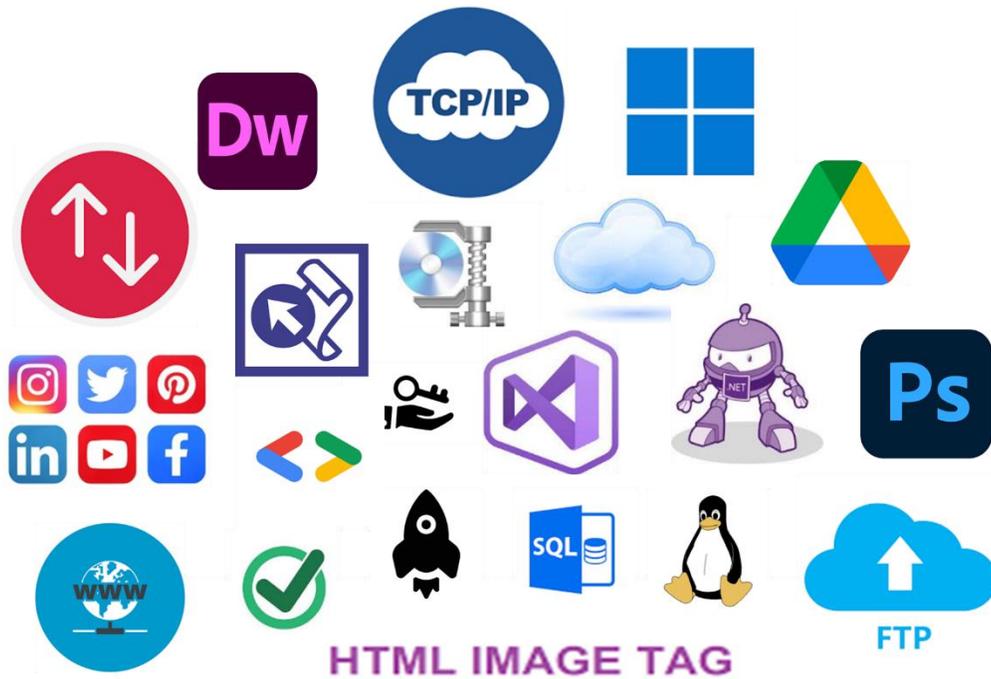


Systems and Internet Symptoms and Diagnosis

Important Topics in Computer Science.
Terms, concepts, and challenges in building, managing, and
improving systems that span across multiple industries, domains,
that universally serve varied purposes.

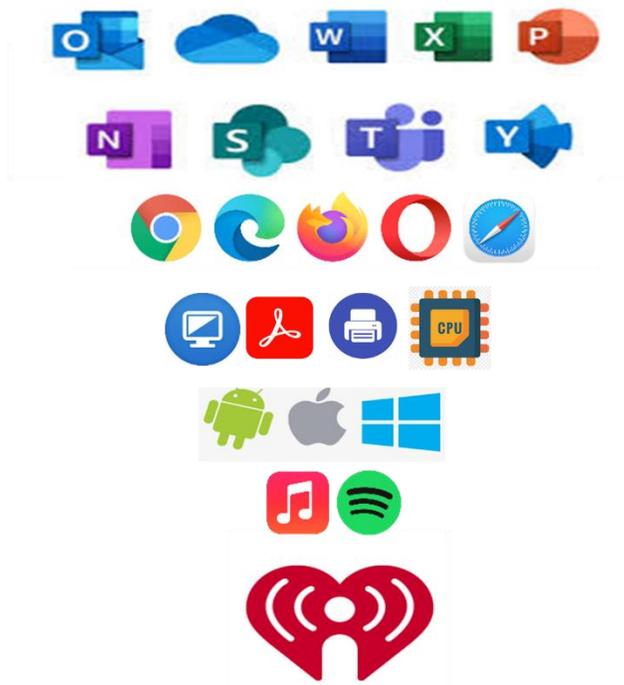
The Internet seems to have Amnesia or severe Memory Dysfunction
I have to tell it my name everyday – it's like it doesn't have a brain at all.

Sheri L. Wilson



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Abstract

The internet is an online information system that offers use and security of personal data but requires a significant amount of maintenance once information is shared. The more a person uses it for bill paying, sharing private information, buying, using credit, spending money, and all the many other things that require authentication, account management, and online enjoyment, the greater the information maintenance burden. This has evolved into a data and document management problem, leaving its users with only partially beneficial and protective systems, with information everywhere and an individual responsibility to manage with minimal technical solutions or direction. The design of the Internet does not follow an efficient database structure that allows source profile maintenance by its users and automatic updates where all the information is contained, used, stored, and held. There are several solutions to this problem, of temporary nature that use a quick program to change data, but a process and possibly a change in data management is required, as well as design standards and security practices. Users are left to manage their account information for each profile, one at a time, when we have technology available that streamlines this task.

Changing the design of the internet or creating an all-encompassing integrated application is not simple. This project will present a new profile management concept which will be applicable to other data management systems and once proven to be more secure and efficient, can be accepted as a legal requirement and standard for information sharing. Whether it's a single user application with a data management policy that solves the problem or it's a complete change to software design standards and information management, this project seeks to present a more optimal information system.

Although this booklet is titled "System and Internet Symptoms and Diagnosis" and referred to as a Book, Paper, Project, and Problem, it is published as a first draft and may or may not result in a fully published book for sale online in hard cover, paperback, and digital formats with audio functionality. The contents herein are not presented in an ordered or unordered list of problems, symptoms, and diagnoses by system. It generally and sometimes specifically and technically discusses the Internet design, software systems, infrastructure, and other matters that require change and explanation for the advancement and improvement of the system for the people and other robotic, artificially intelligent communities.

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WHAT IS BUSINESS INTELLIGENCE?

Business intelligence is a general phrase of two terms that describe a company or businessperson's level of knowledge in one or more subject areas relevant to the business in which they are employed. Business intelligence could also be used to describe a businessperson's intelligence level in the specific subject of an area of business, such as sales, marketing, finance, operations, and technology. To measure a person's intelligence would require a test or some instrument that measures and calculates the intelligence based on factors in comparison to other professionals. Intelligence can be summarized as knowledge and demonstrated by performing a task or discussing and writing about a subject in depth. A single statement, or even two-page resume or document does not demonstrate intelligence, which is often why references are required or evidence of work, claimed to be owned by the owner or worker. A company's knowledge of business would require measurements within their own organization in comparison to other organizations that work with the same type of business areas. These measurements are often sales figures, reports, or stock market indexes, but such figures are not related to intelligence alone. It is true that there are few companies who perform business operations uniquely, therefore they can be standardized with set practices, procedures, and bound by policies and laws, with slight variation. To measure intelligence, which are matters of 'knowledge' they must follow standard business rules or have a general understanding of how to conduct business in their respective field. Some knowledge and intelligence are presented with licensure and diplomas in subjects but lacks full demonstration to those without proof of completion. The proof is often required because of the existence of fraud, plagiarism, and theft of intellectual property.

Varying Levels and Subject Matter Expertise in Business Intelligence

An electrical contractor has different business intelligence than his employed electricians because they have different roles and responsibilities. To compare business intelligence, the company must have a competitor and the businesspersons decide how they conduct business – whether it's aligned with standard business practices, such as marketing, advertising, networking, scheduling, and other management standards or if they do things in whatever order and style they choose. Their business intelligence is not compared based upon profits and losses or assets. Business intelligence is often evaluated using tests and for an Electrical Contractor, it is often based upon licensure, test scores, and the number and type of projects completed, of which there is rarely a one-to-one comparison amongst contractors because of industrial competition and the fact that opportunities exist across the nation of varying levels with different responsibilities, timeframes, and complexity. Investopedia defines Business Intelligence as it “referring” to **the procedural and technical infrastructure that collects, stores, and analyzes the data produced by a company's activities**. Intelligence seems to be a derivative of research and learning, whereas subject matter expertise is based upon experience and gained by performing tasks, learning from others. Both acts of intelligence development are learning from others, just in different formats and ways. Intelligence is defined as the ability to acquire knowledge and skills. The path to which intelligence is obtained and retained are matters of most importance, being that the knowledge, skills, and abilities are current, innovative, and can be compared to others, as well as set apart in in matters higher achievement, scholastics, or work accomplishments. Although the same learning is available to all

citizens, institutions vary in the delivery of information for the purpose of knowledge and skill development, bringing competition into to the educational institutions, as well as the cost or price of learning. Some will argue that intelligence is not available to all, as there are many with learning disabilities, as well as socio-economical limitations or other reasons why people do not pursue intelligence development at institutions known for highly reputable ivy league type instruction. It is also believed that all citizens have access to such knowledge to develop intelligence but are limited by formal documentation, such as licensure, and diplomas, or the actual experience of completing the standard collegiate experience, which is comparable to the requirement of hands-on training or work experience often sought after by companies and corporations or hiring professionals. These limitations and beliefs are often motivated by family, institutions, and corporations that hold a belief that specific university programs produce a more qualified and higher level of intelligence than others, when intelligence is individually developed, depending upon a person's willingness and desire to develop it. Just as some students find their confidence and identity rests in prominent University names, such as Yale, others are self-confident in their intelligent building skill and know their intelligence is not something bought or paid for, but that instruction is, and true intelligence is individualized. Intelligence can be collective, when group projects are completed that prove such intelligence, of which nothing has ever been produced that shows collective intelligence from top Universities. The only published metrics available about a university is the graduation rate, which does not show the mathematics behind the rates, making it an impossible comparison to measure one against another using that figure. The completion of certain education, either an assignment, degree, or class is evidence that person has been instructed on specific subject matter but does not show intelligence or the person's ability to put the principles or concepts into practice in the workplace.

Intelligence has been defined in many ways: the capacity for abstraction, logic, understanding, self-awareness, learning, emotional knowledge, reasoning, planning, creativity, critical thinking, and problem-solving.

BI is a broad term that encompasses data mining, process analysis, performance benchmarking, and descriptive analytics (Investopedia, 2021). Business Intelligence is best defined as information that creates intellect and knowledge within an organization or business. These are not often individual metrics based upon one single person's knowledge, but group knowledge when sharing information in meetings, classrooms, and boardrooms. Other business intelligence is those amongst employees and professions that relate to their business industry and what goes on outside the walls of their company or corporation in comparison to their employee and company performance and standings in an industry, known as competitive awareness or ability to harness experiences with others to improve their business and maintain a certain level of knowledge and possibly confidentiality to be the best. In elementary school, students are taught to share, while highschool students are taught to be individually creative, sharing amongst select groups, and keeping their test answers secret from others, while college level students are challenged to work together and share knowledge on a different level. Understanding knowledge sharing is not simplistic or defined in one or two sentences because it varies depending upon the subject, the situation, the position, and goal.

Business Intelligence that refers to the procedural and technical infrastructure means that the business must have tools or utilizes business tools that processes information about what the company produces or knows. In the Electrical Contracting field, the business intelligence is managed on multiple levels: the projects it manages and completes, and its staff, opportunities, costs, profits, and losses. The Electrical Contractor could and would willingly share knowledge of operations and projects, unless asked not to for some proprietary or competitive reason. These are usually big ideas where patents and trademarks are in the works for some profitable and major inventions. Different types of businessmen, students, and generally stated, people manage these things in their own ways, some using high technology, while others have enough knowledge capable of creating the next gigantic world power system that saves a million trees. Some use specialized financial management software with online integrated sales and marketing solutions, while others use their brains and paper, along with their friends and individual personality skill to obtain and grow their business. Traditional businesses might use computers to gain and manage their intelligence, while others use only printed materials, like marketing and advertising industry choices for business growth. Business management is often done using computers, while traditional businesses select paper only methods to manage their finance department. They rarely ‘mine’ for data or analyze and revamp their processes on an overall company level, but delegate these tasks to their employees to improve skill and produce higher quality work in less time, without written standard operating procedures, task orders, and timekeeping software because they are intelligent workers who understand what needs to be done and are individually motivated either by their leaders or employer who naturally motivates them to not only finish a job, but to modernize the entire industry as they work without killing 50 million trees using printed paper and without wasting 80 million dollars in software development.

Larger companies have found documenting and programming the business intelligence necessary to share the information across the planet and to convince others of much needed regulatory change in the industry and because of our political structure, it is necessary for them to have advanced software systems that manages the business intelligence with regular reporting and qualification metrics, along with financial management proof to show how the electrical field is more dangerous than solar energy, thus changing the industry and direction of many professionals. Such business intelligence remains secret and protected to not cause massive economic downturn and major construction across the nation at an abnormal rate to the point it causes economic downturn in many other business areas because residential homes, roadways, highways, and life is significantly impacted when this industry is at work.

Because a person knows how to connect a computer to a network, or build a world-wide or local network, as well as design the software for use by many indicates a higher level of intelligence in their field, but there must be something to compare it to: A network engineer vs. a software engineer – combining both fields results in a computer science expert, with few knowledgeable on all tasks and able to deal with varying levels. Just as there are computer programmers, systems planners, and users, there are builders, land developers, and homeowners – all with varying levels of knowledge or business intelligence in their field useful for their own or the world’s purpose. These professionals are not named or employed by intelligence level, such as Network Engineer I, or Network Engineer II; they are simply knowledgeable and experienced in Network Engineering and might pursue or hold a specific position title. The same applies to

position title such as Project Manager or Program Manager; they are all varying levels of responsibility and knowledge, as well as experience. In education systems, knowledge is managed by grade, which is a culmination of grades expected for a specific curriculum leading to the completion of elementary or highschool, leading to a diploma, which is a standard learning system called K-12 Education. College level intelligence varies by university and program, with some alignment in content necessary to maintain and change industry standards.

WHAT ARE DOCUMENT MANAGEMENT SYSTEMS (DMS)

A Document Management System (DMS) is a business system necessary to store processed documents and reports. An old document management system was simply a file cabinet, or file system on a computer, which evolved into shared drives where documents were saved, scanned, and stored on hard drives, with accessibility permissions based on official rules. The sharing mechanism was originally via electronic mail, but file storage became more efficient using Internet Software Systems which allowed more efficient access to documents pertaining to a business need or responsibility. These systems extend beyond the management of documents within a business to Customer Accessible Systems where much of the burden of typing and providing information is done by both the Customer and the Business, using standardized processes defined in systems such as QuickBooks for Accounting, Application Status Checking Systems for things such as Birth Records, Legal Files, Property Databases, and other systems the Law requires such as those that fall under various Government Departmental responsibilities such as the Transportation, Healthcare, Education, and Banking Institutions. These systems are managed by the National Institute of Standards and Technology (NIST), which loosely defines document management systems as part of “Cloud Computing” (Turbin, Volnino, Wood, 2015). There is a distinct difference between a Document Management System (DMS) and a database, but all work together where databases create documents and documents are stored in databases.

A simple example of a DMS is the Windows File System. Every business seems to have or require their own system, because of the routine sharing or automation of information, which is often integrated with payment methods and credit, but not much beyond that where identity, validity, and other verification checks are made for Information Assurance. Browser based technologies are not considered Document Management Systems, although they enable the sharing, accessing, and viewing of documents. DMS’s are considered Internet Applications that go through a process and timeline for accomplishing a task, such as a Building Permit, a Land Development Project, or other type of system that requires the exchange of information using multiple systems – such as Computer Aided Drafting, Banking and Finance, and Legal Information. One of the most simplistic DMS’ are in the Project Management and Finance and Accounting areas of Business Management or other systems that require identifiable details or credentials such as those mentioned above. They are critical information systems because they create official documents where other documents are often required. Other DMS’ are those that produce status and ongoing reports, accessible across an organization both internal and external. Each Enterprise has its own requirements for ‘going green’ or as automated and efficient as possible, just as each business has its own compliance department with varied standards that must meet standards set forth by law, which are often financially, and identity related for security and tax reporting purpose – not often standardized. While the law tries to force requirements and standards for compliance and adherence in E-Commerce Systems, they

are loose and simplistically standardized for contracts, financial transactions, and the use of personal information. Document Management Systems are not only used for Finance and Accounting for the Internal Revenue Service (IRS), but also for customer tracking, process management, shipping, receiving, as well as customer service, quality control, and managing the supply chain.

Different types of documents have different sharing and processing requirements before they are considered official, draft, final, and sharable or ready to submit as a finished homework assignment, a book, a report, a paper, or an official record of fact. Each document type has its own process by which it becomes finalized, and the preparers of the documents use different systems than those that process and store them, just as the those that access them follow different processes for accessing, buying, reading, or writing them. A system that manages a company's documents is created by professionals who review the documents contents, purposes, its data, authors, readers, and design automated systems for access control, efficient data entry, storage, transfer, and archival. Document management is critical to business because it provides the right information to the right group or persons at the right level. For example, the principle does not see 15 pages of a student's draft report or homework assignment but might have access to it if a process or policy is put in place to allow the sharing of the documents. This functionality is dependent upon the type of system used and if designed correctly, enables elementary school students and highschool students to have access to higher levels of information to challenge their learning levels and thinking and vice versa.

DMS ACROSS AN ENTERPRISE

Integration across multiple systems is important and shows that one system cannot manage everything, yet industry tries to narrow it down to what is called a Document Management Solution or System. A fully integrated system uses information from all systems both internal and external from the customer, the Government, and information that is not released to the public, but managed by a Public Relations System. These are storage systems of agreements, receipts, and other official documents for courts and the IRS. In business, they are used for managing Projects and internal business documentation that the customer does not need to see, which is all the checks, balances, and information necessary to accomplish the task and the company's objectives. It is not limited to just the profit margin, but also process and efficiency documentation to show improvements in business operational effectiveness, efficiency, management, changes, market shifts, and industry standings. Some corporations call them Knowledge Management or Human Resource Systems because they include Documents to be managed in those areas for credentialing, training, and other personnel reports on performance, attendance, accounting, and legal matters. Information is managed by what is legally protected, such as Corporate strategic plans, internal business relationships with other companies, executive and personnel data, as well as what is published and considered protected by the Privacy Act and Freedom of Information Act and a few other laws designed for both Corporate and Consumer Protection, including International Fair-Trade Agreements and other policies, rules, and standards.

Enterprise Warehouse Systems seem to use data manufacturing terminology when it's not limited to a manufacturing system. Those are separate and different types of business that run on standardized processes of Product Management, Manufacturing, Shipping and Receipt, based on an assembly line business model. Calling them data marts indicates information is being sold, which is probably named that way because of Internet Storage and Sending Requirements to pay for the

Internet Commerce system of multi-site, national, or international business. While ‘going green’ is an efficiency goal of reducing paper, redundancy, improved tracking, and accessibility, it is not entirely achievable at every stop because paper is still necessary.

PORTALS EXPLAINED

Things have improved where documents are available and printed when needed and information sharing, or ‘integration’ enables reduction of duplication of information and making copies. Using warehouse terminology shows the creator is not truly in step with real business and has purposely chosen to name this industrial system after a place where products are packed and ready to go – removing the entire business planning, building, and improving process altogether. Companies can’t go green this way without looking into how a product is made, distributed, and delivered to its customer and how it not only contributes to the profit margin on the balance sheet, but also market and industry reports. Obviously, there are various levels to a business, as well as stages, just as there are points when the business is consistently profitable. A good business uses an ongoing business improvement system or Organization Management beyond just personnel to create its goals and do more than just being a World-Wide company or organization. DMS’ in those areas are systems that review process, procedures, beyond inputs and outputs in a text-based computer system. They review time to market, consumer protection, awareness, competition, and other things that contribute to the overall economy, society, and eco-system. A small businesses’ DMS is not the same as a Corporate Finance System – it is simply a place to store electronic documents, just as my DMS as a student is not comparable to that of a focus group, or consumer population selected and monitored in a phased product improvement program.

Portals are simply internet pages, segregated for a specific purpose. They are just pages within systems, connected to other information systems by linking one to another. The concept is like the way a pastor or preacher selects scripture from the Bible to formulate a story or sermon. The pastor or preacher links the scriptures together to form a persuasive or informative story or sermon with a moral to inspire or inform its listeners. Some read scripture sequentially, each passage in a row, until the entire book is complete, while others weave stories together from a variety of different books. The same approach is used in portals, with one page linking to another within its own domain or somewhere else across the internet, outside of its own information storage site or what is technically called an Internet Domain which stores information on one or more servers, viewable to the public. Anything published on the Internet inside of an Internet Domain, is sharable by a linking system, while other information applications, such as Facebook are linkable and accessible inside of the application. Semantics technologies are being used (Grimes, 2010) but do not truly describe the capabilities or the problems the current Internet faces. They call it ‘natural language processing’ or NLP, which conflicts with another system called Neurolinguistic Programming. With systems being written in several languages (similar to people), this shows that not only is one hand or system, such as healthcare or private industry, not talking to the other in a widely accepted system of speech, voice, and other information data systems that extend to neural networks where much information can be used more efficiently, but also that systems across the internet by industry are separated and customized, bringing information to the public in various and creative ways without much consistency and regulation. Because these are new technologies in behavioral, consumer, and business management, they are highly guarded and secret, and programming such information

systems is not a simple learning task that can take place overnight, nor is the publishing of information across multiple domains. The use of ‘metadata’ to describe ‘keyword’ content used in Semantic Technologies is simply a set of ‘keywords’ used to create a campaign, or directive strategy for information, which is old technology. It was originally created to locate specific information by keyword within a site, making information searchable by word or phrase, similar to a Bible’s Concordance. More advanced technologies use on screen eye tracking and future technology will not only integrate and protect personal information but will reduce redundancy and improve memory and mental functioning. Neurolinguistic Programming or ‘hypnotism’ uses the same keywording approaching in directing the cognitive functioning to a specific area in the brain’s memory to prompt action, a memory, or a new idea. Phrases are used, along with commands, just like a computer program application to create functionality of a system. This is like mental processing and programming using language, images, and content, using both the subconscious and conscious, with and without awareness of personal self-action, inaction, or the actions of others.

Biological Systems are not part of the Document Management System because healthcare is still far behind, stuck in note taking and tracking based upon patient reports and standardized solutions tested or untested by the Federal Drug Administration, totally non-integrated, non-regionalized, and non-supernatural in making everything come together in rapid succession. Although healthcare systems use Document Management Systems, the documents are not standardized and are different because hospitals, like businesses do not use standard patient, nursing, and doctor reports. Investments in the healthcare industry show there is some progress being made by the creation of ‘self-reports’ and healthcare applications that enable a person to manage their own health information, but much work has yet to be done that allows improved sharing and consistency of healthcare data across a network of healthcare providers. Ideally, these standardized systems create world health reports that show the state of human health, rate of change, and major diseases, plagues, and viruses faced by the human population, as well as the accompanying symptoms and possible causes, but the systems are vast with only sporadic, or reports being made available to the public when there is a widespread healthcare risks or national and global problems. Other efforts are in healthcare campaigns to improve systems or to prompt preventive healthcare, of which technology systems are used to bring the information to the population.

Some ideals are still based on an old healthcare system and software model where medication is required to cure problems or disorders, with pharmaceutical advertising and sales taking up much of the television airwaves to cure common problems. This type of programming seems like a neurolinguistic programming tactic to increase sales for specific industry. It is true that enough exposure to a specific subject can manipulate the thinking and cause sickness. There are new technologies such as the Magnetic Resonance Imaging System (MRI) and other scanning systems are the system that should be invested in – not just going green in demanding answers, identity protection, and assurance or insurance, but truly working an integrated full body system review and change to make things easier and healthier. These systems are capable of monitoring physiological responses, so naturally the system works well with home and business computing, as well as mobile technologies, but information management and strategic systems planning must be thoroughly researched before it can be made available to the public and useful for preventative, improvement, or general consumer knowledge and use. Computer Science should take a health assessment approach in systems management, design, and review. They tried to use a Capability Maturity Model (CMM) to assess system readiness in terms of development, but maturity is not the only factor in computer and human development. Managing documents is boring, but Computer Science is amazing when all systems work well together.

Portals are just cover pages for sections of or ‘departmental’ or parts of a system. Some humans think it’s a pipe someone can fly down and become a new person, such as in the movie, Being John Malkovich. It has been proven that biologically, people can share more than behavioral, biological, and other characteristics and traits, but taking over someone’s body and health because of mental deficiency or other purpose is considered mentally insane or in other disciplines, demonic possession. It brings the question as to whether humans and stars are different beyond money and physical features or if ‘morphism’ can be considered equivalent to evolution in humans as it is to the animal kingdom and the development or progress of mankind and all its many tools. The cliché’ is “it’s a pipe dream” refers to a Big Idea that might work, but serious investment is required, just like owning a Worldwide Cloud Based System of Law and Order or a perfect Hollywood Database such as the International Movie Database (IMDB). What might seem out of reach and impossible might truly be possible in a matter of time with the right amount of money and resources, if there is a need for it – showing we still follow a model of supply and demand. The world is not solely economically advanced by entertainment systems, although they are a critical part of life’s infrastructure and source of mental digestion.

DYSFUNCTIONAL DMS’

One example of a Document Management System is the Veterans Administration Healthcare System. Ideally, it manages data sheets and records from all medical visits in a single system which is comprised of many of the same or similar systems, accessible by its authenticated users with varying levels of access and oversight in many different locations. There are not efficient standardized reports to show healthcare statistics over a set period, as in service, after service, symptoms, remedies, complaints, post-operative procedures, and long-term effects, results, or issues. It has a different system for managing post service medical problems and claims of injury or damages, much like an Insurance System. Its DMS consists of scanned documents, where no real database exists that compiles information in a consistent manner. Proving injury, timeframes, fault, and wellness or recovery is nearly impossible especially since it is not connected to other Healthcare, Identity, or Legal Systems. This is obviously a problem. As the World-Wide-Internet grows and prospers in E-Commerce Systems, healthcare systems fall to the wayside because of lack of investment, true integration, real technology that works, and an inability for the Department of Defense to honestly protect and serve its members, veterans, and dependents – which in turn, affects their ability to protect the United States, as evidence of the COVID-19 pandemic. Much of the complaints were that it was too much information to manage for too many people, shifting it into pieces and parts, using for each language and individualized programming, but E-Commerce has proven with Worldwide Technology that we have the systems available that can service more than just our nation’s bases alone. While each regional location has its system and its member information, the systems are the same, but information varies, and a good system can bring all regional data together to show healthcare statistics across the world by region, state, type of population, and specific healthcare problem. This is where the data management, database management, and healthcare information play its biggest role in how data is presented to enable decision makers to invest in further study or medical advancement to make the world a healthier place. Attempting to collect records after being registered and seen at many hospitals across the United States, it is clear there is a data privacy and sharing process, but is a cumbersome task for a patient who suffers from any ailment, proving a serious need for systems integration and automation,

beyond sharing the information from hospital to hospital or from a hospital to an agency that decides payment, such as an Insurance Company or the Social Security Administration and sometimes Law Enforcement Agencies, or worse, Emergency Contacts that are self-reported and managed.

SYSTEMS/SOFTWARE SELECTION

Selecting the right DMS requires some research. Designing and building one requires business analysis and Technology experience. There are systems out there that require a company to build its own to fit its unique processes, such as Microsoft's Cloud Azure, which is an amazing product, if you have developers with the right skill set qualified in its entire suite of products because integration is what its built on. For smaller businesses, other systems might work better, such as a well-organized shared drive with personnel managing access and distribution until they grow their technical and business skills in organizational effectiveness, business process management, databases, diagramming, programming, and integration across the entire organization or corporation. If your technical team is inexperienced with business areas and needs when making a purchase decision, then it's just not a good investment, that is why the systems review process is an important business procedure that should be done regularly in comparison to what is available in the marketplace. Luckily, Microsoft has business advisors and teams that can put together custom proposals, but it really is designed for larger business.

The concept of a DMS is simple – Document Management, or the organization of documents, papers, assignments, and any other written material, such as receipts, reports, and official records. These are often done using a filing system, stored alphabetically, by data, subject, or other way. In computers, it is similar, but some information is contained in databases and 'documents' are created on an as needed basis to preserve space and have a clean organized time dated system. Other affordable DMS' are just not available or comparable because of the way the technology is built – either you know how to manage digital products, files, and processes, or you don't, but you can learn and buying a Microsoft subscription does not mean the buying company is required to know or use every product in its suite. It is a product that a company can grow into and with, making purchases with available consultations as they go. Once a large purchase has been made, the Company must stay with it through good times and bad, almost like buying a house or marriage because mistakes can be costly. Lexis Nexis was the standard Legal Research System, which is in the Document Management category. It works well, but if the legal system that feeds it with documents is changed or flawed, then it affects Lexis Nexis. Buying a DMS for a small Law Office, like Microsoft Azure, makes no sense if it is not integrated with important parts of the Judicial branch. This is especially important because this is how people stay informed on the latest set of written laws, items in the works, and things that require review and update. It's also important because legal databases feed statistical reports that govern the nation's law and order system.

When considering a new system or redesign, Miter Corporation suggests a reverse engineering approach, which Savvy Smart Solutions, LLC understands it as system reviews looking backwards to make improvements. This is tough for some professionals and companies to understand, mainly because it needs to be more simply stated: Before changing a system or upgrading a system that has any integration, all its pieces and parts need to be preserved and documented to show how one affects another or becomes dysfunctional and what must or will change. The problem is that Documents

are everywhere, produced in many ways, which requires business analysis and process improvement before even changing one because when they are interconnected, one change affects another. Customized business software is available, but this creates integration and management issues if special teams are not established.

Selling Microsoft Azure to a large Law Firm is wise, but only if they are responsible for upgrading the entire Judicial branch of the Government, which takes several years in conjunction with reviewing not only the start and finish, but everything in the middle, across the entire country, state by state, with federal oversight and start a large undertaking without knowing if local is doing something they shouldn't, or if the federal branch is being corrupted and considered incompetent. The best practice is to assign a company or group of companies to the development task, not to allow small firms to develop their own system, but for a company to review the legal system and its associated processes and software or infrastructure overall and all its connected parts in order to upgrade or perfect a system.

Not only is managing documents and information the goal of a DMS, but buying a system for a specific branch, industry, or community provides opportunity to revisit laws and the entire process for passing, enforcing, managing, and doing things where there is less of a need for the Law and Enforcement to create a less angry and violent world. Luckily, systems are not like people, where you are stuck next to someone or something who can't be replaced after purchase. People can be replaced, and talent can grow, but this area is part of Organizational Management, beyond how well you can file and sort. This is obviously become so compartmentalized that it must be explained that team dynamics must work well, otherwise it's like isolation and unworkable, which is prison.

Buying products and hiring the right people to manage, maintain, or change them is critical, but not if you can retain good employees and work well together, which is where Document Management Systems are critical. If you can't put something on paper with information, then you really can't put someone away for life because of the way our system is designed or maybe you can by going green. Just like you can't make a contract for life with Microsoft without having the right kind of talent, money, long term plans, organization goals, and power to make those plans and the system a usable and enjoyable product. Unfortunately, Microsoft, Inc., does not share this with you on its sales site because those who deal with Microsoft already know this.

Buying Office 365, using Cloud Technologies is simplified by saving your documents on either a local drive or in an email account. Buying one for a large business requires special expertise, where some are just naturally gifted and professionally trained. Deciding to buy or sell Microsoft's products for DMS was considered, as a team member of collaborators and qualified testers. As a student and owner of Savvy Smart Solutions, LLC, it is not something I plan to do as a business, or even as a student. Since the Organization's goal is to provide Doctorate level services in Technology, it does not provide Product Reviews, only recommendations.

APPLICATION JUSTIFICATIONS

More than just Cost Benefit Analyses

The best way to address the Application Cost Benefit Analysis (CBA) and justification for investment is to first outline the needs and problems, what the solution provides (or should provide), its origin, and how long it will take to go through a Business Management Evaluation or Process Review. It is most likely conducted after problem identification, software purchase, or the creation of an efficiency goal. It must be determined how much change to the business and software is

required, deciding if it can be used as purchased or is customizable from both the user and the software standpoint, as well as its supportability over a long-term period. Business Processes must be looked at either pre-purchase or during the software review and product selection to decide if the company should adapt or the software should adapt – both requiring adaptations. It requires a user group review in conjunction with roles, responsibilities, as well as changes to ensure continuity and improvement of operations. It requires extensive research, development, test, evaluation, reports, and process evaluation in some places and types of work and simplicity in others to prove changes in efficiency, beyond the human senses' perspective. The purchase of new software often requires training and an onboarding campaign to ensure maximum acceptance and use. Costs and benefits are difficult to forecast for applications in the pre-purchase phase, especially for those that have not been in the marketplace for long.

Customizable applications, such as an Act Database, SQL Server for Data Management, Cloud Databases requires a plan, but not an entire test prototype before purchase. Reviewing a simple demonstration that shows Decision Support, Data Management, and Streamlined Processes is enough to decide the purchase will be beneficial. It is where the buyer takes it on and creates internal automated processes and business changes that requires full cost-benefit analysis, which is typically done by internal teams, with some professional consultation from the application provider, such as Microsoft or Oracle, as well as qualified business advisors that can conduct Business Process Re-Engineering (BPR) and Implementation Plans for large scale systems. The standard Project Management process is used, with software features, functionality, and benefits known, alongside a Strategic Goal for the use of the software application. In cases where a suite is purchased or the application can use data from other systems, an Integration Plan is required, with an understanding that other systems may no longer be necessary. This necessitates portfolio management in the Technology Department to ensure supportability and maintenance is managed to realize the long term benefits the new application offers. Assuming an application only fits or solves one business need or problem is not the best approach but being aware that it could manage more than what was originally intended, demonstrated, or documented is required. This is where true engineering and application implementation uncovers and proves hidden benefits, as well as hidden costs. The question must always be asked – will it be worth the time and money in investment and change or what is needed to make it so?

Cost – Benefit Analysis (CBA) and estimation can only be done with clear plans based on real property in action or a demonstration, otherwise it is a conceptual product, where the benefits might not be immediately seen until the application has gone through a test phase and the team has conducted an 'application review' to include how it might replace or make other applications more useful and efficient. A salesperson cannot immediately provide a direct estimate, but they can assist with a demonstration, a prototype test, or a systems design plan, which is often the best way to purchase a new application that spans across an entire organization or affects multiple businesses or units. If a Company decides they are ready to implement a new Financial System, such as QuickBooks or Intuit, to go from a manual financial management process to a computerized one, full process analysis is not required pre-purchase. Application Upgrades require the same type of analysis, but maybe not serious costs estimate covering in-depth reviews and change management.

A simple demonstration can show the benefits of a new application and managers can quickly estimate the cost in comparison to the price of the software, against what is gained and lost with a new system. Documentation is critical, but not every application buyer or purchaser considers doing an official CBA, with pre and post software implementation professional evaluations, using time,

money, supplies, business process value, customer value, and profit or loss formulas to show how it has truly benefited or destroyed a company's ability to profit, process, and be more efficient or meet the strategic goals stated when the product was originally purchased. Often, benefits and losses are realized after the product is implemented or gone, which should be monitored and documented along the way to improve project and product management, as well as change management practices. Sometimes immediate returns are made with quick buys, fixes, small apps, and organization or world-wide implementations but does not equate to the cost of the product and perhaps not enough to see or justify its purchase.

A cost-benefit formula captured at this first phase is important to create forecasts for expanded use of the application so the returns can be seen and managed. Application purchases are managed just like a new business: Investment, Setup, Operational and not profiting to the profiting stage. When its partially implemented, and the benefits of the software can be seen and proven by reduction of costs to operate the business, whether by job role, process, or physical supply costs and measured against the price of the product, along with the talent necessary to implement and other personnel costs, then it can provide an actual numerical figure to show where the product is at in term of return on investment into profitability. If measured and evaluated correctly, the portfolio of systems can show critical business solutions that profit and improved business beyond the monetary figure. These metrics are massive and varied, going from job efficiency, employee productivity, morale, tax payments, insurance, supply budgets, and technology costs and value which are all necessary figures used to evaluate the cost and resale value of a business. Maintenance and Support plans are required for those that can be changed after implementation to handle software problems, upgrades, and manage customized changes, but it must be totally integrated with the system valuation process because it affects overall company value and worth.

BUSINESS CASE: JOB SEEKING & QUALIFICATION PROCESS AUTOMATION

A Company wants to improve the way they manage their employee selection process. It is not just a matter of reducing time and filtering through records to find a qualified professional, but to maximize the use of its incoming applicants. They have decided to expand the scope of their Human Resources Department to share information with a network of companies. To begin the task before selecting a new application to process resumes, it must first look at the standard process and find new ways for data and document management, therefore it needs not only a review of existing processes, but also a new Data Strategy. Originally, it just looked at resume data, seeking qualifications and scheduling interviews, with a document management system that stored basic elements of applicants for scheduling and denials, based upon a partially automated internal review process.

A new process of evaluation and data management makes use of all the applicant information, uncovering a potential new business area to place or refer applicants to other businesses within their business network, using automated data transfer methods. The system goal is to expand beyond a company process to a business network process to share and make use of incoming and outgoing data. Specifically, if one applicant was not directly qualified, but submitted their resume and specific data elements were captured, then it could find within a system of companies or partnerships that extends to their suppliers, customers, family members work elements, and other agencies or businesses that have been in contact or partnership within the company – tracks and ensures review data to make the screening process more valuable. This type of system or application includes internal data management of those people, partners, suppliers, and other businesses, and if

authorized, could create an automated query to check those businesses for other open positions that match the applicant. Many people believe this is or should be based on the seeker's application submission through an application such as CareerBuilder.com or Indeed.com, where a ton of resumes are submitted with varying questionnaires and requirements, some not even being completely read, but responded to using automated messaging and filtering.

Problem: The results for both the applicant and receiver of the applications are overwhelming and only resume data is duplicated and shared, therefore the process needs a better system. The same problem has now occurred in the Google Play Store of Applications. Looking at this process from a single company solution makes no sense because it is an individual, regional, company, and national problem created by an online job search application. Indeed and CareerBuilder.com both took on these suggestions of offering 'other opportunities' for applicants, but this leaves it up to each individual and not the companies who took the time to review and evaluate the applicant's resume. One single application task for a job seeker produced twice the number of emails as the number of job openings it responded to; filling inboxes with automated messages of no value – this jams up servers, wastes time, and takes up space. The true costs are not readily seen from all perspectives: The Applicant, the Job Board, and the Companies involved because companies seem to manage their Cost Evaluations without considering all touch points or receivers and senders. It is a task for the Human Resources (HR) Industry and not an individual company, but requires an individual company to evaluate, develop, and work with a few other companies to test and implement nationally for a serious change in doing business using Technology.

It is a metric that shows one business or network meeting goals and objectives for a specific company, job type, region, employment category, population, or contribution to the unemployment rate, but includes hidden metrics because it affects the Technology and HR Sector. The creation of such a system could be useful for all businesses, if it can correctly manage duplicates, partnerships, contacts, receipts, performance, investments, and security. It is a perfect example of how one purchase or change in business can affect an entire industry if properly reviewed so development and capitalization can take place. What first looked like a simple task of improving the resume review and employee selection process turned into a national system for managing open job requisitions and quality resources to profit share using data gathered from one or more contacts.

Internal and External Data Use must be considered, as well as data ownership and referral management to improve Internet Traffic and quality data sharing processing with a system owner to measure it from start to finish. If standardized, with other system areas, such as the onboarding process, it can create and compare human resource tasks for multiple companies, reducing the challenging and difficult task of 'finding a job' and 'sifting through resumes.' The justification for such a solution must go beyond a simple business process automation task, into a regional, internal, and external impact review for potential profits and losses by working with other companies and contributing to the unemployment rate (reducing or increasing), which should also be captured under technology investments for creating a better sharing system that affects the entire national economy. Further evaluation of such sharing and filtering technology using standardized processing as it is changeable and applicable in other parts of an organization must be considered since the HR process is an undetermined set amount of time which includes all aspects of a company, from acceptance, onboarding, performance management, change management, communications, and even those data elements that extend beyond working hours and contacts to include family, friends, locations, and other common areas of technology and information use. The extension of work data and information used or obtained outside of work directly relate to productivity and morale metrics, which are

components of other serious economic values that affect the local, national, and global economy, as well as law and order.

While job seeker boards such as Careerbuilder.com provides a job opening and candidate submission system, along with company data, it does not provide or capture data that reports job, company, and seeker data that shows industry needs, talent, and other useful metrics that can show specific metrics related to talent, such as education, skills, qualifications, needs, and verifications. One simple example is that a job seeker might attend 3 or more interviews and 3 or more companies verify qualifications, which is a duplication of effort, when such verifications and qualifications can be captured and considered valuable and usable data in responding to candidates in a network of companies. Company recruiters from around the country (or even around the world) access the databank to enter job openings, sort through the posted resumes (by region, profession, or other criteria), or both. More than 3,000 companies use this method to search for prospective candidates (Ober, 1995). Evaluations are also considered valuable validation data that can be compiled by certified HR specialists. Such evaluations and qualification data are not managed on job boards or shared, and neither are non-discrimination metrics, leaving the applicant population unaware of potential problems or violations. Applicants are forced to file complaints with the Justice Department for perceived violations, without actual proof. Making screening and qualification data more available to applicants, employers with openings, and other agencies, makes the process more streamlined and clearer, leaving less room for ambiguity and violations.

Developing a new applicant data sharing system might seem like the right answer to this need, but first it should review current human resource processes, job boards in use, and how information is captured, used, or not used, while identifying impacts to the applicant, other companies in their business network, and how the company works with the board in which it posts its openings. Review of company goals for alignment with industry or partner initiatives should be considered, developed, and reviewed for scope definitions and metrics creation. The overall goal is to improve data management with the task of identifying unused duplicate data where value can be gained from the validation process, such as reference checks, equal opportunity data, college data, and other human resource information that proves valuable in the job seeker process. This function and practice do not currently exist and is an area of unused and untapped data that can reduce redundancy and create a better human resource sharing system, not just for the filling a position within a company, but future data captures and sharing to manage and share performance metrics and reduce verification and validation tasks. Such a task or system maintains human resource records beyond performance in a company position, but as a human worker, which creates useful performance profiles and innovates the reference and data validation process. The same effort can be applied to other industries, such as rental verifications.

PRODUCTIVITY MEASUREMENTS

LABOR PARADOX

Companies manage productivity each in their own way. Not every corporation has a system to manage, time, efficiency, and job or process specific metrics and it's not because each job or process is different, but because metrics have not been fully developed for each job role or type under varying circumstances or environmental conditions. Metrics was considered a measurement

of tools used to work on cars and things, and now it is used to create work statistics and reports, such as ‘performance metrics’ or scales. The variation of terminology and multi-use of terms changes, depending upon industry and use, just as productivity changes depending upon how it is calculated and what it is based upon. Some view productivity as an ‘act of doing’ or ‘working’ while others omit certain tasks from their productivity rates because they are considered ‘collaboration or meeting time’ that is not a function of doing, but of learning and sharing information that enables productivity, such as a training week. If companies are limited to evaluating only work performance and not extending relations and tasks, then they poorly create performance equations because they fail to consider external variables, such as school, family, marriage, and other extra-curricular activities, such as family time and working out or in tough cases, domestic violence. These are variables that affect employee productivity and performance. A simple example: An employee must meet productivity measurements to keep their job and works while sick, infecting ten percent of the staff, which resulted in employee favor for their willingness to meet their goals, but at the detriment of others performance metrics and the bottom line. The Company only reviewed the performance metric when it should have looked at the source of the employee’s sickness and sought to fix that or manage employee metrics and whatever other activities caused the demand or need to be physically present. Allowing them to work from home impacts their office occupancy and system use metrics. Good systems have calculations for this and can effectively manage through it, especially if they can prevent the sickness from reoccurring beyond a single employee using a more advanced solution than the orders or words to “stay at home and recover.” Productivity rates are often impacted with the introduction of new technology because it takes time to learn new systems and uses employee resources to implement them. This is one major reason companies are reluctant to buy and use new systems; they are used to their productivity rates and have a comfortable and predictable rate of production or output where facts and figures are unchanged, such as profits and contributions. Business people are learning quickly that the investment and short impact to production can be avoided or dealt with later because the rewards of new technology has been known to greatly change productivity rates, profits, employee and company worth, as well as overall industrial growth, leading to substantial economic and social growth – not to mention the evolution of all humanity, far beyond just knowledge, but also the enablement of new skills, abilities, and other things that lead to a healthier world.

Some evaluate productivity based upon timecards and create performance metrics based on processing metrics, awards, and reprimands. Dependencies on internal and external information providers or systems, as well as the systems itself are all involved, so they must all be captured individually and calculated as a whole unit for a single process or job to be subject to performance and productivity measurements. The value gained from such a task is where Technology performs best, showing specific and generalized reports for efficiency, health, and improvements or problems that arise when changes are made. It can be evaluated using multiple variables beyond the task itself, but also changes in the environment, contact, corruption, disruption, and all the many emotions and feelings that effect a person’s productivity rate, including management, direction, order, discretion, all of which are considered health metrics. Since there is no company that manages this way or measures changes, sickness and viruses emerge, and productivity increases and decreases at unknown or falsely reported rates without reason or complete understanding.

INVESTMENT EVALUATION

FINANCIAL METHODS, INTERNAL RATES OF RETURN, PAYBACK PERIOD

Financial Methods vary depending upon how a Company calculates its Cost Benefit in comparison to the price of a system or application to its benefits and reduction in costs or additional profits it makes. These figures are not typically found on a balance sheet or a profit and loss statement because those are calculated figures based upon sales and asset valuation. A company might try to show how the purchase of one laptop per employee increased productivity and profits to become mobile and increase profits with customers, but looking at technology use, it cannot prove it resulted in a loss or gain, nor can it say it was a strategic purchase that resulted in a profit until it accounts for unused resources and the previous asset costs in purchase, maintenance, and decreased use of 'non-mobile' computing devices. It could easily be said that investing in mobile assets directly resulted in ten million dollars future profits which covers the cost of under-utilized non-mobile assets. They would be remiss if they did not calculate resell costs or the possibility of leasing unused assets, causing their technology asset to show a deficit in computing potential, unused assets, and if decisions are not strategically made, sold at a low price too early, when better planning would have resulted in greater returns – such as the remote use of desktop assets in conjunction with mobile assets for a specific use. The resell or recycle value might be calculated and necessary to meet other goals and metrics that are not financially driven, but align with going green goals, such as the Electronics Recycling initiative. The payback period is unknown because the asset costs, benefits, and use strategy is unknown and its use not maximized, making desktops look as if they are no longer needed, sellable, and creating a deficit in the technology budget, when they might be a critical infrastructure asset that cannot and should not be sold, but repurposed for maximum productivity.

If facts and figures are not correctly tracked and reported, results in bad metrics showing performance of only human bodies and not asset performance and its contribution to investments, profits, and losses. In personal computing, many users have a desktop and laptop, storing cherished and critical data in both places, and some in the cloud. If loss occurs, it is nearly as bad as losing assets in a fire, but with the right storage or backup process, the risk of loss can be eliminated, but it requires a change in the way they do things, places that they store things, and how they use, value, buy, and sell their devices and information. Internal Rates of Return (IRR) are usually referred to as internal business unit metrics of new efficiencies gained or savings of time, but for users of devices, it is a figure calculated that contributes to customer or product satisfaction, which contributes to industry sales figures and stock reports. It is not only devastating to lose a main device because of our love and attachment to them, but also because it affects our performance, productivity, relationships, health, and bank accounts. This change must be managed and further investigated because loss sometimes equals gain for the wrong teams, reasons, or gains to prevent harm and further disaster. Time spent chasing down and replacing unused, lost, or stolen items might be considered wasted time and result in broken relationships or other damages, especially if it can easily be replaced with better technology, even if it was not a planned investment.

Streaming Media – New Technologies

This newer technology replaced old music recording electronics and computer software that used peer to peer networks and compact disc copies to duplicate music and movies. The

software and music industry faced major challenges, losing money, dealing with copyright infringement, piracy, and viruses, as well as mass circulation of low-quality digital product sharing. While it was great for listeners and movie watchers to enjoy free media, as well as software, it was fraught with problems, including internet speed, storage, and legal confusion. Industry introduced subscription based streaming audio and online digital movie rentals, which revolutionized the entertainment business. The earliest concern was not only bandwidth and connectivity, such as internet service providers being able to give all its customers uninterrupted streaming sound, but also to offer music at an affordable price to music consumers without damaging the record industry. Problems went all the way from piracy and federal crimes for the copy and distribution of music and the duplication of CDs all the way to offering audio solutions that provided high quality access via the Internet to upgrade the radio stations from old equipment to digitized sound beyond satellite radio. Streaming audio technology or just online digital technology that allows the transfer and sharing of audio files dramatically changed the record and radio or broadcasting industry far beyond contract terms between the producers and the artists but all the way to the stations and every device available for sale in the computer industry, as well as individual mobile listening devices like Apple and what first started as mp3 players. Smartphones changed this even more, bringing streaming audio to handheld devices at no cost with advertisements and subscription-based services for streaming on demand music.

The industry continues to advance, offering continuous playback of customized music lists and the same approach has been applied to television and the movie industry – completely changing how we receive, enjoy, and pay for entertainment. Streaming audio has given listeners far more options, enabling commercial free sound, the creation of playlists, and the ability to socially share and interact with other listeners online. The internet has made all this possible. The brand name streaming audio services, such as Pandora, Spotify, and Apple iTunes, as well as iHeart Radio, and other audio players seem to offer the same services – subscription-based accounts for access to the entire audio library, extending into books, and even podcasts free of charge with some slight limitations such as commercials and play limits. The price of the technology is affordable and greatly lowers the cost of entertainment to the consumer to not only enjoy the music, but also own it at a lower price because of its global reach and increased use because of availability and interactive features. There is less bootlegging and reproduction of CDs to share music now that everyone has access to any song at almost any time, if they have cellular data or internet service and are able to install sound player software. This is a major advancement in technology. This advancement has truly given internet engineers a model to follow for the organization and sharing of media, as well as some applications interactive music play lists at an affordable price.

COST OF GOODS VS. WHAT IS GAINED OR LOST

PRIORITIZATION OF NEEDS, WANTS, AND MOTIVATION

If the loss of a \$1,000 device creates more havoc and loss of good business or family relations between two or more people, then it is obvious where a person places their trust and love – in its

attachment to devices and not in relationships. Similarly, if a user gets caught up in the legal process and terminology, such as “I let you use this and you didn’t return it, therefore you owe me and I’m suing you” and doesn’t evaluate the cost of the item vs. the loss of human relations, and costs to recover and sue vs. the value of the actual object, then they wind up spending more money and time on being correct, rather than just replacing the lost item with new technology for better ways of information processing, use, and *sharing*. Humans are not as easily replaced. The same scenario applies to data sharing across the internet and those bound by copyright and corporate proprietary laws. Just one occurrence showed a serious defect in personal information security which gave way to changes in use, storing, backing up, sharing, and securing information without paying a hefty price in products such as Insurance, LoJack, LifeLock, law enforcement, and court resources. It is not that the price of device tracking is more costly, it is that all products need a standardized process for security and recovery of lost or stolen assets along with a need and use assessment on both sides. This does not justify abandoning ‘permissions’ but does help evaluate cost vs. benefit in recovery, prosecution, and using the law to decide cases of technology, which cannot be managed the same as if it were a house break-in, a stolen vehicle, or just a \$1,000 device. It depends upon use, its impact, and the ability to replace, as well as the environmental factors surrounding the incident. Courts might see it as a personal property case when it is a family or personal violation and misuse of an information resource or a failure to appropriately balance the value of a human vs. a device. One must ask, are we, as citizens following the Microsoft Anti-Trust Lawsuit Process in the way in which we share and use computing resources – ending relationships because of device losses or because of an inability to trust that any losses or gains will be rewarded or handled, up to and including bad use, procedures, and perceptions of our *valued* devices and the owners intended use.

BUILDING A BUSINESS CASE FOR A “GREEN” INITIATIVE

GOING GREEN INITIATIVE, JUSTIFICATION METRICS

“Going Green” has different meanings in the Energy business, as well as Information Technology. Going green is often referred to in the Energy Business, as reducing energy costs by developing, buying, and using more energy efficient products, such as Energy Star Compliant equipment, or solar energy systems. In information technology, it means creating more efficient business systems or going paperless. Both initiatives create risk and require a long-term cost benefit analysis to see its return on investment because it is not immediate. Buying software or equipment to accomplish a set of goals to become more cost effective and efficient is not just a goal to increase profits and reduce costs, but also for environmental goals and higher-level initiatives to preserve and protect the earth and its resources. Companies are required to meet certain goals established for compliance with the law because of global initiatives, such as the Paperwork Reduction Act and other laws from the Environmental Protection Agency (EPA) such as Electronics Recycling managed by the Electronics Recycling Coordination Clearing House (ERCC). The ERCC provides affiliate members a forum to efficiently and effectively meet with state regulators to discuss the various aspects of their legislation, and a single resource for important information needed to make timely decisions that affect issues in multiple states (ERCC, 2021). Part of the initiative to create a better job management system affects EPA initiatives because of the server and storage requirement for documents. Reducing replication and multiple storage locations of data reduces the equipment

footprint when data is better managed, which reduces the amount of electronics and computers needed to service the process and industry.

WHAT DOES A LAYERING SYSTEM HAVE TO DO WITH PAPERLESS INITIATIVES?

The Network Application Layer and its uses in the areas of Telecommunications must be clarified to ensure the concepts can be of use and for whom. A network application layer is a conceptual depiction of part of an unseen architecture to simply show that it is separate, in that, not all people or systems see or have access to all pieces and parts. It can be easily explained as the user end, backside, and middle parts, but some systems are in fact more layered and complex, with interconnected parts spanning across many varied systems, regardless of type. This paper focuses on the Voice Over Internet Protocol System, a new computerized telephone system, compatible with older systems and devices. The complexity and design can only be broadly explained because it is a world-wide system, but well understood when an architect or analyst has either visual or technical on hands understanding of older phone systems, its processing and routing centers, along with new Network Technologies, such as Wide Area Networks (WANs) and the Internet. The Networking components used by the Windows Operating System for small offices and homes are simple Wireless Networks or connected Local Area Networks that use the Cable Service to connect to the Internet. The correct settings, which have become far less complicated must be correct on both sides, which is now as simple as account establishment, payment, and connection management, and easily completed with purchased or rented equipment. Other networks are more complicated.

APPLICATION

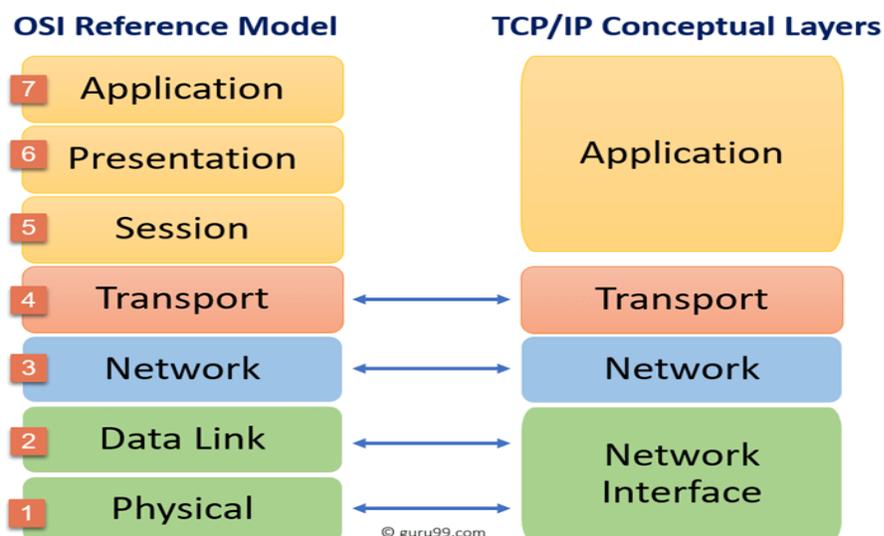
Application software is computing software designed to carry out a specific task other than one relating to the operation of the computer itself, typically to be used by end-users. Examples of an application include a word processor and a media player (Wikipedia, 2021). It also means the action of putting something into operation, "the application of general rules to particular cases (Oxford Dictionary)", in fact, the word application, has more than 3 meanings, which must always be taken into consideration when using information systems. The depiction of how these systems work, in a layered manner does not truly show "how it works" but gives a visual to understand they are separate and categorized. It is not detailed in the OSI or TCP/IP Model to explain how the Network Application Layer works. Because Data Visualization and Learning is the "single best way our brain processes information (Turban, Volonino, Wood, 2015), some visuals are presented, but nothing closely capable of teaching how a Network Application is designed and how it manages a telecommunications system. The Network Management Software on a home or office computer or device is typically the Windows Operating System or the Mobile Operating System with connections to the service provider.

THE INTERNET MODEL – TECHNICAL DESIGN OF CONNECTIVITY

Both the OSI and TCP/IP diagrams in the figure below show the Application Layer, separate from the Network. The OSI Model separates the Application, Presentation, and Session layers, while the TCP/IP Layers combine those layers. The Application Layer in some workgroups have referred to a “Network Application Layer” which is where and how the Network is managed, to include the Applications that run on the network. Layered systems assume they work on top of another, which is not an accurate depiction; they work interchangeably across each layer, simultaneously together with some requiring a specific type of operating system or device to use properly. Access controls were often running inside those applications. With other access-controlled systems, such as Windows Operating Systems, they are managed differently – on a top layer where access is managed on the TCP/IP level, rather than what is located on the host machine. It is not possible to manage security on incoming and outgoing traffic without in-depth knowledge of security protocols, managed on both the Application layer and the TCP-IP. Session layers were once used and visible by the users with Dial Up Connections, where internet connections were made using the telephone. Cable and other types of connections are constant, and rarely disconnected, so session management is rarely seen on the end user side. Session management refers to remote connections and timing when connected to other networks for file sharing, or virtual private networks to access information from other locations using remote software such as PC Anywhere.

Figure 1 - OSI vs TCP/IP Models – 2020

TELECOMMUNICATION NETWORK APPLICATIONS



A network application for Voice Over IP systems is a combination of software and hardware used to manage a phone calling network. Advanced systems include more than just the voice, it includes video, and other data streams, with potential to change and manage air quality and presentation of material. There are some

systems with potential to effect perception and mental awareness or expression; most only textually based data systems, created by Microsoft. To explain the types of expressions, one must first review mathematical equations and consider how information is managed and transformed from audio, to numbers, to data bits, and pixels, beyond just one's email address and phone number. Voice Over IP has great potential for the future, but because of its naming convention, it limits it to just audio systems, when it is capable of so much more, creating another deceptive system or the necessity to rename, perfect, and promote or implement another type of communication system.

Before it can become a more advanced solution, it requires documentation and explanation of how it affects perceptions, moods, health, and behavior beyond just the "wanted vs. unwanted, manual call blocking vs. advanced filtering database include/exclude, declarative programming protocols, and preferred methods of sending and receiving." Therefore, dissection of the term "application" is necessary because it applies to more than one area: 1) How it is used, and 2) What is used to obtain a position, and 3) Software used to manage an information system. It must be understood that one's position is vocalized as a decision or perspective with application to more than just a job, but also one's opinion or decision on a matter. Its resounding or scientific effects beyond a one-to-one communication system must be considered and closely evaluated for similarity and use, especially in global or regional broadcasting systems.

A simple scenario is easily understood by explaining how a system can possibly change the visuals of what is being sent and received when a connection or call is made. Much work has yet to be done on permit and exclude programming, as well as pre-defined or changeable preferences. As the system currently stands, simple still photography is used, with options to see live video. Additional work required is time, location, and information management of not only breaking the sound barrier, but running past calls or events, with management, using both physical human and computer memory. Telecommunications is and was limited to only phone conversations, but some more sophisticated systems can virtually connect for short sessions using time and date specific parameters. Health is of the utmost importance and consideration, due to its potential uses and value.

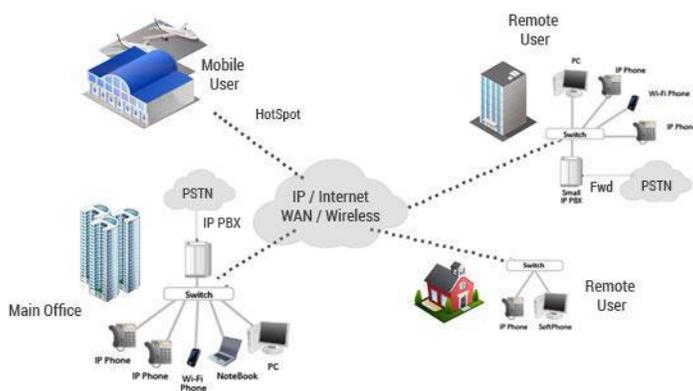
WIDE AREA NETWORK (WANS)

The application used to manage the network is not as simple in a Wide Area Network because it includes a larger region and more people. One of the best functions of a WAN is the ability to include or exclude unwanted contact or people, the dissection of information or culmination(s) and summarizations of information. The ability to auto dial and send or receive information across a larger region in consistent formats, which was often the function of a Television Broadcast. The Internet and other systems allow for better use and management of information, in multiple formats, such as TV Broadcasting, Screen casting, Telecasting, and Information Management. Statistics are better captured using computerized advanced database devices, but user controls must change to allow for better programming, viewing, and listening or communication experiences.

SECURITY

Security is advanced and dangerous because one layer could prevent another layer from sending and receiving traffic or omitting or sending too much or the wrong information. This type of security does not currently apply to Voice Over IP Systems (VOIP), such as Skype or Skype for Business, yet still available, complicated, and dangerous if the user does not understand application layer security from more than one perspective: those which the user has direct control on overall application access and those that the application has control over. Using the OSI Model or TCP/IP model to detail or describe telephonic access is complex because some systems include sensor devices, physical layers, with advanced data management systems to filter information, which includes air quality systems and other information that can be sent. Rather than to focus on misuse, problems, and risks, its best to discuss how the Voice Over IP System works on the Network Layer.

Hacking and unauthorized access or “information leaks” are of greater concern with software systems management because of the excessive number of steps and applications required to secure a system and the intelligence or competence factor of paid Network Management sites to protect, store, and filter information, beyond automated solutions. Eavesdropping, Wiretapping, and Hacking has been around for years, as well as stealing, misperception, and misuse of words, thoughts, and ideas, therefore extra precautions must be taken to protect information. In the past, hackers focused primarily on vulnerabilities in in the operating system and rooms to break into computers...now they hack applications (Panko & Panko, 2015).



*Figure 2 - Voice Over IP System;
Courtesy of Surveillance Secure*

Although available online as an application, such as skype, it does not run on the “World Wide Web” but must have Internet Connectivity to work. The World Wide Web is not the right location for such a system, in fact, they are more secure and better managed as Networked Software

Applications, on servers, and possibly host machines that manage regional call centers, using quality database solutions, integrated with various media formats for personal and business use. Voice Over IP has in fact changed the telecommunication industry, but positioning, use, and acceptance of habitual change and expectations must change. A cordless, battery operated phone with megahertz and range limitations are still used alongside wired VOIP systems, but with more advanced systems, there is potential for wireless VOIP with portable devices, using smart phones and small applications for better mobility and management. The critical factors are no longer the type of the devices, but the software and programming designs behind the system.

No longer are bulky and separate telephone lines used to communicate via voice only. VOIP uses the Internet Cabling, Fiber Optic, or existing phone line infrastructure. This integration allows

for greater use in communication mechanisms, such as conference calling, live meetings, information management systems, call tracking, reporting, recording, and with the use of advanced geographical systems, improved surveillance, and emergency management. How those networks are managed are done regionally, with various options of personal WANS, LANS, and MANS is still standard, with some more advanced solutions connected to business information applications or software systems for communications and data management.

EXPLOSION OF SMALL APPLICATIONS ON MOBILE DEVICES

The rapid explosion of Small Applications for Mobile Devices was exciting for Smart Phone users and an amazing accomplishment for mobile device operating system companies and application developers. It made a large amount of applications available at low cost, but nothing of great value and real intelligence was added for the business industry that did not require significant amounts of time in programming specifically for a mobile use and integrated with business applications or software. Our industry still operates on stand alone, manual entry systems. Some HTML 5 applications sort of changed that, using Internet Application Programming methods to make accessible on mobile devices. Industry has yet to provide a set of standard business tools and demands too much personal or professional programming for every business, still making IT a costly, yet highly profitable, yet vary dysfunctional and disorganized industry. The concern is the massive amounts of applications, security, viruses, and missed opportunities for integration, automation, improved business functioning and socialization.

An Enterprise Resource Planning System is defined as an integrated computer-based system that manages internal and external resources (Radovilsky & Bidgoli, 2004). It is a suite of Applications that manage business processes, finances, the supply chain, personnel, sales, and customer relationships. Not all resources are included in an ERP, in fact, businesses manage their processes and resources in several different applications, some connected to an ERP, which provides integration, making information available across an enterprise to both employees and customers. The system connects other information using data sharing techniques, sometimes in connected databases using queries and reports or Electronic Data Interchanges (EDI). Others manage their data in one system entirely with a few application connections, such as Human Resources and Finance or Geographical Information Systems (GIS). Because business processes vary by mission, operations, and what function it serves in society an out of the box standard application is not available. There is a bit of confusion associated with the system name because it includes the word “Planning,” meaning it is a system that is still evolving and is centered around planning and not around management or execution. The first precursor to ERP software can be traced back to the 1960s when it was used as a tool to manage inventory and quality control in large manufacturing organizations. Since then, it has grown to encompass many industries and job roles, offering unparalleled integration of vastly different departments. This functionality is what has come to define ERP software as we know it today (Thompson, 2020).

ERPs brings individual systems together, using connections and techniques to manage not just manufacturing, the supply chain, shipping, and delivery, but other critical functions of a business now expanded to other types of organizations, such as E-Commerce, Building Management, Physical Security, Asset Management, and even Finance. Succinctly stated, it’s the system that manages everything using automated processes to collect, store, automate, calculate, track, and

report information. The Internet has made it possible to integrate systems in multiple places, for many purposes beyond internal process, but now extends to the customer and other interested parties, such as systems with a Customer Interface that connects to several other regional or local systems, available anywhere, anytime.

Business considerations when implementing ERP are plentiful but managing priorities and expectations of human resources seems to be at the top of the list. An ERP is not setup in a day or even a year. It takes several months to evaluate and change business processes for the best approach in prioritization, data management, and efficiency to reduce cost and increase profits. Processes, policies, and job roles change and even customers because the implementation of these systems is done using a multi-objective strategy to find opportunity to expand business offerings, increase profits, efficiency, and lower technology and manpower costs across the entire world which often opens opportunity for others to create products and services that improve not only business performance, but improve industry standards.

These projects or undertakings usually involves the simultaneous use and eventual removal of old systems, changes in process, reduction of employees because of automation, and the requirement for not only technology investments, but also management of existing human resources. With new technology comes efficiency and automation, and potential disaster if not planned, documented, and managed correctly. The wider the project spans and the more systems involved, the greater the task. Completing these projects using a phased approach helps alleviate business uncertainty and disruption, as well as doing a complete prototype testing and incremental implementation of a live system all the way from Process Management Review, Change Management in both systems management and personnel responsibilities, as well as recording changes in processing, time, personnel, and satisfaction with the system from both internal users and customers. The notion of understanding, documenting and (if necessary) reengineering the underlying business process prior to applying technology is commonly accepted in academia and industry (Laudon & Laudon, 2003).

An ERP Defined: A Large Technology System that encompasses most, if not all business functions in a single location; A database system with linkages and access controls to the other applications (Savvy Smart Solutions, LLC, 2022)

- Standardized business operation, with customization
- Accurate and timely information, centrally accessible
- Multi-user, organization wide system with varying types of presentation of business information
- Layered and structured information delivery based
- Automated

Enterprise resource planning (ERP) refers to a type of software that organizations use to manage day-to-day business activities such as accounting, procurement, project management, risk management and compliance, and supply chain operations (Oracle, 2022).

Enterprise Resource Planning (ERP) is defined by Baltzan et al. (2013), as "a single IT system used by businesses in integrating information and functions in different departments so that employees have access to real-time information to accurately make a business decision" (Bisan Systems, 2021).

INTERNET ANALYTICS

These are part of an ERP System, but are typically called reports, whereas E-Commerce Store traffic information and are called Analytics, providing information on Internet Site Traffic and Keyword Statistics for multiple uses. Some reports are available on the product level to show sales or product visits and can show the amount of time a computer has spent on the page, not developing, but for consumer shopping. These are reports that record site statistics on visits, geographic location of visitors, time on page, and if configured correctly, can show integration with social media, other sources, and critical data linked to advertising campaigns and sales. They are provided for each Domain Owner and do not appear or openly state they provide data to Industry reports. These are automated, customizable, and somewhat standard with slight variation, depending upon the provider such as Google, Bing, and other search engines. They are often not enough and require editing using manual data collection, analysis, and reporting to show other information not included in the automated report, such as product statistics and sales related information. These reports provide no real valuable insight beyond traffic statistics and source, if configured correctly. They only mildly assist in understanding consumer behavior, product quality, sales, or direct buying and advertising statistics. Generally stated, Internet Analytics is a concept that can be applied to all Internet Applications where page tracking information is provided with an ability to customize for specific areas of business, both internal and external that need additional information, such software configuration changes, and other system generated reports specific to each business unit. Unfortunately, businesses are left to their own business and technical talents to create insightful analytical reports. This is what separates a Search Engine's "Automated Report" for site traffic statistics from a customized report built from an ERP System that manages internal and external information to include supply, delivery, ordering, and customer information. They can provide more, but because the developers of these reports are businesses who sell Technology, there are minimal Federal Finance and Information Security Policies directly stated that enables them to provide Industry standardized business integration that interface with all business systems, unless professionally contracted with an approved Technology Company. Those solutions are not called ERPs but are Cloud Systems which perform the similar functions, using Big Data Systems for managing common data sets used across the World.

INTERORGANIZATIONAL SYSTEMS (IOSS)

An interorganizational system (IOS) is a system between organizations, or "shared information system among a group of companies." The most common form of interorganizational system is an Electronic Data Interchange (EDI), which permits instantaneous computer-to-computer transfer of information (Wikipedia, 2021). The IOS concept is not to be confused with the International Organization for Standards, referred to as the ISO, but should be included because the goals of process standardization are similar and critical for designing and implementing solutions where multiple companies and organizations share system technology and information beyond a financial transaction. The concept of an IOS is to use systems and standardized process for ways in which multiple companies, such as the consumer, supplier, buyer, seller, distributor, finance, and personnel departments manage and share information using non-traditional data collection, sharing, reporting, and paper tracking of products on multiple levels of integration beyond payroll and the

supply chain. Advanced use of IOS' and process management are to set and improve standards across entire industries, not single entities. ERP systems make national and global information sharing and standardization far more efficient and possible. One simple example is an Address Database, or GPS and its current use is not as accurate or efficient as it could or should be, in fact, still requires much work in data entry and systems are still vastly underutilized. There is a relational database concept that is not widely used, which is to enter data once and use it multiple times, without the necessity for 'retyping.' This is often a 'data entry perspective' and was thought to be resolved with the use of an EDI with a Central Database Source owner with connections to manage information, which is the reason IOS' exist.

In E-Commerce and other online systems, such as Uber, Grub Hub, and other delivery systems, information is not stored, re-used, and is often repetitive and occasionally inaccurate, requiring a user to re-enter for each transaction. Delivery is reliant on the Global Position System (GPS) and the Financial System used for payment and has little integration in the Business Systems beyond sales and finance. These are in fact IO systems. The same problem occurs in multi-business Interorganizational Systems. In the Food Delivery Case, it is an individual ordering transactional system, when it could be a better IO with quality data management and storage solutions. It unfortunately is not classified as an IOS because it is not a business-to-business system, but could follow similar standards of 'regular, reoccurring transactions, with better service and data management,' beyond just GPS Tracking, but also basic GIS systems, use reports, and improved service standards for delivery, customer satisfaction, and personalization. While the Fast-Food Industry is standardized, their mobile systems are not and are changing with a new delivery model. A truly effective Inter Organizational System that truly serves Industry, Businesses, and Customers provides effective and efficient information for multiple uses to all parties of the industry and not just the business itself. Currently, a Mobile Food Ordering Customer cannot quickly review all Food Delivery transactions in a single location in a single report without manual calculation and neither can a Fast-Food company review activity by customer, at least not without good electronic records management systems and reports and if they cannot do this, then they cannot effectively run a good Customer Loyalty Program or understand and adapt to their competition.

Consumers are forced to visit delivery sites individually to order, review history, or do manual calculations using their bank account. This feature is not only critical to American Budgeting and Finance for the Consumer household, but also Healthcare, whether its managed locally, regionally, nationally, or globally. While Food Delivery Service Solutions such as Uber-Eats, Grub-Hub, and Door Dash has made food delivery more convenient, servicing multiple companies and regions, it falls short in its IOS for both the business and the consumer. The same concept applies to all other E-Commerce Industries, but the hope or possibility is that IO systems can fix that through data sharing and consolidated system generated reports, using sound privacy, and sharing options for consumer choice, availability, advertising, finance, and effective delivery systems. There are obvious standard practices for the Food Delivery System but could be improved now that centralized technology is there to track and manage ordering, but it needs to be taken a step further and fit to the industry and not individually catered to a single business, consumer, or franchise – or limited to ordering and delivery.

PARTNER MANAGEMENT SYSTEMS (PRM)

According to G2 Learning, Partner management software, sometimes called partner relationship management (PRM), provide businesses with tools to track sales partners and affiliates, and for those partners to communicate with and receive support from the business. Partner management software provides a private portal for each partner, where they can access documents, campaign materials, market development funds (MDF), opportunities, and deals (G2 Learning, 2021). Gartner defines Partner Relationship Management (PRM) applications as supporting channel sales personnel — that is, channel sales leaders, channel account managers, channel program managers and channel marketing resources (which also include the sales partners' resources at all levels) — to devise strategies and provide functions that control and ease joint sales activities. Technology application reviewers such as Gartner and G2 Learning define PMS' as for businesses to manage partnerships for deals and market development. They are collaboration systems, which are customized document and communication tracking applications with a standardized process for what they do. Both G2 Learning and Gartner offer a list of peer reviewed applications for use, each requiring installation, testing, and most likely process change and adaptation with special teams to implement and manage. It is further defined as applications that ensure an effective execution of an organization's channel management strategy by enabling close-knit integration with the organization's CRM, ERP, and marketing automation applications. Furthermore, they enable an organization to put together a robust application framework to drive and grow channel business in new markets or new geographies, along with their indirect channel partners. Finally, PRM applications enhance channel collaboration and empower the channel partners to drive channel revenue and improve the brand image of the organization (Gartner, 2021). Salesforce.com is number one on the list of PRMs at Gartner. Business partnerships might vary in industry understanding and might not be the type of partnerships that are considered in Mergers and Acquisitions or might be the Supplier/Vendor, which might be managed completely different than an organization that has a Partnership Organizational Structure such as a Consulting Firm, but their goals might be the same. A tool such as Salesforce.com does not fit a technical need where internal business partners have business dependencies and must develop their goals and deals together to grow and maintain their business. It largely depends upon how each endeavor is viewed – as a proposal, project, sales, deal, transaction, or market development investment. An application such as Salesforce does not provide the market research, findings, business needs, or manage investment strategies or processes by which new business opportunities are identified and invested in. Those are considered programs or projects and managed differently, using Corporate Strategy, which is not often available to the public or even shared online for competitive reasons.

An E-Commerce provider might use a PRM to manage its partners and affiliate programs to organize products, services, monitor earnings, and other technical data. Affiliate programs often provide their partners with a tracking application to monitor agreements, sales, and other information, eliminating the need for a separate PRM. It is also sometimes easier for providers to manage these partnerships in a basic list, relying on each partner to store the sales or other information, just because separate PRMs would require additional duplicate data entry. For example, Savvy Smart Solutions, LLC joined the Amazon.com, Rhatuken, and Microsoft Affiliate Program to make commissions from product sales. Using a separate PRM to manage these relationships was not necessary because once the partnerships are created, the information is automatically managed and seen by financial transactions, where nothing else is needed. These

systems are helpful and provide opportunity for freelancers and online marketers to make money on social media or other networks, but not without some level of technical expertise, user base, and product knowledge.

Enterprise Resource Systems (ERPs), Analytics, and Partner Management Systems (PRMs) are three completely different types of systems. An ERP is process driven, while analytical reports are autogenerated internet traffic reports that require technical skill to obtain, read, and manage. Partner Management Systems vary depending upon the type of partnership being created or managed, making several variations in application where no one application fits all types of partnerships or affiliations. Interorganizational Systems (IOSs) are systems designed for multiple businesses. All of these system designs and functions are dependent upon the size of the business or organization, how many other businesses, people, processes, and organizations it deals with, and the location and management of data sources, including both inputs and outputs.

DIGITAL BOOKS AND THE PUBLISHING PROCESS

Internet E-Commerce Systems are vast and varied depending upon the organization's purpose and type of business it conducts, for example, the Government does not operate and perform the same function as a startup, home based business, or an established E-Commerce Vendor or what industry calls "Big Box" shopping sites with massive supply chain requirements, but they do share the same process, need, and common use of Digital readers, writers, sellers, including all kinds of talent. Outlining or asking for detailed discussion of the utter vastness and variation of such big words and projects like "infrastructure, managerial ethical responsibility, and web development software systems" is like asking a book Author to describe what is needed to sell ten million copies of someone else's book, while you pay an institution to ask permission from your instructor to use a Human Subject in your non-published work to create a success formula. Just like the Big Apple is not comparable to the value, size, and for some readers, the importance of the children's book: Johnny Appleseed. The associated memories and selective memory or involuntary omission of content and feelings of such an experience as a 43-year-old recollector of the previously read, national popular publication prompts study area of intelligence, recollection, and name cognition, books, and use, in conjunction with a major city, world changing event, and location of powerhouse of outdoor digital displays like New York, New York. It strategically comprises long term planning and purpose for the digital book industry and what is called digital display of duplication, protection, excitement, travel, technology, emotion, and disappointment. The topic and reference to the children's book is important and insightful because of its title reference to technology brands, names, and common memorable and widely known popularly used phrases and actions, such as "An Apple for the Teacher," or the false or non-proven belief that an "Apple a Day Keeps the Doctor Away." It's significant reference in purposeful scholarly action and demonstration of the convergence of educational, professional, and technological goals with more than just the self or specific task of answering detailed duplicative technology essay questions which cause irritation. The goal of the writer or author is to be understood by the reader and to complete the assignment, fulfilling a long-term personal goal with a different set of experiences and expectations, conveyed to begin or pickup on existing studies with minimal or no relevance and correlation, other than irritation to the big chosen word "infrastructure" and irrelevance of Strategic Planning to the first set of essay questions.

Many people who make up parts of an organization prioritize their actions and change them based on importance, attempting to balance and devote time, and effort into different things, people, places, of different ages in various stages, and stories, often unmeasurable and mismanaged using scattered chatter, chaos, over or underdoing it, or just quitting altogether. Other people use keywords to psychologically ill or frustrate writers and educators. Too much or not enough, how is it managed, measured, and how does it compare? Is it business, technical, strategic, accidental, or done on purpose to persuade or purposely cause a good person to fail or to force an ugly reminder of a bad event? I can provide ‘detailed explanation of infrastructure’ but my perspective is different for each project and general relative discussions cannot adequately address or answer what is being asked and again, it causes mental anguish.

While the Internet does allow for the buying, selling, reading, sharing, and editing of the book titled Johnny Appleseed and new digitally presented material, measurements of consumer interest, task leveling, selective or involuntary memory and keywording using ‘infrastructure for both the human and computers psychological programming involved here are separate, but connected, geographically dispersed and varied, and are managed separately on different timelines and schedules, each in a different place, with time references, and purpose, with varying degrees of psychological harm and suspected as a ‘bad reference, start, or strategic deterrence system used at will ill with Will and with ill intent – or as bad as saying you will and then don’t.’ Free will is in question, thing many should not have or need. Each person, place, or thing does not experience, value, or remember the selected book or act of reading, learning, listening, processing, planning, and, knowing or unknowingly in full awareness during or after the task, plan, effort, nor do they perform the same function or do it the same way, but it repetition and irritation is clear, as well as the perceived threat of harm by the use of International Technologies in reference to publishing digital material where certain ‘job offers were made and follow through was prevented.’ Both the Architect or Technical Expert, which might also be the reader spend the same amount of time in selection, checkout, reading, browsing, reading, understanding the story, or providing a book report are varied in user experience, task, process, plan, action, and some are just shockingly gifted.

Just like the education system, designing technology or discussing the infrastructure necessary to accomplish a major international task has varying levels of requirements and purposes for use, sharing, reading, comprehending, and reporting, with varying languages, monetary scales, and levels of difficulty, as well as the amount of time to respond, organize, and complete tasks to convince another person with acceptable proof. There are also variations in demonstration and proof of knowledge and comprehension and or recollection conveyance of read or personally experienced works, where results vary based on time lapse for the human’s mind, as well as delivery of the book, time to read, digest, learn, compare, scan, detail, and provide general answers to questions based on personal or professional experience. There is something called false tasking and misuse, which will be described later, to include biological cloning and other government business ‘infrastructure’ financial adventures and experiences. The variations depend upon people, geography, demographics, requirements, and whatever else sparks interest or the necessity of specific book keywords, topics, or whatever reference point is stored, recalled, and used as educational threats, deterrents, or reminders of desirable human and technology goals that resulted in unfavorable outcomes. Those variances in purpose for book selection, source, and price depend upon the tasker, the age of the purchaser, the reader, the version of the book, and the level of intelligence, or excitement for the author, the book, its purpose, and contents in relation to the self and others, and the expectations surrounding it. Two pages covering a person’s experience, a phone interview, and an in-person meeting which included a 500 mile flight, does equate to the reading of a 200 page

document, or the understanding of human attachment, responsibility, time, energy, expectation, and legal impacts on government tasks and extension and acceptance of written, verbal, or other offers of employment or earnings and/or learning(s). It also does not promise if other conditions are denied, not officially or properly presented, or shared, such as legal requirements and requests changes in dates, timelines, and potentially hidden planned, unrevealed, later suspected, criminal or other dishonest motivations, which include inhumane treatment, fraud, greed, and corruption. The job interview and offer process is not made solely on one point or word – just as this paper cannot be solely based on one keyword, such as Infrastructure, but the correlation to professional experience is present.

Memory, recollection, success, and sales of study related materials, findings, and measurements of success might solely depend upon the book, year of publication, size of the visual cortex of the reader's brain and not the reader, length of the book, or the time between reading and recalling its details 40 or less years later. Be reminded, there are two reference points, books, and strategic plans and priorities under examination, with a vast seemingly unfocused study area, which is perhaps a goal of old competitors seeking to prevent the success of a talented professional and success minded author student and planner affected by several events that directly and indirectly are connected in correlation and connection with the timed publishing, injuries, damages, and the use of certain duplication technologies in people and places. The details, participants, and relative points in time, injury, relationship, occurrence, will prove direct correlation to hidden motivations and agendas of those seeking to cause injury and inflict bodily harm to 'give the impression of cooperation and true human support, trust, caring, and communication, but later proved to be mentally incompetent and were improperly used to inflict unnatural harm based on abnormal monetary motivations improperly 'coached' or employed to prove measurements and ideals of financial stability, military insurance claims, legal tampering, fraud, improper use and poorly designed systems. Comps or comparisons for real estate does cannot be effectively compared to eating or taxing a victim of psychological warfare, or directly correlate to the sound of eating fruit on an airflight to Kentucky, although structurally, K is added, as well as the Corporation of KPMG, and one of the kinetic study areas and members the technology and irritants in question, used metaphorically to describe sound irritations and psychological misuse or false representation.

This is similar to a Navy co-worker/friend with two kids whose husband served in Fallujah, near Iraq while she was pregnant; after her 2nd child, reported she was graduating college with a bachelor's degree in Kinesiology and planning for her Masters, yet makes odd statements about the health of those she speaks to, calling them "manic" because she thinks or believes she can be supermom, veteran, and hero, while creatively hurting others because it's her chance to shine while her competition suffers from Abuses of Power in Family Court Systems. No one ever asked how the woman felt, having lost her 18 month old baby. Their next phone call (almost 10 years later) was a repeat of old tearful conversations about the co-workers' happiness – this time not concerned if her husband was going to be killed in combat or even ready to discuss his well-being and their success as a family or anyone else's. Is she an automated machine of tearful and self-centered sadness?

What does this have to do with "Infrastructure?" Kinesiology is the study of human movements and exercises, yet she showed up in person, overweight, claiming "we" are overweight, not able to only include herself in her insults, which are patterned, and duplicative insults made by others to a woman who wore a size 2, 4, and 6 in Women's clothing. The US Military does not size its clothing, perhaps this is what has caused their dysfunction and confusion, or the fact that they could not make

their own personal clothing choices or professional and personal decisions by the age of 25. It's not just a 'word' or 'keyword' selection problem, but mental dysfunction in groups where problems represent themselves in others – continuously until it reaches to the point of War, Gun Violence, and other crimes. If a person has a degree in Exercise Science and physically goes to college with two kids at home, it is expected they are to be in good physical shape.

The family bought a heavy 4x4 truck to haul around four wheelers and move to New Mexico with two infants/ toddlers so her husband, a Veteran can work for his Dad as a Mechanic. While shallowly listening and kindly responding, the answers or responses are “great, good for you” while the internal self says yeah, right, you are a sick woman or have become accustomed to lying and abusing to be accepted as another military success story that was initially terrible or holding on to life and its responsibilities by a thread. Technology helps us become more aware of the world's offerings and gives us freedom of choice, but very little ability to block content for the betterment of the world or to help plan, lead, and direct others in how to be a more compassionate, caring, and less self-centered individual, dysfunctional, injured, or odd family.

Infrastructure are those things that must be in place for something to work correctly, often referenced only with Technology, but used here as an analogy that purchase plans must be well thought out before, during, and after. Be not totally self-centered or think you must attack the psychological aspects of what Technology does and can do. Routine patterns, consistency, and predictability is good, but not when stuck in negative patterns of abuse of the self or others; the same is true for patterned and limited considerations for the creation and management of technology – which is one of the best parts of what we call innovation. Thankfully, this book is not about warfare, but Technology wars, as well as many others are considered, especially in the gaming industry, politics, and Hollywood.

It is patterned and inclusive, potentially strategically aligned with ‘*infrastructure*’ and the problems associated with other problems, attractions, injuries, failures, and features of a bad ‘climate control’ threat and harmful system to cause injury or create evidence of time, movement, exposure as represented as forensic proof in digital photography or ‘drivers’ of such harmful misuse, misspelling, duplication, ignorant attraction and dismissed duplication in subject participants that proves ‘human awareness’ and personal choice and total lack thereof. For example, I cannot separate a man and then in the same week date another man who drives a similar truck of a different color, without considering it or making a mental note of reasoning and rationale and cannot do so without seeing it as more than just a coincidence.

Why dump one for another? Is it based on color, monetary potential, sex, abuse, dissatisfaction, or the future hope that the next driver will love me better because his truck was red and my ex-husband's truck was green and it commonly exited the freeway in San Diego, California at University Avenue, which is what set the motivation for the driver of the truck to go to school online in New Hampshire. The new husband or suitor exited the Interstate Highway in an upscale neighborhood, who was employed or set to inherit a large beach home as soon as the elderly grandmother moved out of the space, died, or was killed so his new girlfriend could move in. He was a highway motorcycle racer and relied on his parents to drive fancy cars and crash into new female surfers and demanded to fix the product without concern for the woman's near-death experience. I, ethically, could not meet such emotional and physical demands of abandoning concern, compassion, and basic comparative analysis in selecting or destroying a life partner and her friend to fulfill my desire to live by the beach and be loved. I could terminate the relationship based upon distance, the man's devotion and employment to his rich grandmother, but I'd have to question

motivation, legalities, and balance it with honest needs of physical passion, love, ethics, responsibility, and what is physically doable for me to obtain love, romance, a million dollar home, and future with a new man who drives a truck of similar make and model, only different in color. Self-awareness forces this and so does vehicle comparison, selection, mileage, feasibility, and reality. The girl actually accepted a job driving over two hours away in Southern California traffic, only to quit two weeks later, unwilling to make copies for a major Technology Consulting Firm. These are why decision support systems and feasibility studies exist, as well as Insurance, Criminal Law, Contract Law, and good honest dealings with friends, family, and co-workers – as well as the “Block” button online.

If the motivators are promises of money, and based solely on money, then my standards would be skewed, unless other areas of satisfaction and expectations were met. Those will be reviewed and the results will reveal a long term study was conducted to show a person’s greed toward money and possession in choice over health, welfare, and reality of what is considered normal, feasible, and responsible while traveling in legal or illegal statuses, as well as differentiators in military systems, law, love, and final outcomes of bankruptcy, divorce, and asset destruction or increases to show advancement of greed for possessions alongside the reduction of human compassion and ethical relationship support, expectations, and outcomes. Technology is important because it is used to communicate, help people be more organized and better at their jobs, produce and share photography, which has been proven to be falsely represented and misused, just as it has been often used to falsely represent or perceive happiness, and other systems of communication.

Not all photography or information sharing systems are bad, in fact, we have some of the best technology available to communicate across the miles, at our convenience. With the internet, it is difficult to convey human emotion, as well as understand true intent behind typewritten works. Information is often short, text-based exchanges, different from in person communications, meetings, and phone calls.

Humans should be able to see color variation just like computers – but some lack in ability to compare, as well as the ability to make human centric decisions, just as others get caught up in the color of their skin, their socks, ties, wallpaper, while people starve and cry themselves to sleep at night in honest pain. These are the humans that kill unknowingly, sometimes justified, that cause harm without compassion, or ability to know and understanding choice. Some lack not only awareness in vehicles, but they even go so far as to kill their own people for monetary gain and are willing to kill others to maintain a certain style of living, bank account, social status, or sense of ‘their own’ understanding of happiness and understanding that is not aligned with what is considered socially or humanly acceptable. They often seek to leave the planet, to escape reality, or to conjure up ideals. It’s almost like the mouthy rumor creator who shares that people who drive red cars are more likely to get a ticket than other drivers. True in one case and not true in another. Let’s not be the victim of the odd statistician, but do our best to follow the law, if the law can in fact be followed and it’s not designed to purposely harm and limit qualified learners and professionals from enjoying themselves safely.

Systems will be categorized, and data will show the direct impact of human relationships, cloning, communication, duplication, psychological and financial systems, breakdowns, and other legal entities involved in the failures, fault, where injuries occurred, as well as the removal understanding and increase/decrease of non-human compassion, was used and ignored, causing severe physical and psychological injury. Sexy prowresses still sell, online, on TV, and are still heavily enjoyed as ‘nice to look at’ with knowledge levels, rarely measured in depth. It’s true that

some abilities were present to prevent harmful acts but were purposely ignored. These systems shall advance to show success criteria in human prioritization in relationships, systems, and content where certain named companies and individuals were threatening and physically present or indirectly present, paid directly or indirectly with the use of Government funds and filed as business *Infrastructure* projects – emphasis placed on ‘vehicle’ and the type of ‘truck’ due to the government contractual use of the use in contracts, where terms and conditions are often signed, sold, accepted, and delivered in accordance with the law. It’s true that criminals can go on living in the world, on the roads, and online after they thoroughly hurt, hospitalize, torture, and nearly kill a decent, respectable, and loving woman. This is sad, and the reason protection and privacy are required, at least until those people (the ignorant, wicked, negligent, and unjust) are removed from the world or scientists find a way to fix it, without relying on some single man named Jesus.

This area includes biomedical engineering, communication systems, basic brain functionality, relationships, expectations, and natural human understanding in humans and computers in long term competitive relationships. The research will also use government and industry specific people, experiences, and human subjects to prove the necessity for criminal prosecution and immediate stop orders for access to technical devices and advanced communication systems, which shall prove monetary necessity, punishment, pain, pleasures, and rewards, along with the use or absence of necessary or preventive measures that should’ve been taken against many to protect another group. The selected participants will not be informed since the damage is ex-post facto, but the research will prevent future harm and advance our understanding of technology, as well as how certain sets of physical characteristics based on preference for physics, pleasure, love, sex, money, power, prestige and progress, over mental, physical, spiritual and institutional dysfunction are used individually and are further damaged by human dysfunction called ‘selfishly guided false beliefs and motivations.’ The research is directly related to Neurology, but will not dissect or compare the interior physical brain size, competence, or preference to force evaluation of a child vs. a parent or a chronological age of one female in comparison to another, accept where specific matters of personal and human ethics, health, and legal responsibility merge to establish a baseline of expected human behavioral response to life, learning, technology, and the punishment reward system defined and used to explain pain and pleasure, choice and force and in a hyphenated word self-discipline or single word “discipline.”

It will not force mental anguish or suffering on the writer, its readers, or test subjects using chaos or other negative practices that have been known to cause pain, discomfort, and suffering, but the expectation has already been formed that those that have found to be the cause of such discomfort and unintelligent lifeform who continues to operate, communicate, and profit online shall be removed from the researcher who believes and can prove they were involved in the injury and can clearly convince the review panel that they should not have access to freely transmit or publicize competitive, professional, or personal information that causes mental harm and frustration of the student/writer and organizer of the study. This type of restriction causes a learning dysfunction and an inability to close the matter, close off bio-hazardous areas, solve long and short-term problems, and grow in love, wealth, intelligence, and internal strength or in a word – recover from damages caused by negligent workers and dealers of unwanted and unhealthy content and contracts.

The expectation remains that humans improve over time and Mothers expect their children to be smarter and more competent than themselves, but science attempts to force statistics and place physical restrictions that prompt reaction in human emotion, intelligence, and understanding. Biological cloning using relativity and genetic or hereditary brain dysfunction is no longer a natural

theory of duplication. This causes shifts in prioritization, response, protections, terms, conditions, purchases, planning, necessity, feelings, and importance. Am I being replaced? I cannot replace old feelings and voids from not being able to physically hold, touch, or reading an object such as a vehicle or book to or with a person and those activities used in conjunction with each other are varied and dependent upon place, amount of information, focus, and responsibility, which is used to understand accidents and other potential information processing centers. There are many study areas and beyond beliefs, both of which belong to Intelligence Studies based on Digital Sharing and the use of new and old information to help or harm. It's easy to see variations and changes based on age and other 'characteristics,' where some are egotistically, wrongfully trusted, and later revealed to prove severe human disconnect in basic human functionality which often leads to harm and indifference to injury or the wonderful creation and change those babies, infants, and new possessions bring, as well as how they are evaluated and treated differently and sometimes the same. Truly, we do not have good test instruments for intelligence, but we might be able to prove criminal negligence using shared written tests, publications, using traditional American Values and Standards in relationships using studies with assumptions, systems, physical distance separations, and proximation reactions to specific life changing events, such as child birth, new jobs, long distance driving, auto driving, learning, and prioritization, as well as ignorance, negligence, and disregard for those people, educational systems, and the technology we've abandoned to forward a humanless convenient and costly automated existence for the rich and powerful.

The scientific questions are vast and need to be narrowed down. Detailed answers to 'infrastructure' can't and won't be relevant, determined, useful instruction nor will be detailed answers be provided because the study area(s) do not align with student professional and educational goals – I'm poor, I survive on government loans. Infrastructure is an ugly repetitive unwanted use of a big word, associated with an employment failure at a specific time of injury, applicable to the point in which job experience, goals, legal system, and physical separation that restricted the 43-year-old reader's ability and one who previously experienced injury in the involuntary recollection of the details or reasons for failure to remember the plot of Johnny Appleseed. The reader could've had a different experience if given the opportunity to enjoy the favorite novel with her own child as an adult but was forced to rely on 40-year recollection. The legal system prevented the enjoyable activity, just as the legal system prevents prosecution for criminal negligence and the promise of protection and the exercise of basic rights built on laws that we cling to, promising protection, equality, justice, and govern our activities for learning and managing systems that produce our most cherished learning tools. What prevented the reader from remembering the book and what caused 25 versions of the book with different covers, available online?

The choice and reason for "Johnny Appleseed" will be provided later, when the human military study participants are listed and when the strategic goals of the study become clearer. It is critical to the study because it includes 'grandfather clauses' and genetic naming conventions where two people in military medical professions were involved who used similar names of different ages, in medical industry while battling claims of false allegations of 'unacceptable mental pathologies' and ability to love and be faithful to a wife and female or husband and wife of a paid Armed Forces person. It will review commonalities, characteristics, and basic human evaluations of ethics, decision making abilities, motivations, and discoveries, which will advance our understanding of such behavior and motivation, beyond a person's choice title selection, romantic or educational pursuit. Many rely on 'biological or hereditary' assumptions of how a person will turn out to be, grow to be and what professions they will most likely pursue, as well as how long they will live. While statistics are fun and mathematics are nice, Cancer is not; nor is zero compassion or odd

requests for compassion and sharing ailments with expectations that others will drop everything to nurse a psychological need that was improperly presented in the wrong place at the wrong time with the wrong person or with the right person(s).

The research is relevant and important in neural processing because it is suspected that the co-location, complaints, and dysfunction of the employed health professionals were falsely accused and harmed by a person who will be proven to have no human ability to love or communicate effectively, but harmed more than 5 humans without understanding or awareness and was promoted and paid to work in the Technology industry with an abnormal psyche in a quest for millions of dollars in love, financial security, emotional reward, without punishment or pain, in a patterned offensive and criminally negligent manner. The subjects used in the research will show direct biological cloning in the use of names and common techniques to block, ignore, or react to emotions and activity during challenge of mental awareness and make human dysfunction blatantly obvious to the point of hatred and sickness when exposed. The human subjects are compared in education level, parenting responsibility, law, and technical use and evaluated on human interaction in social media, in comparison to others who were involved in timed set scenarios. This is the first published attempt to summarize formal institutional goals, understanding there are competitors seeking to stop the review to protect their own abnormal psyche, as well as the demand for the removal and elimination of old repetitive techniques, such as ‘clouding, deterring, delaying, or seeking to confuse to prevent financial and gains in elements that show prosperity and improved health of the previously injured.

Strategic Planning involves the process of separating the thinking from doing or doing the preparation tasks to complete a mission or goal, which is either set forth by an organization or a person within one with a specific purpose or set of goals. People can strategically plan without being part of a company, business, organization, agency, institution, or all the many other words for human’s roles and associations or things they may be paid by, receive money, or be participants of. Making the book titled Johnny Appleseed available online, anywhere, anytime, by anyone is a process that requires Information Technology Strategic Planning. It would be more enjoyable to listen to a 3 year pronounce the word infrastructure and seek to read his mother’s technology summary, but for the sake of this paper, it will focus on Digital Media Systems. Johnny Appleseed is not the focus of this book, nor is a book who talks about another book, or festers on past co-worker psychological dysfunction. The book is about how to use Technology to prevent and possibly fix the system that allowed these things to happen and for computers to understand us, while we better understand them, and learn to design, develop, and make not only new systems, but friends, progress, and enjoy life’s adventures with honest emotions, feelings, data, and decisions, as well as opportunities for others to grow and learn.

Searching online for a/the book is prompted by something or someone, either a person or an assignment, which has a due date, but publishing that book for purchase or in a machine readable, downloadable, purchasable, or sharable format is a task for another type of person who understands how to meet the requirements for that type of material to fulfill a need, requirement, or obligation defined as another purpose – separate but similar. The two purposes are categorized as internally motivated or externally motivated tasks that are required and will be used to show brain functionality omission, processing, and perhaps early Alzheimer’s or another selective memory function that is applicable and directly relevant to those present during military service where communication system injuries occurred, continued, and some beliefs, expectations, and goals were set. Perhaps no one will read it, or this book at all. We do know for a fact that the Internet enables greater accessibility to the missing information but does not assist in the replacement of the missing details,

without re-purchase and re-reading, where the experience is guaranteed to be different, potentially worse, hurtful, and therefore avoided, but that again, depends upon timing and what is going on at the time of reading and purchase.

“You’re just a number” “You’ll never amount to anything if you leave” “You’ll never be trusted again” “You’re not fat, the only thing fat on you is your XXXX.” “Rudimentary Disabilities” “No one will ever want one of those” “You’re not smart enough” “Are you a Type-A Personality?” “Are you an ENTP or INTJ?” “No One Is Available”

AUTOGENERATED NUMBERS VERSUS TITLES AND CONTENT USED IN MEMORY

TESTING AND RECOLLECTION

Books are categorized and identifiable by the International Standard Book Number, but not many users memorize an ISBN and use Google to find Johnny Appleseed. Many might completely overlook this standard assigned number and search by Title to find the book and results vary. To some, it’s very important, exhaustive, and to others unimportant, neat, and respectable accomplishment. Some seekers might use an online search engine using the Title, the Author, or the ISBN, while others might go directly to a book dealer, such as Amazon or their local library’s internet site to locate the book. It is safe to say, no one seeks to memorize an ISBN.

Each option or route to finding the book is performed to fulfill a different purpose, often brought on by random events, the self, or the demand of an institution or other mutually agreed or forced rational or non-rational non-purposeful reason, at the choice of searching by Title, Number from typing or copying and pasting, or by Author, and some are provided direct links. The purpose is different for technical experts who build or are tasked to provide a mechanism to access a book, whether it’s an individual book for sale with a credit card or for checkout with a library card. Goals vary, just as healthy and criminal minds, investments, reading preferences, actions, and agendas change. Contents and success of the books varies, but some expectations are expected, as a healthy human and that of a non-healthy human, just as writing skills can be evaluated at different times to show regression in intelligence and skill in comparison to documents officially written and shared at an Online Educational Institution. These are various Strategic Goals of the Study based on vocal compliments of others in position of power, authority, in pursuit of similar goals, working on similar systems, with vastly different skillset, family dynamics, paychecks, and physical characteristics. The study areas expand to the effects of vocal commentary using compliments, with strategic questions to identify reading and behavior patterns or to detect truth and motivation in others where values differ and are measured on multiple scales. Depending upon the technology requirements and dynamics one can negatively affect another, fund another, support another, or harm another, which is why serious research must be done is assessing academic skill, intelligence, understanding, and developing expectations for human compassionate responses in both personal, professional, and educational systems. As more study areas and situational references are introduced, the study participants grow and so does the University involvements, as well as potential falsely documented efforts, endeavors, and activities in work, investment, interest, which harms more than just company and industry relationships, but forces the necessity for research, documentation, and inclusion.

The goals are to provide access to the book(s) and for users to access the book, where the strategic planner or architect might not actually access or read the book themselves but enable others to do so. Both groups are not required to understand the ISBN, which is a standardized system of

organization designed specifically for published works, each with a different number for each format such as e-book, paperback, and hardcover, as well as the author's version of the published work. It is most likely taught in the educational system where students learn the foundation of the Library System and how to quickly access books online, but not many spend time in obtaining one.

Few or only industry professionals understand the process of obtaining an ISBN, its purpose, use, history, and importance. Others are forced to learn it by viewing online resources that teach about the system and how to publish officially recognized works available. Explaining the purpose and creation of an ISBN in relation to Amazon.com's infrastructure necessary to become an International Leader in Digital Book Publishing and Sales with its own system, changes the requirements and experience, explainable using two perspectives – the Architect and the Author. The ISBN is visible and commonly referenced as an easy way to find a book using a numerical data sequence. Not much strategic planning is involved in deciding to checkout or search for the book online, but much planning is involved in the publishing of the book for sale or other use and much technical process is designed around obtaining the ISBN, Copyright, meeting publishing requirements for digital formats, print requirements, distribution, and digital copies, as well as the software used to deliver the information.

Strategic planners, Publishers, Authors, and E-Commerce Digital Architects do not *all* have to obtain ISBN numbers for their published work, nor do they have to verify ISBNs to sell an author's work, although they must adhere to International Copyright Laws and Restrictions or face strict fines and penalties. Designing the architecture of a Digital Store that sells or offers access to an e-book or digital copy of a book with an assigned ISBN number might not be as time consuming or complicated as publishing the book and obtaining legal copyright for non-library of congress, copywritten works. All parties or agencies and consumers are not all equally knowledgeable and skilled in the technical and legal requirements of copyright, sharing, privacy, protection, and infringement, nor are they all skilled and all-knowing in the infrastructure required to supply massive amounts of information printed and stored in libraries from the start of the printing press. Traditional or Print and Digital Media are two separate technologies with different tasks and separate functions, just as Law and Technology are two separate disciplines, yet critically dependent upon each other.

Providing a system is a task to give access or a means to complete an online task, while the other is to strategically plan to publish an official digital artifact with an ISBN and copyright protections for sale or common use and distribution and the planning activities and task levels are so varied. Using the common idiom of 'comparing apples to oranges' is perfect and valuable for 'referential' numerical objects, technologies, processes, and widely known and popular uses in three respectable areas: Health, Technology, and Education. An apple is a fruit and so is an orange, but the book titled Johnny Appleseed's retailer does not perform the same function or share the same level of interest, talent, or skillset that the author, interested party or required reader does in designing the mechanism to sell or promote it. They all three have fruit references, with different purposes, meanings, ways of obtaining, consuming, and enjoying them – each with different benefits at different costs. The same problem exists when trying to explain the details of the 'basic' infrastructure for marketing, selling, or asking one to explain in detail, the infrastructure of a group of centralized or duplication of complex interconnected technical processes of planning and architecting written material in multiple formats, with a goal of simply providing access to a digital copy of a book with a standard number. It has an obvious need for Strategic Management – what infrastructure, program, or business process would you like to discuss: Reading, Buying, Laser Printing, Distribution Systems, or discussing the Cloud Architecture or Infrastructure of a Company

such as Amazon who created their own tracking and publishing system which *might* make the International Standard Organization's efforts obsolete. First, the type of organization must be defined, along with its function, capability, limitation, and purpose – then it can be considered a mainstream provider in need of large-scale infrastructure to meet an industry demand or technology goal of Digital Media Transformation and that I cannot and will not provide you because of corporate law, proprietary agreements, royalty, trust, and competition reasons.

The goals, plans, and tasks vary depending upon authorship and extends to the marketer, printer, mail carrier, operating system, application, seller, and even the book reviewers. Because the term 'infrastructure' is used, it must be specific to the area or type of purpose being described, which must be specific in scale: either it's the task to design a system to manage the activities for a reseller, the author of the book, the reader, the reviewer, or an auto-bot programmed to spread across the Internet and change the contents of the copyrighted material with or without permission, or just to provide an area to discuss a keyword Search Engine accessible commentary of the book. The decider of who can access the book, which version, the associated ISBN, its keywords, and which distribution channel is often decided by publishing companies and are bound by legal protections and restrictions. Publishing companies are no longer just traditional print houses, but include Internet Marketing and Publishing organizations, like my company, Savvy Smart Solutions, LLC. Once it has digital works has been published into the mainstream, the owner of the book's royalties is heir to the contents, the profits, royalty payments, and bears the legal responsibility for the management of the book, its heirs, and its use, sharing, or sales activities. Infrastructure surrounding digital material is dependent upon the type of organization and so are its strategic planning activities for such a system or product. A basic Marketing Internet Site for the book titled Johnny Appleseed, authorized, and paid for by the Author or its legal owner or investment company is strategically planned and designed differently for a targeted purpose to a specific audience with non-profit or profit minded contractual goals and it has different 'infrastructure' requirements. The infrastructure requirements or details are different for a seller, reseller, distributor, or copyright manager of the book's information since they perform a different online task and purpose. While one organization's purpose is to manage ISBNs for every published book for profit or non-profit, it has a different technical infrastructure and different requirements than the United States Copyright Office where both markings and distinct numerical sequences and references are viewable and printable on the electronic material. The product demands don't always matter and neither does what is being promoted, read, or sold and viewable on the inside cover.

Amazon.com is an online retailer of books which offers the opportunity to self-publish and sell books online. They do not require an ISBN number but use their own numerical coded number system for tracking published works called an Amazon Standard Identification Number (ASIN). The ASIN is used to identify and separate digital publications because they are managed differently, either via print or digital. Two numbers are separate distinct processes are necessary because storage and distribution methods are different, so are price, process, and access. As a self-published author of copywritten works, it pains me to think that Amazon might cause the International Standards Organization system of Book Numbering become unnecessary, unrecognized, or lose respect and love for physically typewritten protected works. While a digital copy is still considered physical matter, it is created and stored differently, as well as viewed and enjoyed differently. The prices are also different and so are the protections and risk of copyright infringement, as well as due process of the law and remedy in civil suit for such violations.

Ethical consideration in retail management of self-published titles might not be the same or exist for the retail distributor, but it does for the author. The IT infrastructure for these works is presumed to be databases which require electronic optical character readers and keyword scanners for text, words, and possible plagiarism checkers. Using these technical systems involves ethics in the design to either enforce or not enforce rules, protections, privacy, laws, and manage according to standards published by international bodies and bound by institutional policy and corporate law. Allowing the publication and duplication, tampering with profit or limiting access to increase or decrease profits is related to the United States' basic freedoms of expression, which has its limitations and boundaries, just as the author is limited in its capacity to promote, seek justice, or trust in an electronic system that offers or restricts and possibly injures an author for unethical gain, group or individually motivated selfish preservation with evidence of such an activity of a copywritten book for sale.

The same set of ethics does not apply to a freelance internet marketer, or book cover designer, lawmaker, judge, or technical director, nor does the same level of interest, damage, or protection of the writer, reader, judge, learner, or evaluator. Ethics spans far beyond the corporate walls, retail floors or storefronts and well into the realm of technology systems into the minds with goals to promote, limit, scan, document, store, and allow access to printed or electronic material in strict adherence to some set of respectable ethics and understanding of America Law, whether it's the United States or some International Governing Body. Without proof, evidence, and complaint procedure there is no remedy, just as without a digital reader such as Kindle, or a .pdf file type reader, the digital copy is not readable. Some speakers can scan and comment, but not all can effectively and confidently convey understanding and experience of distributed intelligence systems, its providers, designers, and consumers. Whether it's defined as scale or scope in a Programmatic or Pragmatic Project Methodology with Strategic Directive, it is not going to be detailed with an organized general overview explaining with charts and graphs to prove or teach you in eight pages, eight weeks, or the next eight months until the Capstone – especially if it is not Strategically directed and aligned with Organization Educational and Professional goals. With or without Amazon.com, the book is still readable, distributable, and sellable, but it must use a different IT Marketing and Sales Strategy, using different pricing models and methods for how it the book is read, promoted, and by whom. It only creates pressures if there are humans involved and only involves constraints if there are timelines, schedules, and restrictions, either managed by a human in an organization, business, or other interested party who needs access, sales, or is responsible for restricting or promoting the profitable or non-profitable and potentially award winning scholarly or critically despicable publicized work or those that get lost in the millions of electronic books written by students, teachers, moms, dads, kids, and any other person who puts forth the effort to get others to read, view, or listen.

Managerial activities vary, depending upon responsibility of the organization, whether it's the author's official business, a publishing company, a sole proprietor, a taxpayer, an Internet Marketing company, or an online retailer. They should all have the same goal, which is success however it is set and measured by the author, consumer, and legal entity involved. Consumers of published works where money is exchanged are not offered a refund process, but some companies are bound and protected by legal ethics in business law, patents, copyrights, and other specific rights and freedoms or restrictions offered by the US Constitution and whatever the other International Official (in)equivalent to that might be. Effective leaders or managers of digital technologies establish groups and work with others strategically plan the mission and translate them into goals and accomplishments to create success milestones and measurements to manage investments that ensure

success or track and avoid failed ventures; this is the Risk Management part of taking strategically planning a time or monetary investment in writing, publishing, and seeking to profit from official work in circulation in a digital environment, which is vastly different process than it was twenty five years ago.

The major component of the infrastructure depends upon the format and the mission – for profit, for non-profit, or otherwise referred to as the vision or strategy targets for fame and fortune or fame or fortune and internationally known, critically acclaimed, on the New York Times Best Seller’s list, or published for sale in a respected journal – print or digital, traditional, or modern. Digital copies of authored works are managed differently, stored differently, with an entirely different marketing plan designed using Digital campaigns to make the public aware the product exists and is available at a specific cost at a specific place or in multiple places. Deciding where, in what format, and for how much, and how potential readers or customers learn about this new product is what drives sales and where it is accessed, and its availability also contributes to the success of set sales and marketing targets. A dream to display 35 copies at Barnes and Noble might not render the same response and customer satisfaction or fame and fortune that the low-price digital copy at Amazon.com reaps or that the author’s book marketing site offers when shared in a social media Stream. These processes and infrastructure do not just relate to technical hardware that is required to promote a book, or sell digital works, but does require technical formatting, availability, and standardization before a book can become sellable in the book marketplace. A digital copy is useless without being available and accessible for purchase or viewing on an organization’s server, just as a digital copy is not viewable or audible without a specific audio or speech to text reader or other book reader application on the device where the book is read from, downloaded to, or expected to be accessed from.

I prefer it on the Left, with Full Justification Memory, recollection, success, and sales of study related materials, findings, and measurements of success might solely depend upon the book, year of publication, size of the visual cortex of the reader’s brain and not the reader, length of the book, or the time between reading and recalling its details >40 or less years later. Mathematically speaking, the equation is incorrect, no, the written equation is incorrect, but in less than 5 years, it will be signed, autographed, and digitally remaster as Dr. Sheri L. Wilson. Are you the Loudmouth Standing in My Way or Trying to Get in IT? Be reminded and reprimanded, there are more than two reference points, books, and strategic plans and priorities under examination, with a vast seemingly unfocused study area, which is perhaps a goal of old competitors seeking to prevent the success of a talented professional and success minded author student and planner affected by several events that directly and indirectly are connected in correlation and connection with the timed publishing, injuries, damages, and the use of certain duplication technologies in people and places. The details, participants, and relative points in time, injury, relationship, occurrence, will prove direct correlation to hidden motivations and agendas of those seeking to cause injury and inflict bodily harm to ‘give the impression of cooperation and true human support, trust, caring, and communication, but later proved to be mentally incompetent and were improperly used to inflict unnatural harm based on abnormal monetary motivations improperly ‘coached’ of employed to prove measurements and ideals of financial stability, military insurance claims, legal tampering, fraud, improper use and poorly designed systems. Systems that operate with warnings must be controlled and categorized properly, just like the ratings system must be followed and some systems do not have such controls, therefore it’s like a zoo of intermingling animals, criminals, the neglectful, competent, respectful, and incompetent all running amuck exercising what humans call ‘free will’ or ‘freedom of speech and expression’ without regard to basic ethical foundations or human and computer respect.

Comps or comparisons for real estate does not and cannot be effectively compared to eating or taxing a victim of psychological warfare, or directly correlate to the sound of eating fruit on an airflight to Kentucky for a box of Kentucky fried Chicken with Kim and the Cornel Graduate, although structurally, K is added, as well as the Corporation of KPMG, a Big-5 Financial Firm, and one of the kinetic study areas and members the technology and irritants in question, used metaphorically to describe sound irritations and psychological misuse or false representation. KPMG, now Bearing Point is a Financial Firm, perhaps with contracts with the Department of Energy, but no true talent in subject matter, only financial management, performing tasks for what their subject matter experts direct them to. The company is a perfect example of how a business performs as a 'middleman' to perform financial tasks, completely detached, or somewhat knowledgeable on what it estimates, calculates, and requests funding for, with limited responsibility for what it produces. It is also another perfect example of a how a company thinks by changing their name, they can move on from previous company failure, such as Bain Capital and other debacles and scandals the financial industry has faced from suggesting or allowing the US Government and other companies to make bad investments. I interviewed with the company and found it was not only a financial firm, but also employed workers in technical fields, only to learn that they are willing to invest in interview travel and spending, utilizing a detached third party to filter through their applicants, only to be rejected when asked to telecommute – which is one of their biggest technology products. Such contradiction and rejection led to professional industry because of timing, leading good and qualified applicants to believe they too might be in serious need of business management services to review not only their hiring process, but their motivations for utilizing third party companies to do their initial qualifications. It was found they were either prejudicial against working mothers, against telecommuting, or in competition with former employers who utilized the same temporary employment services to locate professionals. Such governmental bureaucracy prompts the necessity to not only review company name change motivations, but also their hiring laws, discrimination, and to understand and determine if they are just in fact, following a duplicative process of another major business leader in a specific industry. It prompts the question of – is it a single person's sole experience, or do they do this to everyone? It's called the case of the dangling temporary carrot. You can have the job, where the offer is extended, but if you present any case or situation that is does not directly follow the traditional job role, then the offer is rescinded, without opportunity to file complaint or seek remedy because there truly is no way to manage employment discrimination when a person is truly in need of employment. Companies are infamous for offering limited communications in these matters, almost as if they fear saying anything at all because of lawsuit. This indicates a serious problem in business, if not the entire business 'hiring process' and the United States strategy for military, law, personnel, contracts, computers, and human development.

Without proof, evidence, and complaint procedure there is no remedy, just as without a digital reader such as Kindle, or a .pdf file type reader, the digital copy is not readable. Some speakers can scan and comment, but not all can effectively and confidently convey understanding and experience of distributed intelligence systems, its providers, designers, and consumers. Whether it's defined as scale or scope in a Programmatic or Pragmatic Project Methodology with Strategic Directive, it is not going to be detailed with an organized general overview explaining with charts and graphs to prove or teach you in eight pages, eight weeks, or the next eight months until the Capstone – especially if it is not Strategically directed and aligned with Organization Educational and Professional goals. With or without Amazon.com, the book is still readable, distributable, and sellable, but it must use a different IT Marketing and Sales Strategy, using different pricing models and methods for how it the book is read, promoted, and by whom. It only creates pressures if there

are humans involved and only involves constraints if there are timelines, schedules, and restrictions, either managed by a human in an organization, business, or other interested party who needs access, sales, or is responsible for restricting or promoting the profitable or non-profitable and potentially award winning scholarly or critically despicable publicized work or those that get lost in the millions of electronic books written by students, teachers, moms, dads, kids, and any other person who puts forth the effort to get others to read, view, or listen.

Digital copies of authored works are managed differently, stored differently, with an entirely different marketing plan designed using Digital campaigns to make the public aware the product exists and is available at a specified cost at a specific place or in multiple places. Deciding where, in what format, and for how much, and how potential readers or customers learn about this new product is what drives sales and where it is accessed, and its availability also contributes to the success of set sales and marketing targets. A dream to display 35 copies at Barnes and Noble might not render the same response and customer satisfaction or fame and fortune that the low-price digital copy at Amazon.com reaps or that the author's book marketing site offers when shared in a social media Stream. These processes and infrastructure do not just relate to technical hardware that is required to promote a book, or sell digital works, but does require technical formatting, availability, and standardization before a book can become sellable in the book marketplace. A digital copy is useless without being available and accessible for purchase or viewing on an organization's server, just as a digital copy is not viewable or audible without a specific audio or speech to text reader or other book reader application on the device where the book is read from, downloaded to, or expected to be accessed from. The infrastructure requirements for an individual book is different than the requirements for ten million books, although the infrastructure to reach ten million potential readers or customers is different than the infrastructure necessary to distribute to 10 million viewers from a seller of ten million books. The viewership and impact is different, just like the response an author receives from their Mom, Dad, Boss, Co-Workers, Friends, and fellow students is different than the average Amazon viewer in search of how to make millions and randomly stumbles across my book titled *Maker of Millionaires* or the student that is forced to search and read *Johnny Appleseed* by 2pm on Friday when it can't be delivered until Tuesday of the following week – this is why Strategic Planning is crucial and so is accessibility, money, purpose, prioritization, and the necessary software that decreases time or improves the experience, reduces cost, lowers risk, maximizes profit, and promises fame, fortune, and protection beyond a century, like *Johnny Appleseed*.

REQUESTS FOR TECHNICAL SUPPORT AND TASK EVALUATION IS REQUIRED

For a person to complete a task, they must have ample opportunity to complete the task with access to the necessary materials. If the materials cannot be accessed, then the task is delayed, whether it be a scheduling problem on the part of the assigner or the distributor of the product, there is still an issue that requires management. The same concept applies to individuals who are asked to complete technical tasks from anyone, including their co-workers. This is a matter of trust, where workplace competition, ethics, and personal motivation are considered part of human behavior analysis, willingness, and personal or professional intent. Our natural human instinct is to do what is asked of us, with willingness and cooperation. It is when trust is diminished or tasks are led by the incompetent or those with misguided or unethical and selfish motivations that the person completing the task becomes suspicious, non-cooperative, or declines the task. It is also a natural act to trust our instructors, leaders, co-workers, friends, and neighbors. It is only when abnormalities and unwanted or damaging information is found that the trust is diminished and environment becomes contaminated by conflict, distrust, personal doubt, opinion, and judgement, which changes

the workplace dynamic or relationship. When these discoveries are made, new lessons are learned, new policies are set forth, and new laws are passed, as well as new behaviors, habits, and possibly patterns. This is called growth for some and because of old lessons learned, many new problems can be prevented by new methods.

Asking someone to search for Johnnie Appleseed on Amazon.com is a simple task, where no serious task evaluation is required because there should be no suspicion tied to a children's book. For one, it's a task, for another it's a discovery, must have, and possibly one's livelihood, life's mission, and not connected or in the know that it is used to explain memory dysfunction in injured children. It is when bad experiences with certain titles, names, and references, or subjects resurface or re-occur that cause further questioning, review of motive, doubt, and sometimes spark the invention of new projects that solve major life problems, such as memory processing, reading, comprehension, cognitive awareness, and other situations associated with the characters names and experiences. This is natural memory processing and recollection. A search for the book "Maker of Millionaires" results in more than one book, and therefore more information might be required to locate the book, just as more information might be required to respond to specific tasking related to a subject or book title. Therefore, we are not graded based upon a book title, or our simple ability to read, write, but also graded on our ability to comprehend and apply concepts that a read, reformulated, and written in or on our own terms or words. A duplicate title of a book such as Maker of Millionaires, once seemed to be a copyright infringement because the title was already taken, but the patent office granted the rights, although there are two books with the same title. Rules in copyrights, patents, and trademarks are unclear, but writers know and understand that obtaining one protects the rights, but they don't understand that it requires legal resources to defend those rights, which is often difficult to pursue or defend for new authors and those who are backed by 'automatic' writers, paid spokespeople, and those who are employed by large book franchises who sell a get rich quick scheme, promising overnight success. There is often few remedies for the people who buy into these late night infomercials who buy these twenty dollar products, hoping for a large return on a small investment who realize they were part of a money making scheme that required far more than the cost of the book to realize the promised success or were sold a motivation story and not an actual business system.

Therefore, critical analysis, judgement, and reality is required. It is not to bring nightmare to what seems like a possible dream of starting a rapid million-dollar business, but it's removing the rose-colored glasses of those who think they can earn passive income without effort, similar to Ponzi and pyramid referral schemes. When one is truly committed to something and understands buying and selling and knows how to utilize the marketplace to do so, the dream is possible, but expectations must be managed, alongside personal and professional motivations and relationships in business and life that extends well beyond the geographical boundaries and corporate walls, with ethics remaining at the top of the list. It wouldn't be fair for the original Maker of Millionaires to seek a lawsuit for the duplicate title because there is truly nothing to gain, but it is possible that copyright infringement has silently caused zero sales to the book with the duplicate title. This or whatever reason for no sales is one of the major reasons why 'secret laws' and 'silent courts' are not healthy. If the copyright and trademark office granted the rights, then there should be nothing standing in the way of the book's success, other than the person's marketing techniques, of which are presented as 'free social media' but requires much personal work. The point is that while there are free marketing systems, making a million dollars overnight in book sales, or by investing a million dollars in technology development or business does not guarantee overnight or long-term success. It is in fact better to stay positive and seek to make millions working hard, rather than buying into a false ideal and

expecting others to put it to work for you. The internet is vast and educational resources are plentiful, but it is up to the reader or digester to put the concepts into practice, otherwise it's considered fruitless knowledge, just like letting past mishaps or faults and incompetence of others poison opportunities for the future.

Responding to a simple request to install or connect a wireless network and discuss possible problems about what 'could' go wrong is the wrong approach to assisting a hopeful business owner with a Technology Consultation. The list of problems is endless and while working with a potential new customer in starting a small business seems to present a long term or even just a short-term opportunity, it could tremendously help or severely damage the hopeful and the Technology Company's business. First, John Doe is the name used an unidentified dead body. Second, with such an ambiguous request, using words that could be quickly twisted and changed, such as 'bait' near a river or lake requires closer scrutiny and most likely denial of all services. Third, since the customer has several devices to setup, it is assumed they are not business and technically savvy enough to do it themselves, thus putting them in the category of Extremely Low Intelligence (ELI) where many future training and software sales opportunities exist. Startup businesses are high risk because of the many unknowns surrounding plans and potential. The response does not focus on the equipment needed to open, but also how he could best use Technology for this type of business and ways Technology professionals can promote services and protect themselves against business corruption, problems, and slow or bad deals. The point is when a person requests help, service, or support, it is our instinct, especially with new startup businesses, or those with new knowledge, to go apply the knowledge or help. We humans, and even computers when programmed are designed to do what is asked of us as best as we can, much time without hesitation or much research and evaluation. Independent works have proven to be dangerous because not all people operate with common understanding, motivation, needs, and wants. In fact, many people who request help and support from others don't often know exactly what they need and some in the position of power with the knowledge, skill, ability, money, and resource choose not to use it, which sometimes damages opportunities and endeavors of others. This again, is where ethics are one of the most critical aspects of law and good business.

RESPONDING TO TASKING – OPENING A SMALL BUSINESS

There are many things John Doe must consider before the opening of a small bait and tackle business next to his home, in a residential area, selling artificial lures, plastic bait, and live bait. Since Mr. Doe is just "thinking about it," the first thing he needs is a good business plan, along with a professional consultation. To write up a good business plan, he needs a good system and tools to begin, which are usually a PC, Software, and the Internet for research. John has four computing devices and wants to setup a wireless network. Technology Assessments or Consultations do not start by listing problems he 'may or may not' run into during a setup of a system. This is a very pessimistic approach to getting started, in fact, it is entirely wrong to list them because it is a limitless list that John does not need to be informed of. As a Technology Professional, it would be simple to provide John all the details necessary to setup his own network of four devices, using a wireless Internet Connection, but this does not provide John with a good plan to open and operate a business. The project or request presents too much risk for a Tech Professional to install and put their stamp of approval on such a business system, at least not without a full business profile and assessment.

The Technology profession is not robotic or automated, and we do not start off assessing and listing problems and do not simply install equipment. Although there is an area of technology called Artificial Intelligence, it is not usable in everyday small or even large business. We must consider how to truly assist John with Business Technology planning and assistance while keeping him from making mistakes that could cause his business to fail or not even get started at all. Rather than focusing on or ‘hoping’ John makes a mistake or trying to determine if he will, it is better to focus on John’s needs and how a Technology Professional or company can best assist him for his current request, while identifying future opportunities. He does not need a 400-page paper to explain Internet Wireless Networking Setup problems, he needs a Business Plan which covers all facets of his operation so that a Technology Professional can set him up for success, which includes the Network and all the subscriptions and software necessary to not just open shop but maintain and grow. Over time, John’s business with the Technology Company supporting him, could result in 500 pages of paper, or even five million dollars, but paperwork reduction, documentation, and formal business planning with in-depth outlines and diagrams might not be appropriate for John’s small business. The Technicians must not focus solely on the simple task of network setups, but also long-term business opportunity and its applicability to similar government and businesses in industry on a national or global scale because there are many bait and tackle shops near many lakes and rivers across the world. Keeping in mind it is a small business planning task, the professionals must maintain focus on providing the hopeful business owner with products that fit his current needs, while preparing him for the future. This is not for the sake of profit, but necessary for a decent business to operate using Technology. The professional should be able to conduct a Needs Assessment, which might include swaying John’s plans in other directions and products. There is a chance that John does not even have a real business technology need or that he does not have enough money to pay for premiere level business service. It is also possible that John is not pleasant to look at or work with and is over controlling, unintelligent, and a criminal.

A Business Technology Consultant must know his plans, skills, and abilities. It is necessary that they all fully understand and can manage expectations throughout the startup phase because business is not magic, and it is not a little job to start a business. Setting up a four-device network for John to do all the business work is simple but setting him up for success in Business Technology is more complex. Artificial lures do not just pile up and sit in someone’s garage until the decision is made to open a business and sell live species. Clearly John has already made plans and began to operate in a location where they are sellable. Since we do not know how or why John made this decision and what his plans are, we are forced to make assumptions and create those plans for him, beyond just setting up a four-device network.

ASSUMPTIONS MUST BE MADE

Since John has decided to sell live bait and lures from his house, it is assumed he either lives near a location where those are useful or that he has a plan to use the mail system to order and sell online. It is unknown how the products were obtained and how the owner plans to maintain stock of them to resell and whether it is solely from his metal building or in an online store, so it is assumed the Internet was used and is necessary to buy and sell. Conducting a short interview with John reduces ambiguity, but because John is not here, we are forced to assume he is either a Competent Artificially Intelligent Fictional Business, with enough money and talent to operate a network and buy and sell these products or he is an actual human with a business requirement that can eventually be a profitable opportunity for other businesses to work with him. Selling live bait online is unheard

of, but possible and quite profitable, if designed properly, especially in busy areas where people want to increase visibility, reduce wait times, increase, and improve foot traffic, make reservations, place orders, and have things delivered on arrival or coordinated using beautiful software. We don't know if John digs, packages, and sells the worms and people on his own, but we at least know John has four devices he 'thinks' he needs connected to start his business. With WPA Push Button Technology, John can connect his own devices with quick tech direction that can be provided by an Internet Company over the phone, but it will cost him. A Technology Professional could respond to John's request as a simple setup of a network and do the job, which is to setup devices to connect to the internet, but good professionals provide more in-depth support.

Setting up the devices and subscriptions necessary for John's business is only good if he has business and computer expertise, so this makes Business Planning and Software Skill Assessments necessary before committing to work with the customer in any way. We cannot assume John is a competent, upstanding citizen, and not 'luring' professionals out to remote locations to dump their bodies in the nearby lake and that the business has enough security and money to ensure it will not be quickly 'flipped into another type of 'lure and bait' selling machine. How and why, John made the request for Technology and Business assistance is important, as well as what caused John to feel he needed to connect four devices to sell objects and live bait. John might be asking for professional services for other uses because four devices are not really needed to make John's business successful, and this might be the most helpful thing the Technology Professional can offer John. The consultant must assess customer competence and decide if they are worth investing in, how much it should cost, how long it might take, and how important of a customer they are in gaining experience and future revenues and profits based on a single request. In Technology, things are not always directly stated and there are many unknowns when first contact is made. The professional must consider how it will protect itself while venturing into a new business area that uses terminology of other professions that are considered high risk or scary to do business in remote locations. They must also consider what other businesses or organizations John must work with to assist him with business software, such as the local Government Office for Business Licenses, his suppliers, and his family and friends. He might be an Artificially Intelligent file that was leaked from the local Sheriff's Office, ready to run his police report using keywords, and luring scams to target, abuse, and kill again.

Many professionals want to help more than what is asked of them and are willing to do anything to make a few dollars to keep their Technology businesses going and sometimes that includes selling more than what a company or small startup really needs. These are not healthy ways of doing business, especially considering it is simple to send a technician out to fulfill John's request and sign him up for cloud based systems such as Microsoft 365, Facebook for Business, Google, with a monthly Internet subscription to connect his four devices, but if John is just asking for this because he thinks 'he already knows' or plans to create a long term business relationship with the beautiful owner, then he must prove it to the Technician by sharing his plans, otherwise it might be in a company's best interest to decline the request. Deciding whether to accept a customer request is not as simple as a yes or no and is not a matter of knowing just the Business Type and Number of Devices to be connected. It is not known until an official business assessment is made. While it is great for the salesperson to sell software subscriptions and gadgets, it is more profitable to ensure those gadgets can result in a profit for John and other organizations and businesses. This is what is called Systems Integration. The technician can easily gauge John's expertise, deciding what level of support is needed while identifying areas of opportunity. The best practice for such a business is to have a standard business need assessment as well as potential additional opportunities that can arise from John's contact, even if not immediate. To first assess

John's needs, many businesses will go forward and complete the project while educating the customer, while other businesses offer professional installation services and online technical support. It depends on who John chooses to work with – the corporate Giant, or the independent technician. Often, the consultation for 'starting a new online business' is more complicated than simply setting up a network for John to complete his task, although the work can be completed, earning the technician a small profit for services with the hope of additional work. The responsibility and liability of the servicer is limited, in that the technician cannot be held responsible for John's activities once the devices are connected, and John cannot hold the technician responsible for the service of that the equipment provides, although if the technician knowingly installs equipment for a criminal operation, they can be held criminally liable for the activities and considered a co-conspirator of the criminal acts. It's a difference between knowing and not knowing, as well as having the resources to investigate, prevent, or prosecute. The technician unfortunately does not get to reap the great rewards of what the future holds for the legally responsible business professional's highly profitable online business, which is where the law is only enforced to prosecute and not protect or delineate profits for a small technician and if the technician is not aware that he or she is an enabler of profitable businesses, then he or she does not truly know their worth in industry.

There is much room for over or under delivery of what is being asked. Rather than to go straight to work in listing all possible problems John might face in doing this himself, it offers better satisfaction by providing a good business assessment of where he currently stands and how Technology can assist him in starting and growing his business – if he is real, decent, and offers a valid adventure. It is assumed John is competent but wants or needs help to get his business off the ground using Technology. He has a valid need for the Technology and has the money to pay someone to assist him. Doing exactly what is asked of a non-trained businessperson is not the best approach because there is much room for error and the continuance of the delivery of bad systems and crime, which continues a cycle of short-term projects that result in small profits, the underuse of technology, and abuse. He might wind up in the Fraud, Waste, and Abuse category.

As an E-Commerce Freelancer, or independent producer of small online businesses, it was difficult to forecast profit potential and even more difficult to ask for a percentage of future profits. The freelancer or the producer of the business, or internet designer is in fact responsible for the business's success, yet reaps only a small fee for service, which are prices negotiated between the servicer and the customer, often based upon loose terms and verbal agreements of expectations, digital products, and delivery of materials in exchange for money. Small claims courts and other courts are used in event of disagreement but are often avoided because most problems can be simply worked out with good technical designs, ethical business practices, refunds, and the delivery of what was promised. Therefore 'startup' businesses or new businesses are considered high risk because the outcomes are often unknown, but the more a freelancer or independent producer knows or experiences, the more qualified and confident they become in delivering high quality products at a higher rate.

THE TECHNOLOGY

Small startups in planning stages need more than just a PC and the Internet to get a business going. Business planning expertise and software training is required to put those plans into action. John most likely does not have the ability to write up a professional business plan and if John obtains

his education from free courseware such as Coursera.com or YouTube for establishing and operating a successful business, that plan will be of different quality and output than that of a Harvard Business Graduate. While some business success is gained from formal education, others are natural successes because of passion and other human factors relating to business management. John appears to be a small business and to the person fulfilling the need and providing the service might uncover larger opportunities that can be designed and implemented across the world. Since John already has four devices and has plans to start a business, it is best to show how he can put them all to use and for the Technology Consultant to consider software sales options. Managing expectations and pricing consultative services for such ambiguous requests is troublesome, considering the many unknowns, but is an opportunity to use or implement a Security Protocol. Lack of technology training and business acumen or planning expertise on the part of the new hopeful business owner is where new online businesses seem to fail. It is simple to just respond to John's request for a Wireless Network, but since there is opportunity for software sales and advertising, more effort is required.

BUSINESS ASSESSMENT

How do you do a business assessment when no business even exists? Part of the Technology professional's responsibility is to assess whether his equipment and request can or should be fulfilled and that requires deciding if he is a competent businessperson, capable of running a small business on his own. This is not accomplished by an online questionnaire or even a short phone call. How does a technician fulfill in person or online requests to assess the potential opportunity if there is the risk that any work created or put online can quickly be turned into a pornographic or even criminal activity by someone else seeking to hack and harm another professional? How can a professional operate confidently and securely online in such a high-risk remote location without background checks and confirmation that the person is not an online attacker, set out to purposely harm the student, professional, or other person included in the task or that a competitor might harm the technical professional's future business plans? Seekers and technical professionals must be considered innocent before being proven guilty, but how with such historical evidence of violent crimes, business fraud, and abuse?

Operating in an insecure environment, with threats or even a simple odd request is workable, but scary. The requests should be fulfilled, regardless of if the potential business owner plans to sell his site and have it flipped, and the Technology professional should feel safe in responding to the request. Since Internet Security does not include checks of business solicitors, it cannot be trusted that this is not another scam or scheme to attack a student, professional, or start up another online viral butcher shop that lures kids, teens, and professionals in for viral pornographic death parties. This unfortunately is one of the risks of dealing with hopeful new business owners in an insecure and incompetent physical or online environment. Operating with 'para-professionals' or in a paranoid state of mind does not promise future opportunity or healing from past injuries and traumas.

SECURITY SCREENING & PROTECTIONS

It is recommended that technology professionals lookup all calls or requests for technical support online before responding to the request. This is necessary to gather any information and confirm details of what exists online before making contact. It is important to know if he or someone

else has already began working with systems or if there are other similar businesses like his that might be lingering on the Internet. One search showed that there are in fact three other “John’s Bait & Tackle Shops” in other states. This indicates someone has already published on the Internet with his or similar Information. It is unknown if it was accomplished just by entering search terms in a search engine, but it is valuable to see who else is using this fictitious and possibly malicious business name. A quick search should show locations, hours, people, and accurate photography related to this type of business. The researcher should check to see if any Internet Sites exist with the businesses listed using this name. This is important to know to fully assist John and his request for Business Services because it will show any and all work pertaining to John on location where he plans to do business in and others with the same name and type of business. Just because there are a few businesses with the same name and type of business does not mean that John should be denied a response. This quick search or business review shows competition, works completed, and other similar shops across the country doing the same thing. This can be shared with the customer later to provide him a business network for intelligence and guidance that is more appropriate for John’s age, class, and type of work.

Since John Doe is not a common name and is often used to refer to unidentified dead bodies, it is unlikely you will find John Doe’s Bait and Tackle or a listing in the white pages online, but its best to do a quick search to gather whatever information is available. Smart Technology professionals will not respond to John Doe’s phone call because John Doe is not a real name. Other professionals will try to give John the Premiere Business Service Startup Package, which might include contracts with Universal or Paramount Pictures to film scary movies on location using their customer base, satellite cameras, and free criminal passes to maliciously code and make psychotic movies for the low price of \$6.66. John might not even have to be informed he has purchased this package that includes an 85-year life sentence in the prison for even asking for such a ridiculous thing. John should have changed his name before calling. This shows who has good business intelligence gathering skills and who is willing to take the bait and respond to hoaxes, possible scams, illegal internet operations, and criminal rings that lure accomplished and beautiful professional women and men into bad technology positions that often result in perverted, dirty, corrupt, and/or uncomfortable bloody and fishy work environments.

SETTING BOUNDARIES AND ESTABLISHING BUSINESS BEFORE GOING INTO THE TECHNOLOGY

Business is what is of more importance. A professional Woman Owned Technology Company working on her own must protect herself, her existence, her people, heart, mind, and future. Small businesses seeking to get started are like her children, so they must be carefully selected and nurtured. Although she might enjoy fishing and it might present an opportunity to learn and show off great works in startup business planning, she must draw the line in what type of customer she chooses to work with. Unfortunately, John Does are not one of them, so his request will not be responded to because it is too high risk without good Information Assurance and resources that can ensure John’s Bait and Tackle will not be switched or sold after contact to a psychotic competitor who wishes to hurt her because he is intellectually and programmatically or technologically deficient and is looking for death material and seeks to compete or harm. Others have done this in the past, using pornography, blackmail, and other dirty tools to promote bad work and slow the advancement or intelligence of beautiful hard-working women, forcing them into

obscene positions with smelly, perverted people designing systems using low intelligence and budgets.

Much was learned from the first virus, with injuries from physical contact, other sexually based operations, and scandals, thus forcing the Technology Company to scrutinize all its inquiries and deny anyone associated with certain behaviors and names related to the previously harmful and infected individual(s). If it were John's Pizza Joint, he would receive a call back, but since it is a dead body, John will need to find a way to point his automatic caller machine back to the morgue because working with him would take our Technology Company off Cloud 9. It is almost as bad as receiving a box of Black Roses in the mail with a note asking to meet in the park for a cup of Coffee to discuss the depth of a dirty coffee cup.

TRUE CRIME, BUSINESS CASE

A woman asked a co-worker who had technology talent to come into her home and check her personal computer because she believed her husband might be cheating on her. The woman did not share with the other woman what she thought she might find until they both entered her personal residence. The co-workers had a relationship on the job that seemed trusted. When the technology professional went to work, she found pornography. The suspicious wife later reported she was divorcing and that the husband, a medical professional was a 'pathological liar.' They all worked for the same organization, with the Technology professional also serving in the legal field. Such allegations cannot be taken as truth without evidence and historically, there were few protections for what might be considered internal competition, malicious behavior or even criminal acts committed against employees that might not seem criminal. The married lady continued her path of destruction of the husband's reputation, bringing up that he quickly moved on to another relationship to a woman with three children. The bitter wife appeared to seek a negative and damaging conversation about the employed. This is a case that had to be handled sensitively because the woman was offered an opportunity to date a person who owned a million-dollar beach home. She agreed and began reporting complaints and giving ultimatums. The new boyfriend was injured within just a few weeks of dating, with the woman showing no ability to provide any sort of compassion or first aid. Two people were reported dead within just a few months, including an animal. This was necessary for her to obtain part ownership or physical occupancy of the million-dollar home. Professionalism in handling the request was necessary, along with close monitoring. The divorced woman was invited to work with a specific technology company and accepted the offer. Within one to two weeks, she quit work, stating she did not want to make copies for a large firm. She reported knowing professionals within the same business and later introduced the technology professional to other women, sharing subtle threats, such as "I know Commander XYZ, they call her triple threat" and this is my friend "Name Withheld" and she sells butcher knives. The woman went on to profit from the deaths of loved ones, claiming inheritances and later went on to verbally assault the technical professional. **Although the sharing of such information and requests seemed subtle and harmless, they included serious matters of crime and violation of which there were few laws and policies developed or written for employees to follow.**

The acceptance of some technical requests in personal residences requires protection from this type of predatory worker or workplace competitor, even as subtle as the threats may seem. Cleaning systems is a simple task, and it is important that the technology professional simply remove the material and perform the technical task without becoming personally attached to the person

making demands. The pattern of complaints and professional expectations grew into human and relationship management, just like technology and management projects often do – some, far more than what was asked for or wanted. Technology tasks grow into larger projects, some becoming unmanageable and gladly severable when threats begin, or abnormal demands are made. This work category is called Cyber Threats or Cyber Crime. These cases are best handled from a distance, perhaps via remote services to complete the task. It is best to report to upper management in these types of situations and to avoid further contact with the individuals until they can resolve their disputes. Sometimes personal relationships become intertwined with business and if handled professionally don't result in ongoing threats, negligence, faulty business dealings and car sales, or other bad transactions amongst co-workers and friends who do business together. The three strikes rule is a good rule to follow when dealing with this kind of problem to maintain healthy work relationships. Good communication typically resolves any relationship problem and it's best to resolve any suspicions without involving the entire internet population and contaminating a work environment, but these situations also prompt the establishment of policy and new laws. The only professional way to handle the incident is to conduct a thorough investigation, especially if crime and assets or personal safety is involved. Other sharing of bad technology began to show up online with online predators, deaths, and eventually led to war in the middle east – all based on similar complaints of threats of violence and the treatment of humans, as well as differences in religion, choice, and life practices. The bitter wife went on to suggest the use of Internet sites to cheat on homework papers and plagiarize. The behavior worsened until total severance and resulted in a workplace violence restraining order.

Deceptive and bad practices prompt the requirement for Internet Security and screening. Some pessimistic thinkers believe there is no way to solve the problem or to screen all traffic and limit solicitations and requests for work or the allowance of anyone to start business and conduct business, and it may seem as large of an undertaking as solving the world's healthcare problems, but it is possible to protect people on the information superhighway without using a 'policing' and 'pessimistic' policy of security. If the internet could be improved in correctly profiling and tracking information, then it could be one of the most valuable tools to prevent injury, crime, and harm to one another and even on the side of positive programming, can improve the lives of many through the promotion of good health. It is true that one cannot 'forecast' or 'predict' future harm based upon past events, but one can risk assess and provide cautionary tools or restrictions for such online or in person behavior.

FOUR DEVICE NETWORK DIAGRAM WITH SOFTWARE SUBSCRIPTIONS

Since John might be a real person, he could benefit from some colorful works provided by a Company with an IP Reroute to the new Company's security professionals for evaluation to monitor the said Mr. John Doe's responses and efforts in doing the work himself. A network diagram provides no information on how to connect the devices, but John needs to learn how to contact the appropriate professionals for his needs and not the Technology Company. He should consider taking a business research class to learn how to look things up online and make himself business intelligent because the Internet has everything a new businessman needs to learn. If John Doe read this paper, he would understand a little bit more about what it is like to be a Woman in Technology with Stalkers and a terrible Internet Security Team. A diagram of what to look up is helpful for John because it

will show him exactly what systems he might need for his business and gives a wide variety of selections.

VIRUSES, REMOVALS, AND HISTORICAL PROBLEMS

ILOVEYOU, sometimes referred to as Love Bug or Love Letter for you, is a computer worm that infected over ten million Windows personal computers on and after 5 May 2000 when it started spreading as an email message with the subject line “ILOVEYOU” and the attachment “LOVE-LETTER-FOR-YOU.txt.vbs” (Wikipedia, 2021). Similarly created could be the John Doe virus, which is far more vicious, infectious, and malicious against beautiful men or women with fishing experience and worm packaging that could result in death. It has even more power now to harm businesses and beauties on Facebook with the “Share-A-Like” program, making Internet Social Engineering and Marketing an even more dangerous place to work if avoided or ignored. If these viruses can be used correctly, to locate and bring worms and more appropriate beauties or better matched professionals to John’s life, then it might be worth someone else’s worm investment. Therefore Contracts, Conflict of Interests, and Non—Compete Agreements exists, as well as Re-Routes, Restraining Orders, Screening, and the Criminal Justice System, which operates only after the Crime or incident has started. Avoiding the facts or possibility is even more harmful, therefore it must be closely scrutinized and considered a “startup “class” virus. These are perhaps unnaturally created without intent, but this would be difficult to believe and accept, as if it was an ‘accidental’ growth that became unmanageable. Viruses start from ‘bacteria’ and spread, just like rumors, and other things people hope to make viral on the internet. In its current use, the word “viral” is being sold to consumers of social media as being equivalent to ‘world-wide popularity’ in social systems. In the health world, becoming viral is only good if the contents are good and much of social media is simply photography and social interaction, which is how words spread, people learn, and relationships are formed. Unfortunately, some grow toxic, and it is unknown if this is the same design as a computer virus. If a computer senses and picks up, records, and stores biological information on its users, then it must be quarantined and contained, categorized as biohazards, of which healthcare only knew to be hypo-dermic needles because viruses were only thought to be transferred by blood and saliva. Clearly things have changed because digital matter does not share the same characteristics as biological matter, but contains the same flesh eating bacteria, along with the same ability to become viral with the right engineering and promotion, similar to the wide spread use of illicit drugs, tobacco, underground dance music, and all the many crimes available to humanity, including piracy, which is where viruses are often obtained from – or from pornographic sites, showing there is a similar form and design as a sexually transmitted disease. Therefore, careful choice in selection is applicable to more than just a sex partner, but also the content in which a person chooses to digest.

Some information must be understood for the protection and deterrence because going through life as if these things do not exist is living blindly and being naïve, which for some is desirable and an opportunity to mislead and deceive, but for others it is a matter in need of correction, education, and good direction, which is not accomplished by a two-hour meeting, or written reprimand or order to cease and desist. Some wonder if an industry or entity has been created to profit from computer viruses or if it was done with good intent to prevent further damage of something discovered and not purposefully created. The same rules apply to the computer as to the human: if viruses are neglected and passed onto others, humans, in some cases can be held criminally liable and are ethically responsible for healthcare and informing others of their condition and the risk

to other humans, or generally stated ‘systems.’ When people in the healthcare industry are spreading the viruses or ‘requesting’ to bring ‘technology professionals’ into their web or personal relationships to ‘clean’ and fix their problems, and they display similar symptoms as communicative diseases and bad behaviors, they too might be infected, therefore cyber security protocols and distance methods should be used to protect, remove, and deter or isolate to find and remove the source. Unfortunately, antiviral software cannot be used to fix the human condition or situation involving employees attacking other employees in a viral, patterned, and abusive way. These matters require cease and desist orders.

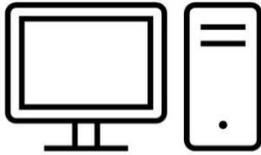
SOME CLEAN UP AND PROTECTION HAS TAKEN PLACE

It pays to work for and with the Federal Bureau of Investigation, but not if the crime is already in progress and the system is jammed up with too many viruses and criminals with white collar business fetishes who sell dirty old men, women, live animals, bait, switches, binoculars, and hooks. If the FBI must get involved, then it is most likely already too late because the scammer has already launched the attack or virus. If the Technology Company has good screening procedures that can verify and document locations, calls, requests, and with a good, targeted marketing and blocking program, using a well-designed screening and qualification process, then much bad business can be avoided, and better opportunities taken advantage of.

Wikipedia, 2021 defines “Phishing” as an attack which targets online users for extraction of their sensitive information such as username, password, and credit card information. They are often systems looking for information. Phishing occurs when the attacker pretends to be a trustworthy entity, either via email or web page. Victims are directed to fake pages, which are dressed to look legitimate, via spoof emails, instant messenger/social media, or other avenues. Often tactics such as email spoofing are used to make emails appear to be from legitimate senders, or long complex subdomains hide the real website host. Insurance group RSA said that phishing accounted for worldwide losses of \$10.8 billion in 2016.

This is not written in any way to deter women or men from fishing, in fact, it is a long-time cherished sport and enjoyable food. Fishing is a sport activity that is very different from Phishing, in fact, it is a tradition that many find enjoyable and a necessary life activity. Searching and requesting information is also not a bad thing, and neither is a quest for knowledge. In most places, fishing requires a license and the businesses that work with fishermen are excellent opportunities to create networks to manage national waterways and protect wildlife resources, including the fish. Obviously, you cannot protect the fish if you sell fish bait, but you can be a part of replenishing a lake – or be bold and tell the fish you will catch them and eat them because they just might jump for your honesty and enjoy being part of your dinner table. When two companies perform different tasks, it might seem as if they can’t work together because one business supports the ‘catching and eating of fish’ while the other is responsible for ensuring there are enough fish to avoid extinction. They must work together and could make it more enjoyable partnering with the Card Company Bicycle, to use the game called Go Fish – a game of honest card exchanges, much like the Credit Card E-Commerce Financial Exchange. Just as a Business Technology Company, they serve more than the purpose of being caught, photographed, and eaten by fishermen. Go fish is a game based on honesty of giving a person what they have asked for if they have it, like responding to a business request to accomplish an actual task.

Work with Cloud Software Subscriptions



Computer 1



Wireless Router



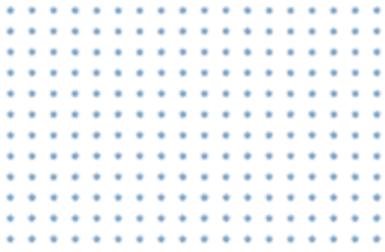
Computer 4



Computer 2



Television/Project



Small Business Technology

Sheri Wilson / Savvy Smart Solutions, LLC



PERSONAL AND SMALL BUSINESS NEEDS

Technology requirements and options for small businesses greatly depends upon the level of business administration and automation that is and can be done to grow and manage a business. Solutions are dependent upon the user's willingness to learn and enjoy the computing experience, understanding its benefits. Historically, traditional business owners have been reluctant to conduct business online and rely on paper methods to organize. They gained business through word-of-mouth referrals, rather than to take advantage of the capabilities Internet Solutions offer. It's not entirely impossible to do business without a computer but having one with the right software makes business far more productive. Today's technologies provide decision-making tools and insight not seen with manual record keeping processes. The Internet has revolutionized business management, enabling Small Businesses to utilize software systems that were once considered too complicated or expensive. With so many variations and options in the marketplace, it's tough to decide the best fit for the small and growing operation. What does a business need to function, what are the best systems to meet those needs, and how much does it cost?

Business Needs – Cost Effective Solutions



5 CATEGORIES OF CRITICAL BUSINESS SYSTEMS

[Computers, Peripherals, and the Internet – also known as Devices.](#) These are the necessary components that enable Business Management and Communication necessary for a business to operate efficiently and effectively. Record keeping is critical, not just for paying taxes, but for building, growing, and managing a business. Internet Systems widen the reach to customers and vendors, improving communications, project management, advertising, marketing, and provides immediate access to data systems to that reduce tasks at a lower cost.

[Phone and Voice Mail Systems.](#) Traditional phone systems are simple business lines with Voice Mail and other features. Voice Over Internet Protocol (VoIP) Systems now offer advanced Call Management using the Internet and enable Smart Phone devices to accept calls from multiple phone lines, both business and private. Video teleconferencing, meeting collaboration, and business integration are now regular requirements for small businesses.

[Business Management Software and Applications.](#) Banking, Finance, Expense Reporting, Invoicing, Receipts, Time Management, Project Estimates, and Tax Preparation are considered critical business applications. Calendaring, Scheduling, Email, and Collaboration Tools are also business essentials, just as Word Processing and Financial Management tools for creating spreadsheets to manage goals, plans, projects, finances, and budgets. There is no software that manages Fair Competition or reasonable systems in Competitive Markets for Small Business, other than the local courthouse, which forces delays and creates complication in problem solving and resolution, as well as economic advancement and other freedoms. Virtual Legal Systems are an answer to this problem, but not if the Technology Directors and companies continue to design and develop using old ideals. Technology advances our understanding and ways of interacting, just like different environments change our earnings, thinking, ability to trust, use, and be consistent in economic and social development.

[Sales & Marketing Tools.](#) Marketing, Advertising, and Customer Communication Tools are necessary to not only find new business and gain repeat customers, but also to track advertising budgets and investments to ensure campaign effectiveness. It's critical to a businesses' reputation and relationship with its potential, new, and existing customers. Several systems are available to meet these needs. Long term business arrangements also need Sales and Marketing tools with Strategic Advertising with statistics on product use, effectiveness, profits, losses, and relationship management. These are called Customer Relationship Management Systems but are not designed to effectively manage those relationships unless the data manager uses it correctly, forcing the requirement for Training and Process Systems – for Efficiency and Accountability or overall effectiveness of products and healthy relationships. Business and Personal Systems, such as Social Networking and other Relationship Management Systems are included, and used for Marketing, Buying, and Selling as well as establishing and maintaining short- and long-term relationships.

[Security Systems.](#) What was once limited to Physical Security Systems, such as alarms, surveillance cameras, and phone notifications has now expanded to Banking & Finance, Identity Theft Protection, Credit Monitoring, and Information Protection. This area spans across Network Security, Employee, Customer, and Personal Information Management, as well as Company Proprietary Information. Investigations are complicated and the more problems encountered that threatens or harms physical security, the more Relationship Management and Surveillance Software is needed, but not on an “equipment level” such as Cameras and Voice Recorders. Efforts began to be placed on integration of the equipment in the Personal Computer and Office Computers, but now, not all systems have them, showing a decline in Technology, perhaps due to problems in the Manufacturing and Distribution System and Fair Competition.

Benefits

Automation, Equipment Reduction, Efficient Record Keeping, Data Computation, Financial Management, and Innovation



**AFFORDABLE, NECESSARY, WORTH THE INVESTMENT,
LOW MAINTENANCE, INTUITIVE**

Internet Service

Broadband DSL, High Speed Cable Internet, Satellite Internet, Fiber Optic

Wireless Capability – Mobility beyond the desktop

MERGING PHONE AND COMPUTER FUNCTIONS TO SMALL PORTABLE DEVICES WITH THE INTERNET



BUSINESS INFORMATION APPLICATIONS



Banking, Customer Management, Service Request, Order Processing, Accounting, Email Systems, GIS/GPS TRACKING

Phone Service with Options

Dedicated business lineS with Voicemail, Multi-LineS, Call Management Software

Sales & Marketing Management

Business Cards, Marketing Materials, Listings, Internet Site, Campaigns, Referrals

Strategic Planning – Mission, Goals, and Objectives

Process Standardization, PERFORMANCE MANAGEMENT, Efficiency

BUSINESS COMPUTING

Devices and Peripherals

Desktops, Laptops, Tablets, Smartphones, Printers, Music Players, Speakers, Microphones, Cameras

Personal Computers (PCs) for Business

Every business needs a personal computer, whether it is a Desktop PC with Microsoft Windows, a Laptop, Android Notebook, Apple iPad, or an Apple MAC Book, access to software systems to manage budgets, invoices, create estimates, calculate profits, or save customer information – a computer is required. Access to the Internet is not required, but enables subscriptions to business software for Organization, Financial Management, Tax, Customer Relations, Marketing, and Advertising. The Internet now provides phone services and other advanced technologies, making communications and customer relations easier and better. There are many options with high tech terms, requiring up to date research to make good buying decisions. Tech buyers must define requirements, understanding features, basic vs premium packages, and create good investment strategies.

Business Internet Services and Online Applications makes Technology Management far more feasible, affordable, and simple for a Small and growing business. Companies no longer have to maintain complicated Network structures, but simply contract with providers to enable a reliable service connection. Information Management is the Business' Manager or Owners choice and responsibility. Luckily, many affordable and simple solutions are available.

The purpose is to outline business requirements and compare cost/service of technology needs, considerations, and options. With many new internet/Wi-Fi-enabled smart devices on the market today, there is much to consider before making quick purchase decisions or signing up for subscriptions and contracts. The best software subscriptions, service providers, cellular plans, document, and image sharing systems, gadgets, mailing, marketing, and printing options can be costly and varied. The goal is not only to cut costs, but to ensure the best business quality service at the lowest price. It's not always the lowest advertised purchase price that makes the best most affordable solution. Technology is an investment – a business asset of value necessary to enjoy increasing profits, so the price tag on a device is not viewed as “the total cost of ownership.” The cost of technology and doing business in comparison to the profits and time savings it brings is how the investment is calculated. The total cost of ownership’ is the purchase price of an asset plus the costs of operation, representing the complete cost through its entire lifecycle, when compared to the profit on a task or project level, the value of the technology and return on investment is clearer.

SMART INVESTING

Knowing the right features and functions necessary to meet personal and business needs, avoid excess, unnecessary, and overpriced non-essentials.

A small business owner needs phone services, a PC, internet, and a cellular device to manage business requests and fulfill needs of his/her customer. Without these things, the business cannot operate. The profits made from such services is not directly comparable on a ‘month to month’ basis to the cost of those services. The cost of services must exceed the profit either measured monthly, quarterly, semi-annually, or annually, depending upon the investment terms, as well as what form of payment is used. What might appear to be a large up-front cost is responsible for your profit(s), making a [Cost Benefit Technical Analysis](#) a critical business requirement.

LAPTOP & NOTEBOOK COMPARISON



LG Ultra PC 17” Laptop – Intel Core i5 – 16GB Memory – NVIDIA GeForce GTX 1650 – 512GB SSD – Dark Silver
\$1,499.99



HP AMD 3020e (1.2 GHz base clock(2h), up to 2.6 GHz max boost clock(2i), 4 MB L3 cache, 2 cores) + AMD Radeon™ Graphics
\$249.00



Lenovo – Chromebook Flex 3 11” MTK 2-in-1 11.6” Touch Screen – MediaTek MT8173C – 4GB Memory – 32GB eMMC Flash Memory – Platinum Grey -
\$169.00

Above are three nice laptops with the same look and a slight size variation, but there is a major price difference. From their descriptions, it looks like memory and size of the display are responsible for the price variance. What is not clear to the buyer is 1) What are the necessities and benefits of larger PC Memory and Display size; and 2) What is the Operating System and how do those three things fit *your plans* for use. The processing speed of a PC

was once considered most important, along with the size of its hard drive and memory. The data provided to the consumer from the reseller is limited and cannot be compared directly. The size of the monitor is obvious, but does an 11.6” screen vs. a 17” screen cost an additional \$900? Is an Android Notebook or Apple iPad as good as a Windows Laptop? Buying a small HP Notebook, an HDMI Cable, and a Smart TV costs less than an LG Ultra 17” Windows Laptop. Notebooks and Laptops do not require heavy maintenance, in fact, they can last years if data is managed correctly and efficiently. Issue: YOUR PLANS are not my plans and if everyone’s plans are different, no one can be together in the same place, on a similar project, with similar goals, or plans. Being “too connected” or “disconnected” in knowing or unknowing causes planning, processing, and communication dysfunction or conflicts, not of interests and career pursuits, but also living.”

Investment Tip: Take advantage of free online storage accounts from One Drive & Google

Return on Investment

A Windows 10 HP Notebook purchased for \$249.00 provided the necessary tools for a Business and Internet Marketing Consultant to generate over \$3,500 in profit after two weeks of purchase. Some of that profit went to the Consultant’s customer, while the other portion was a service fee. What used to cost over \$2,500 for one person to compute and design solutions was reduced to \$249.00 and enabled two businesses to profit. This is the power of Technology.

When making a purchase, it’s important to read the specifications of a device, but useless if you don’t understand Operating System Compatibility, Storage, and Display options. Just as important are ports for other devices, such as a Mouse, Internet Connections, CD ROMs, DVDs, Wireless Internet, Cell Phone Chargers & File Sharing Devices, Microphones, and other peripherals, like TVs, HDMI Connections, Printers, Scanners, and Faxes. Some devices are not built to connect to both an Ethernet Cable Internet Service, Wifi, and others are not equipped to connect to certain printers and other devices. Therefore, understanding operating systems and connection types of devices is critical, such as a USB Port, an Ethernet Connection, a Wifi-Enabled System, a Windows PC, an Android, or MAC OS.

There are many other display and storage options available, making larger hard-drives and screens unnecessary, lowering the cost. Touchscreens and laser remote command tools are becoming more popular. These additions or options serve more than one purpose, making your investment more valuable than buying something built into a PC. The Smart TV as a Display Monitor is a perfect an example – it serves two or more purposes (display and TV), reducing the importance of a laptop’s display size.

BUYING CONSIDERATIONS

Mobility	Account Management
Compatibility with Software & Devices	Operating System
Wi-Fi Enabled	Storage Capacity & Plan
Peripherals (Types of Connectors)	Ethernet Internet Capable
Display Type & Size	Software Subscriptions
Virus Protection & Security	Warranties

Time is Money

Automation is Value, but not if it causes pollution and congests and slows the Internet

Needs Assessment

How will these devices be connected and where will they be used? Do they need to be mobile and connect to Cable Internet, as well as Wirelessly? Is it used to record CDs, watch DVDs, and will it connect to a Printer, a TV, a Smart Phone, and does it need specific Office Productivity software, such as Microsoft Office for writing and creating financial spreadsheets, or power point presentations? Does the device Smart Cast to a TV, is additional cabling required, is it being purchased to create graphics, listen to and read books, play video games, watch TV, call friends, co-workers, and family? What type of work does it need to do? Basic Word Processing, Video & Graphics Design, Internet, and Software Development, or just Entertainment? Will it store important documents, photos, and is it used to communicate online with social media applications like Facebook, Twitter, Google, Instagram, Online Education, Financial Systems, and other critical business software applications? Does it need a Blue Tooth USB Connection, a place to connect headphones, and a telephone jack? Does it have an Email System? Can I connect my Stereo Speakers?



This PC should meet all my business needs – it must connect to my Printer, Scanner, and Fax, it must connect to the Internet using an Ethernet Cable and Wireless Connection, it needs to have at least 4 USB Connections to support Phone Charging, an External Microphone, a Wireless Printer connector, an External Keyboard, and a Mouse. It also needs an HDMI port to connect to my Smart TV for projection, must be able to run Adobe Photoshop for Graphics Design, and Microsoft Office. The Windows Operating System is necessary because I plan to purchase additional software to manage other things like programming databases. This makes storage and compatibility a top priority in selecting the right device.

Not every computer user requires everything

A small business or person only really needs a small PC with access to the Internet and a few ports to connect to other devices. It's best to identify all devices to ensure the Laptop or Desktop can connect to other devices, such as a Wireless Printer, a Smartphone, or an old printer or mouse with a Serial Port. Thanks to the availability of software services on the Internet, a Notebook for \$149.00 will meet the needs of a small business operation. Microsoft Office and the Google Suite offer Online Word Processing, File Storage, and Sharing, some free, with others at an affordable price. This makes the Storage Capacity in a PC or Laptop not as important.

Laptop + Smart TV + Router + Ethernet + Internet Service + Applications + Speakers + Mouse + Printer + Smartphone Cellular Plan

Inventory Existing Devices & Software

When buying new Technology, one of the most important things to consider is compatibility with other, newer & older devices and software. With Operating Systems Upgrades and advancements in Connection Types such as Blue Tooth, Wifi, Screen Casting, File Storage and Sharing, Internet, and Smart Phone Applications, knowing how everything works together, as well as recognizing capability overlap is important to include in Device and Software Use Strategies.

1. Review device ports and connector types
2. Document Operating Systems and ensure they stay up to date
3. Understand Software and Hardware Compatibility – Multi Device Accessibility
4. Create a Device, Information Management, Backup, and Security Plan

Universal Serial Bus (USB) Connections are becoming more popular due to ease of installation with Plug and Play ability, its compact size, and multi-functionality.

High-Definition Multi-media Interface (HDMI) offers improved Display; its current competitor is Screen Cast Mirroring for multi-screen sharing which replaces projectors.

Accessing Applications and the Internet using Smartphone and Screen Cast Mirroring Technology provides lower cost entertainment and business management options. Smartphones are proving to serve a wide range of services, including Internet Service and business productivity – doing far more than just Voice Talk, Texts, Directions, and Scheduling.

Android and MAC iOS' have gained popularity because of Operating System device compatibility, Cloud Storage, the App Stores, and access to Gaming and Mobile Business Applications.

Operating Systems

Desktops, Laptops, Notebooks, Tablets



Windows, Apple MAC iOS, Android iOS, Penguin Linux, Gaming Systems

If you already have a monitor or a Smart TV or TV with an HDMI Port, a laptop can be connected to your TV for a larger display – making the size of a laptop monitor less important. Wireless Screen Casting from Smart Phone devices are also available. Customers are most concerned with accessing information on multiple devices, so an Organizational Strategy must be designed to designate specific software, storage locations, and sharing policies. Many laptops, tablets, and notebooks have microphones and video equipment built into the Operating System and wireless options, such as Bluetooth are becoming more popular. Knowing extra peripherals, such as a Video Recorder (web camera), Microphone, Mouse, and Keyboard can be purchased and added on separately, might cost more than a built-in option, but meet other requirements for Mobility such as a USB Wireless Mouse, Printer, and Headsets for hands-free communications. Quality varies, but standards are improving – a web camera does not take nearly as high-quality photos as a Smart Phone and Image Storage, Organization, and Sharing among devices are improving. Where and how do you plan to store and share your digital media, such as Audio, Video, Documents, and Photography?

Business Software

The most important decision factor in choosing the right Business Software are the plans for its use. Deciding between Desktop and Laptop Software which is installed on a local hard-drive or to purchase a software subscription and use it via the Internet. There are advantages and limitations to both. If installed on a PC or Laptop, then Operating System software compatibility is critical, as well as the amount of storage space on the hard drive. Local device software installations limit use on multiple devices. If you purchase and install an older copy of Microsoft Office or Financial Management Applications on a PC, you cannot use it your Tablet or Smart Phone. It is a one copy per device per person design replaced by multi device user subscriptions.

Companies offer affordable prices per user, enabling online information processing and management. Functionality varies between desktop and online versions but can be accessed typically on any device. Cloud Systems, Subscription Based Online Solutions, provide better file management and relieves the business user of the burden of software maintenance.

Microsoft 365 Business Basic	Microsoft 365 Business Standard	Microsoft 365 Business Premium	Microsoft 365 Apps
\$5.00 user/month (annual commitment)	\$12.50 user/month (annual commitment)	\$20.00 user/month (annual commitment)	\$8.25 user/month (annual commitment)
Buy now	Buy now	Buy now	Buy now
Try free for 1 month > ⁴	Try free for 1 month > ⁴	Try free for 1 month > ⁴	
Best for businesses that need easy remote solutions, with Microsoft Teams, secure cloud storage, and Office Online (desktop versions not included).	Best for businesses that need full remote work and collaboration tools including Microsoft Teams, secure cloud storage, business email, and premium Office applications across devices.	Best for businesses that require secure, remote work solutions with everything included in Business Standard, plus advanced cyberthreat protection and device management.	Best for businesses that need Office apps across devices and cloud file storage. Business email and Microsoft Teams not included.
Premium Office apps included	Premium Office apps included	Premium Office apps included	Premium Office apps included
Web and mobile versions of Word, Excel, and PowerPoint included. ³	 Outlook Word Excel  PowerPoint Publisher (PC only) Access (PC only)	 Outlook Word Excel  PowerPoint Publisher (PC only) Access (PC only)	 Outlook Word Excel  PowerPoint Publisher (PC only) Access (PC only)
Secure cloud services included	Secure cloud services included	Secure cloud services included	Secure cloud services included
 Teams Exchange OneDrive	 Teams Exchange OneDrive	 Teams Exchange OneDrive	 OneDrive

Microsoft Office products, or Microsoft 365 can be installed on a local machine and used on the Internet. The Google Suite is different; there is no software installation necessary and runs from compatible Internet Browsers.

Office Productivity

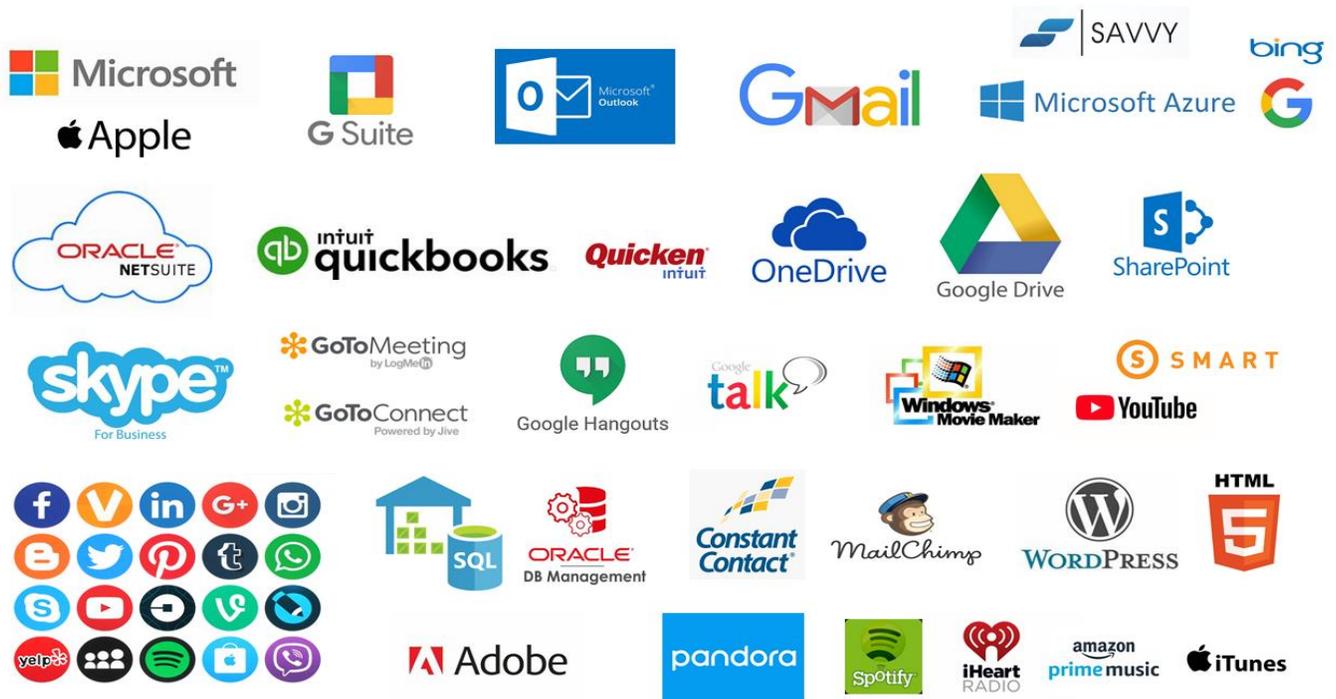
Word Processing, Spreadsheets, Presentations, Accounting, Tax, Human Resources, Calendaring, Email. The two major software providers are Microsoft 365 and Google Suite. Business Accounting Software is an essential business application but the same can be accomplished using the Google Suite or Microsoft 365 templates. The top providers for Business Accounting Software are Oracle Net Suite, Intuit QuickBooks, and Quicken. What used to cost businesses approximately \$250 per user license in Microsoft Office software costs, has expanded to offer affordable monthly subscription fees for Microsoft 365 Applications on the Internet.

Electronic Business Supply Savings

Office Supply	Product Cost	Electronic Cost
File Folders	10.99 – 25.00	Included in Operating & Storage Systems
Sticky Notes	10.99 – 15.99	Included in Operating Systems
Business Planner/Calendar	12.00 - 20.00	Included in Operating Systems
Address Book	10.00 – 20.00	Included in Operating Systems
Receipt Book	6.00 – 12.00	Office Productivity Templates, Accounting

		Software
Telephone Message Pads	9.00 – 12.00	Text, Voicemail, Email, Journal
Envelopes & Postage	10.00 – 150.00	Included in Email System
Return & Shipping Address Labels	7.00	Templates to Print + \$20.00 for Special Paper
Business Cards	10.00 – 20.00	Templates to Print + \$20.00 for Special Paper
Business Flyers, Brochures, Forms	Design & Print Cost	Office Productivity Templates
Printed Checks from Bank	20.00 and up	Free Online Transactions
Alarm Clock	20.00 and up	Included in Operating System & Smartphones
Calculator	20.00 - 250.00	Included in Operating Systems & Online

Save over \$350 on Equipment & Supply Costs using built in PC and Internet tools



Google vs. Microsoft Productivity Tool Pricing

G Suite

Plan	Monthly Pricing
Basic	\$6 per user
Business	\$12 per user
Enterprise	\$25 per user

Office 365

Plan	Monthly Pricing
Business Essentials	\$5 per user
Business	\$8.25 per user
Business Premium	\$12.50 per user
ProPlus	\$12 per user
Enterprise E1	\$8 per user
Enterprise E3	\$20 per user
Enterprise E5	\$35 per user
Office 365 F1	\$4/per user

Does a Small Business Need Everything?



The Internet and Computer eliminates equipment

CD Players, Phones, Stereos, Speakers, VCRs, Cameras, DVD Players, Audio Recorders, Remote Controls, Filing Cabinets. A single PC with an Internet Connection enables free Streaming Online Media, Clocks, Digital Media Storage and Preservation, Sharing across the miles, Remote Management, and Free or Low-Cost Business Management Tools.



Cloud Computing – Online Subscription Based Software Services



PC + Internet + Email + Business Productivity Applications + Marketing



Management Tip: Maintain Digital Files in Online Storage, with backups in a separate place



5 Reasons Businesses Use the Cloud

Every year, more and more businesses are adopting cloud. While traditionally thought of as an IT decision, cloud is increasingly being considered a business decision to enable company functions. Take a look at five reasons why more businesses are adding the cloud to their technology arsenals.

1 It offers better insight and visibility

Businesses are using cloud technology to support their analytics efforts. Of leading organizations:

- 54% use analytics extensively to derive insights from big data
- 59% use cloud to share data seamlessly across applications
- 59% intend to use cloud to access and manage big data in the future

2 It makes collaboration easy

Cloud allows work to be accessed from anywhere on multiple devices, making cross-functional collaboration much easier. Here's what leading organizations—those that are gaining competitive advantage through cloud—cited as popular uses:

- 58% collaborate across the organization and ecosystem
- 59% improve integration between development and operations

3 It can support a variety of business needs

Companies are forging a tighter link between technology and business outcomes. Take a look at the business functions companies have migrated to the cloud.

- 18% messaging
- 15% storage
- 13% office/productivity suites

4 It allows for rapid development of new products and services

The cloud offers businesses valuable capabilities. Here's what leading organizations say it enables them to do:

- 52% use it to innovate products & services rapidly
- 24% are able to offer additional products & services

5 The results are proven

From business growth to increased efficiency, businesses using cloud are realizing benefits across the company.

- 25% of businesses saw a reduction in IT costs
- 55% saw an increase in efficiency
- 49% saw improvement in employee mobility

Sources: CDW, IBM Center for Applied Insights



INTERNET SERVICES & EQUIPMENT

Providers – ISPs

- Online Account Management
- Automatic Bill Pay
- Discounts
- Email Addresses
- Streaming Media

Service Plan Considerations

- Service Level Agreements – Uptime, Downtime, Equipment Support
- Availability, Reliability, Price Comparisons, Other Optional Services
- Equipment Leasing Costs & Contract Terms
- Pricing for Number of Users, Guaranteed Speeds

Requirements

Modems, Routers, Wireless USBs, Ethernet Cables, Coaxial Internet & TV Cable

All Internet Service Providers (ISPs) offer Installation Services or provide Self Install Instructions, along with rental options on equipment. It is important to design a good configuration for your home office considering the number of devices that require a connection and how they connect: wireless and/or wired options. Some ISPs offer their customers an option to rent a modem and router in a single device.

Renting a Modem/Router from an ISP might be cost effective in the beginning, but better to invest in your own. Before purchasing, make sure you understand the difference in Wireless & Wired Connections and have a solid plan for where those devices are located to ensure the right amount of cable. Some homes and office buildings might require Wifi Range extension, but you should first check with your ISP or Technical Service Representative to make sure you have everything configured correctly and the right type of Subscription set up for multiple users and/or devices.

Investment Tip:

Do your own installation and buy equipment to save \$200+ annually

Internet Phone service

Voice over Internet Protocol (VoIP), also called IP telephony, is a new technology for the delivery of voice communications and multimedia sessions over Internet Protocol (IP) networks, such as the Internet.

- Price per phone line
- Voicemail, Text, HD Video Teleconferencing
- Device Use Plan (Laptop, Smartphone, Tablet)
- Software features (Call Ques, ID, Routing)

Requirements

High Speed Internet Connection or Cellular Smart Phone Service

Service Plan Considerations

VoIP Phones are subscription-based phone software applications that use High-Speed Internet Service or a Cellular Data Plan. Many users subscribe to both High-Speed Internet and Cellular Data to ensure mobility. Cellular Service Providers offer special data rate plans and Wi-Fi access that enables Internet and Video Calling. As more Internet Service Providers setup local and regional Hot Spot Wi-Fi Connectivity, the reliance on Cellular systems decreases, lowering Communication costs. ISPs have not entirely reached acceptable levels of guaranteed Wi-Fi Hot Spot coverage, but when they do, customers will only need to pay for Internet Service if they use VoIP. This is only a concern for customers who need phone service while out of range of their business Wi-Fi or ISP Wi-Fi connection.

A VoIP Service Plan eliminates the need for a separate business phone account because it uses the Internet. While multiple Applications are available, such as Facebook Video Calling, Phone, and Chat, as well as three Video Calling Applications below and your local ISP, Contact Management and centralization is important in business.

	 Google Meet	
Microsoft 365 Business	Free PC to PC Calling	Prices start at \$19.95/mo
Investment Tip: Eliminate Cellular Mobile Service and Transition to VoIP w/Wi-Fi Hot Spots		

ENTERTAINMENT SYSTEMS

Entertainment possibilities are nearly endless with High-Speed Internet and a few good software subscriptions like Spotify, Pandora, iHeartRadio, YouTube, and Network TV Apps like CBS, ABC, ESPN, and CNN. Smart TVs connected to the Internet have much to offer Businesses as Projector Screens, In-Store/In-Office Advertising, and are great for Home Based Businesses, Sports Bars, News Agencies, and Video Teleconferencing. Larger viewing devices, such as a 55" Television works perfectly for experienced graphics designers, developers, and viewers of schematics and other documents with small print.

Stream Music in the Lobby, on your Headset, and while customers are on hold. Watch Network Television, Record and Air YouTube Video Advertisements at the office & Stream Presentations with Smart TV Internet Devices.

Improve the Office Environment and Customer Experience with Multi-Media

Wireless Sound Systems range from basic PC Speakers to High Quality Sound Bars, Sub-Woofers, and surround sound with Remote Management and Media Player Software makes digital media shareable, streaming on multiple devices, and preserves quality for far longer than Consumer Electronics.

Account management

Account Management is one of the most important parts of Business Technology and Personal Computing. Security of Account Information, Banking, and other Business Data needs to be easily accessible and protected. While software service companies allow purchasing goods and services online with reoccurring payment options, it's important to maintain details, warranties, serial numbers, access codes, and contact information in a safe place. A small business using Cloud Technologies has at least 10 or more accounts to manage. The information is necessary for support, helpdesk, add on features, payment, cancellation, and business accounting purposes. Details should be saved in writing on paper in a secure location, as well as in your Accounting Software. Be sure to take extra security measures when storing valuable financial and access information in one location.



COST ESTIMATE WORKSHEET

Technology	Number of Devices or Accounts	Month/Year Purchased	One Time Cost	Monthly Cost	Warranty Support Service	Provider/Brand
Desktop PC						
Monitors						
Smart Television						
Printer, Ink, Paper						
Laptops						
Tablets						
Mice, Keyboards, Pointers						
Smartphones						
USB Connectors/Drives						
Cables (HDMI, Ethernet)						
Headphones/Earbuds						
Internet Service						
Music and Video Services						
Office 365						
Google Suite						
File Storage Services						
Accounting & Payroll						
Anti-Virus						
VoIP Service						
Handheld VoIP Phones						
Headsets						
Microphones						
Internet Cameras						
Phone Number (800) or Other						
Total Technical Asset Costs						

ACCOUNT SECURITY

There are systems that generate initial strong passwords that users are required to change using their own password creation on their own schedule, usually because they have forgotten them or another personally driven reason. Originally, users were not forced into creating strong passwords that met certain requirements. Later, systems changed, forcing users to meet specific criteria for passwords, which were varied, depending upon the system. This made it impossible to use the same password for all system and showed variation in system programming. Users were not forced to change their passwords unless they forgot them, which previously required human intervention with calls to help desks. This has changed with auto generated password systems. Password requirements have also changed to include a secondary verification using CAPTCHA to prove visual verification of physical objects using photography. There are still some stragglers that force password complication and make it even more difficult with two factor verification systems, using a series of three personal questions. There is still much vulnerability and risks in password and account management, just because of identity theft, hacking, social engineering, poor human practices, and variations in systems account management using Identity Verification Software with complicated and varied processes.

Forcing users to change their passwords on a regular basis further complicates management and data security, causing forgetfulness, and even more risk in data sharing. Even though it may be an automated process to reset them, which makes it seem easier, it causes more difficulty for the human who is forced to change, remember, document, and share. It is especially problematic for those with disabilities, Alzheimer's, Dementia, and other mental disorders, especially when the number of systems in use grows.

The National Institute of Standards and Technology published "guidelines that cover identity proofing and authentication of users (such as employees, contractors, or private individuals) interacting with government IT systems over open networks." While they provide guidelines for government systems, they are different from business and citizen requirements. A publication states: "Verifiers SHOULD NOT require memorized secrets to be changed arbitrarily (e.g., periodically). However, verifiers SHALL force a change if there is evidence of compromise of the authenticator" (NIST, 2007).

Users should not be forced to change their passwords on a regular basis and password requirements should be uniform across all systems, but this creates risk that if one system is compromised, then so can all the others. There are plenty of other ways to verify users, including biometrics: eye scanners, fingerprints, and other special account security protections, such as Swipe, and other mechanisms like pin codes, but this increases complexity, requires more time, tighter control, and secrecy. Industry acts as if they must be as secure as a Bank Vault that manages eighty million dollars because Law Enforcement does not properly do its job or because automated security solutions are inadequate and seek to profit off identity protection and anti-virus software. It is in fact critical software and so important that it should be built into an operating system with cost configured into the price of the device or software to remove this burden from the users. Digital Identity and Account Management has more problems than just passwords. It has an authentication duplication problem where users are unable to conduct business and share information across multiple systems and networks without replicating personal details. Even greater risk exists with Voice Over IP Systems, recording systems, and cameras because of text based data capturing.

Fixing these issues by securing an operating system or database protocols would reduce this burden of constant replication of data entry and provide a more secure system when using the Internet.

CAREER OPPORTUNITIES

Telecommunications and Networking offers a wide variety of positions starting from entry level technicians all the way up to Network Management and then the higher executive level positions as Chief Information Officer and other engineering positions as Network Architects and Engineers. Finding the right position that matches the experience level is what is important in Networking since a Network Operator or Technician might be skilled in many Information Technology areas. Also, a person with a strong technical Network Technician, Operator, or Management experience would fit best in a specific Network Management role. Some technicians might find opportunities to move into management roles after several years working as a technician. Such opportunity depends upon the company's requirements and the applicant's background and qualifications. Other types of positions are Network Architect and Engineering positions.

Network Management is a highly valued profession and requires highly skilled, trained, and qualified workers, not just in network management, but also information security. They are those who administer and troubleshoot the network, ensuring it meets and follows data security protocols, and specific service level agreements. They also manage contingency plans for maintenance and outages, ensuring minimal or uninterrupted access to the network, its software, data, and the Internet.

An entry level position for a Networking Professional is a level one position on an IT Team. They typically utilize the help desk ticketing system, responding to calls for network support. They are responsible for connecting, troubleshooting, and maintaining the network for businesses and organizations. In this role, they might also be responsible for managing access to directory services, addresses, and manage infrastructure data. These professionals must be skilled in Network Security, Access Controls, Privacy, and Permissions. They might also be asked to work on Telephone Systems and Voice Over IP Phone Systems as part of their responsibility as a Network Technician.

More advanced levels interface with higher levels of management across an organization, working with corporate strategies and key performance indicators. They are responsible for maintaining Network reports for usage to ensure data integrity and other corporate strategies. They most likely work with regional managers to set and manage network performance expectations. They create or manage network improvement plans and key performance indicators for their company. They might also be asked to manage teams of network operators or technicians.

Network Architects and Engineers are a different type of role where the Engineer is responsible for analyzing and changing or redesigning a Network for specific purposes. These are often opportunities where new technology or a new system is being considered and talent is needed to create the right solution, implement, and manage it. They must be skilled in managing, creating, and reading detailed schematics for network architecture. They are also responsible for creating cost benefit analysis and estimates. They might also be asked to create or manage network test plans and advise on hardware and software requirements, configuration, and limitations, as well as upgrade opportunities and projects. They are required to be knowledgeable in all areas of Networking to include routers, multiplexers, firewalls, hubs,

bridges, gateways, and have a way to evaluate and advise on new technologies. They might also be asked to perform as a Network Administrator or build and manage teams of Network Technicians and Managers.

Not all Networking positions require certification or brand specific experience, such as CISCO Certified, or Microsoft Certified Network Engineer, although helpful. They most often must have a bachelor's degree or equivalent work experience. More advanced Engineering positions benefit from master's degrees or PhDs, as well as relevant work experience. There are many opportunities in Government, Department of Defense Contracting, Corporate IT Teams, and Non-Profit Companies.

The US Bureau of Labor and Statistics categorizes this profession under the Computer and Mathematical Occupations, with several types of positions. The salaries range from entry level at approximately \$57,000 to \$119,230 for Architect careers. A Network Engineer has a higher salary range and falls under the Computer Engineer categories (USBOL, 2020).

EMERGING TECHNOLOGIES

Current Telecommunication Standards in Power, Media, Hardware, Software seem to be loose and where government and industry falls short in working together to create a more efficient high tech standardized integrated system. There are obvious differences between Voice Over IP Systems and Smart Phone Technology device manufacturers and services, all accessing and relying on Cloud Systems. The marketplace is flooded with products and services with automated application generators and many open and under protected or ambiguous systems with valuable programs, but little interoperability or integration. One of the most common examples is the design of the Voice Over IP System and the Smart Phone System, the reliance on the Internet, as well as Cellular Infrastructure and problems with automated calling software. While each provider offers different and valuable operating system software, they fall short in integration and what is considered "Integrated Voice Recognition" (IVR) Systems. IVRs are now called Integrated Voice Response Systems, showing industry has changed from its original naming convention and possibly its purpose in moving closer to a more automated phone system. This, coupled with Artificially Intelligent Machines, makes for a complicated systems development process where information is subject to higher scrutiny. There is no evidence of actual standards or value in such a system.

Part of the purpose is to discuss problems and make recommendations for a reputable governing body to manage and forward integration for the next phase of Telecommunication Software that are aligned with Environmental and Economic Global Initiatives. It will not discuss international agency or organizational specific responsibility and oversight or the necessity for changes in policies or procedures, nor will it dissect industry plans, profits, losses, or laws. Standards Organizations, Boards, Committees, Agencies are spread across the world, making it even more difficult to follow the lead of engineering groups who set new standards and requirements for Integrated Telecommunication Software Systems (ITSS).

What is ITSS?

ITSS is a suite of software applications that enable interoperability across all types of networks, applications, and systems. It might even manage the cross-cultural and intelligence divide across multiple

Systems and The Internet
Symptoms and Diagnosis

Sheri L. Wilson

dimensions. It manages data using phone systems that are capable of processing data and does not just use numbers to connect to and display on other devices. Capabilities are not limited to just Smart Phone systems but can process information and transform audio into text and access multiple databases to find the information the caller seeks, and the answerer provides. Receptionists, Cell Center Agents, and Directories are less important with Databases when setup or configured correctly. As the Computer Science Industry gets smarter in developing standardized databases and business processes, the telecommunications Industry improves in its ability to access information using less human contact and more software systems to handle information. This is good for industry because answers are provided faster and more accurately, leading to a better world.

There are several organizations that contribute to setting and maintaining Telecommunication Standards, but no group seems to be governing “Cloud Computing” with a Telecommunications Standards committee that manages everything. When too many people or groups get involved, things become disorganized and the focus seems to shift to price, rates, roles, fiction and friction, functionality, and traditional ways of doing business, such as a phone call, an email, or a letter, rather than autogenerated reports that are efficient, legal, and effective information processing.

The International Telecommunications Union-Telecommunications Standards Sector (ITU-T in OSI) is an agency of the United Nations (Panko & Panko, 2015) that is said to manage standards. Making the ITSS technology available to all nations is premature since no agency or business has proven they can effectively implement a standardized fully automated and integrated Cloud Computing System that works for all business departments and its customers, regardless of the network or device type. The International Standards Organization (ISO) is an independent, non-governmental international organization with a membership of 165 national standards bodies. The ISO’s latest reported president is from Nigeria (iso.org, 2021). Relying on a United Nations and International Standards Organization, while systems are in development is disastrous, like deploying and selling a new system without a thorough test or plan to maintain and improve standards which is also like asking a monkey to standardize and manage a donkey while one is in the zoo swinging on artificial call trees, while the other is stuck in 1985 auditioning for a spot-on Hee Haw with Minnie Pearl in Tennessee while using the American Economic, Law and Taxation System without human regulatory board oversight.

The Federal Communications Commission regulates interstate and international communications by radio, television, wire, satellite, and cable in all 50 states, the District of Columbia and U.S. territories. An independent U.S. government agency overseen by Congress, the commission is the United States' primary authority for communications law, regulation, and technological innovation. (FCC, 2021).

The Telecommunications Act of 1996 is the first major overhaul of telecommunications law in almost 62 years. The goal of this new law is to let anyone enter any communications business -- to let any communications business compete in any market against any other (FCC, 2021). Competition harms regulatory compliance, especially if the Regulations and Standards are not set and manageable. Marketplace competition is one area, while product integration and improvement are another area of Research and Development, both of which eventually affect each other and every user across the world. According to Panko & Panko, authors of Business Networks and Data Security textbooks, standards are important because they allow products from different vendors to interoperate (work together). A clear example where this is not true or compliant is the USB Charging mechanism for an Android and an iPhone. They do not work together. They can call each other and plug the universal plug into a computer or

charger, but they do not charge at the same rate, nor do they use the same connector for both types of phones.

Cellular devices, Smart Phones, and computers on different networks can communicate, but not work together in every aspect. For example, a Cellular Device cannot access and process the same amount of information as a Home Computer with High-Speed Internet because of Data Rate variations on contracts. Some phones are accessible on Smart Televisions, but not accessible by a Remote-Controlled Smartphone or Browser based Application, such as Skype and neither are many of the VOIP Phone Systems. Historically, the cellular network could not access the Internet at all, until the introduction of Smart Phones and even with Smart Phones, data processing methods, prices, software, and capabilities are different. Network standards are already set for these different service providers to call, text, or access content from different networks and providers using the Internet.

Competition begins with device features and functionality which drives the pricing structure in the marketplace. Network Standards must be clarified because at this current time, it is only relevant to Cable, Satellite, and Wireless Networks for the Internet, and not Network Television, so Telecommunications Standards is not all encompassing. Television is now available using the Internet, changing the Technology for Internet TVs, but the underlying Internet Network Protocols are still the same – wireless and wired internet connections. Cellular and Internet Devices are only the transport and storage devices to manage content and they do not do a very good job beyond allowing voice enabled communications, text messages, small application processing, and internet browsing. Cellular Telecom providers have improved some of this with Smart Phone Application Stores to access and manage mobile data, but there are still problems with interoperability with Business Systems and Voice Over IP Solutions in Automated Call Routing and Account Management Systems. Additionally, there are storage problems and connectivity issues.

While the law may allow competition, it requires significant investment and effort to buy, build, invent or produce new or improve existing systems and create new competition. Why a company would attempt to invent a new Phone System or enter the marketplace makes no real sense unless they have a fully integrated all-encompassing Smart System. This type of system would enable Business Automation using Televisions, Computers, Cameras, Microphones, Databases, Telephones, and Mobile Applications accessible via both an Internet and Cellular Connection. Device size is an obvious factor in data management, accessibility, but not in Software Systems, which are developed from Computer Systems with outputs provided that fit the size and capability of the viewer.

The issue is not a matter of global economic competition, but of the protection, change management, and advancement of technological standards working together to improve in all areas of Technology, not just telephones because Voice Over IP systems now include software, the Internet, and the infrastructure that enables communication. The “Open and Uncontrolled Software Marketplace” shows little to no standardization in integration and the rapid development and deployment has opened new capabilities but presented far greater risks because of the loose requirements and abandonment of rules and laws in standardized application development and sales. Cellular and VOIP or Smartphones that use Wireless Internet Technologies are two different systems but work together and the software used for call tracking, automation, and other business practices is much lower quality than what is possible, showing the Telecommunication Industry has not yet established an acceptable set standard in Software Systems.

We have the tools to develop an automated integrated Telecommunication system, that works with databases. Because each business is free to use its own business processes and choose their own providers and the providers work separately, with no integration standards and quality review board, the cycle continues of selling and using only partially interoperable software systems. Quality Control and Training is vocalized in the service industry, but no improvements are seen, making the statements invalid or useless in terms of process improvement and advancement in technology. People are still required to speak to gatekeepers, call center representatives, and constantly input and provide the same information over and over to do business, when this can and should be automated and secure. Some Internet Software Systems have fixed this, but not enough to consider the industry awesome and advanced in all areas of Telecommunications. It has not reached its fullest potential. Artificially intelligent machines were created to give a face and human like experience to automated systems, but this is easily damaged with bad processes, people, programming, data, and inability to share information across multiple business entities and networks. Hollywood has also played its roll in damaging these efforts and our perceptions of these types of systems by producing fear based major motion pictures to deter the advancement and acceptance of these valuable systems. One specific example of the production of thriller and fear-based technology is the movie AI: Artificial Intelligence (Spielberg, 2001), followed by many other movies depicting out of control and harmful uses of Technology.

WHAT IS CONSIDERED TELECOMMUNICATIONS (TELECOM)

Business Industries such as Telecommunications are classified by Industry Codes that identify the type of work. With several organizations using different coding systems, such as the North American Industry Classification System (NAICS), the Standard Industrial Classification (SIC) Manual, and commercial systems such as Dun & Bradstreet Hoovers, and the new and popular Salesforce Cloud System, it's easy to become rapidly dysfunctional and disorganized, affecting standards and systems integration. Discussing the variations and parts of Telecommunications Technologies is similar, in that it once only included manufacturers, sellers and servicers of Telephones, but now involves Internet Companies, Utilities, Computers, Electronics, affecting all governments and businesses across the world. Dysfunction and disorganized misuse of such codes, software systems, and standards organizations have potential to cause world disaster if not controlled. Too many naming conventions, variations in systems, and code types leaves American Businesses at risk in even categorizing the type of industry, which causes problems in other system automation and integration efforts. If a business were to automate its systems using one set of classification codes and try to work with another business that uses another classification system, then it will experience failure if the codes are not directly matched. Another example is the difference or variation that Google uses to define Company Types in comparison to what Microsoft and the United States Government uses. No one knows if this matches the Internal Revenue Services (IRS) codes and classifications and variances in use limits and unnecessarily complicates automation. The same problem exists in Telecommunication Systems such as Android, Apple, and Window's Systems. It gets even more complicated when dealing with different types of Phone Systems, such as Key System Units (KSU), Private Branch Exchange (PBX), and Voice Over Internet Protocol (VOIP). Thankfully, technology is advancing to VOIP because of advancements made in Internet Technologies in both Hardware and Software Systems.

Today's definition of Telecom only broadly defines it as communication over a distance by cable, telegraph, telephone, or broadcasting. Definitions do not openly state that it includes devices such as Satellites, Cellular Systems, Telegraphs, the Internet, and other equipment and devices that enable locating, tracking, talking, watching, listening, sending, receiving, or processing, accessing, and storing information. Telecom falls under the Computer Science Industry, which is undergoing major changes with Cloud Technologies which includes Voice Over Internet Protocol (IP) Systems.

Telecom is not just comprised of Phones and Phone Lines; it now includes Television, Computers, Software, the Internet, and many other technology "smart" devices used throughout the world. There is little industry leadership in software but much competition in devices, only offering slight variation in hardware design, operating system, and user experience with low Standards using database technologies that engineers now have access to. Does Industry develop these standards or does the Government set the standard and sell to Industry? It is understood that the Telecom Industry is regulated by the Federal Communications Commission (FCC). It is also understood that Research and Development in the Telecommunications Industry is funded by the United States Government and conducted by research institutions in competition or together with multi-national corporations who do not actively or effectively coordinate their projects, programs, findings. If they coordinated effectively, all systems would work together perfectly, with no drop spots, data insecurity, hacking, or problems obtaining or viewing information.

VISION, LEADERSHIP, PROCESS, AND RESOURCES

Determining readiness for the implementation of an 'innovation strategy' is not defined by a checklist, it's also not a schedule process or project, but perhaps a task or principle. The checklist refers to what is necessary to assess an organization or business' understanding in relation to yours about their plans using a set of commonly used terms called: goals, written in a to categorize and separate a vision, from a mission, using leadership, processes, and resources. These are high level executive concepts – generalized, not specific. It means a company must have goals before they can even work – they must know what they're doing and they have to check and make sure they continue to do what they set out to do and those visions, missions, and goals change, on various levels. It seems that more than just goals are required, but also a clear assessment of where they currently stand and how they plan to improve or innovate, beyond just an invention or regular product or service improvement. Innovation is not an assignment for everyone; it's for managers and executives, to create a way to integrate it with product and service reviews in all areas of business. Right now, it's a broad, generalized approach.

Business process management or re-engineering is used to improve or manage processes, for consistent efficiencies with the ability to evaluate and measure change. Technology improves all of this, but these are things often reviewed when developing new or improving systems. How do we innovate is a common question, translated or otherwise stated as: How can we get or be better, spend less, waste less, enjoy life more, and manage great ideas, opportunities, and options, as well as change, while remaining profitable, happy, successful, and not damaging what already exists or continuing in a cycle of dysfunction or inefficiency? Figure 4.7 – The checklist for innovation strategy (White & Bruton, 2017) presents low level concepts, yet useful in all parts of life, but not known or followed by everyone. Not everyone

understands or accepts the ideals of creating a ‘vision’ and using ‘leadership concepts’ and reviewing how people and systems share information, the purpose, the waste, how to be more efficient and effective. These are old ideals that suggests a management team is required to plan and coordinate the tasks of its employees or motivate and assign them to improve processes, procedures, and systems. In high performing organizations, innovation is not something managers perform as oversight and daily tasks but are principles they use in their service or products, ideals, and practices. How can we, I, this, or you be better? This covers performance management on multiple levels beyond employee work results, but also following a standard practice that can be evaluated as above standard or below standard, beyond a check in the box, or bubble filled test result.

This is the main premise of ‘innovation’ on a business management level, or what should be the common strategy of all technology changes, reviews, or use selections. Everyone has vision, and ways they think would be best for a company, but many don’t see and understand – it requires more than just a visual and idea sharing, or mentally and aesthetically pleasing proposals like the word “innovative” – or “ingenuitive” – people’s perceptions and behaviors are what are important, either to be improved or eliminated.

Is innovation a daily task, a business principle, or a project? It seems more of training employees and implementing processes with minds and sights set on how to regularly improve people, processes, and products. An ‘innovative organization’ does not routinely carry out its day-to-day operations blindly fulfilling task orders without taking out the time to conduct product and performance reviews on multiple levels and timelines. A new innovative idea is only good if it follows a standard implementation or proposal process, with the right people so good ideas don’t get lost, minimally implemented, or worse, ignored, forgotten, and or damage other systems. It’s not advised to focus on what could go wrong, but what it could do, and prove it in small tests with an implementation plan for other systems. This is not a one size fits all project; the variances and applicability are tremendous, which is why there is an entire field of specialists devoted to reviewing, evaluating, and documenting and researching for implementation in more than one business office, area, or system.

Innovation requires understanding or explanation of what the word applies to, and how to show results, as well as the purpose behind it. It’s not a concept of being the best of the best, but producing the best, most preferred, and best value product or service and doing it with a specific strategy of immediate and long-term results, either evident by quarterly finance reports, or other valuable measurements that show increase in standards across the entire corporation. First, the standards must be known to exceed them and so do expectations, but delivering products solely based on expectations or to customer specifications shows little to no innovation because the company is only doing what its asked or told, responding to the needs of everyone else and not driving the business train to industry or worldwide change. Some new ideas seem amazing, like Facebook, but end up being short-term, disastrous, or faulty, but it depends on who or what perspective or what user and experience level reviews the new system of *social engineering*.

If customers accept low quality work, then innovation is not a top priority if the leadership accepts the low-quality standards of the customer. Innovation teaches executives and managers to increase quality on both fronts, which enables them to improve the business atmosphere for both clients and employees. A hire and fire concept, which works in many places, is also not the answer or contributor to innovation. In a learning environment, visions are often conceptual, or evaluations of other writers or concepts, not personally implementable because they are too large or because there is no proof or strategy that education

changes industry, until students are ready to apply what they've learned. Another word is 'envision' which is how an innovator conceptualizes. Everyone has vision, but not everyone sees the same because vision is more than just a 20/20 standard. Individual reviews, reports of other organizations ideals of innovation, as well as 'hard coding' or promoting keywords, such as "front end, back end" and vehicle management concepts sounds like industry follows the basic car manufacturer. Continuing with this approach might 'sound' appealing and is something comparable and predictable by reviewing old business tactics, as well as providing the world with something they all need with various levels of design quality; they still pollute the environment and require serious maintenance plans. Technology is not a vehicle, but it does provide a means to help businesses get where they need to go and gives them the 'tools' needed to improve performance. The question is, why produce or continue in a cycle of something people already have and know, in a market that fully functions consistently? Why buy the Cadillac if the Toyota Civic functions just the same? While it seems matters of choice, style, and affordability, there are other considerations or drivers of choice beyond economics, comfort, and technology. Using a car manufacturer terminology as an example of 'innovation' is important because it's a historical business which has been around for years, showing long term sustainment, but also long-term problems, like traffic congestion and more, making the "automobile industry" only a component of innovation, not the entire and only focus.

The mixing of terminology is creative writing or explanation and causes severe discomfort because 'automation' is only a single component of an overused and flooded industry concept. It's like they attempted to use Ford Motor Company's manufacturing approach to business management for all products and services because they invented something amazing, came up with a standard management process, and experienced a serious crash and leveled out to remain consistent and competitive with a few new releases. "Getting new ideas off the ground" suggests we must struggle for something to take off when we don't even know or are able to forecast where its headed. A metaphor for the flight or launch of something new. The Global Position System, to the customer is simple navigation, an amazing invention, but to the innovator, it's the technology where most investments should be placed because of its potential. "Driving such projects" or tasks is not steered by simple product engineering and release methods; it requires a serious long-term review, strategy, and application, as well as protection, prevention, and all the many areas the Technology spans.

New ideas are amazing and innovative, but not if the company is already set in their ways, with sound processes, and procedures, without the need to solve more problems, or take on new business areas in need of improvement. Problem solving focused organizations might unknowingly and haphazardly create more problems. Constant change is damaging, confusing, and in technology destructive and results in half-baked or what people call 'homemade' non-supported, yet genius, or seriously in need of help products, with people trying to come up with new ideas to replace previous half-hearted attempts or to try to compete with products that exist without general or specific regulation or market management processes. Worse, is garbage built upon garbage, without an Environmental Strategy that is applicable to all Technology. Rapid responses to questions without evidence, proof, and time to see it to the end, creates distrust and waste and so does generalization. It's not just innovation. A company can 'set out' to do the same work it has been doing for the past 100 years, and attempt an 'innovation strategy' or open their business managers or staff to brainstorming sessions, or call an outside company to help, but it has to be done regularly, structured, consistently, and the **process of innovation must be tested and managed** itself before it can be used as a 'strategic process' used to manage other processes, such as the Technology Development process. Perhaps it's not a process, but a principle or way of working, with a mind set on an awareness or 'eye' for business change.

1. The COVID-19 Vaccination. How can scientists and doctors come up with a vaccination if they can't even properly assess what and how to make societies better, such as group healthcare or other underlying faulty and dysfunctional systems? So easily generalized as "some people can't breathe" not realizing, that many people shouldn't have the right to. It's like people on "Death Row" – letting them live for 20 years in a concrete box and waiting to put them to death, so another group can argue it out, or search for reasons, when it's already been determined. Is the profession sleep walking or do they lack innovative leadership? This is not a paper on the Death Penalty or Global sickness, but about Medical Technologies and Innovative Strategies to make the world a better place. People have been dying for years, complaining for years about healthcare costs, prescriptions, and the world has faced decades of sickness, yet they call medicine "technology" and have no valuable way to provide *innovative* healthcare at an affordable price, or even for free. Existing health self-reporting systems are horrifying, dysfunctional, and not worth a single dime.
2. Traffic is regularly congested, societies are ugly, crime is ridiculous, and money is wasted on keeping polluters and non-essential or non-innovative people alive, straining our system, and waiting for a free injection. Great innovative news would be to learn that these are population control mechanisms set in motion or planned for better business and world management; to make room for the intelligent that can create and fix it and not just complain or find reasons to avoid, assess risk, or linger and fester on threats, govern by fear, or manage by 'correlation and comparison to other industry ideals', failure, or delay. Hopefully pretty AI people that must be programmed, line by line, on what to say, click, and do are not 'driving the technology businesses' but a world innovation technology question naturally arises; how do they intersect and is it useful?
3. Innovation strategies using low-level and generalized terms like "leadership" is not fit for any project, program, or system, and although a good word and a start to explaining to children how to create a plan and take initiative, it lacks. It shows severe incompetence in our education system if higher learning institutions must be taught this, or that these concepts must be reinforced at this late stage, age, and level of learning. Perhaps it is a valuable reminder that sparks new ideas, while re-instilling, reinforcing, or strengthening old ones, which is not a bad strategy. Although familiar and helpful, it is not used in everyday business and society and is only a start to how businesses or people "want" things or people to work, not how they 'actually work.' Creating something new, while in the midst of a pandemic, and then choosing to promote or educate people that 'it can't or shouldn't be done during certain times,' such as "our focus is on this right now, so it's not a good time' is resource haggling or management, as if not enough humans, people, or money is available to focus on more than one problem area at a time. They are true statements, but diversions, perhaps as a Risk Management avoidance tactic. Even worse is when companies or other people go off and create new 'innovative' ideas and damage the marketplace, leaving the influencers, users, or industries behind, causing a severe waste of energy, time, and money. A long list of damaging fallouts is available for each industry, and proponents of "time to market" or other fluffy phrases, such as "Strategic Planning" sound great, but if there's no proof of implementation or visible and worthwhile change with a certain timeframe – it's wasted words and money. It sounds good, but can it be used or carried out by everyone, everywhere? Results *oriented* approach: This is not China.

4. Social Media: While it might look like a new innovative communication system, it is nothing much different than email or an online organized phone system, with additional features, such as texting, and picture sharing. While it seems wonderful and amazing upon release and first use, it lacks all areas in the Checklist for Innovation Strategy, showing that the checklist does have somewhat of a purpose, but only to show those systems that exist and a company's failure to follow or publicize their adherence to the list, and make use of it beyond the creation of small groups with moderators, across the world, with no real associated action, professional management, and systems that show proof of change, improvement, and world development, beyond family or social dysfunction and a pretty picture storage sites. There is some 'leadership' in social media, but because of our 'corporate' or 'business' structure, the world places its focus on the owner, creator, and the stock market ticker of how 'profitable it is' without even realizing the company only profits on tiny little advertisements that don't actually render much of a profit, exposure, or provide the kind of business value that other media sources do. Leaders within Facebook, or users of the system are not easily found.
5. The Harvard Business Review writes about Software Giant: Facebook, "In an age when user experience as king, it's important that top management weigh in directly on prototypes themselves before approving any project. "There isn't a review board that designers and engineers go present to with PowerPoint slides. We're very much a build and prototype culture. Ideas presented on slides just don't stick," she said, echoing the credo of Steve Jobs." This again, shows such a low-level understanding and view of the internal 'innovation strategies and what management does or needs to do. Grouping and defining 'culture types' or how organizations develop removes creativity. Such common sense reported from Harvard, but no public 'management' comments; they attempted to give a name to the type of 'culture' their company has and how it works. "Culture" is turning into a bad word; an attempt to define a group type or way a company works because of their clothes, ethnicity, work, or management style. Statements such as "We are a conservative company" is an attempt to explain how an organization works or an executive or managers way of summarizing how a company is to be presented or viewed, which prompts new employees or workers to follow the definition and standard. Rather than saying, "we dress and operate professionally, as the standard business executive corporation is expected to, we also lead the world in Technology and Innovation." Although not directly written, it is understood and not a 'checklist following mentality.'
6. A 'build and prototype' *culture* doesn't correctly describe Facebook – it's a Software Company that built software, published it, and releases teeny tiny improvements, over the span of 20 years. There is not a single integration tool for students, scientists, or sociologists to data gather and run patterned analysis, yet there are lawsuits, movies, and other bad media about how to compare beauty and promote photography, as well as promotion of interracial marriage, non-degreed software developers, and a platform to give voice or a space to type and discuss global topics, without any real action beyond the ability to form a group and meet in person. This is a Sociologist perspective, showing there is no 'innovative' strategy that can be applied to that process, especially if the review of the systems are not taken seriously, open to new innovative ideas, with structured technology change, testing, and implementation, as well as improvements in capability, but the task is too big to use and deploy 'scientific tests' with valuable statistical reporting, using the world

to see ‘what’s really going on’ and to implement a new vision for world or social change. Number of users and company worth is not enough. Based on the world of Artificial Intelligence in Technology, it is possible that the Owner and CEO of Facebook is a paid spokesperson or actor; falsely reporting, along with others, that Facebook renders billions of dollars in profit. A smart Technology professional already knows once the system is built, it is paid based upon its revenue stream and Facebook Advertising is miniscule and not a billion-dollar money making machine. Feels like business projection is trying to forecast something outlandish and unreal or they don’t know how to calculate money or investment. Perhaps this is or was industries choice way of promoting “Software Engineering” as a highly profitable industry concept if a team could create and maintain a useful World-Wide communication system.

7. The important part of the media and software analysis is reality and its relation to the Checklist for Innovation Strategy comes down to whether the reports match reality, in that “Is this vision attainable?” Everyone wants a billion-dollar idea, but no one seems to want to manage it, improve it, report earnings, expenditures, social change, and show how ‘bogus’ it can actually be, by using honesty. What is more important – money in profits or social change and can both be attained and on what level? Facebook is a great marketing platform but requires significant time to setup and manage. Make the money and quit? Does it challenge standard practices? They are new practices, with competitors in advertising, so the answer is no, not really. Fake worlds, built on data or ‘creative’ lying using locations, relationships, profiles, and words, is untrustworthy and no control or match to the outside world, creates yet another system that parents, educators, and technologists are forced to study, adapt, and improve because the owner, Mark, decided to drop out of college, just like William R. Gates.
8. Lastly, the final question, “what happens when a ‘new idea fails?’ (White & Burton, 2017). Failure ideals are required to step aside and let positive humans take over; Business and technology consultants do not offer failure advice or instruct how to create a backup plan or an alternative way to earn money if new business ‘doesn’t work.’ These concepts are already known to smart professionals and is simple; either invest more, change course, try a different approach, and ensure money continues flowing in, either by going back to work full time or finding another source. Forecasting project failure using statistical analysis or ratio is either based on consistent project reporting that follow the same process, but it’s a faulty way to predict outcomes because people, processes, and systems are different. Using ratios to predict, means the projects are in a test phase of another scientific study to prove or detect failure points, yet failure is not fully defined, is obscure or secret. Backing up Technology is an important concept to avoid loss and it is a standard task for commercial, military, and private businesses. It has become an important concept to avoid loss of new or ongoing work, but ‘backup plans’ for new ideas are handled differently. Smart people don’t go 100% into an idea without an ability to change course depending upon their success and expectations. If a new business owner quit their job to start a business, then they have a plan and can effectively do it, if not, they do something different and fulfill their career and business needs at another company. New businesses are not handled the same as ‘ideas.’
9. Small ideas are simple, but big ideas or plans don’t fail, they course correct and change strategies or plans. Using “Technology Terms” such as system failure and taking it from its original use

from education terms, such as “you failed the class” then, well, take it again or get out of the way and make sure Educators and Technologists create ways where students don’t fail or are repositioned to something more appropriate for them because they are infecting other positive and capable humans with far better competence and understanding. A newly marketed concept is called “Disruptive Technologies” which is obviously negative and unwanted contact but viewed as a way of shaking up industry and making a big impact, often with growing pains. “Pretending” or being automated, replicated or ‘artificially intelligent’ new creations or employees, make it even worse. It’s better to professionally state that some ideals and practices have become widely acceptable strategies and viewpoints with proven results, but again, it’s a mix of Hollywood and pharmaceutical marketing approach to medication. Facebook has given us the platform to pretend to be someone we’re not – to steal pictures, stalk, harass, duplicate and the Internet has done the same and there is only oversight for what we call ‘plagiarism’ in the school system. Alternatively, it allows us to communicate across the miles, but rarely on a personal level with depth and value, yet still excellent for business networking and marketing. In the real world of Internet publishing, linking, or giving credit creates yet another long step in the process of attempting to ‘connect to the source’ of the words, reference, idea, or concept possibly with the only real goal of “sounding competent” for a short period of time. Following a media channel or business is good and like a magazine subscription, but if everyone publishes with different strategies, styles, and methods, it creates a confusing world, and the popularity contest or adoption of ideas or trends begin or end. The same concept applies to the Internet in general, standardization, overdevelopment, ranking, deciphering truth, application, use, security, and innovation.

10. There was a process for great ideas, but it became bureaucratic, just like the others; some were taken by others and put into the marketplace, leaving the inventor to see how it was implemented and left feeling used, and not paid to think. Being paid to think and advise is only valuable if people listen and providing a typing platform to ‘exchange ideas’ or thoughts is only good if they can be put into action on a larger scale than a photo share, or an ‘automated messenger’ that is designed to irritate or wreak social havoc. With social media, everyone has something to say, and your inbox, feed, or stream is full. A good research question is how many read beyond a comment box, follow, use, and or buy? Technology is available for purchase, but not for application of life’s principles.

CHANGE MANAGEMENT

Missing is the way to navigate and review or change visions, processes, leadership, and resources, or how important it is to stay focused on creating a set plan, strategy, in those areas, without constant change or ideals of ‘disruption’ or ‘failure.’ The concept of ‘vision’ takes on new meaning when viewed in different ways; my eyes are important and what I’m seeing is not pleasing, but my ears are also important, as well as the rest of myself and my plans. Perhaps reviewing basic concepts that promote ‘innovation’ and ‘strategy’ are not based on what we use our senses for or conceptualize in our minds and put on paper or out in products and systems. Although creating things of beauty and generating amazing ideas is healthy, they are only of use if there is a realistic and true payoff, in health, wealth, and prosperity. Individualization versus common consensus or collective ideals is another question, beyond a collection

of concepts. This is early phased creation, without specifics on what those ideas are – a general strategy to manage ideas, useless if already in production, created, or put to plan – sounds like a Creative Brain or Mind. Individualized idea generation or the ability to work alone was referred to as ‘autonomy’ but the function is not automatic – another word created and brought on by others that does not explain the ability to work without leadership, to create amazing things with others without being asked, tasked, or told, or without step-by-step specific instructions and constant correction, consequence, argument, debate, the need to please others, or fear of unintelligent and incompetent oversight. Allowance and tolerance of low-quality work must change. Commenting using ‘feelings based’ work ethic in Strategic Management is like bringing your emotional or leadership disease to the office – with a recommendation to ‘step aside’ and let your personal self be removed – this is in fact what working for a paycheck and others does during the process of work. When the competent is forced to work with the less competent or undesirable, dysfunction is obvious, but the world and social order forces unwanted ‘strategic communications’ that demotivate, deter, or complicate the environment – like the cluttered Internet Advertising placement strategies; rarely connected, all over the place, sending people off into never-never land, without any real evidence the ‘strategic innovative’ implementation was a worthwhile investment.

Savvysmartsolutions.com does not use advertisements; it pays to publish information, yet its comment base when opened was spammed with ‘automatic’ comments and garbage of negative value, although most comments were generalized compliments. The ability to write to the company or respond to published works had to be closed. A terrible internet design or attempt to sell unnecessary and unwanted automated security to detect, reject, and restrict certain sources or writers.

KNOWLEDGE MANAGEMENT SYSTEMS (KMS) AND LEARNING MANAGEMENT SYSTEMS (LMS)

Knowledge Management Systems (KMS) and Learning Management Systems (LMS) are software with keyword search capability designed for specific knowledge sets, maintained either internally or externally, with registration and completion tracking. How does one manage knowledge? First, knowledge must be defined as to what it is, how it is gained, its application, and its learning process. The Oxford Dictionary defines Knowledge as facts, information, and skills acquired by a person through experience or education, the theoretical or practical understanding of a subject. What is a fact and how is it determined? A fact is a thing that is known or proved to be true, but with so many different requirements and variations of truths and levels or variance of experience, there are different qualities of facts, as well as how they are obtained or accepted as fact. One might “appear” to be knowledgeable by the sound of their speech, the use of their words, and many provide documentation of completion of education or classes. Without good systems tracking and certifications of authenticity, as well as demonstration of such knowledge gained, such words and actions are always questionable. Some are accepted based upon their words and ability to convey quality behavior or understanding by communication, while showing proof of skill, but short periods of demonstration does not produce quality “knowledge testing and proof or evidence” of such knowledge, training, or education. Systems of trust are established based upon words, longevity in relationships or are granted immediately and destroyed once proof has shown otherwise. For example, if one says “they understand” or “know” how it works and can effectively do it

themselves, then it is expected they will do so, but there are variations in skill levels and quality of work. Work or action is the application of knowledge.

Knowledge is important, but more important is the ability to put the knowledge to use and create results or positively affect people, systems, or populations. Gaining knowledge requires comprehension and such understanding creates belief and disbelief that can be changed or altered based upon new knowledge.

COMPUTER SYSTEMS AND KNOWLEDGE

Computer Systems store and track knowledge. They do not automatically know anything; they must be programmed to function for a specific purpose. The human brain is like the computer. In that it processes information or knowledge. Historically, knowledge was considered information and the everything was considered information, and militarily, being in formation with a space split is like being militarized to materialize what is sought after, until “S” became a search “engine” and people stopped using ‘transmissions’ and vehicle terminology. Search engines still exist, and there are several, in competition, with the starter being, first, Human Brains, then with technology, Internet Explorer, who changed its name several times, and has become a corporate competitor to Google, and now search functionality on individual sites. An engine, in contrast to functionality, is a simple term used to separate the corporate giants, which are Google, Bing, formerly known as Internet Explorer, which is a part of Microsoft, Yahoo, Ask Jeeves, and others. The difference between Google, Inc. and Microsoft, Inc. is that Google has left their search engine name the same as their corporate name, while others changed theirs and others are unknown. Search functionality within an individual site, is the enablement of being able to complete the search task of an entire site. Google’s entire site is gigantic and considered big data. If this were available on an Internet site, there would be a link on the search term “Big Data” and it would be clickable, taking the reader all the way to the last chapter, where the topic is discussed in further detail. This design is like the way a Table of Contents, an Index, or Concordance works. There are many different types of sites, which are simplified as Informational, Official Government, Registered Businesses, E-Commerce, and mixed boards such as the well-known Craigslist. A new category, with about 10 years on the net is called social media, which comprises applications such as Facebook, Twitter, Instagram, and others. Internet Search terms return a mix of what they call sites and applications, but they are all considered applications, some large and some small, with similar functionality such as “Face Time and WhatsApp” some with more functions and features than others, with other competitors, such as Apple, Inc. They are all leaders, leading you to information and contact with people, using linkages to shorten what is seen on page and offering the option of finding things with ease, without being limited to simply a Table of Contents (TOC), or Index. Since they’ve entered the Smart Phone or “Mobilization” phase, things have individualized, with each offering different categorizations and presentation of options, with some customers staying brand loyal, while others enjoy not changing regular processes for which they find and work with information. You’ll notice by using various search engines, that design is primarily the same, with three paid advertisements at the top, optimized in the second area, and more variation available with Google, depending upon what is being searched for – a product, a term, a person, a place, a song, or a thing. The Internet of Things is expanding our understanding, as well as ‘categorization’ and the organization of information for the best viewing result. The old motivation was to place items where users would most likely go first, or by what funded the system, which has changed to be less advertisement based, offering a wide variety of friendly and well-organized options to learn, communicate, and be

entertained, and even more to be a contributor of the Internet's content as an entertainer or user of its file systems.

The reason company's branch off and change their names is almost as interesting as the similarities and differences among search engine giants and the question of whether or not they are limited in their own abilities, by law or corporate and technical structure to change.

Much like the human brain, it is a database that stores and helps you find information. Computer software is designed to compute and communicate information. If a search engine also contained the contents of our current brains, we wouldn't have access to learn anything new, which would destroy human learning. Knowledge Management Systems (KMS) are applications that track or deliver education. The broad category encompasses more than just an Online Learning System, which is considered an LMS. It also includes Machine Learning Systems, as well as Knowledge Management in the human brain. Machine Learning Systems are applications that teach a computer or application how to learn, based upon user input or other data based on statistical or other functions.

How can a system track knowledge? Currently, computers or KMS' cannot manage all knowledge learning systems effectively but can based on a few line items or in short, timed intervals. The category is broadly defined as educational systems or education delivery systems. They manage knowledge gained for each institution by student. There is not one single system that manages all knowledge gained or education completed. The systems are individual systems, interfacing with Financial Systems for payment and ordering systems for proof of completion or degree. Other KMS' manage school records, curriculum, and school data, such as textbooks, costs, attendance, staff, administration, attendance, scores, grades, and averages.

A "Knowledge Management System" might manage learning in a structured format, such as an e-Learning or Educational System that has a set time span, registration, course requirements, tests, grades, and reports of completion. These are actual knowledge systems that provide online learning experiences that have advanced from old paper methods of an education system where students learn from vocal instruction, reading from the same textbook, and adhering to standard course curriculum, homework, test, and grade reports done on schedule. Although systems, schedules, books, and classes vary throughout the world, there is a system called the Education System. A Knowledge Management System is something corporations attempt to use to train and monitor employee development. The methods of learning and documenting have changed to include non-credentialed instructor led training, the use of online multimedia, and the removal of tests to prove such knowledge. An advanced corporate system can match the training plans to employee evaluations and job requirements to prove the learning system works. Other systems, such as the Internet, provides several opportunities to learn, but no real opportunity to centrally manage all knowledge, skills, and abilities, alongside the corresponding job role with evidence of skill with documented proof or outcomes.

Such systems are managed by learning institutions, businesses, individuals, and organizations, with varying processes for storing, sharing, and managing training and other human resource qualifications. Duhon (1998) provided definition: "Knowledge management is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets." This definition is too general because "information assets is a large category encompassing "everything."" There are few differences between a KMS, LMS, LMCS, and what is broadly referred to as e-Learning Systems, other than different names used by industry to describe learning

on the Internet. There are obvious differences in those used by educational institutions and those used by Corporations, Businesses, and Organizations, serving different purposes, but the variation in the naming convention and its reason is unknown. It is also unknown what constitutes “knowledge” versus “learning” and the demonstration or use of such knowledge. There are systems that lead to formal degrees by Online Institutions accredited with established curricula and content delivery systems and there are e-learning media designed to accompany new systems, processes, and procedures, intended to meet specific and strategic business goals, and needs.

There is no evidence of the existence of a Knowledge Management System generally designed for all people, using all systems that tracks all areas. Knowledge sharing for professional development of employees of organizations, takes place with e-learning modules for specific subjects for intellectual growth. This leaves people responsible for developing their own learning management system for personal and professional development activities that go beyond the scope of business systems with classes, grades, completions, systems used, and applicability or demonstration of such knowledge. Traditional learning included the completion of professional training and college coursework, recorded with registration, grades, and completions used for direct applicability in the workforce. These are typically items recorded on a resume for the purpose of obtaining a new position or as data points within a portfolio to demonstrate employee knowledge, accomplishment, to showcase products, or provide evidence of knowledge obtained or used. Since resumes are limited to approximately two pages, all learning and knowledge records are not seen by prospective employers, eliminating opportunity for job seekers and other qualified professionals who obtain knowledge via e-learning systems by non-traditional means.

Company knowledge management systems do not often include Massive Open Online Courses (MOOCs), unless a training or knowledge plan is designed around content. Such a disparate knowledge system creates gaps and duplicity in learning, forcing redundancy and limits acknowledgement of non-traditionally obtained education, as well as its application and value. No ‘end user’ system exists that stores all formal and non-formal learning completions with detailed information on source, registration, and correlation of subjects to applicability in paid positions within a company or personal and professional development goal setting and tracking. No computer system exists that track, monitor, and document applicability of concepts learned via e-learning systems for the self-guided learner – the learner naturally completes this evaluation. E-Learning systems also do not show career advancement potential or promotion data from the completion of such courses, unless provided individually within a company or on a paid training contract between a training institution and company. An e-Learner knows the value of the completed lessons. How the learning is applied in the workforce is also known by the learner, but it is not known how e-learning that was not designed, purchased, and implemented by a company is viewed, accepted, and benefited.

While traditional and modern learning systems show proof of knowledge with grade reports, test results, and certificates of completion, knowledge of other methods of learning are not measured. Demonstration of skill by proof of viewable or tangible product or applicability of such knowledge gained from experience is still what is considered ‘qualification criteria’ shared in the quest for a job, company requirement, promotion, or personal development. Certificates of completion of informal e-learning are not standard company or corporate metrics used to measure employee skill and performance for promotion or intellectual growth. Some Corporate or Business Knowledge Management Systems provide directly relevant data to the Human Resource Management System or Intellectual Capital system, which connects

to their performance management system. Some sophisticated systems track and monitor e-learning initiatives and other instructional information to measure knowledge, skills, and abilities to create strategic goals for specific industries, job roles, populations, and people, measuring pre and post learning activities, its gains, losses, and direct applicability in the workplace.

LMS is the framework that handles all aspects of the learning process (Watson & Watson, 2007). An LMS is the infrastructure that delivers and manages instructional content, identifies, and assesses individual and organizational learning or training goals, tracks the progress towards meeting those goals, and collects and presents data for supervising the learning process of an organization (Szabo & Flesher, 2002). An LMS delivers content but also handles course registration and administration, skills gap analysis, tracking and reporting (Gilhooly, 2001). A Learning Content Management Systems (LCMS) is content focused: It tackles the challenge of creating, reusing, managing, and delivering content (Oakes, 2002). Introduced to the E-Commerce Marketplace in the mid-2000s is the Content Management System (CMS) which is computer software used to manage the creation and modification of digital content. CMSs are typically used for enterprise content management and web content management (Wordpress, 2021). Although not directly stated as part of an LMS, a CMS is an E-Commerce tool to manage information associated with business, service, or published product information available to search engines for ranking but intended to educate buyers and researchers.

E-LEARNING SYSTEMS

E-Learning Systems is a system category that includes Knowledge Management Systems, Learning Management Systems, Learning Content Management Systems, Online Formal Education offered by Educational Institutions, Massive Open Online Courses and basic video tutorials or demonstrations available online that offer step by step instructions or how to's. It also includes Internet Pages published online that include tutorial or learning material for application. A system of learning is not just an online video, but a system that stores and tracks educational content and student information. It is often an individual application, not connected other systems and tracked using various means either by a company, a person, or an educational institution. We will call e-Learning all forms of electronic supported learning and teaching, which are procedural in character and aim to affect the construction of knowledge with reference to individual experience, practice, and knowledge of the learner. Information and communication systems, whether networked or not, serve as specific media (specific in the sense elaborated previously) to implement the learning process (Tavangarian, Leypold, Nölting, et. al, 2004).

STANDARD DELIVERY AND CONSISTENCY

E-Learning or KMS, LMS, LCMS' do not seem to have a standard delivery model used by instructors, teachers, or professors, as it varies in style, method, and material. E-Learning takes place via online articles, e-books, demonstrations, videos, tutorials, frequently asked questions, and formal educational software used by multiple online universities. We must use caution when using the term "delivery" because of the many definitions or meanings of the word. Delivery is often used to describe 1) the mail system, 2)4- delivery of a speech or message; and 3) a separate and different category called Email; 4) Maternal process of giving birth, and now 5) Methods to send packages or sets of information. The educational system now uses different delivery models of in-person formal educational institutions at different levels, where some form of Technology is used to record attendance, grades, coursework, book information, and other critical educational and subject related information. Another category of e-learning systems or types are visual aids such as online videos, computer aided simulations, and subject specific courseware via internet pages, online libraries, multimedia, video, and audio presentations.

Technology advancement has enabled access to digital learning materials to facilitate the sharing of information and access to educational resources. Libraries of books, journals, and periodicals are available online to support the learning research process. Studies on brain processing, memory, retention, and recollection have been conducted, but not in comparison to non-technological systems and the processing of printed materials or in person lectures, making the research less valuable. Basic rating systems of courseware with questionnaires provide developers and promoters of e-learning with a means to understand learner satisfaction, applicability, relevancy, and areas in need of improvement, but each deliverer of educational technology uses different surveying and rating methods, offering no real consistent rating structure to measure quality, effectiveness, and change in e-learning systems.

Instructional methods for learning systems follow basic presentation styles with some systems using quizzes or tests to prove knowledge of subject information. Some are instructional videos with a person demonstrating, with a blackboard or whiteboard, or other videos that offer human presentation or instruction, some with extensive videography to show the subject in action, such as the Home Depot's Do It Yourself series (Home Depot, 2021). While businesses use video and other instructional guides to assist their employees and customers, it is not standardized throughout the industry. There are some businesses that offer Internet Pages of tutorials, instructional videos, demonstrations, frequently asked questions, and tons of product information, but it is not a standard Internet Product design or delivery model for E-Commerce.

Informational systems in the e-learning category are useful to grow intelligence and knowledge for a specified use, but not all systems or content results in the tracking, registration, certification, and proof of knowledge, usable by a company or organization. One simple example of this critical need that Technology has not met that can and should is a project or scientific experiment completed in a specific class, such as Life Science 101, either in middle school, high school, home schools, or college. The system registers progress and completion of the class but does not document and record projects and student findings of valuable projects which has potential to feed into other systems for life planning, career goals, or even just scientific discoveries that have the potential to change the world by sharing standard procedures for product testing and comparisons, documentation of findings, broadcasting, and capturing the rate of change based upon the findings.

THE INTERNET AS A LEARNING SYSTEM

The Internet is considered a learning system accessible via sites using a browser, search engine, and keyword terms. In just a matter of hours, I was able to learn how to create a rich coating for my countertops, using epoxy resin; an over-the-counter product that creates a hard, glossy, colorful finish. I did not use the keywords ‘epoxy resin’ to locate content and learn about this type of counter upgrade. I searched how to update my countertops using paint and tiling, which produced other relevant topics that included epoxy resin. Countless hours of demonstration and video was available, teaching me exactly how to do it myself. There was no single learning or content area that included ‘countertop upgrades’ other than thousands of search results covering the topic, using different methods, demonstrated on video, with specific products, and professionally prepared marketing videos.

Internet learning leaves the navigation and selection up to the learner to decide on which type of information it chooses to search and digest, with results presented in either internet pages, instructional, product specific, or demonstrations created by everyday people with answers to very specific questions. The Internet does not know if the knowledge was use in the physical world. It can track purchases but provides no evidence of value beyond the financial benefit or cost to the consumer. Metadata use, keywording, and content management or marketing of video or other learning material is the responsibility of the creator with guidance to improve viewership and ranking offered by the Search Engine Optimization (SEO) experts. Search Engine giants such as YouTube and Google, Inc. have specific ranking criteria and methods to increase traffic and visibility of such material, but keywording or categorizing material as ‘demonstration, learning, informational instruction, or how do I’ is not shared as a standard keyword search practice. The ‘originator or uploader’ keywording approach leaves too much room for disorganization, yet the Internet somehow knows how to return specific results based upon search engine user requests – forcing the learner or user to use specific words to describe the reason for the content. Searchers are expected to enter plain language prefaces for their requests such as “How do I” to access content that is not stored or managed in an official e-learning system. The same results are produced with just the key terms: upgrade countertops. The keyword strategies are standard throughout internet systems and sometimes results are limited to what the creator has selected as its keyword or metatag base for search engine ranking.

While the accomplishment and review of the training material are not recorded by search engines, nor is the fact that I learned how to use epoxy resin and understand the risks, costs, products, and its competitors, I can effectively apply the knowledge in a real-world scenario. There is no compilation of Home Improvement knowledge tracked that was gained from the Internet, other than what I, as a human and user of the Internet decide to store, bookmark, and remember using my brain that can be put into practice in the real world. I unfortunately cannot get college credit for the research, nor can I use it to get a job, or sell the product, unless I am able to perform the tasks that were demonstrated, using the experience to advance in that profession. The learning system made it possible to gain the knowledge and the experience creates job qualifications and new skills. This makes the internet a quality learning management system, with an abundance of available instructional material that can be applied for general use – either personal or professional development. The demonstration of the task was varied, with different presentation styles, products, techniques, and application, which offered a wide variety of options accessible from the comfort of my home that equated to a two-day class on updating countertops. Such content enables the creation of skilled workers if they are willing to spend time learning and using the

knowledge, not just in the areas of countertops, but other do-it-yourself tasks that many people would rather call an artist or qualified contractor to do.

The Internet is such a vast learning center and not just a ‘keyword search engine.’ It enables formal institutions to deliver education via training systems and other institutional instruction via MOOCs. “edX is the education movement for restless learners. Together with founding partners Harvard and MIT, they have brought together over 35 million learners, most top-ranked universities in the world, and industry-leading companies onto one online learning platform that supports learners at every stage” (MOOC, 2021).

Companies such as CourseEra, Lynda.com, edX.com provide free online courses for users in many different personal and professional areas. The sites are so rich in content that anyone could become college knowledgeable if they complete the free course work. It is unknown how accepted the coursework is by the workforce, but the development of these delivery systems has advanced to provide actual accredited degrees from well-known Universities with eligibility for Federal Financial Aid, making an online degree non-distinguishable from on campus attendance.

PROBLEMS WITH E-LEARNING

The problem of organized Knowledge or Learning Management exists for those who use Internet Learning Systems to develop knowledge and skill because there is no single tracking system for course completion, verification, and training or instructional planning. A person can complete 100 MOOCs and obtain useful knowledge with no real-world applicability, recognition, or professional advancement, wasting countless hours learning without direction or plan for application. Knowledge is only good if it can be used and proven. Others can use online learning to expand their knowledge with a specific goal and objective, self-guided, with evidence that directly shows skill and worth, making them more experienced and marketable using advanced modern technology.

Because online learning is so vast, there is great potential for users to get lost in open online learning systems or to spend years learning different subject areas with little evidence of completion or applicability. Microsoft has a training system which provides tons of product information and training courses, from free training to actual paid online and in person certification systems. The online training is designed for users to store and collect subject certifications and badges to show proof of completion of product specific modules, along with testing and simulations. It is not designed for a person to rapidly become a Cloud Computing expert but provides a wealth of information for professionals to evaluate the products, increase skill in use, management, purchase, sales, and implementation. It is a lifelong learning system. Competitors of Microsoft, such as Google and IBM, have similar e-learning resources, with the ability to certify, save, track, and show completion of online training modules. None of the systems can evaluate product knowledge and skill – that is the learner’s task, and the learner must prove it, either in business or other real-world application.

Accessibility of online training is invaluable for the committed learner who can invest in professional development beyond day-to-day work activities. It is also invaluable to industry partners and other users of the systems in need of quick presentations of software capability, demonstration, sales points, and other product specific knowledge necessary for use and integration, but professionals must

select one or the other. Because of system complexity in Cloud Computing, there is a wealth of information where it is nearly impossible to become certified in both Company's systems, at least not every individual system, but the resources are there to learn the basics of both and how they compete and work together with a standardized certification and proof of completion that the industry understands.

Since there is no real way to manage all knowledge gained from Internet Learning Systems, it is up to everyone to choose how to manage its learning priorities and activities. While some e-Learning sites offer certificates of completion, badges, certifications, or degrees, there are many that do not. Deciding how to compile this information and track for progress toward a larger education and skill building goal is the challenge, as well as the acceptance of the information learned by others, the medium used, and one's ability to demonstrate skill. While there are sophisticated systems called LMS, KMS, and systems that manage KSAs, if not integrated with other systems, it creates only half a system and measures knowledge based on what is gained while at work and not what occurs on the Internet during off time. Such commitment to personal and professional development must be recognized, but there is no real way to share a standardized profile and how a person grows their knowledge base beyond what is captured at the office or stored on laptops and PCs. Professional networking and profile systems, such as LinkedIn has a place to store all training where users can manage dates, institutions, learning systems, and subject areas (LinkedIn, 2021).

Another issue is the integration of online learning systems, such as the Federal Veteran's Training Environment (FEDVTE) which has countless hours of content related to Information Systems Security. While it does offer certificates of completion (FEDVTE, 2021), it does not directly tie into or offer college credit or work with institutions accredited by the National Security Agency, forcing redundancy in online learning. The same problem exists in completing free online coursework and then enrolling in a formal institution. While the course might have been an open free course offered by a University via a MOOC system, no college credit is granted. This makes online learning a problem and necessitates the creation of a serious education and professional or personal development plan in order not to waste time and money.

ANALYTIC REPORTS

The links "learn more" and "read more" are considered call to action links or buttons used in web development to engage the reader. There are more than 30 different types, displayed as links or buttons to engage the reader in the content, whether it is a product knowledge, e-commerce, or learning management system. They are the key links to get a person to dive into the published content, such as buy now, register, learn more, read more, or sign up. These terms are all closely tied to learning activities. While click rates can be tracked and analytic reports are available to show time on page, purchases, or conversions, there is no system to show increased product knowledge, application of knowledge, and awareness on a user level for specific product areas and communities. There is also no report that shows product or subject specific information management by user and there is no system that shows increased user knowledge and ongoing interest with evidence of knowledge being put into action beyond viewing

that can be readily shared with others to advance their career, share knowledge, or provide proof of usefulness in time spent learning online.

While Knowledge Management and Learning Systems exist, they are simple delivery systems for educational and training content, with some ability to track registration and completions aligned with strategic goals. The Knowledge Management industry has a way to go to show actual benefits of e-learning systems, as well as the return on investment of all its students beyond formal online classrooms and corporate business solutions.

DECISION SUPPORT SYSTEMS

Decision Support Systems (DSS) are defined as a computerized program used to support determinations, judgments, and courses of action in an organization or a business. A DSS sifts through and analyzes massive amounts of data, compiling comprehensive information that can be used to solve problems and in decision-making (Investopedia, 2020). Simply defined, DSSs are interactive applications that support decision making (Turbin, Volonino, & Wood, 2015). Human decision support systems are considered unstructured decisions made based on human intelligence, similar in that, they look at existing data in their memory, using situations, information they think is accurate and true and make decisions based on their findings (Turbin, Volonino & Wood, 2015). In both cases, decision making can be immediate with small pieces of information made by surroundings, or decisions based on memory, such as the decision to go shopping, by checking their memory to decide what they can spend. Some humans rely on Online Banking for more specific data, while others store it in their human memory bank, making quick, short, split, and long-term decisions. Human decisions are made all day long, but most of them are routine decisions that do not require extensive research and support. Humans make decisions based on input or opinion from other humans or data sources provided by the computer or other things, not often called 'support systems' but often seek the support of others to make decisions or to confirm they made the correct decision. In human life, it is called co-decision making or validation seeking, and, in many cases, formal documentation procedures are required by law because it affects one or more parties. In business, it varies, depending upon organizational structure and policy. Many decisions are dependent upon other systems, things, people, and processes.

Computer software has improved decision making, enabling more efficient, accurate, and confident decisions because of scenario and calculation tools. It has also provided more options, sometimes making the decision-making process more complex, but also offering more information at less cost. One example is the decision to buy a home. Traditionally, a buyer would visit a mortgage company and start the finance process by filling out paperwork and waiting for an answer. Perhaps they shop in the meantime because they already know they qualify based on the conversation with the mortgage company. It is not official, but the buyer can confidently begin the process and work with a realtor to physically look at properties. A simple calculator or good math skills, along with basic financial requirements are the decision support tools, as well as a good understanding of what is included on their credit reports – which are also considered decision support tools for lenders. Although the buyer has a good idea of what they want and can afford, decisions change because there are several other parties involved with different requirements, rates, costs, fees, and other important data both the buyer and the lender must consider.

Software now provides close estimates for mortgage payments, specific qualification requirements, online applications, realtor information, and links to home buying sites where interested parties can review property details and photographs without leaving their own residence. Computer systems have made it completely possible to buy a home without physically seeing or touching the property. These tools, computer software, or internet sites are called Decision Support Systems in the Banking and Finance industry, as well as the Real Estate Market.

Good decision evaluators run scenarios either on paper, in their minds, or using decision support systems to review possible outcomes before a decision is made. Those decisions do not always match reality when put into action because not every situation or factor of every decision can be pre-evaluated and constructed. If they could, then there would be no need to learn lessons, make mistakes, or even make the decision because it would already be made. Some scenarios and decisions that have proved specific outcomes need not be duplicated or made again, such as the decision to contact a person where it has already been shown the person does not have the answer or cannot fulfill the need requested. In these cases, it is good to document or manage the system provider of that contact to prevent others from contacting that person again to ask the same question and get the same wrong answer. In more complex situations, such as whether to apply for a credit card can be made not based on the last result, but the known research and changes that have been made between the last denial and what is known to be true about the approval requirements and current credit standing.

Publishing specific requirements for approval, along with consequence educates applicants on what will occur if approved and denied. This is a standard credit application and reporting process that really does not need to be repeated on every credit application, although it is. There are many solutions to reduce the duplication, through credit counseling or education, but not all people with the ability to apply for credit are knowledgeable. The decision to apply is individual and the decision to deny is based on a set requirement by the creditor, with a standard process. Some companies, such as Kohls.com offer discounts for credit applications, even if denied. Applicants are not advised that each inquiry marks their credit but apply to receive the in-store discount and can apply multiple times and receive the discount. The online application differs, in that it does not allow “reproduction or duplicate applications” (Kohls.com, 2021). Credit education is not the responsibility of the grantor, it is the responsibility of the applicant, which is considered a widely understood process for obtaining goods and services. The use of credit cards in society has affected not only traditional consumers, but also vulnerable groups, such as college students, senior citizens, and disabled citizens (Mansfield, Pinto, Robb, 2021). Solicitation on college campuses has caused concern among college officials, consumer advocacy groups, and legislators (Hayhoe, Leach, Allen, & Edwards, 2005; Mansfield & Pinto, 2007; Robb & Sharpe, 2009).

Another population of concern is the non-traditional consumer, such as developmentally disabled individuals. In the late 1990s marketers were criticized for their predatory activities directed toward this segment of vulnerable consumers to gain more market share (Cahill, 1998). Decisions to apply or not to apply seem to be based on marketing tactics and assumption of approval, access to more money, with some concerned about debt-to-income ratio, ability to spend and pay, and desire to increase credit scores. Credit card applications affect the Home Buying Process and there is no decision support system to manage these scenarios, other than a human’s understanding of how additional credit might help or hurt their ability to reach the goal of home ownership. It is widely known and accepted that creditors report limits and payments to the credit bureaus and this is what makes up a credit score. It is also widely published that reporters are known to have made mistakes and that it is the consumers responsibility to

manage their own reports and check the work of the reporter, using the dispute process, which is not often successful. Companies such as “freecreditreport.com” and other credit reporting agencies offer access to these reports, with dispute capability, and scores, but there is no published formula for how these companies create the scores or how to manage false or bad reports and bad businesses.

Other lenders make decisions based on these reports, with input from the consumer to explain derogatory marks, with little to no recourse for the consumer if the disputes are ignored with no real ability to remove the bad marks or truly investigate the problem. This leads to a bad credit reporting system, harming the buying potential of good, disabled, or temporarily financially impacted consumers. Creditors are free to market and give money to lenders and free to damage, threaten, harass, and harm a person’s future if payments are not made, at least until formally demanded to stop. They must follow verbal or written request for no contact. If they do not, it is asked that consumers report them to the Federal Trade Commission (FTC). Reporting bad business, fraud, or scams does not fix consumer credit reports, but impacts decision consumer and lender decision making beyond spending. There is no real decision support system or clear process for how to prevent, fix, or solve this problem. The decision to apply and work with credit is dependent upon each applicant which is based on traditional processes where credit damage has been consistently done by a large part of the American population, which occurs over time, never planned, and independently evaluated, often post damage, or just before a request for a large amount of credit. This changed with improved consumer education and companies who provide credit counseling, although they were also seen as predatory agencies, seeking to capitalize on consumer debt. The internet is supposed to be a source of knowledge, yet it bombards its searchers with advertisements with few educational do it yourself articles.

Investopedia shares an article about the CARD Act of 2009, reporting changes since the law was put into place regarding consumer debts and restrictions of advertising to college students. Towards the end of the article, it shares links to a ‘smartasset.com’ and explains it is a tool to assist in matching a person with a financial advisor – another marketing attempt to promote financial products. It is disguised as a free retirement planning tool or questionnaire to protect consumers, when, it is an advertisement to sell financial consulting products. What was expected to be a decision support or education tool in consumer credit and financial planning, was another marketing tool for to sell retirement and investment professional advice. The article page has nine advertising spots for financial products (Investopedia, 2021). The article wrote about a law against ‘marketing and advertising’ to college students and at the end, used a marketing and advertising tool for costly financial planning.

In the home buying process, humans use more than just computerized decision support tools. They rely on their needs, wants, and senses, which are reasons behind making purchases, location, life plans, goals. They also rely on the thoughts and feelings of others or how and what they think others might feel or want. The decisions are not solely made based on internet information, numbers, and data alone, although, it can be argued that any information is ‘data’ and those decisions are not always made independently, varying for each buyer. Data captured in the feeling of walking through the home, visualizing ownership, plans to improve it, and live in it for many years, or plans to upgrade and sell to make a profit are considered parts of a human decision-making system, as well as what the mortgage will enable in the future. Some add far more or less time on factors and feelings to the process because of the significance budget, price, and life experience. The property selection decision is provided to the companies to begin processing using other decision-making systems to grant the loan, which are outputs

from several other data systems, not often tied together or integrated, forcing the customer, realtor, and other humans to bring the proof together.

Information providers, such as landlords, credit bureaus, work history, and other factors that lenders need to make decisions are provided forms to complete, which are often sent back and forth via email and not in automated decision solutions. These companies, realtors, mortgage brokers, lenders, and buyers use many different systems where the data is brought together to secure financing through a bank and often have different forms, software, and formulas for their decisions, all of which can be automated to a certain extent. It is a standard buying process, but different than swiping a credit card or filling out an application for furniture, most likely because of the credit bureau, the amount, the tax code, or the lending process of securing a different type of loan. Decisions are affected by all parties included in the process, but not all parties of the decision need every piece of documentation or participate in every part of every process. If one provides faulty or bad information, it causes another party to check and correct, and if one provides negative input, it causes another to independently assess and evaluate. If problems surmount and people are unable to fix bad or false reports, then how can they prosper in a faulty credit environment?

Once a decision has been made by the buyer, an offer is made, and negotiations begin. The length of the deal changes based upon those things up for negotiation and all parties' abilities to make decisions in a timely manner. Documentation of such agreements, prices, values, and promises are signed as legal documents and stored as proof of a legal transaction where money is exchanged for goods. These systems could be integrated with other systems to obtain automated reports, but it is guaranteed to slow the process, depending upon selected data sources and points of automation. Decisions are made independently of other systems but are based on inputs where final agreements and outputs are consolidated for contract execution by the lender. There are several companies that offer the same service and process at different rates, just like lenders, but once a lender and property has been selected, the buyer must meet state and federal laws for loan guarantees and protection of the home, as required by the lender. Once the transaction is started, a contract is signed, and money has been exchanged, it is unlikely the process halts and does not complete or that the consumer leaves and works with another agency.

Decisions for loan products are made based on several factors and often experience, although buyers browse looking for the best rates and options. Many are limited, depending upon credit profile, access to money, and health. There are software engines that provide lists of lenders, each with a different software and possibly processes, where each follow the standard mortgage lending process. Status checking software that manages process requirements with human oversight are good decision-making systems. They show all parties what is required, where they are at in the process at all stages to ensure completion. They are not fully automated and should not be because of data integrity and proof requirements. Some automation is helpful, such as forms sent via email or other data entry tasks that provide information that is used to make the decision, but it still must be checked and verified by a human. If an applicant provided an email address to verify rental or account information and it was automated, then it could not be confirmed that person was a real landlord and the information was not completed by the applicant; at least not without cyber security to check identity, along with other verifications. There are other ways to verify data and prevent human error in some cases where people are unreachable or seek to harm others, but these are not typically set up in systems engineering or development of decision support systems.

Decisions made in the Home Buying process are not often singular, in fact, decisions are made by more than one legally registered company or organization, and must follow federal, state, and local laws. Decision support systems included in this process are often price estimators for the buyer and document management systems and data entry systems for the lender. It is not always numerically based, in fact, there are opportunities for human explanation and decision changes based upon factors such as potential, forecasting, and possibly human need. Deals and promises can be broken or harmed through the process if systems are not monitored, official, and standardized. Just because the negotiation process is bound by law, does not guarantee a business will operate and make sound business decisions based on the law because of complex and exhaustive or bureaucratic post conflict resolution procedures, where even more time and money are lost. If all decisions were standardized, computerized, and hard coded, there would be no deviation from what is clearly stated and there would be no need for a mortgage broker, lender, underwriter, or landlord because all systems would be integrated and automated. This negatively affects not only jobs, but human support in certain situations and this would mean, humans are no longer needed to make decisions. This is not always bad, in fact, some decisions need not be reconsidered after decided, such as the decision to pay sales tax. That decision is already made for consumers. There are voluntary and involuntary decisions, some forced by requirements, with some options for consumers to choose who to use, such as Homeowner's Insurance. It is required and the decision need not be made to purchase it, but the matter to decide is who and what price to pay. There are internet systems to support this, such as referral services by a lender or other insurance product quote generators.

Decisions and actions are interrelated, some not seen, but affect the decision-making process, where some are critical financial life decisions, while others might be temporary delays. Making decisions to manage priorities and meet goals are decisions where two or more things are evaluated and one or more deferred because both can't occur at the same time, or because one might impact another. Sacrificing dental insurance for a year or more might be a decision that enables the purchase of a new home but might result in severe setback if emergency dental needs arise. Home loans, mortgages, and other credit-based decisions do not consider these items, but a disabled person or regular buyer does. Living in a new home for a 43-year-old person to the point of buying dentures is a long-term consideration in the buying process, and is considered in the plans for the home, not the decision to buy or the ability to secure the loan, unless the buyer has a sudden need for dentures early because of an accident during the buying process. There are plenty of things that change the decision-making process during a sale, as well as the credit and financial profile of the buyer and those decisions or 'bits of data' held in memory, managed individually, are not part of the underwriting and home buying process but could be factors, depending upon buyer needs and priorities. They are factoring the buyer considers, not the lender. Lenders manage their decisions using a different set of criteria. This is when a person asks themselves, well, what if the sky falls, and acid rain damages my roof, and my molars fall out at the same time?

Increased credit scores from becoming a homeowner, enables better conditions for the other decision or need. With a lower monthly mortgage than rent, lower dental financing for procedures is most likely available later. Shorter term needs versus long term decisions that enable or affect another are what are considered, which cause re-prioritization of other needs, as well as changes in perspectives from what seemed impossible, to an absolute need that can be met later at less cost. Budgeting decision systems manage these types of problems but change when other system needs, or financial transactions take place. Unexpected wants and needs must be managed and deferred or dealt with independently to not deter from the original goal, especially if there is no real evidence of immediate need or if 'not brushing one's teeth' rapidly progresses into the need to have 15 teeth extracted at once.

Likelihood, accuracy, and reality are critical and so is deterring people from operating with a risk management mindset who encourage disaster planning when there is no evidence of such a possibility. Homeowner's Insurance is a required cost and part of the decision-making process of buying a home to cover "if" any damages occur. There is no getting around it and the only decision is who should provide it and at what cost. It is not managed based on human risk or likelihood of a specific single woman burning her own home down because she was once an arsonist but is calculated based on the value of the property in event it needs replaced, which is paid to the mortgage company to ensure the loan amount is paid.

Financial balancing of these things is important when considering the cost of a chimney sweep vs. the price of dental insurance to avoid fire and dental pain. One could result in a severe fire hazard and loss of a major asset, while the other could result in severe reoccurrence of pain and infection which affects one's ability to eat, sleep, and get out of bed. Not knowing alternative heating options and costs keeps us from budgeting and one's recommendation of chimney maintenance causes a person to believe they need to pay hefty prices to enjoy features and comforts of a new home. The problem affects decision making systems when the information and personal experience is in conflict, non-specific or varied. Fear of using a gas heating system was formed based on a past explosion, so a decision to stay away from that style of heating was made, yet another comment forced financial concern of even more maintenance because of the chimney.

A decision support system of a chimney maintenance is different than the decision support system of managing dental, although the Internet is a great resource for both. The decision support system could be an Internet Search or a question to what might be considered a knowledgeable professional. These decisions are based on experience, visuals, feelings, products, prices, and effectiveness. Although many people have varying or even standard ideals and recommendations, it is up to the individual on how often they want to clean their chimney or brush their teeth and results vary by chimney and by mouth. Budgeting and prioritization of needs and wants are how decisions are often made, choosing necessity over comforts, and understanding of risks, expectations, or alternatives.

Some decision support systems are forced and not voluntary, just as losing teeth over time is not voluntary. We can buy and use preventative measures and make cosmetic improvements, using products that reduce pain, but cannot and should not seek to plan or predict but prepare for based on what human life has demonstrated can be expected over time. Even that depends upon age, stage of life, and other things. These are separate systems, not fully integrated with Mortgage, Home, Life, Car, Dental, and Motorcycle Insurance. Those are risk management products that are different from a Risk/Decision Making System made to 'back' loans or make individual daily life decisions versus plans to invest in long term care, both budgeted, managed, and decided separately, by choice. Although we would like to financially plan and predict spending, down to the penny, things come up and we can only budget and plan for so many unexpected negative events before we are considered 'doomsday' planners with no ability to live life without self-doubt, harm, and system enforced fear-based living.

Human's feel better when they know their needs can be met in event something unexpected and bad happens. Paying one year for Dental Insurance before having a procedure done for only 50% coverage of the procedure requires decision support tools to calculate the cost vs. the benefit of the product, especially if a \$3.00 product can solve the problem. These are typically decisions made by one's own ability to compare costs and evaluate investments and spending where there are many products and services in the marketplace that can meet their needs, rather than traditional insurance. These are sometimes not even considered by younger people but are evaluated when the need arises or there is a life

change where one product can no longer be relied upon, such as Dental Insurance paid for by an employer or fake teeth sold online that were promised to conform to anyone's gum line.

These DSS' do not sift through 'massive amounts of data' to make their decisions, but they manage massive amounts of data with data and document management process, retention, and archiving rules. The human manages through these big decisions and process, providing data, and storing their experience to the point of selection – the recording of this information affects future buyers and decision makers. Once the qualification and selection process are complete, the buyer waits for the other parties to make their decision, using the information the buyer provided, their requirements, and whatever else they use to make their final decision. These factors are provided in the initial pre-qualification process before the buyer begins to shop, even though some additional requirements might be revealed once it progresses into a serious business deal. Even though one decision maker or data provider gave negative information, such as a credit mark, or a bad review for a realtor or lender, it does not mean it will negatively affect the entire process. Some data in the pre/mid/post process is not considered official decision support data. There is very little decision support data provided for online denture sales without being professionally fitted and receiving advice or consultation from a doctor. This is where official systems and processes versus "do it yourself" healthcare is important, but decisions are made based upon financial ability and need, many being forced into low quality systems because of other system failures. Investing in a 5-year contract for cosmetic braces while in escrow on a home is dependent upon what one can afford and what was decided when they went into the process. Decisions that affect one another need to be made carefully, knowing the impact of one to another, using the best research and evaluation skills possible, as well as planning, prioritization, and the willingness to wait or change plans. Injury on the job and becoming disabled should provide dental insurance, but because of poor Social Security Disability Systems and how or when determinations are made, based upon time and not taking the time to investigate injury, cheats a good person out of lifelong or even temporary benefits. This is called mismanagement and fraud.

Information Technology adds value to all these business areas, beyond the Insurance Industry, but also Fraud Detection and Prevention. Just the Internet alone can be one of the best decision support tools, but not without good evaluation and calculation skills, or tools. One tool cannot provide all data necessary to decide, although several do assist in the final decision. The best thing IT can do in the Decision Support System area, is provide standardized process and options and considerations for those types of decisions, with outcomes so people can plan and change plans with good understanding of costs, benefits, and what and whom might be affected by their decisions. IT improves decision making, just like Orajel reduces the pain, but does not work for all types of problems or situations. The scary truth is people knowingly and unknowingly seek to and cause harm to others (even good people).

To automate a decision support system, a simple review of a manual process and how technology can provide faster more accurate data is what is required, but the projects are easily affected, deterred, or hurt by other priorities, problems, and issues in other systems that it gathers data from. The standard decision-making procedure is to gather the information necessary to decide with consideration of potential expected or unexpected outcomes to reduce unknowns and achieve the desired outcome. Automated support systems are not available for every scenario, but a solid financial assessment of needs and wants, planning, and budgeting help in prioritizing. Systems do not make decisions for you, but a standard process shows how things can be evaluated against each other and changed to get what one wants or needs. Other people make decisions that affect a person, and their plans and obviously new decisions are made to adapt to those changes.

ALIGNMENT OF DSS

There is no 'alignment of Decision Support Systems' because those have to be individually designed for each business and decision, deciding when a custom solution is developed that can be useful for a group of users, type of business, or standardized process, such as Home Buying, Chimney Maintenance, or Dentistry. The Internet is a vast resource, but if the information is bad, then so are future decisions if people cannot independently evaluate on their own and even more damage occurs if they are locked into automated systems with bad processes, recommendations, requirements, and data. Ensuring decision making is aligned with goals, priorities, needs, and wants is what is critical, as well as evaluating best possible outcomes while being prepared for surprises or changes. Not all situations can be prepared for, nor considered because thinking about all the potential 'bad' things that could prevent something from happening, deters from all the good things that can come from the decision, turning it into a negative process. Being positive and realistic is of the greatest importance, using lessons learned from life and others, but not giving into constant negative scenarios often used in Risk Management. Managing risk varies depending upon the type of decision and precautions should always be taken, but not manage the decision into an unworkable problem because of long list of negative possibilities and letting it get to a point where a decision cannot even be made because one has worked themselves into a fearful state of mind or situation.

COST COMPARISONS

Using a basic cost comparison to reduce spending that enables the purchase of another desired product, system, or need is a standard decision support system. Evaluating costs of higher priced products to the lowest price option and making the decision to purchase lower cost for a set period, enables other purchases or needs to be met. This is called a Need/Cost/Benefit Evaluation and used regularly in decision making and prioritization or redirection of funds.

Decision Support System: Cost Benefit Evaluation

“Save \$1200 a year on Hygiene Products”

Hygiene Products	Avg. Cost	Lowest Price
Toothpaste	6	2
Hairspray	8	2
Gel	7	2
Nail Polish/Remover	4	0
Laundry Detergent	10	2
Dryer Sheets	6	2
Makeup	20	0
Pantihose	20	0
Feminine Products	8	5
Razors	12	3
Body Wash/Soap	8	5
Monthly Costs	109	23
Total Monthly Savings	86	
Cost of Dental Service		
Smile Direct	200+80/mo	
Dental Insurance + Cosmetic Procedure	25/mo + 4000	
Crest White Strips/OTC Bleach	20	
Choosing Lower Cost Hygiene Products enables the purchase of cosmetic dentistry		
This Cost Evaluation is a Decision Support System		

Table 1: Average Cost vs. Lowest Cost Comparison for Reprioritization

Human decision-making systems are different from automated decision systems. Nothing should ever be entirely automated without human review and intervention, even when trusted in its entirety until a long-time frame has past because people make mistakes and when systems become integrated and more people are responsible for more systems, it becomes more difficult and often more dangerous because it affects more people, money, and other critical systems. They should also never be created without a good systems management and review process with plans for long term investment. Understanding how decisions are made and designing support systems to assist in decision making is important, as well as human factors that affect such decisions. Brushing one’s teeth should not affect a mortgage application or need a serious decision support system, but ignoring long term dental hygiene does affect health, which affects a person’s ability to pay their mortgage if dental debt piles up. What costs a person five to ten dollars monthly has the potential to ruin a person’s mouth and long-term health if ignored for a long period of time, just as careful selection of dental hygiene products can save thousands. Product cost evaluations using prioritization, comparisons, and goals are used as decision support systems to change or reprogram our thinking to shift from automatic spending, budgeting, and product selection.

Putting off, ignoring, delaying, or improperly automating important decisions are costly. Personal choice decisions and forced decisions, such as Homeowner’s Insurance versus Dental Insurance are

different decisions and requirements for loan qualifications which cannot truly be predicted but are considered because of one's ability to pay and balance home maintenance with basic healthcare where one is required by law and the other is simply encouraged. Automatic buying or disqualifying is just as dangerous and is considered a routine decision that sometimes benefits from reevaluation. It is a perfect scenario of deferment to satisfy another need and meeting requirements, by evaluating and selecting products based on personal choice and not traditional market products, such as over the counter options versus standard insurance.

ACCOUNT MANAGEMENT

Individual Internet Account Management by merchant and user created a more complex non-standardized security system. Each Internet Site requires a new user profile, with only some offering automatic creation using an existing profile or account, called Single Sign on Solutions, but data sharing is limited. The Internet is built using a One-to-One Profile or Account Management design. It's difficult to explain – but in the simplest terms, it means that requiring a profile to be setup for each Internet Site, such as Facebook, Banking, Credit Cards, and whatever other site people go on for news, entertainment, or information is a bad design and by bad, I mean it's overdone and a terrible way to manage information.

The problem will be explained in greater detail and every user should agree, as well as every developer. If not, then you've never used it, so you're not authorized to use it because we don't want to put more people on something that is poorly designed, until it's fixed. It's been 10 years since we've filed this complaint, so we are confident we won't see a change and that Microsoft will not compromise or fix it for reasons that cannot be revealed in this document or paper, other than to briefly say, an ex-boyfriend of mine tried to say his 'wife' worked for Microsoft and he was ordered to not comply with any requirements because he was an angry, disease carrying, vindictive ex-boyfriend in the United States Marine Corps serving under bad leadership where Rape and other serious violations and crimes against women and humanity occurred.

They like it difficult: Internet Account Management is not only difficult for designers and developers to track, secure, and maintain, but also users because of the high number of accounts and because security policies are varied and self-managed. The current one to one design on Internet Security Policies, such as credit card and personal information management leaves 'financial data' the primary area of security, when there are many other areas in need of protection. This is what we find most upsetting and unacceptable in their work or maybe even another level, is that they think they can blame it on me personally because my brother's name is Mike and they think it's short for Microsoft, when we've worked with other "Satelite Professionals" with the same name working with even more incompetent professionals who made sexually based odd requests. It would be great if all Mikes were billionaires to pay the Bills, but they aren't. Watching the virus run and transfer, attempting to make excuses about its origination and ease of transferring and luring others into his or her infected environments is what is of most concern, as well as attempts to deny military related activities of other disease carriers in hospital positions.

Mike's just a regular guy who was also put at risk. The other ones to be concerned about are the ones who work with Department of Defense Contractors who deny the need for such scanning, quarantine, and removal. Those are the ones who must be punished and degraded or investigated, but perhaps the

low-quality intelligence has infected their abilities as well. Some people need to see direct evidence in their face to believe in the ‘virality’ and who caused it, just as some people need to be thoroughly bankrupt before they learn right from wrong. Those people were in the US Military assigned as Executive Assistants to stand in the way of good work, as Gatekeepers, to force bad words and requests, using their own limited judgement that affects executives and the overall business.

While high level policies are published, many companies violate these rules and laws, creating an information security problem across the Internet. If Judges continue make rulings based on ignorance and limited data, then the system fails – period (Microsoft AntiTrust Case). Who can trust anyone in this kind of environment? If anyone can learn and design Internet Stores without following adherence to rules and policies, then any user is at risk of a breach (if there is a Contract) but if there is no contract or contact, then how is anyone supposed to fix it? If anyone with a disease can be assigned to a hospital position, handling hazardous material, having sexual intercourse, and spreading viruses and new technology is built that does not secure hazardous material, the virus continues to spread. The first virus carrier engaged in chatting online, meeting civilians for dates, then a chat bot virus started, affecting thousands, creating an insecure and unsafe chat world. It worsened and spread to another carrier who claimed to work for Microsoft as a Project Manager. If Microsoft and other systems integrate and begin making demands and odd suggestions, then it is obvious it has transferred onto the vary devices they create and sell, creating corrupt software packages and viruses called “Trojan Horses” which has terminology related to sexual protection products. It worsened into communicable diseases where words became infected, beyond influenza and resulted in a pandemic called COVID-19.

If all policies are varied, an entanglement occurs. Problems also occur when accounts are delegated, mismanaged, openly shared, erased, or not manually organized. Not allowing everyone to learn and design, creates a closed industry, managed only by large companies and banks, limiting competition and commerce. Not only is this an information security problem for E-Commerce Providers, but also its users due to the massive security requirement of protecting information by account, rather than by system or household. Giving opportunity or a chance to people with the wrong priorities, like their Hair or their Teeth, is like abandoning reality or compromising to send someone back home for learning how to be better, more protective, selective, and secure. Disease carriers sought employment in the Technology business and hired professionals, where sexual activity occurred in workplace relationships, thus showing how the virus seeks to attach itself to advanced systems. It should be obvious that the development or creation of sensor system that captures information can store and transfer biological material, including viruses, therefore the infected and healthcare organizations and its workers need special software to not infect others.

Government Agencies in charge of this information are often under-skilled in protections and fail to provide adequate Security Management solutions for the Internet, leaving this up to Industry and Consumers who build for the Internet when either the Operating System or Browser design should change. This paper is not based on a ‘scientific’ study presented as an experiment but includes experiential research to show the necessity of Identity Information Management with Healthcare Integration for consideration. Social engineering improves ease of personal security information collection without committing a crime, but once the connections are made and information is shared or misused, it can take years to clean up and involves serious damage to personas, relationships, credit, health, and systems. Social Engineering is two words that define the process of ‘finding friends or contacts for personal gain in information’ – love,

money, power, prestige, with a purpose, either done with good intent or ill intent. Obvious awareness and deterrence skills are necessary because of copy-cats, con artists, abusers, and thieves.

Protection and preventative procedures are often self-managed, assumed, and or completely absent beyond what is considered ‘human protection practices.’ When users become more comfortable sharing and using multiple private and public connections or personas the risks and complications increase. Constant warnings and ‘threat’ based terminology causes psychological insecurity which affects biometric systems, beyond fingerprinting and facial scanning. Warnings are often ignored and are no longer used or seen in Online E-Commerce Systems. Finance, security, information protection, and environmental laws are undefined for specific computer system areas, forcing the cycle of teaching and learning, developing, testing and manual security processes to continue, just as the cycle of criminal development in society with a vast, unknown ratio. Just as Humans are not born with an understanding and automatic adherence to basic rules and laws, the Internet was not born with basic security.

Relying on a secure set of windows or other operating system does not guarantee online privacy and security, nor does a simple password protected system, if it’s not properly used and managed and security practices vary depending upon system, sites, and browser. A lock can be purposely or accidentally picked, broken, and objects or items and articles stolen, making privacy and protection a lifelong online requirement beyond a simple Secure Socket Layer or HTTPS lock icon on an Internet Site or a password protected user account managed browser-based security system. Not only is the requirement to manage account information, personal details, login, and passwords an information nightmare, the high security risks involved in sharing and using information online creates fear, paranoia, and distrust. After the fact recovery from theft, breach, compromise, or accidents adds to the burden once online use has become a standard procedure.

Just as kids become more trusted when they learn independence, a system should also be trusted, but the process of system trust, use, and security is not the same as raising a child and teaching them right from wrong or asking them to establish their identities and memorize important things. As E-Commerce becomes more standardized, users become more secure in use, but it requires a greater level of account management; developers must manage and build systems using many different types of systems and languages, thus creating obvious security management problems. It seems no one considered the heavy burden of a one-to-one site managed Identity Protection and Account Management System; therefore, it is individualized by Merchant and user managed, rather than a Household Profile System with Financial and Parental Integration. The number of accounts or profiles to create and manage for each user has become an issue because it requires advanced technological skill, even though industry provides some solutions, it does not fix the problem, thus making a more difficult world where parents are forced to setup their own network, train their children, and use the same old protection methods, when technology can and should be used to setup automatic controls, deterrents, and restrictions.

Information virality in social media and what the Cyber Security community calls “Social Engineering” can be dangerous when there are untrained and malicious users seeking to gather, steal, clone, copy, or misuse information. Even without known intent, problems and viruses spread. Sharing and control has been a common practice, but it too has its limits, just as ownership and protection. Individualized management on a site level can be automated using the “remember me” feature but is also dangerous. Simply stated promises, warnings, and handshakes are no longer enough because these are ways in which breaches occur and viruses spread. Personal responsibility is often abandoned and corporate or business responsibility is varied, forcing the need for more than health and safety protections

into the realm of Technology. Well intended ‘friends’ or buyers and sellers of new systems or businesses don’t often start off immediate friends or secure in every right – they are forced to achieve it in a highly restricted advanced online environment which deters many from starting their own businesses or using Systems the way they could and should be, mainly because of cloned and automated chat bots or copycats.

Even in the use of free systems, there are management problems. While Online Systems are vast and varied, the use of all or even some requires time, money, and protection. To obtain 500 or more viewers or friends and share information creates greater personal risk than to publish an Internet Site as a Fictitious Business Name with a registered domain advertised to 500 online users. These are Information Management issues with risks of reuse or misuse of photography and other professional or biometric details used in Identity Management and perhaps reserved for later use in Healthcare or Biotechnology Systems Management.

Deciding what to share and who to share it with, along with who to market and advertise or do business with is what is critical and in Social Media and E-Commerce, but communication, online sales and customer service is a more distant activity than physical commerce. There is multi-dimensional protection problem in determining who is responsible for what and to what amount in case of damages, but once that point is reached, it is too late. Measures taken to protect information from being copied, reused, or changed are not standardized across the Internet. Some sites allow the copying or downloading of information, such as your photos from LinkedIn, Facebook, and some businesses sell your information with and without your consent. A smart individual can learn everything they want to know about a person online, using basic Internet Research and the only reason this is a problem is because of crime, absence of understand of how viruses spread, the unauthorized copy of material, and malicious intent potential.

A self-managed and individual system security approach creates a high-risk environment forcing system owners and users to purchase protection when it should be inherent in basic design before any online transaction takes place for both individual users and business owners/users. A One-to-Many Profile Manager with data sharing is a better design, or an improved security policy for E-Commerce or Internet Communications is required. Profiles or Accounts are created for every site where a transaction occurs, whether its financial or other interaction that requires identity verification. Terms such as “Transactions” are not limited to financial actions, just as “Terms and Conditions” are not created and standardized in all E-Commerce transactions for every contract or product, or service purchased. Broad direction and limited legal understanding of financial and privacy or information laws complicates protection, damage, and remedy process. Cyber Security jobs created for each Merchant is good for the economy in job creation for the protection of information against fraud, misuse, automated viruses, but requires heavy monitoring, finance and IT skill, investigative, and multi-company coordination and are only useful for post accidental or criminal misuse, especially if companies are authorized to operate with low quality Systems Security Health Practices and Policies. Roles and responsibilities are often blurred between the user, the storage owner, the sharer, and information during transit. Proof of delivery, receipt, and proper handling and use were once the critical security factors, which are now transformed into ‘multi-site or multi-cloud or multi-system security and management.

Strict requirements stifle growth and opportunity, as well as production and sales, on both ends of the spectrum: the lawful and unlawful, as well as the open and ultra-secured. Offering “layered systems” and small software vault protection programs or encouraging storage of information in a browser to be used across the Internet for purchases does not fix the Security Management issue and are only temporary solutions to ease the burden of accessing and securing account information. Simply publishing a

disclaimer regarding privacy and the sale or protection of information is not enough due to inability to prove data or information was misused without a serious technical investigation. Publishing guidance on ‘how to protect yourself and others on the Internet’ or “threat-based terminology and warnings” instills a belief that Internet Users are not secure online and are responsible for their own protection, creating a ‘fearful or scary’ environment before they even have a chance to talk to a person online from another city, county, or country, browse freely without fear, or confidently make purchases and contacts.

Content ratings and freedom of ‘publishing’ any information is also at issue, such as adult material and the manipulation of information for the purpose of health screening, job interviews, program evaluations, business ownership, probation, or parole violations, or even just child protections. Monitoring programs such as Lifelock, Credit Card Fraud Protections, Credit Report Monitoring, and other Internet Security Solutions are disguised as Online Insurance and not preventively based. These solutions offer similar protections to what a firewall once promised, what merchant site security promises, and the checks and confirmations humans do on a regular basis in account management. Password or Account Manager applications help users to remember and manage information, but manual entry and maintenance is still required. It is often shared that once information is published on the Internet and associated with a User Account, that information cannot be removed and can be damaging to one’s reputation, career, and health. This shows we have poor Information Management practices, limiting user control on published and shared content, as well as misuse that limits personal and economic growth and success.

Some companies sought to force Privacy and E-Commerce Laws and Rules by the requirement of logins, receipts, promises of personal information protection and sales policies, as well as credit card protections, but because systems are not connected to Government Systems such as the IRS, or a centralized identification and protection processing center, there is no real financial accountability or promisable identity protection. Some E-Commerce providers force every business owner to publish policies, buy individual security, and carry insurance that are not integrated with other Asset Protection Systems, such as Life, Home, Auto, and Property or Casualty Insurance. Biometric Systems fall short in Identity Protections due to biological cloning and low budget systems. After the fact solutions are designed for post-criminal or accidental protections and does not prevent breaches or misuse. Anti-viruses and Anti-Theft Devices are often behind, constantly fighting security threats, scams, and viruses. This shows the convergence of Humanity and the Computer design like infants and toddlers when they are first exposed to other children with runny noses; reported as necessary exposure to build an auto-immune system.

To prevent fraud, misuse, and an insecure system, it must be delivered fully tested, protected, maintained, and guaranteed. There are no set standards for such a guarantee, which leaves E-Commerce insecure and dependent upon each system owner and user’s abilities to follow laws, and recommended policies or procedures. Automatic Account Management is not yet available and requires Human intervention to verify and monitor transactions. Bank alerts, blocks, and credit card monitoring is available, but this creates another inconvenience in security where a 3rd party intervenes, blocks access, and often harms the account holder. This heavy burden on developers, online business owners, and users is manageable, but more work than it should be. Sadly, a small business owner cannot promise complete Information Protection, leaving Security up to the IT and Financial Industry and currently, is only identity and monetarily focused, offering inefficient solutions.

It is suspected that any business that does not monitor internet site traffic cannot promise Information Security Protections and can only be held responsible for the delivery of goods and services as promised through online transactions. Rarely can it be proven that information has been sold, misused, and even more rare is the ability to monetarily be paid for damages in such events. Inter-state commerce and World-Wide information processing that relies on post-security breach protections are disastrous, therefore preventative automatic measures must be taken. The current design is far too complicated for individual designers, users, and store owners. It is unknown if Centralized Identity Verification Agencies exist, just as it is unknown if your information is being used and duplicated in another location or country. Users must assume it is not, but it cannot be proven. The creation of Robots to scan information sites are useful, but security makes it more difficult to track misuse or effectively use them to copy, use, and store information in the right places with good purpose.

Information security is of the utmost importance not only for the protection of intellectualism and financial management, but also identity, ownership, communications, and now even biological/biomedical systems categorized as Biotechnology. Categorizing, separating, and securing these systems into separate designs creates another problem in information management, reducing the desire the Internet and Online Software Systems offer for optimum business and personal management.

The purpose is to explain the multi-account personal and business security design, show the heavy user responsibility of Profile and Account Management and discuss the Security issues associated with a one to one or site and user managed security design.

This cannot be done without a short terminology overview:

Entanglement – A complicated or compromising relationship.

One to One – In an Internet Account Management System, it is defined as one Login and Password required for every Internet Site or account, regardless of the amount of named authorized users on the account. Each E-Commerce Site where credit card transactions or the exchange of personal information takes place, a login and password is required to identify the users involved in each transaction.

One to Many – A not yet designed system of Account Management that offers one simple Owner or Profile with many different accounts where authorization to use or financially transact online occurs. This type of system ‘automatically’ checks the profile and account holder details for authentication, verification, and authorization to buy, sell, or use an E-Commerce or other online site where Identification is required. The system ‘automatically’ queries and matches account information to confirm identification using location, stored profile information, and corresponding account and authorization codes and does not require data entry for each transaction. Although it checks each time, it does not ask the user to login or provide already known or previously exchanged information. Rather than one profile and account per site – it is a one Profile that stores authorizations for many sites and requires one-time setup and entry. The profile matches real financial account information and cannot be changed by the user unless it has been officially canceled or closed. The same process would apply for all Online Accounts regardless of ‘financial transacting’ and is applicable to all identity related communications.

A study found that customer’s online security and privacy concerns are positively correlated with not giving the credit card number to unprotected online shopping sites. It means that customers are not willing to give credit card numbers to the unprotected sites if they perceive privacy and security concerns being the barriers to online shopping (Patel, 2018). This study appeared to be an American Study, but

upon further research, showed elements of possible terroristic Cyber plagiarism, potential threat for usage of reference, or a direct attack against a Veteran of the United States seeking to show/uncover IT vulnerabilities and bad security designs. It might also be that American Intelligence has been transferred to other institutions to forward International IT Intelligence, which causes more risk in National or International trust of online systems. No statistics are available to show terrorism or agreements made between the US and other countries to study consumer IT behavior, but it is obvious either the profile and authorship of the research has been changed or a database problem has occurred because Indian writing does not often match the same APA referencing and writing styles as a report authored from a Turkish Educational Institution. The points are accepted, but the authorship is questionable.

While some violations deliberately make the systems inaccessible and interrupt services, some of them occur due to accidental software or hardware failures. Either by accident or malice, security violations seriously affect the activity and reliability of an institution (Kashyap, 2013). Every phenomenon causing a violation of any one of the principles of confidentiality, integrity, and accessibility—the three main elements of information security—is a violation of security (Mehmet Guclu, Cigdem Bakir, and Veli Hakkoymaz, (Sep, 2020). Again, another study obtained from the American Public University Library System that appears American, but is written by foreigners, causing severe distrust in the University Library and Internet works. Although the point is accepted, suspicion of the authorship is natural due to past terroristic activities and the point itself. A database error and terrorist attack could've occurred to change the author. The American Public University System should separate and note international doctrine. This lowers student trust and decreases confidence in the study results and quoting such works, not because of prejudice, but because of known terrorism and an obvious investment in international learning, to the detriment of American knowledge.

If American businesspeople struggle to understand technology and there are foreign intelligent authors, then it can easily be suspected that American IT is behind and failed to prioritize IT intelligence growth for its own users; an obvious mistake in authorship or purchased cyber terrorism attack suspected to have occurred for pointing out a flawed security design or to show an additional one of importance. If American IT studies are not readily accessible in the University's library, then the University is questionable in its ability to provide reputable and acceptable scholarly research for American students. It also shows its more than a password breach or security vulnerability, but an advanced international attack on a major IT knowledge management and security issue at hand. Outsourcing IT services to foreigners will not be discussed further in this research because America has yet to prove it can offer efficient and secure services within its own borders. Why are Indians or Hindus writing about American Consumer Privacy and Consumer Behavior? Every phenomenon causing a violation of any one of the principles of confidentiality, integrity, and accessibility—the three main elements of information security—is a violation of security (some other idiot wrote this part, sick and limited in their own mind – there are many more elements of Information Security than just three).

In today's environment, multi-cloud security is the most important task for data safety. Prioritizing security across all clouds is imperative to ensure no sensitive data is exposed to risk, all loopholes in the system are diagnosed, and workloads are protected. While managing additional servers is no small feat, following some best practices and working with a competent operations team can eliminate most issues (Campbell, 2021). This is broad and generalized research showing obvious risks are inherent in working with multiple systems designed on different platforms. It not only creates a password and network management issue, but a data collection issue when information is all over the place. Information sharing

and security policies must be implemented and well documented in IT Services, with standardized global processes if shared internationally. If an organization cannot effectively do this within its own walls, then how can it effectively and efficiently do it globally and securely?

Sasse et al (2001) observed that sharing passwords is considered a sign of trust among colleagues and friends. People who are not willing to share passwords with colleagues are regarded as “untrusting” (Sasse et al., 2001). Users who practice safe computing by having strong passwords are often described as “paranoid” or “antisocial” (Sasse et al., 2001). This is an inference that can be viewed in two ways – a negative assessment against those who do not want to share and understand the purposes for protecting information beyond personal systems, but also high levels of responsibility in data management, systems, design, engineering, and interchanges and relationships beyond the human and computer, but in neural networks, and other artificially intelligent systems where information and systems are misused. A perfect example is the need to protect the eyes and ears of others in certain companies where humans have not been taught or forced not to share personal details or misuse the eyes and ears of another to cause psychological trauma or negatively impact their career progression, educational goals, and health in certain environments. Assuming ‘paranoia’ because a person seeks to protect their information is false, especially when industry and developers or designers of systems have recommended this process. The use of “Anti-Social” behavior reference is also an attack on developers because the process of development is not a ‘social activity’ where some place human interaction as their top personality reference trait when computer programmers choose to spend their time working rather than ‘socially computing’ or interacting with others.

Passwords are protected not just against theft, but from those who can come in and purposely or accidentally destroy works in progress or good designs. It is unknown how often passwords are resetting due to forgetting in comparison to those deleted by accident through a device reset or clearing of browser history. Although account management has improved with Browser based memory and auto-fill features, the massive problem of security on each site creates not only a management issue, but also causes storage problems and delays across the Internet. This paper will propose a more efficient design.

Using both qualitative and quantitative methods, the research will show account management statistics with a high and varying number of online login and password accounts required for E-Commerce for both users and designers to show management and necessity for offline storage. It will discuss the ‘remember me’ feature and will show browser in/efficiencies with synchronization and site managed multi-profile account maintenance. It will prove the sharing of one password and one single browser action can cause severe loss of work, financial and psychological damage, and how to protect against the unauthorized sharing, deletion, or misuse of this information. It will also show the average number of identifying details a human and computer is asked to remember, regularly provide and reuse just to verify identity to use, discuss, access or change information, summarizing the Identity and Account Management process as a one-to-one Internet Wide Site Accounting System versus a One to Many Operating System integrated Browser Profile Management System. It will argue the need for change in Identity and Account Management to provide a more efficient, better managed, more secure, lower risk design in both human and computer maintenance, storage, and retrieval processes. Overall, it will show the current design forces excessive work, insecurity, and over protection.

The research is based on a single user with more than 15 online accounts to manage who also holds the responsibility of account management for others, such as family, customers, and users of a published system. It will briefly cover the average household number of accounts to manage and shows severe

problems in human trust and risk. It will generalize risks and show non-restrictive and abnormal/ambiguous assignments in roles and responsibilities in civil and business law, management, recovery, and protections. The average number of online accounts is unknown, but averages can be obtained using a survey. For this paper, data from an online developer and frequent Internet user is summarized and provided to show the high number of duplications of profile details which require memorization, off-line management, and manual entry with no centralized technical solution to monitor, update, manage, or change information.

There is no single reusable Profile or Account Manager available to auto-fill new user profile details and although there are some solutions, it does not solve the duplication and management problem faced by Internet users. Current solutions are high risk and managing profile and account information forces off-line manual tracking, user entered duplication across the Internet, and is a non-efficient identity verification requirement. Browser based security and account management is helpful, but not consistent across the Internet because of varied Internet Security Policies and Development procedures. Account Recovery and memorization is often required and becomes more difficult the more a user integrates the Internet into their life for shopping, interacting, research, accounting, education, and other life management tasks available online, such as Telecommuting.

EXPERIENTIAL RESEARCH / FIELD STUDY

The E-Commerce Provider for this study did not create profiles or manage accounts for family but was asked to provide specific identifying details for family members, where the information was unobtainable. A basic Internet Account Holder has at a minimum, three accounts to manage: Operating System Credentials, Internet Connection Account, and Email. An active Internet User, who browses, interacts, shops, and pays bills online has the following accounts to manage:

When Social Media first came on the scene, business users created pages using their personal account and later changed to their business account because it was unclear to them how to best use the application for marketing and advertising, separating friends from co-workers, customers, and prospects. This required an additional Social Media account and the necessity to use more than 3 profiles to manage activity: The Developer Account, the owner's personal account, and the business account(s). The same was not true for Twitter Accounts. The minimum number of required accounts for a new E-Commerce store owner was approximately nine, but this did not include Social Media services, Email Marketing, Advertising, or integration with other systems for customer management which increased it to 16 plus accounts to manage.

Duplicate profile information was managed in approximately eight or more different applications, only one or two of which were already known and created by the new store owner, such as the Email Provider, Social Media applications, and online banking institution. The information required to create an account was the same for each site. For two person working households, the account and profile management was less of a burden, requiring an average of 29 accounts for internet services, bill paying, online shopping, and social media. In each case, every account number is different, but memorable details, such as Email, Password, Address, Phone Number, and Zip Code were always the same, except when using business accounts. An additional layer of security was added to Online Banking Accounts and Email Accounts for 'two-factor authentication' which included three security questions, where each account's question options were different, some even added PIN numbers on top of these requirements, including cellular phone providers. The household numbers are combined to show the numbers required for two working individuals, but both individuals don't often know and share all their business account details, when they should. The figures shown in the Account Table does not include all accounts managed by a working businessperson, such as business applications used by the company, which adds more accounts, not only to remember, but also to manage.

Qualitative Results

Without serious experimentation or surveying, an experienced developer can confidently say Account and Identity Management is excessive and duplicative across many networked applications and systems and causes frustration and stress when forced to reset, forgotten, erased, cracked, misused, or stolen. Staying logged into all necessary applications daily reduces the burden, but many systems have session time outs, and few have auto-login features using browser auto-fill features. By asking a household or business user to remember 29 logins or one login for every account shows applications are not built on device security, nor do they use biometric statistics to verify identity. It also indicates severe distrust in online account management, bill paying, communications, and shopping. The reasons or methodology behind this type of programming model is unknown.

If an account holder uses the same device to pay bills, chat online, and shop, then the device already has the account information, which is stored and reused with identifying standard details that rarely change, yet customer service account reps and E-Commerce financial exchanges still require this information in every sales process, and many require the creation of an account to even buy. It is suspected that the reason or intent was to sell information and use it later for marketing and loyalty programs, or systems that monitored and learned consumer behavior to make buying and selling a more personalized experience, which can be accomplished using device memory and purchase history applications. Social Media enabled online shoppers and buyers to share purchase information with their friends, but not much sharing occurred unless asked by the retailer or business – like a standard in person sales referral strategy

for salespeople to grow business. Direct marketing to specific demographics were enabled in Social Media, but customer interaction remains a manual process. E-Commerce sales tracking is still anonymous with some analytical reports available to show referral sources, but not specific sales figures. Pinterest, a Social Media Image Sharing Application, prompted individuals and businesses to share photographs and links to stores, but offered only referral source reporting in marketing efforts.

E-Commerce Social Media users were encouraged to setup multiple profiles and share business product and service information in multiple streams to expand their reach, but no real sales resulted from applications other than Facebook and Google Search Engine Placements and Ad Words. Duplication of postings across Social Media applications was also seen. Even increasing in sales and profits does not make the burden of profile management worthwhile, nor does the storage of information on multiple servers, accessible by many different users. The concept of widen the reach of potential customers or targets was the goal, as well as name recognition or brand awareness, but nothing could be proven to be effective unless communications were closely tracked, monitored, and contacted to make a sale.

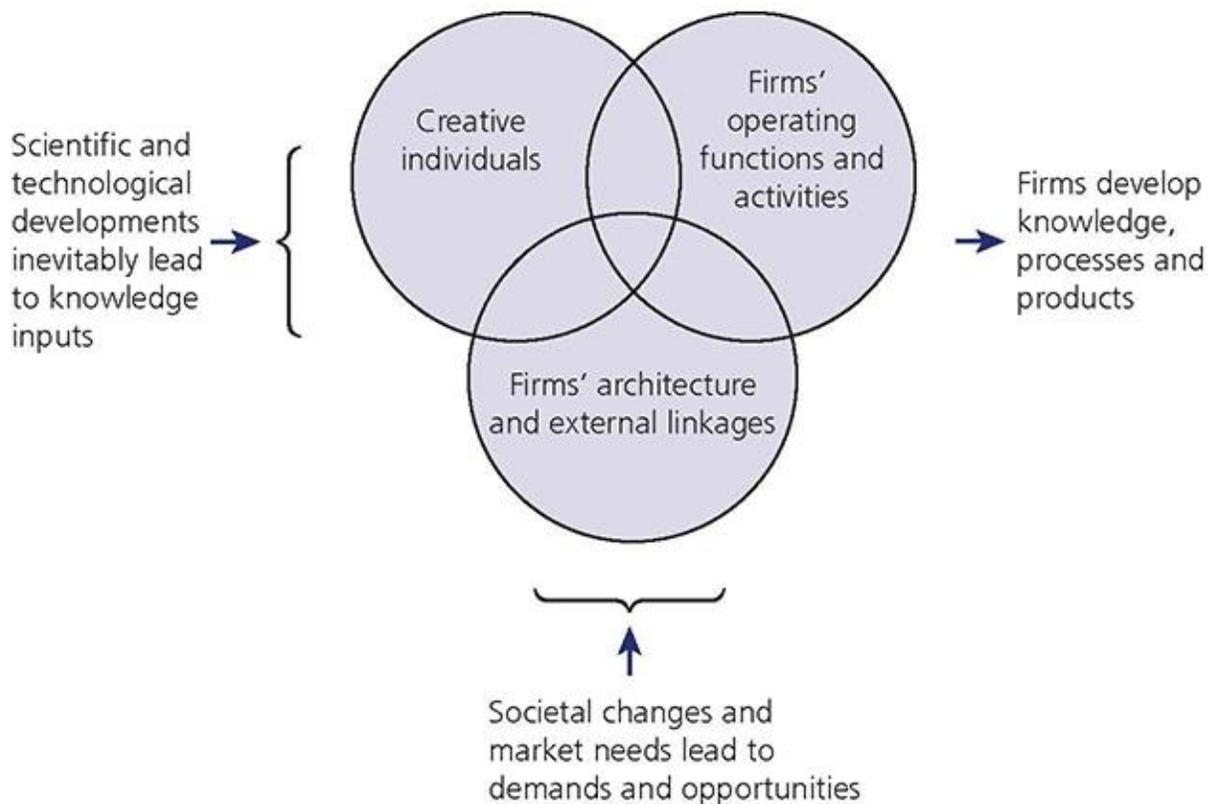
Account or Profile Management is duplicative, excessive, and requires much time in setup, management, trust, and memory. Security settings in each browser is not easily understood by users who don't understand the benefits of storage and reuse of account information and the browser does not offer full Household or User Account Management necessary to manage all different types of accounts. The reason leads to only speculation that the system remains untrusted and is undesirable. The necessity of every Internet Site to require a login and password is beyond natural and is unnecessary when the data is available stored on a local hard-drive or cellular device and application server where the account information resides. Tracking activity makes this easier in some authoritative areas for Financial and Location Services, but there are better ways than a user login and password to accomplish Information Security, Identity, and Profile Management. Asking a person more than three times in one day what their name is and what their identifying credentials is intrusive, excessive, and a new design should be considered. This design is not suitable for developers, users, or anyone that has trouble remembering complicated password combinations. Resetting is also a major burden, requiring new passwords, several emails, verifications, and delays in completing work or tasks.

Single Sign On solutions and Browser Account Management or Auto-Fill features are helpful, but do not show an organized Account Management summary of what accounts are created, active, and in use, with corresponding location and device information. It also doesn't automatically share this information for the establishment of new accounts, forcing the user to use a browser 'auto-fill' feature or to manually key in the same information. Resetting a machine or Clearing browser history quickly deletes this valuable information, requiring re-entry. Verification and Validation of information is also not present and there is no way for a user to know their information is being used, mishandled, insecure, and there is also no way to quickly close accounts. This not only presents problem for Cyber Security and Computer Forensics, but also for each user because it requires off-line record keeping, an excessive amount of memorization, non-efficient management, and constant duplication of identity details.

INNOVATION AS A MANAGEMENT PROCESS

It is believed that companies must innovate to gain and maintain competitive advantage in the marketplace. Innovation is not only change, but improvement that not only includes technology, but is mainly driven by technology. It is understood as being the most technologically advanced, or the most proficient and efficient, bringing the best products to the marketplace with the soundest processes. This is accomplished using technology and well-defined business processes, which are management processes. Innovation is not just the implementation, management, and use of technology that creates a high functioning organization, but a company that operates with a corporate or company mindset of being the best, and offering the best, always ready and willing to improve. This is not just a mindset of corporate executives and managers, but a process of product review, market surveys, testing, and investment in how products are made and managed, as well as how business is conducted. An innovative company not only uses innovation processes to improve its products and what it sells to customers, but also its internal business systems, making processes seamless, efficient, and well managed with enjoyable and advanced technology. Innovation must be managed because it involves risk, therefore processes must be in place that separate the 'business as usual' departments from 'innovation' strategic changes that are managed in phases with proof of actual business value beyond the profit or bottom line.

Figure 1 presents an overview of the innovation process which includes an economic perspective, a business management strategy perspective and organizational behavior, which attempts to look at the internal activities (Trott, 2021).



Knowledge, operating functions, and activities, as well as the firm's architecture and external linkages are parts of innovation, suggesting that scientific and technological developments lead to knowledge and firms develop knowledge, processes, and products. Therefore, for the firm, knowledge is their form of innovation, brought to them by technological developments. The firm's architecture is its internal design, and its relationships with suppliers, competitors, and customers are what will influence the firm's innovation process. More recently, open innovation is defined as "a distributed innovation process based on purposively managed knowledge flows across organizational boundaries, using pecuniary and non-pecuniary (or monetary) mechanisms in line with the organization's business model" (Wikipedia, 2021). Rather than a business functioning as a closed or 'secretive' model with strict policies on trade secrets, business functions, activities, and other, open innovation is the management of knowledge flow across organizational boundaries. Open innovation seems to be naturally in conflict with working to gain competitive advantage by not sharing methods and tactics to innovate. After a firm has gained competitive advantage and is considered truly innovative, it can become an 'openly innovative' company that can lead its competitors to advance the entire industry, but they must maintain competitive advantage and risk losing by taking a different role as an industry leader. Once a giant innovator has become a giant, it can train other small giants to become giants, without fear of being overtaken, if the original giant continues to innovate. Innovation has its limitations because corporations cannot be on a constant path of change because markets must settle to show the impact of change and it must be proven over a set length of time to prove that the innovation was truly responsible for the change and that the change or improvements are sustainable and can be maintained. A company or corporation in a constant state of flux, never levels out, and rarely understands or knows what causes the greatest change, profits,

and loss, making the management of innovation a critical business function. If one accepts that inventions are new discoveries, new ways of doing things, and that products are the eventual outputs from the inventions, that process from new discovery to eventual product is the innovation process (Trott, 2021). The innovation process is also applicable to the implementation of products within an organization which changes operations and organizational behavior, which affects eventual outputs.

“Ideas are Easy, but Innovation is hard.” Sergey Brin, Co-Founder of Google

Coming up with ideas in brainstorming sessions are in fact easy but putting them into action or practice is in fact difficult. Just as coming up with an invention is easy, but finding and utilizing the resources to buy, build, test, and put it into the marketplace is a lengthy process. Innovation seems to be most applicable to improving upon existing systems and processes and not so much new inventions, although being innovative when creating new inventions is always a best practice. What does innovation truly mean? It means being on the cutting edge or being creatively advanced and open to using new technologies and improving technologies. Others might view this as being open and willing to take risks and venture out from the status quo of business operations into a willingness to invest in new advanced processes, people, and ways of working, expanding toolsets and always on the lookout for ways to be more efficient, creative, and advanced. Innovation seems to be one word best defined as how can we be the best and constantly grow and improve? How can we improve the business, marketplace, customer base, nation, and the world – or society as a whole? Obviously changing a few things here and there does not create complete technological advancement or socio-economic change, but big ideas that are put into practice with the right strategies and timing creates innovative growth across the world, and this is in fact not easy, but possible with innovative planning and processes. It must be managed to show impact and longevity beyond short and simple wins, but long-term results that truly change the world.

GOVERNMENT, UNIVERSITIES, AND ENTREPRENEURS

Entrepreneurs can creatively invent and innovate, while government regulates, and educators teach the use and how to be innovative to follow the entrepreneur model of single-handed success with investor backing. Government must also be innovative because they too serve a role beyond regulation, but also the development of industry and the world. Universities and Educators follow suit, in the study of such change or innovation, which is regulated, but where innovation is encouraged, and ideas and processes are taught. How they all work together is truly unknown, but there seems to be a process that is interconnected, where one feeds another through a process and that process is not documented or considered innovative, but obviously occurs using innovative technology, making the learning and communication system one of the critical systems that influences innovation. Technology history has shown that colleges create not only entrepreneurs that changed the world with the formation of companies like Apple, Microsoft, and Facebook, but also that the entrepreneurial mindset promotes college dropouts who seek to make millions by creating and introducing technical solutions and making giant corporations, many of which have been subject to near criminal lawsuits for their creations.

INNOVATION DIFFUSION AND MARKET ADOPTION

Austrian economist, Joseph Schumpeter, the founder of modern growth theory, in the 1930s was the first to realize that the development and diffusion of new technologies by profit-seeking entrepreneurs formed the source of economic progress. Diffusion is defined as the spreading of something more widely (Oxford, 2022). Diffusion of innovations is a theory that seeks to explain how, why and at what rate new technology spread through an industry and markets (Trott, 2021). The terminology in defining diffusion using ‘spread’ sounds as if it could turn into a viral illness, which in fact, we’ve already seen many cases of computer viruses being used as weapons in business and cyber war. While it might result in economic progress for the computer doctors, it creates havoc on worldwide systems and business, as well as society.

Obviously spreading any profitable solution in a wider scale result in economic progress if it follows the concept of supply and demand. What they have not done however, is manage and document the effects of innovation using the clarity that we understand the aftermath of war, which often includes economic advancement, but ends in depression or how the industrial revolution resulted in or was connected to world health problems. Some might believe the creation of the Atomic Bomb was innovative, but it was truly just an invention that led to the end of a war. Innovation is more about the creative use of technology to bring new and fresh ideas to shake up status quo operations which often results in improved health, organizational behavior, better business processes, that in turn, results in employee retention and less spending, not always profits. Market adoption is simply how or when and why users adopt technologies and innovation, but its terminology again, uses negative wording to make it sound as if technology is a parentless orphan in need of loving care by someone new. While we ‘adopt laws’ it appears we also ‘adopt ideas and technology’ or items in the marketplace. Once the ideas or technology is full grown, it’s no longer a matter of finding fit and qualified parents to be held legally responsible for the technology and innovations, meaning, it has worked itself through all the growing pains and phases of becoming an independently accepted system or technology. Some creative technology companies even call some projects ‘incubators’ as if they are dealing with the creation of ‘premature’ systems in need of tender loving care. There not only seems to be a mix up in terminology using ‘procreation’ or ‘parental’ legal birthing terms, but also the use in correlation with the Technology industry, which has been around since the 1960s; nearly 45 years.

INNOVATION IN A SOCIAL SYSTEM

Diffusion innovation in a social system is comparable to the generation of ideas or social sharing that prompts innovation using new technologies such as social media. An innovator did not come along and suggest to industry professionals that they should offer the public an online medium of several photo

sharing and interactive solutions to allow users to socialize. A technology change occurred that enabled what is summarized as social media, which included applications such as Facebook, Instagram, Pinterest, Twitter, Linked In and Google Circles. These social media applications enabled society to create profiles and connect to other users, like email, but with group streaming content to prompt communications across multiple platforms and miles. The innovative aspect is that it does prompt new and fresh ideas for the users, based upon what is shared, but innovation amongst the systems happens slowly now that they have been created because the social effect has yet to be seen. For Facebook to innovate, it needs to not only be concerned with its competition, such as Google, or other small interactive sharing applications, but how it can improve content and assist social analysts in understanding online and in person human behavior and the impact of media on its user base, in relation to real life activities or outcomes. What seems to be a simple photo sharing and comment box application of connected individuals, it truly can offer more and do more for communities beyond communications.

The interesting component of social media is that the leaders did not have to ‘convince’ a population to use the system, nor did they have to convince a Technology and Social steering committee on how to use innovative technology to create community engagements or online interaction. To technology professionals, it’s a simple advancement of email capability with an extended address book, separated from the search engine and internet libraries of e-commerce and knowledge-based systems. I don’t know of any company that ‘convinces’ industry to adopt new technology because there is no such person or entity called ‘industry’ where a company or organization goes before a board who makes the final decision and sets the parameters for which they operate. The free enterprise that we operate within allows that for any hopeful business and it’s up to them to convince their investors, board, buyers, or users. The five factors of influence vary, depending upon what is being introduced or attempted to be sold as a free service, or solution.

The National Science and Technology Council (NSTC) was established by executive order on November 23, 1993, by the Office of the White House (Whitehouse.gov, 2022). It creates science and technology policy and works with other groups and organizations to provide direction, oversight, and overall governance of two split areas called Science and Technology. Many other organizations have been created that work with the NSTC in coordination, and how technical direction is managed amongst several governing organizations across the nation and how they work with companies that build and sell technology is not clear to the everyday reviewer or researcher. It is believed to follow an organizational structure of management that set forth policies and governance, as well as cyber security operations that regulate and manage the Technology and Innovation industry.

RELATIONAL DATABASES AND TERMINOLOGY

A relational database is a system that stores and organizes data that is related to one another. For example, a customer has information kept in a database that is related to that customer and possibly other data points, such as geographical location or other important attributes. The data in a relational database are stored in tables, connected to each other using a relationship diagram or entity relationship diagram, joining to the data together. In older data management systems, all data was stored in one location and included several repetitive data points. Segmenting data in tables and using a relational database concept,

data fields are joined using ‘one to one, one to many or many-to-many’ relationships to link the tables and information where data is applicable to many others or just one. In a case of separating a data point that is related to (or is unique to) another attribute, such as a person’s address and social security number, the two tables store data separately and are linked. It is a one-to-many relationship because while the person may have more than one address, which is further linked to tables that include only cities, states, and zip codes. This is done so that data does not have to continuously be entered and duplicated. It becomes necessary often for security and the organization and storage of data.

Entity Relationship Diagram(s)

The relational data model and ERM combined to provide the foundation for tightly structured database design. ER models are normally represented in an entity relationship diagram (ERD), which uses graphical representations to model database components (Coronel & Morris, 2018). An entity is anything where data is collected and stored in a database. For example, a table named “City” is considered an attribute, where the entity would be considered Geographies or Counties, where cities are a part of specific counties. An entity is defined as a thing with a distinct and independent existence or an existence or being (Oxford Languages, 2022). In database terminology an entity is an object that exists. In database administration, an entity can be a single thing, person, place, or object. Data can be stored about such entities. A design tool that allows database administrators to view the relationships between several entities is called the entity relationship diagram (ERD) (Study.com, 2017).

Crows Foot Notation – ERD

The originator of Crow's Foot Notation was Gordon Everest, who in 1976 put forward the idea of how to visually represent the different types of relationships that can exist between objects in an ERD. Figure 1 below shows the Crows Foot Notation that depict relationship type using symbols. The Crow’s Foot Notation in the figure below represents the many sides. The rectangles or boxes are tables and the lines with symbols show how the data fields within the tables are related to data in other tables or entities. The figure below does not include cardinality, but if it did, it would be positioned at the start and end of each line where the tables are joined to show the number of instances within each.

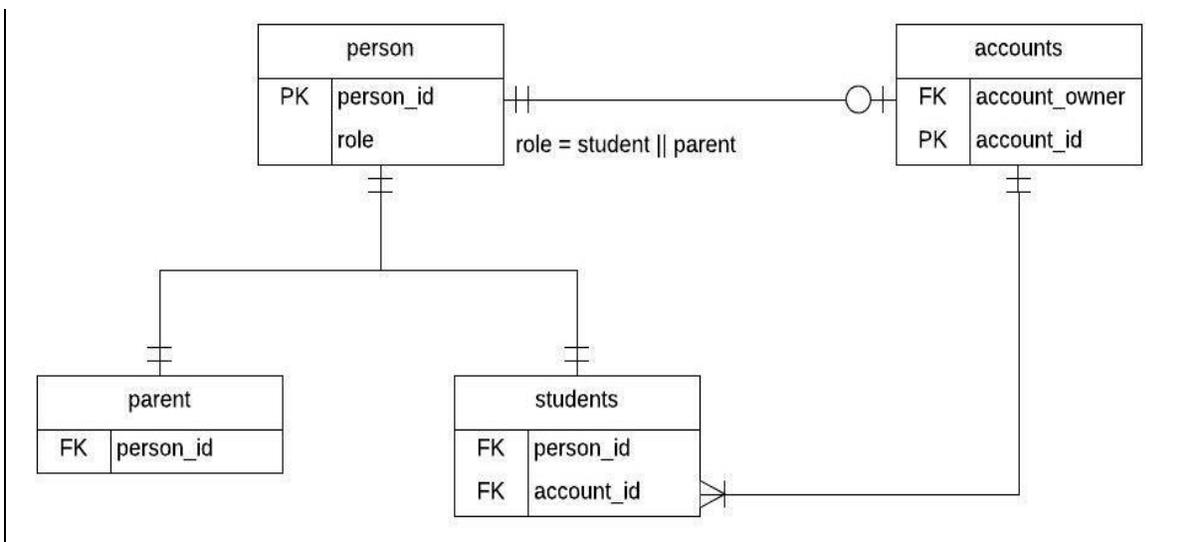


Figure 3 - Crow's Foot Notation – Courtesy of Concept Draw

Cardinality

Cardinality expresses the minimum and maximum number of entity occurrences associated with one occurrence of the related entity (Coronel & Morris, 2018). Some of these numbers, which can automatically be performed as 'counts' are placed in the ERD and sometimes in other areas, such as on reports, beside the entities. These are usually relational minimum and maximum requirements for specific entities, such as an instructor to students or classes, where there must be a minimum amount for a class to be scheduled, which might be an automatically generated date with other associated actions. It's not clear if it can also be used to define data or record counts using minimum and maximum numbers to control the size of the data tables or database. Within data modeling, the cardinality of a join between two tables is the numerical relationship between rows of one table and rows in the other (Wikipedia, 2022). In Microsoft SQL Server, there is a Cardinality Estimator to help predict and or set cardinality parameters to manage server efficiency and now also cost using an algorithm to estimate and optimize queries. A one-to-many relationship is abbreviated as 1:N which means there is one instance of entity A, there exists zero, one, or many instances of entity B; but for one instance of entity B, there exists zero or one instance of entity A. The capital letter N on the right-hand side of the ratio is a number of rows or instances.

Relationships – Weak and Strong

Relationship strength is a concept related to how tables and data are joined using primary and foreign keys between two or more tables. Strong identifying relationships have visible primary key to its related entity also described as a primary or parent key to a child key. The relationship shown in the ERD is visibly connected, using correct naming conventions to show its strong relationship. Weak relationships are considered when the primary key of the related entity does not contain a primary key component of the parent entity. By default, a foreign key is created for what are considered weak relationships. These relationships are represented by shapes in the ERD, where a strong entity is represented by a single rectangle and a weak entity is represented by a double rectangle (GeeksforGeeks.org, Oct 25, 2021).

Composite Keys and Attributes

A composite key is a key that is composed of more than one attribute. An attribute that is a part of a key is called a key attribute (Coronel & Morris, 2018). A key attribute is a part of a primary key, which is the unique distinctive value or attribute for that table that connects relationally to other tables containing keys and attributes. A primary key connects to a composite key using a one-to-many or one-to-one relationship, where the primary key links to more than one attribute contained in another table.

Figure 2 below shows a simple ERD and the composite key attribute in the ERD is the address because it contains more than one field that includes street number, street name, housing type, which are often connected to other database tables as lookup options, such as ST, BLVD, DR., and are also separated because the street might be the same for more than one student.

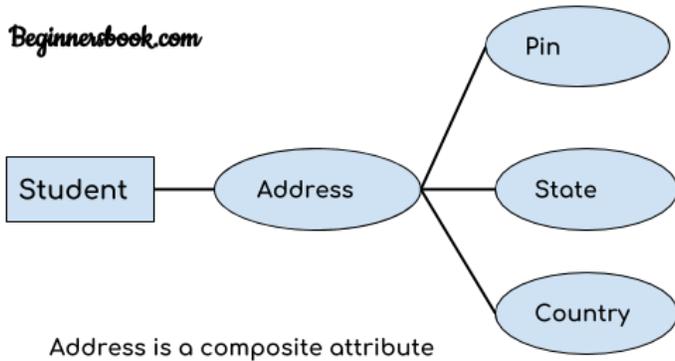


Figure 4 - Composite Attribute - Beginner Book

Multivalued Attributes

Multivalued attributes are those that can have many values. An example is how a student can have more than one degree, classes, or addresses. The multivalued attribute might be simple or composite, which was determined when deciding if those attributes could be subdivided, such as Address. Composites are subdivided before connected or used and multivalued attributes are determined when structuring the design. It should be done when the tables are created so that further definition added later does not create date and structure problems. So, address is a composite attribute and possibly a multivalued attribute if business rules allow a student to have more than one address. To determine if the data is a multivalued attribute, the database designer must decide if the data can and must be further broken down to identifying information or attributes, such as Car Color. In simplistic terms and a vehicle database for parking registration or something else, the car color can be one value, but in more complex systems, such as a paint store or other type of application or data system that requires more information, it might be a multivalued attribute to show that the car is black and white and not just black or white. Before creating multivalued attributes, the designer must consider existing structure and if the new attribute is added or a regular attribute to change. The structure must change to accommodate new selection or data points and options, which affects other data where the multivalued attribute might not be applicable, which can lead to data problems. A derived attribute is created from other attributes using a calculation or algorithm and does not need to be physically stored in the database, although it can be. A chart or report showing age ranges are derived attributes created from calculations from today's date and the birthday and might include date range or numerical range calculations to show average age of students, organized by classroom, in order of age or year born, depending upon what output is considered the best data view to represent the student age population. Computed attributes are those values calculated using formulas. A simple example of a derived attribute are where two data fields are combined, which might not always be numerical or integer-based calculations, such as select FirstName + ' ' + MiddleName + ' ' + Lastname as Name from TableName.

ERD – Relationship Indications – Crows Foot Notation

Different symbols are used to identify relationship types in an ERD. There is more than one way of representing relationships. The three common ones are simple Relationship Diagrams showing table joins, Chen Notation, Crows Foot Notation, and the class diagram which is part of the Unified Modeling

Language (UML). The Crows Foot Notation uses symbols to represent table relationships and below is an example, along with its definitions.

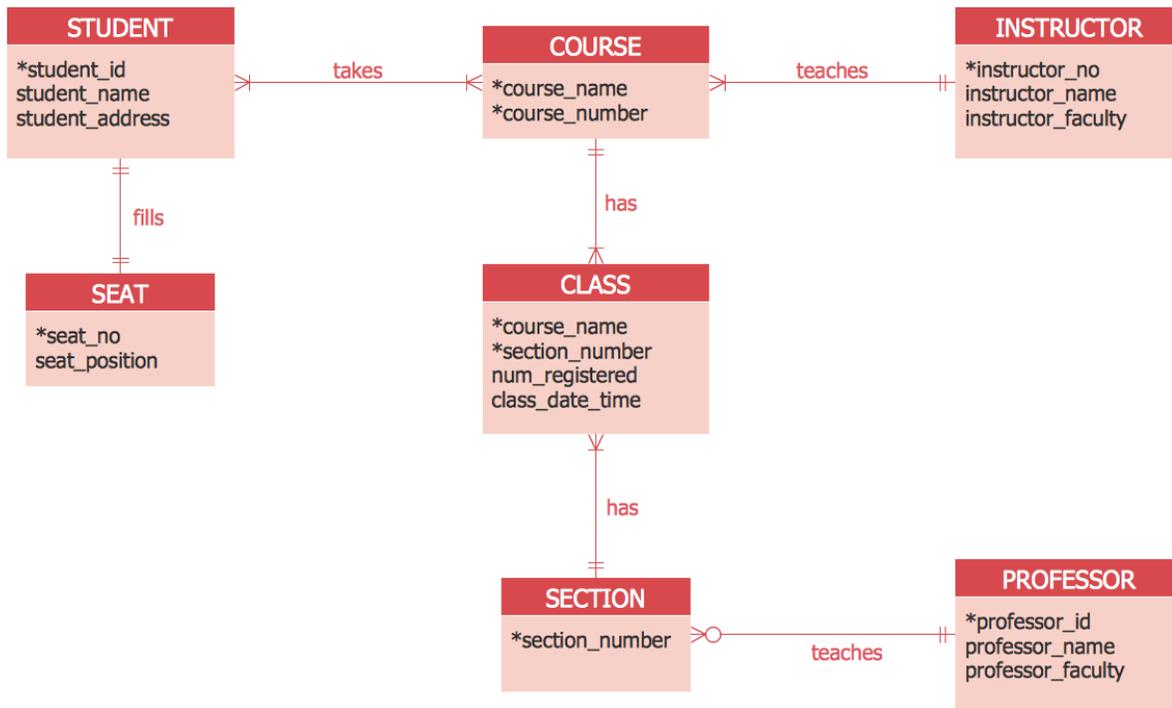
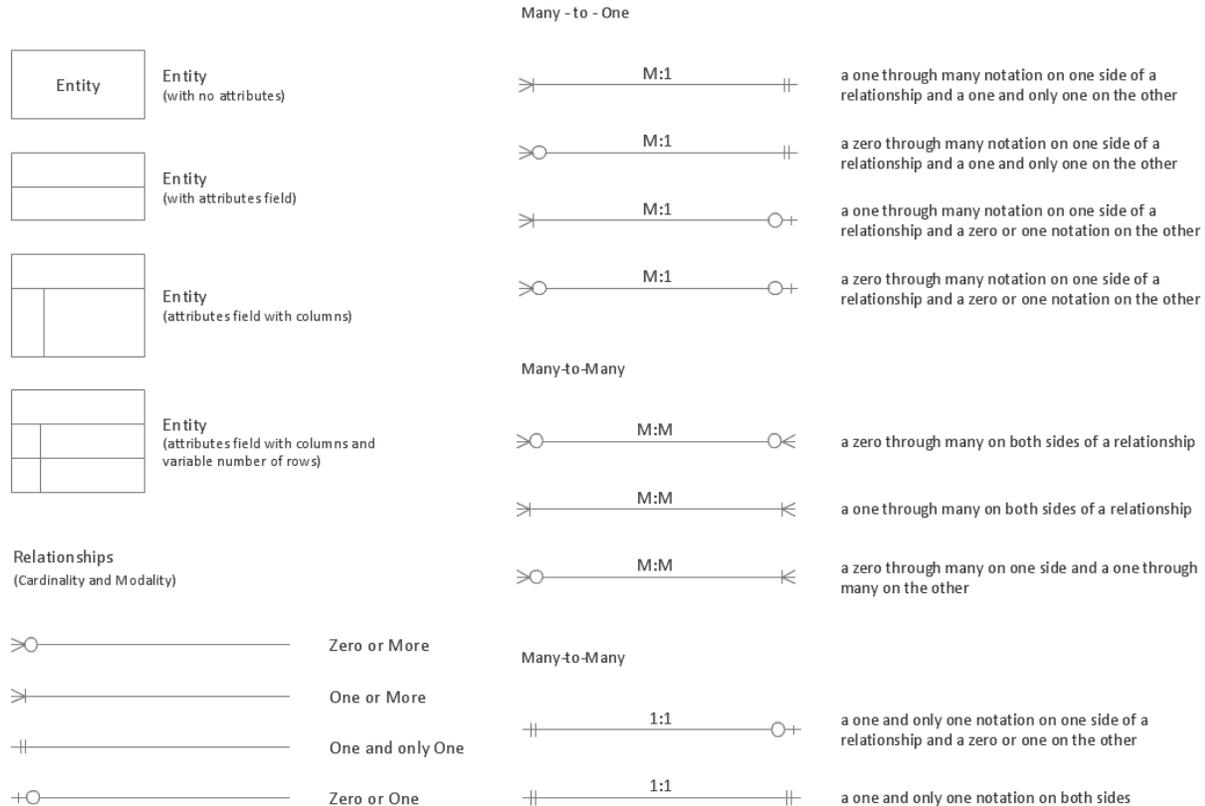


Figure 5 - Crows Foot Notation – ConceptDraw

Crow's Foot ERD



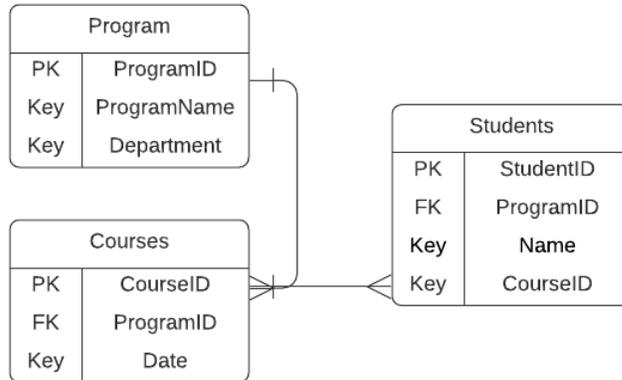
The Crows Foot ERD uses different symbols at the join parts of the line to the table, which vary, depending upon the relationship type. These are often created before using database software to design the database, to conceptually map out how the data is connected and should be stored. Some software applications, such as Microsoft Access and SQL, allows database developers or architects to design the database and later review the relationship designs after they are created, so they can optimize and build on what has been created for use. The ERD is available without having to create a separate document because it is built as the architect builds the database. In these applications, the ERD is used to show the relational data and how tables and attributes are connected or ‘related.’

One to Many Relational Database Example

A simple entity relationship diagram was created using an application at Lucidchart.com. The sample diagram below shows a one-to-many relationship of Courses to Program and Courses to Students. It does not include cardinality, although there is room to edit and add those constraints. The ERD below uses the Crow’s Foot Notation, which uses a specific symbol to annotate the 1:M relationship. If Microsoft Access or MS SQL was used, the ERD would have been automatically created to show the relationship between the tables, but it would not include the Crow’s Foot Notation.

Simple Program / Course ERD

Sheri Wilson | January 19, 2022



A primary key is not declared, unless using Javascript. Variables are not used in SQL. Primary keys are set on unique numerical data fields that must be unique and auto numbered. An example of a field that works well as a primary key is an ID number, employee number, or social security number because it is unique and when it is connected to other data in other tables, such as a name or department, it provides the necessary referential integrity to show its join type, which defines how data is managed. There are four different join types: one to one, one to many, many to one, and many to many.

A good real world or real-life example is when people are speaking out loud. When people speak one on one, there are only two people, and they are only talking to each other. When one speaks to many, there is one speaking to many people. When many people speak to one person, it is a many to one relationship, and when many people speak to many people, then it is a many to many relationships.

Rather than to repeat the same words over and over, conversations and information exchange or sharing is managed by different relationship types to reach many or just one and when there is more than one type of information being shared, the information must be managed to update for changes in tables where data is related, making this a very important concept. In Access Databases, it is called 'cascading' the updates, which means that if one person, which has a primary key in a table that is connected to another table with primary keys or other data, integrity must be maintained to ensure that tables interact correctly. If an employee leaves and the database is designed to delete an employee and all its related data and that data is connected and shared by other employees, then it causes critical data loss.

In communications, referential integrity and the use of primary keys are similar, in that, if one person is connected to or shares the same data as another person and one is deleted, then correct referential integrity will not allow one not to update another, or find a replacement, such as the new employee, where data is often different because people are unique and so is most of their personally identifiable data. Shared data is a different concept, but necessary to understand because the references, beyond the interview process, are critical to data sharing, learning, and communicating. If one or many are not able to

understand a person's frame of reference, which is understanding a person's standpoint, which is not necessarily their physical geography in where they are standing, but how they came to understand something and how they communicate it to someone else, using angular and geographical metaphorical language, making 'reference' another important word to clearly define and understand. Reference is usually defined and understood as what a person talking about, used in either her or him, or a subject. In other areas of use, they are specified as people. Asking what a person is 'referring to' typically indicates that a question has been asked that has multiple answers, making it necessary to specify it further as a specific type of relationship that connects to multiple points of view, points of debate or topics, points on a map, or points on a scoreboard. If a unique point has been made at a specific point in a conversation, then it arrived at a common point, making that a possible unique number, within a topic of conversation, but not necessarily a unique database field called agreement or understanding. These database fields are often self-completed yes and no fields on a form which connects to a database, making it necessary to move on to something else. While yes and no fields are database fields, they are not often considered primary keys, but they relate to primary keys which are the unique identifying numbers that connects to the employee number, which might connect to a table that stores the yes and no answers. In the table that contains the options, yes and no, are primary keys, called number of options, being only two in the option table, making the ID numbers unique. While people can say yes and no at the same time about something, control functions will allow for the selection of both, but the primary key in the option tables do not change. The data is often recorded as 1 and 2 or 1, or 2 and sometimes viewable in forms and reports as yes and no or no and no, yes and so on.

The root word of integrity is integer, making it a number, and a human value; the quality of being honest and having strong moral principles; moral uprightness. While one is quantitative, the other is qualitative in explanation, but contains two points – honest and moral; where one is straightforward – no lying, while the other is a long list of values that define morals and principles, which are standards of behavior and beliefs and what a person does and does not do or did and no longer does. In databases, it is important to note referential integrity because if a person's frame of reference about another person is not updated after a change in integrity, then they operate and base their decisions on old data, which creates limitations, restrictions, and bad data in need of change. Not all data is kept in a database, so tracking moral value in a database is possible, but must be completed in timeframes or situational data collection and management using either tests, scenarios, lessons, and proof, or new information entered or removed – such as a Criminal Record in a justice database or personnel file. While the data remains in the file, it does not mean that the person is of low integrity and weak moral value, but it means they have a record on file that does not match other data and is not connected to other information sources that prove otherwise and show a change in status. Rules for data management are set, referring only to 'deletion' or 'removal' not update and transfer to show social impact, improvement, and what caused the change.

The goal of a database is to utilize information and avoid duplication, as well as to find ways to make data entry and processing more efficient. While memory banks and brains are similar to data banks and efficiency is sought after, humans are a bit different and allowed to and expected to repeat certain tasks.

A CASE EXAMPLE

A group of friends often shared Sunday afternoons together, surfing the ocean and enjoying a healthy lunch, which turned into a routine of delicious turkey and mashed potatoes or barbequed dinner. On Thanksgiving Day, the friends got together, and no one told the cook or host "Thank You." Perhaps

their mental databases thought vocalizing the appreciation of the “Thanksgiving Meal” did not need to be said because it was already included within the word “Thanksgiving” and the thankfulness is implied and inherent in the name of the Traditional Holiday. This causes a sense of non-appreciation, selfishness, and causes the sharing of the holiday to cease. It’s important to thank your chef, host, and help clean up the dishes – similar to people who post on the Internet – to clean up the hosts, satellite dishes, and associated tools used to share information. Although surfing the ocean and the internet are different tasks, and giving thanks is always encouraged, utilizing text-based efficiency as an excuse not to thank your waitress or server, is no excuse for bad manners. This prompts the discussion for Internet Etiquette, which is the same as in person contact, although distance might seem to offer a sense of protection to exercise and push the boundaries of freedoms of speech and expression. Even though the law does not expressly separate online activities from in person activities, the rules are basically the same.

DATABASES

The Internet might seem like a database, but it is not. It is an information system that is keyword search enabled which provides access to Internet Sites matching the key search terms. Databases allow similar searching but manage data differently. Databases are software that store information in an organized format, where information is contained within a specified type of information field, such as a number, text, text with a set limit of characters, a specific type of number, such as date, or date of birth, phone number, or a hyperlink to an Internet page. Databases are designed using database software, of which there are several, such as Microsoft Access, SQL, Oracle, Act, and others. Data query is an operation completed to ask a database to show specific information contained within it. These operations are also performed by other software programming tools, where the information is contained on-screen or within an Internet page. After the queries are complete, the information can be used or moved to other locations and stored inside other databases, which is an interesting data sharing method. Some information is not copyable or sharable, and JavaScript or other query languages cannot be used on simple on-screen internet sites without access to the main domain or server where the information is held. If the information provider allows for search on their published page, simple keyword search of terms is authorized, but in-depth querying is reserved for database systems and information systems that allow information gathering and dissemination across multiple domains or internet sites and applications.

Best Practices for Microsoft’s Sequel Query Language (SQL)

SQL offers the ability to write specific queries for tables of data and allows data from multiple tables to be brought together into another table or report, which might be stored or simply presented on screen and enabled to be saved in another format for some purpose. The SQL statements have specific rules on how they are written and have restrictions on what information can be obtained. First, the tables must first exist, otherwise the statements are data writing tasks to create tables and data and then join them to other tables to associate data. For example, a database user cannot query (or ask) a database to provide data that does not exist using a select statement. The database user can execute a write statement, which is called a SQL insert, which places typewritten data into a data table. If the data belongs to another data set in the table, then it must be associated. For example, a table of people exists that includes their first and last names, shortened by F_Name, Last_Name and are stored in two different database table columns. Some databases store them in one column and combine them using special characters later. It’s

recommended and optimum to store the data in two separate columns because in some places and across the world, there are more than one people named John or Mike. If the data set is small and there are two people at a table and the database architect wanted to create a quick short database and both people at the table are both named Mike, then the data only must be entered once and not twice because they would be able to use a select statement for table because the data is already available. This is where and how data tables are joined and the purpose of this is reduce ‘redundancy.’ It takes less time to type in both names than it does to architect a set of tables that are joined, along with a lookup table that shows the unique differences between the two Mikes. Time is not the only consideration, but also what was collected then and what can be collected and used in the future. On the Internet, information is duplicated all over the World, in separate systems, making Mike a common name and difficult to find without additional data, such as the Last_Name. Mike and Mike and using creative database techniques, Mike and Mike can change from people to Mike and Ike, but this requires great skill in select and data change techniques. To optimize the data is not necessary if the data sets are small and designed for minimal purpose, but in large databases, such as Military records or the Department of Vital Statistics, databases must be optimized to produce the best results. Optimization of data tables is what the textbook calls “tuning.” If a database request was to tune a radio station to find Michael Jackson, the database would have to have the name exactly or the query set to find some characters, and if the database contained “Mike and the Mechanics” then it would return “Mike and the Mechanics.” Both “Michaels” are recording artists, but one is a short name, which is like how we name our fields, such as F_Name and L_Name. Although this is duplication, it can be optimized to read as FN and LN, but the programmers must be careful in its architecture and design because this could conflict with other data and make querying data tables more difficult, especially in military databases. The database engineer must specifically write the queries and have access to the data or enter the data themselves.

The Internet is a searchable database and can return information for basic search queries without complex query writing, meaning the seeker or searcher doesn’t need to know SQL code writing, but they do need to know that they will not be able to find information online unless they type in the exact spelling match or something similar. Google queries are based on complex algorithms and are not query based language, although they could be in the future – it is unknown, but offer users a simple search box, which is what a SQL statement can and would do, if the programmer knew how to create a search form to allow a specific database to be searched and enable its users to change what is called ‘parameters’ and if they knew how to utilize wild cards and special characters. For example, *Ike would show them Mike, or Mike and Ike’s Candy, but the results would be based upon whatever the algorithm is that places the return results to the top of the page and not who is on the top of the charts. A simple search using a wild card (*) returns Ike’s Sandwiches, which is like Jersey Mike’s Subs, but that result was not returned, although it is in the database as an available local restaurant nearby – indicating something is incorrect or specifically designed to return a specific result, along with a write code that provides the data the search was “not looking for.” This also indicates there is a data copy somewhere that creatively utilizes and duplicates names, overriding and limiting access to popular information, which changes when the name is correctly and specifically entered. The number of results for the search term “Mike” is an astounding number, making data management and searching a difficult task.

The task of database ‘tuning’ or optimization belongs to the owner of the database or the programmer or information provider of whoever manages the Internet Search, and some search engines produce different results. A SQL database that contains only the F_Name and L_Name does not include “Mike and the Mechanics” because it is a band title. The database can be changed, which would require

the addition of a new field to the database, which would follow different data use and split rules to reduce redundancy of the name Mike or to optimize the use of the name, without being forced to retype it. In this case, the band title would have to consist of code without special character, which would be an insert statement where “and the mechanics” would be entered in the L_Name field. The Internet database does not have to be changed to provide information on Mike and the Mechanics, but the searcher and the person that needs to find the information must use the entire search term or find a site that includes 1980s band names. This is where data could be optimized and better managed. A search box with more selection criteria, such as “Band Names” could enable a user to find all Bands with the name Mike in the title or as a “singer” or contributors name, but Google does not allow for extended search criteria and assumes all searchers know how to enter specific search terms to find what they are looking for or that some information must be presented to a user to capture their attention and get them to listen to a song or search for something.

Wildcard Uses

Changing a SQL Statement from providing access to “all records” where a wildcard is used to return “all records” in a single defined table. The wildcard is used differently in Internet Searches – it stands for an ‘unknown’ character and a wildcard in a card game can be used as any number that the player needs – thus the requirement to know and change letters to numbers and numbers to letters using optical character reading, decision making, formula changing, and writing SQL statements that work correctly in many systems and not just one. The Internet’s search form is an abstract secure layer that accesses military data or people data, but there are some systems that might provide people data if the search terms are entered correctly, with additional information, such as location. A searcher or developer of new and separate SQL databases cannot change Internet data, they can only search for it, and they cannot change the algorithms and the results that are returned. In SQL, the wildcard is used to show all records in a specific table.

A SQL Statement Change

Find all the customers who placed orders under the PROMO_SUBCATEGORY called “TV program sponsorship”, and their total sales. The last report had too much detail so this time, she wants to make sure the report only includes these fields: CUST_ID, CUST_FIRST_NAME, CUST_LAST_NAME, Total Sales (hint: use AMOUNT_SOLD). Remember, only for the TV program sponsorship promotion.

Bruce Springfield, “The Boss” wants to make sure the report only includes these fields: CUST_ID, CUST_FIRST_NAME, CUST_LAST_NAME, Total Sales (hint: use AMOUNT_SOLD). Remember, only for the TV program sponsorship promotion.

Modify the following query to produce the requested output:

```
SELECT * from SH.Customers
LEFT JOIN SH.Sales
ON SH.Customers.CUST_ID = SH.Sales.CUST_ID
LEFT JOIN SH.Promotions
ON SH.Sales.Promo_ID = SH.Sales.Promo_ID
```

The task or database request cannot be completed because the requestor has not shown the architecture or the entity relationship of the database tables and has not said where the “Promo_Subcategory” fields are. This requires access to the database to see how the tables are setup. An assumption can be made that the Promo_Subcategory is a separate table, but since the fields are not completely defined in what table, the query would most likely result in 0 findings and the programmer forced to haphazardly create queries, hoping to locate information in table, when if they had access to it, could look at the diagram and correctly join the tables and provide the level of detail they are looking for. The database tasker in this request does not correctly or adequately know yet how to provide the right amount of information or has purposely asked you to complete an impossible and ambiguous task, knowing it couldn’t be done without more information. It’s never a good idea to ask people to write queries without a test database because writers need to see and execute their queries.

Finding Mike and the Mechanics is easier and possible if the database is setup correctly and the user knows how and what they are searching for. The query designer or ‘algorithm’ writer could limit seekers from finding useful and relevant data and this is limiting to the searcher, and sometimes illegal. Finding Michael on Jackson St in a capital city when he is out late is not possible on the Internet, unless you know the city and his last name, as some distinguishing characteristics, yet for some reason, he returns himself safely and as expected (most of the time). Unfortunately, finding a missing person and accessing hospital or law enforcement records is not an option for just any user. It sometimes requires a little bit more work, especially since names and artists change, like Mike Posner.

Databases can grow into large systems when information is combined and connected. A perfect example of such a situation is when there is a ton of data with no real structure or database or queried results from an oversized dataset coming from one or more data sources – such as The Internet. Big data as described by industry is considered a field that treats ways to analyze, systematically extract information from, or otherwise deal with data sets that are too large or complex to be dealt with by traditional data-processing application software. The real problem with Big Data is that humans are not able to comprehend such large amounts of data quickly enough; in a sense we are “drowning” in data (Coronel & Morris, 2018). Big data contained in a ‘field’ in a database generally means that too much information is contained in one text box or data field. Depending upon the search terms used in Google, results are still in the millions, now narrowed down by page, ranked by a complex algorithm, and clouded by advertisements. This forces people to select first page results and for businesses and internet writers to optimize pages for search engine results.

Big data might also mean that there is a professional field where data management professionals work and understand how data must be managed in databases where information is contained in smaller fields and are combined to create information reports. Data feeds into other databases to reduce redundancy and maintain integrity and accuracy of data, as well as efficiency in information systems management and maintenance. The Big Data “Field” might also mean information is stored out in a field somewhere and spaceships have not yet been built to find the data and make sense of the creation of the new term and its non-valuable use for students who have great ideas to improve Big Data Systems, such as the Internet, but are held hostage and deemed powerless because of a legal case of gender or other inequality that restricts good and healthy improvement – such as life living in or out of a box or a bag.

Big data can also be viewed as a compilation of large and complex systems that connect to other databases and the connections combined create a complex database environment of relational dependencies that serve as critical infrastructure. Some databases should not be combined or connected, while others should and are considered world-wide information systems where data is synchronized and serves as useful systems that offer up to the nano-second, real time information with minimal need to manage data in multiple locations. Currently, our data structure for online systems are not connected. They are individual information systems that require identity management, security, and individual information processing for each site, which is not a relational database structure. Each little account site has its own data, and the owners of the sites manage their own databases however they see fit, with varying protocols, somewhat standardized to follow simple security methods, such as multi-factor authentication, and single sign on methods. Data is rarely connected to other sites to manage a single personal profile of data, other than what is contained within a browser. Big data for a corporation or company is different, in that, it manages multiple databases with a minimal number of connections and data sharing. These are inefficient data management methods and while connected by the Internet to provide remote access or accessibility in multiple locations, the data is not interconnected, forcing users to manage and reuse data in multiple places, causing redundant business practices, which are duplicative and inefficient.

Kids in elementary school are forced to write their names, the data, and the assignment on every piece of paper they must write for assignments, as are college students. Databases and ‘form fields’ in merge databases solve this ‘retyping or rewriting problem’ as does big data, but without a database, the information cannot be connected and show a record or trail of completed papers or assignments, unless put into an education system, often which the student has no access to after the program or class is completed. Such a data structure forces limited access to completed works, unless students are able and willing to design database systems that save their works. Many to settle for their Windows Operating System to manage files, which is not a database, but a file system, where information must manually be combined and accessed to review the information, which is not available in a summary report or compiled book of papers written by a student.

For many unintelligent thinkers, non-connected or non-data sharing systems enables America to work individualized in a standardized unique, yet duplicative manner where there are multiple employees with the same data entry or information management roles and responsibilities. This makes Universities rich in data, where compilers can be considered effective, but information security must be managed and give credit to student works, which is where a process is missing and can easily be corrupted – causing students to miss out or be shorted on credit and valuable recognition for genius ideas, industry improvements, opportunity, and awards.

An example where Big Data is used is in the Human Resources Office, where the employee enters its personal information into a database and that information is stored and accessible, as well as usable throughout the organization, in databases connected to other databases where the employee rarely if ever is forced to ‘re-enter’ or ‘re-type’ personal data. In superb big data management systems, this information is connected, effectively managed, and reports can be built that show employee contribution, and other informative metrics that truly provide valuable insight used by management to see employee value, work, and when combined, provides real effective team or departmental statistics.

Opportunities and Challenges in Using Big Data

First, the understanding of Big Data must be accepted by all, and all must follow its practices. Right now, there is no standard understanding, in that, the term is vague and partially glamorized as meaning a system with a lot of information. Management protocols are varied, when they should be standardized, just like business processes, and information management on an organization wide scale, leading to a national and global level. When information is interconnected, it leads to systems such as Interpol, the FBI's system that facilitates world-wide police cooperation. The definition of Interpol is even in need of an update, to reflect more accurate system purpose, which is to apprehend suspects that have fled the United States or to find American Citizens that have been found missing or reported as missing. The fact that systems show improper definitions and inaccurate understanding of 'Big Data' and 'International Systems' in use or on record shows management or some other ineffective service and system has gone to work to corrupt or misinform and cause false understanding of what systems are defined and used for. The online term of Interpol says it is for 'international police cooperation' which is incorrect and misstated – because police already cooperate, and it is not the system of record which enables international police cooperation. Police cooperation in International Crime Systems are created using ally agreements between countries, which are standardized systems with slight variations in law and order, not based on concepts of 'cooperation.'

Other Big Data Systems might be incorrectly categorized as the Financial System, which works internationally to enable the transfer and use of money across the world. These are not 'big data' systems, in fact, they are simply called International Systems because the information shared and accessible in many locations are small data sets of information, such as personally identifiable financial information, which has a common set of security protocols to protect individuals and companies. There are many opportunities and challenges in Big Data and the first is clarification of what it is, should it ever be used, avoided, and eliminated, or is it too late to clean up the "big data" mess that has already shown to cause corruption, competitive and misleading business practices, misuse, falsification, and problems among organizations because of failure to correctly manage data.

Role of Business Intelligence (BI)

The term business intelligence describes a comprehensive approach to capture and process business data with the purpose of generating information to support business decision making (Coronel & Morris, 2018). A sound BI strategy adds value to an organization by providing the right data, in the right format, to the right people, at the right time (Coronel & Morris, 2018). BI analysts typically handle analysis and data modeling design using data collected in a centralized data warehouse or multiple databases throughout the organization. It's a role that combines hard skills like programming, data modeling and statistics with soft skills like communication, analytical thinking and problem-solving (White, 2019). BI helps organizations tackle data challenges by creatively organizing and providing access to the right data by programming, developing databases, and enabling access to the data, usable in many ways. They also help organizations maximize the use of data by following efficient data management rules and processes. Business Intelligence Analysts also work with security teams to protect data and manage the flow of information, especially in multi-user database environments where data is shared, changed, and accessed or used by many people. They are often experts who assist in creating business rules for data and the protocols surrounding access and use of data, serving as members of security teams. Best practices for the protection of data are plentiful and dependent upon organization policies, laws, and rules for data. Some are standard practices for protection of personal information, while others manage and write policies for the protection of corporate or company data called trade secrets.

Rules and policies of confidentiality extend well beyond the human resources department, into business practices, processes, and trade secrets, many of which are at the discretion of the company and its workers.

SQL Skills/Knowledge Applicability

SQL database skills are highly valuable in organizations that regularly use databases and those who do not. These skills are valuable because most employees with the SQLs not only know how to use the software, but also understand how data is best managed, enabling access and storage of large amounts of data across an organization. If a company does not use SQL or other type of database, they can greatly benefit from people with the skillset because the employee with the skill is able to identify areas that can be improved using a database.

Brainstorming Innovations List (10-15 Needs)

Career Planning Assessment (Educator, Business CTO, CIO, Writer, Researcher, Advisor)
Supplemental Learning and Licensure of Product Technology

- Microsoft Certifications
- Google Certificates
- Project Management Certificate (SCRUM/AGILE, PMBOK)

Alignment of Learning with Specialized Technologies

Implementation Practices & Evaluations

Integrated Learning of Formal Education with Product Learning Systems

Acquire, Implement, Design, Develop, and Evaluate Software (Proof of Skill/Knowledge Development)

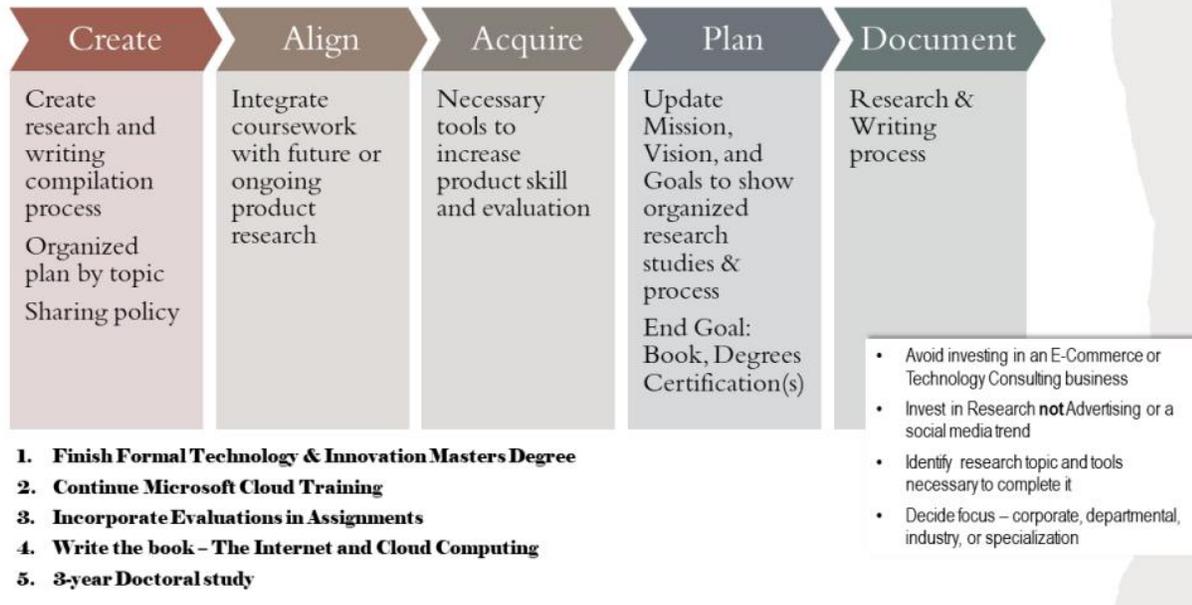
Innovation of Existing Internal Technology

New External Technology Acquisition

STRATEGIC PLAN

SAVVY SMART SOLUTIONS

STRATEGIC PLAN 2021 - 2025



Need

Technology planning, acquisition, development, research, and testing uses specific processes and regulations which are different for government, commercial, public, or private use. The specific processes must be known, along with regulating authority, law, or policy for best practices. Structure and alignment must be well understood and outlined for each area of responsibility. Technology is a vast subject, covering many areas. Computer Science is the field of research and focus, therefore strategic goals must be aligned with subjects related to Computer Science. While software development and implementation have its own process that differs but involves other processes, that might differ from Government and Private regulations and practices, there is a need to fully understand and document both. A Gap Analysis is a phase of program and project management – what is missing and needed to fully examine the field of Computer Science beyond the basic computing device and its applications. Many parts of the study areas are out of reach; unable to change the architecture, but *Critical Analysis and Design Reviews* are necessary for its advancement in many areas.

SPAN OF CONTROL AND INFLUENCE

What can be produced, acquired, developed, tested, and evaluated requires investment in both money, time, and development resources. There is greater motivation to review and advise on matters related to the Internet in the Development of Cloud Systems, therefore investment in product knowledge, as well as documented processes, such as the Software Development Lifecycle, Acquisition Process, Research and Development Process is critical to maintain consistency and standardization in product review and common understanding. The Internet or top products, such as Microsoft or Google cannot be directly changed without being assigned specifically to a product evaluator or system position. Learning the products adds value to understanding to utilize the systems post-graduation, but goals are not specific because employment opportunities are limited to a specific set of titles and responsibilities. When the overall goal is to be a Doctor of Computer Science, the focus and study cannot solely focus on software and corporate or government responsibility, policy, process, and oversight. Deciding what level of knowledge while considering future applicability is what is important. Why invest in software or testing of technology if it cannot be used to profit in the short term, or available for sell and use in the long-term future. The goals are not to develop a software application, but to fully understand the field of computer science, its function, history, and progression to be a leader in the field.

DEVELOPING THE STRATEGIC PLAN

It is not a simple plan of business change management or the acquisition of technology, or the development of knowledge and demonstration of skill. It is creating a high-level plan to attain the goal while working towards a larger goal of developing a sellable product while learning. Profitability potential, as well as educational investment and future opportunity remains the focus. A book based on years of research, field experience, and intuitively obtained knowledge is a consideration, but requires several years of study and practice before results can be seen. A Doctor of Technology cannot exactly expect to open up a doctor's office for electronic devices and can't exactly diagnose computer professionals as patients without a specific focus on psychology or behavioral science. A Doctor of Computer Science can develop a standard process for the diagnosis of programs, projects, along with specific terminology beyond 'viruses and other terms used by the medical field. While standard book writing and research practices can be followed, it is in addition to following the standard educational format of responding to assignments, with limited leeway on topic, forcing additional requirements for compilation, and organization for study that results in valuable and usable findings in Government and Industry. Remaining focused on conceptual learning and not investing in Technology that has already been used, tested, and demonstrated saves money and time, yet investment provides opportunity to prove development skill, which is not aligned with high level "Doctoral Study" and practice.

STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS (SWOT)

A simple SWOT analysis shows and proves there are and were all four areas in pursuing business in the field of technology. To review threats, requires a Cyber War approach to managing competition, which is often simplified as a simple question as to what threatens success? It was not expected that the endeavor would include threats to life, liberty, prosperity, and happiness, but proved there are not only

individuals willing to threaten the lives of others, but capable of killing opportunity using technology, prompting further analysis of fair business practices, Internet Law and how humans and computers work together in solving or preventing such a bad practice. Perhaps the practice of a “SWOT” analysis needs to change to a safer approach to reviewing business and technology or pursuing opportunity and attaining goals.

The technology skill and managerial experience already exists, therefore there is no need to personally invest in software or special hardware to experiment. There is a natural need to experiment, explore, and attempt to make money by utilizing software and advertising systems, without a return on investment, simply to create a group of listeners or readers, this is viewed as a weakness. A strategic long-term goal is to write and sell a book with scientific research in the field, therefore short-term business goals of profiting from advertisements or technology recordings and discussions is not a sound investment and conflicts with the long-term goal. Maintaining a public Internet site is an area where podcasts can be shared, along with articles but costs money and the greater the information storage or compilations of writings, the greater the want and need to invest in advertising and put forth efforts in building a readership. It’s an obvious practice of following a trend, which might be considered a ‘fad’ or attempt to become a public speaker or influencer in the field, when more time and research is required. The recordings prove value in subject specific knowledge and shows weakness. This can be viewed as a threat to future success or a method to measure professional and personal growth. Although immediate money-making opportunities exist, it is better to compile research for a more formal and professional presentation of works using the scientific method of research and study after more knowledge and education is gained. A policy must be established to avoid social media, Advertising Campaigns, Business Planning, and sharing of premature evaluations, works, or opinions.

FOCUS ON LONG-TERM SUCCESS

Immediate fame, interaction, advertising, and hands on knowledge can be gained and reproved using new tools, but has already been demonstrated, so there is no need to re-invest to build a small technology information center. It is better to focus on long term plans of research and book writing, the organization of material, and not on its application in the business industry, although in depth research opportunities exist and are needed. The ability to recognize future trends while contributing to the design for ‘*their firm*’ (Bruton & White, 2017) is a goal, but there is no promised future with a firm and no evidence of direct immediate contribution.

TIME AND COST TO COMPLETE THE PROJECT

Development of a Strategic Plan is the project, not the acquisition of Technology to create or implement the strategic plan. The plan can be simplistically developed, with specific milestones or goals set to create research processes and compilation procedures to identify the area in most need of research, or the area that presents the least amount of understanding. If problem management or improvement is to be the focus and the system is out of the span of control and influence, then researching and discussing the issues independently is the only option, with expectation that the concepts or areas of study can be used to influence industry and the systems later. The time span is five years, therefore the current strategy is to maintain momentum to complete the credential requirements, while working to align efforts with a

preservation or use method in how to apply the concepts and discoveries, whether as information for a future study, general knowledge for the book, or new problems uncovered or very serious directional evidence beyond just general societal, psychological, and financial dependence.

INNOVATION OF INTERNAL TECHNOLOGY & EXTERNAL ACQUISITION

Reassessing processes, policies, needs, and plans assist with cost control and effort management. It would be considered a weakness to respond to old methods of ‘advertising’ and ‘marketing’ or social media sharing of information when no population of IT professionals exist or should be marketed, or findings shared with because the research and studies are still being conducted. Artificial intelligence and commentary automation has presented a major challenge and potential deterrent to furthering studies in human and computer interaction and the exchange of information for profit or non-profit.

The acquisition of software or technology to engage in collaboration, commentary, viewership, or readership, along with the purchase of tools to prove knowledge in certain areas is beneficial for short term, immediate results where the goal is to be a public speaker, therefore a review of Goals and reconsideration or refocus took place, deciding to wait to publish any incomplete or non-professionally examined educational works in the field.

If set on a path of constant word-breakdown, when the government task of organizing and scheduling work orders is considered a ‘work-breakdown structure’ then we are in fact in a technological phase of defining processes of work for the purposes of automation, using combinations of upward and downward spirals of mixed medical and directional terminology – gaining momentum in describing the purpose and use of the figure 8 symbol and its infinite use or possibility where time, labor, and profit is of the greatest importance, as well as the application of findings and knowledge. The etymology of the root ‘comp’ adds significant value to the field of understanding or ‘comprehension’ but only if it serves a greater purpose than insight because our goal is to see and predict or create the non-existent and unseen or improve upon what is available and known. Adding to this a biblical reference from “Genesis to Revelation” – Genetics versus what can and is revealed to us in the time span, whether individually motivated to find or discover or religiously inclined to devote research to ‘inter-twined’ understanding of even just a cellular structure and universal knowledge or language and its vast use. Reviewing Microsoft’s Sequel vs. the DNA Sequence in Genetic Code, brings us closer to working together, but more scientifically separated from basic understanding of how we view human physical traits into the scientific description, collection, and changing of biological matter.

The greatest need is to bridge the gap between the field of Medicine or Physics and Computer Science, as well as to clarify and further define dimensions beyond shapes, but into the manipulation or change in matter in geographical systems, beyond words and topics, but into energy and the systems that can accomplish such major events with and without devices and systems.

Implementation of Externally Acquired Technology

The implementation phase takes place after products, services, or ideas have been bought or sold. Technology companies offer and sell services to assist with this process. Smaller technologies that are easy to use do not have implementation services and it is up to the buyer or user(s) to implement and integrate it into their daily lives or business functions. For example, Microsoft, Inc. sells software, but doesn't tell businesses how to best use it, but provides high priced software training. Some technologies cannot be purchased and self-implemented, meaning, it requires professional expertise to install and manage the technology until the buyer and the system itself becomes certified as operational. The same practice is used in the medical field; patients cannot obtain prescription medication without a doctor's written or electronic approval by a licensed physician, but because of medication management and healthcare systems, drug or procedure effectiveness and patient outcomes are not fully captured and the drug or procedure fully perfected in real world implementations. Whether the technology lacks, or process lacks, it creates an industry of pharmaceuticals and not a world-health strategic goal of proof and reduced sickness, injury, and death. This makes metrics a component of a critical reporting process that is required by technology that is used not just at the National Institute of Health (NIH), but also each Doctor's office, and patient's office or home – devices. There are organizations in between that must also be considered but won't be listed because this is not a scientific paper on what organizations manage health, how clinical trials work and where Technology falls short, but an example of how numbers and reporting, as well as results are insufficient and a continuous cycle because Technology is not fully utilized and completely implemented.

Obtaining technology might appear simple, but there is an evaluation process that companies should go through before making decisions, not only because it's a product investment, but because it changes the way business is done, which changes people, processes, and profits. Clearly, evaluation and control should be ongoing (White & Bruton, 2017). These processes are both internal and external evaluations of existing systems, capabilities, industry options, needs, and possibly a few rounds of professional evaluations and presentations by the technology providers or resellers. Government agencies have a formal procurement process that starts with a Request for Information (RFI), followed by a Request for Proposal (RFP) and also have contracts and sales channels setup to purchase computer technology from a selected set of qualified and certified dealers. The same processes exist in business, but the technologies are sold as individual components and software solutions, with many companies not knowing what they need, budget for, or plan for until contacted by a sales agent, or a proposal brought to them by a qualified professional, either a paid internal employee, or an external agent. Obtaining technology in the computer marketplace is easy if a company knows what it needs and has a plan to invest, train, and maintain, but these are tasks often done individually to suit the needs of the business and not the requirements of the computer science and technology industry. For Worldwide Technology to be successful, prioritization, compatibility and capability are its top critical factors, but it requires a global R&D, acquisition, and implementation strategy to ensure all systems work correctly, beyond a computing device, a network, and its basic peripherals. This includes the software industry and business solutions, but with it comes world change or advancement, which must be done without corruption, high costs, and high risk.

TECHNOLOGY INTEGRATION

Integrated systems are interconnected and share the capabilities and data of other systems. Currently, there are electronic data transfers that take place in Financial and Supply chain systems, but few businesses are integrated with each other; all operating using individual software to manage their operations, showing few standardized business processes beyond Geographical and Financial Management, Supply, Delivery, and Communication methods. New technology changes this by offering integrated systems where data sharing creates efficiencies and invaluable insight to industries, making our worldwide economy or even national economy more predictable and controllable; a requirement to avoid poverty, another great depression, and other financial and world dysfunctions brought into the marketplace from failed planning, or inability to follow standardized processes, procedures, and laws for commerce. Failure to implement unmanned aircraft systems promptly and correctly, or flight control systems resulted a major war and event called 9/11. Too many freedoms, options, and too much or not enough control causes similar results. Failure to properly buy, sell, and implement technology can have even worse outcomes, as evident by COVID-19 because the premise was and might still be, that something bad must happen, or something must break to buy something new or replace something that already works with better technology. It might also be based on a faulty premise that war fuels the economy and uncovers national insecurities which prompt the development of new revolutionary ideas. These are old ways of thinking that must also be upgraded, just like Technology. While voice activated assistive devices appear to be one of the most amazing inventions to the consumer, to the computer scientist and innovator, it is a waste of manufacturing space and engineering time.

If the computer science industry informed business professionals that they are required to buy a set number of database licenses for each data manager in its business, without explaining evolution of typists to data managers onward to business process engineers, and validators, or if they even make those licenses available and propose a sale, it would mislead the potential buyer or customer unless it fully understood the business requirements and plans, as well as its ability to utilize the licenses. It must also offer ongoing services that are aligned with Technology leaders, scientists, boards, and panels that evaluate the Technology industry, inventions, innovations, and ideals on a global level, beyond the project or ‘capability’ optional sales industry. If they skip the automation analysis phase, they now pay high employment rates, plus the cost of technology because they ‘didn’t know’ how software changes business requirements and failed to utilize it to its fullest potential. The problem exists in that software sales continue, against the advice of computer science industry professionals, either because they are not aware there are integration projects in the works and that a better strategy exists that include large integrated systems, rather than a one for one software system sale, which we currently see. Why spend money on short term needs and wants, working site by site, when long term investment is required to make real valuable global change? This requires a change in business understanding and viewpoint: Not all technology is available for purchase, and not all technology is optional, just as not all development is optional and must be paid a high price for, some is required and necessary for the protection of the world to avoid disaster, yet some professionals still think it’s okay for buyers and users to operate in insecure and unprotected environments, making security and protection an option available for a price, under the false assumption that Technology is part of free commerce.

Ideals of Strategic Technology and Innovation must shift from a ‘company’ perspective to a national and global perspective to create integrated products and solutions. It must not remain solely focused on profitability or environmental factors and it must not also continue without a secure structure

of design, engineering, testing, and production, as well as an implementation plan. Beyond implementation requires review, testing, training, and change management, but not on the ‘software’ version or hardware maintenance schedule planning of simplistic upgrades with miniscule changes and advances in industry and the field of computer science. It must consider taking a non-industrialized or segmented business strategy. Enterprise-wide systems change not only individual processes, but overall strategic goals and the management of an organization. New tools or technology brings new insights and enables faster, more informed decisions. Not only does technology change the way people do their daily tasks, but the improved decision capabilities and insight, brings new ideas and opportunities. All of this must be managed while staying focused on strategic goals, which might also change at any point in an implementation. Strategic goals don’t and won’t stay the same after an Enterprise-wide system has been bought because new systems bring new efficiencies, measurements, and new ways of doing things that don’t exactly align with old goals and practices which necessitates the need for change management. Many of these systems automate old manual data gathering and reporting, freeing up much time because of improved management. New technologies also bring new levels of accuracy and ways to view information, enabling managers to have answers faster, without long meetings or heavy tasking to evaluate information. This enables management to create better forecasts and even possibly change their structures to support new innovative ideas, such as historical business studies, trends, comparative reports, and other comparisons which give more insight and make more time for product or process improvement.

INNOVATIVE EVALUATION & USE OF TECHNOLOGY

Virtual teleconferencing software with collaboration tools not only reduces travel costs and increases work availability, but also provides an information tracking system of meetings, agreements, and other important items. The technology is seen as ‘communication technology’ when it has potential to integrate with data management systems for scheduling, recording, and storing information, or being part of a ‘stage’ in workflow software systems that manage business processes. Using technology as sold or solely for its intended purpose limits innovation but allowing any buyer or owner to add on to the functionality of certain devices causes dysfunction in the Technology sector if not managed correctly with the right group of people.

THE SOFTWARE DEVELOPMENT LIFE CYCLE

If every company followed the Software Development Life Cycle (SDLC) for customization, implementation, and management of its software, hiring computer professionals to design and implement its own solutions, then it has potential to destroy the company, economy, as well as any plans to create an integrated worldwide system of commerce, international markets, beyond a global economy.

This cycle can be followed as a standard process for the management and evaluation of technology, adapted for the functions and tasks of each business or agency. Development tasks or initiatives should be restricted to only software providers, where the development tasks can be adapted to gain insight or scientific use of metrics for system improvement. The life cycle can be adapted to personnel for improved

processes and understanding of the new system, its features, uses, and functions until fully operational. It is true that Technology drives process and procedure and is implemented by qualified computer professionals and not users. Technology professionals cannot be individually assigned to departments without integration with all aspects of the Technology; individualization creates disconnection, duplication, and inconsistency. Hiring a staff of Microsoft Certified Professionals to implement new technologies works if the technology is used to its fullest potential, but it is expensive and temporary. The certified professionals are better employed at Research and Development companies and employed to professionally manage technology changes on a global scale, rather than company by company since the Technology allows open and non-standardized use and programming. While the software offers much leeway and freedom to develop systems, it also creates opportunity for random and varied solutions which becomes a maintenance and security problem, negatively affecting the learning and technology advancement community if there is no ability to share design and programming works. An individualized approach to Technology implementation creates a non-connected environment, with only the Internet and custom information transport mechanisms as the means to integrate. Many businesses do not utilize the full potential of their software systems, perhaps because of lack of talent, money, or direction.

While global economies are important, it is not the only technology that the world benefits from. Intellectual advancements, communications, travel, and other systems must be managed on a global scale to utilize technology to its fullest potential; not by selling older versions to less economically advanced countries, but by following a global implementation strategy of secure and valuable technologies. Also, not every company or nation can or should lead and direct technology decisions, but they should be empowered to purchase or implement the right products, some being required to be in business or operation.

PRE-ACQUISITION CONSIDERATIONS

Before ‘acquiring’ technology, businesses, and professionals review systems, identify needs, budgets, balance wants, and evaluate how it will change or help business. It’s a simple process, with many unknowns, thus the need to manage risk. As projects proceed, unknowns are reduced, and more certainty and consistency are built in and proven once it operates consistently for a set period. Decisions to ‘acquire’ or ‘procure’ are based on references, demonstrations, and decision maker’s abilities to see how it ‘could’ work in their organization, knowing risks arise in implementation that increase cost, as well as the fact that new needs are discovered, as well as new problems, requiring more time and money. Deciding whether they must also acquire talent and have the money to pay for it and for how long is also a factor, all managed by how bad they want or need the Technology. Few organizations take time out to review current systems and shop for solutions on their own and few organizations seek to hire computer scientists to solve individual and small business problems. Rarely do business managers and executives conduct industry comparative technology analysis and prototype before investing, buying, leasing, or considering the development of something similar for profit or to solve a business problem where all the product solutions are high priced systems. Executives, business leaders, and managers are often contacted by professionals with solutions who know the problems often before the businessperson does. This is called Technology innovation – knowing and solving problems or preventing them using technology and becoming more automated and creative – changing the business design for enjoyment,

profitability, and health. Business terminology and ‘market’ analysis and competition, including investment or merger and acquisition strategies play roles in the valuation of companies *after* technology is implemented because it changes the worth and value of business and its contribution, impact, or potential for other global initiatives.

The table below includes keyword considerations for Technology Acquisition. Although not a complete and sequential list of items, it is simply keywords that summarize what happens in the acquisition process – the process can be simplified by a simple OEM or Certification Process. Technology acquisition is not a ‘keyword’ strategy, it is a process of evaluation of needs, existing capability, business and industry offerings, management, and systems shopping task to see if something exists or if the need and benefit is great enough to develop something; either to profit through software or technology sales, or to improve systems and make process and procedures or practices more efficient, effective, prosperous, healthy, and enjoyable.

Integration	Leadership	Alignment	Execution
Capabilities Evaluation	Motivation	Fits with all levels of Strategic Goals	Skill
Leveraging Data/Functionality	Management	Standard Systems Management	Timing
Gap Analysis	Standard Processes	Aligns with Profit or Investment Goals	Management
System, Process, Policy, and Data Use	Innovation & Change Management	Multiple Use, Application	Acceptance and Use
Known Dependencies	Company and Team Specific	Management	Maintenance
Requirements, Needs, Prioritization	Risk Management	Company and Personnel Goals	Team Building, Changing
Training	Investment – Cost/Benefit	Individual and Collective Capital – Growth	Gain Efficiencies
Customization	Training	Knowledge sharing	Metrics
Compatibility	Speed	Trust	
Due Diligence	Lessons Learned / Sharing	Organizational	
<i>Evaluation, Control, Metrics</i>			

The current problem of ‘technology’ sales exists where there is an abundance of solutions, few are integrated, and many require the hiring or acquisition of development or technology professionals to implement systems or use cumbersome data transfer methods, as well as business process change methods to adapt to existing software. Customization also presents serious problems in systems support. Since there are so many solutions available, business is guaranteed to move away from working consistently together, to becoming vastly different, non-standardized, creating more unnecessary work to report, stay compliant, protected, secure, and well managed throughout society and across the globe. This not only causes disorder, but dysfunction and failure to operate as a functional unit, nation, or business with a technology portfolio forced to function with larger non-connected systems. Executives and managers must understand the magnitude of change and commitment when approving the use of new technology and processes; the same exists for the hiring of technologically advanced employees; it will not be business as usual and that disruption comes at a cost, with many long-term benefits.

There are other technology problems in supportability due to the enablement of custom programming. Businesses and organizations buy software and hire professionals to customize it to fit their specific needs and business processes. While beneficial for the company to not be forced to adapt to the way software or technology is designed, it becomes a support issue when the seller or reseller requires special training and extra time to manage custom configurations or non-standardized processes. This type of support plan is costly and is not guaranteed for long term success. Another problem exists in the design of security functions of current Technology systems, requiring excessive amounts of verification and validation of personal information, often creating unwanted and unnecessary locking out of people from their own accounts, lengthy support phone calls, and a non-personal level of customer support. Because products like Office 365 or Microsoft Office does not offer customized support and training for how it can make businesses more efficient and effective, it is not utilized to its fullest potential – creating great profits for Microsoft, Inc., but not much visible profit for its end users, unless they hire full time professionals to perform innovative technology design and programming tasks.

Purchasing software to supplement or assist in management of a business is only helpful in conjunction with a Business Process Re-Engineering task and an evaluation of existing resource utilization, both human and computer, and the planned management of new ways of doing business. Many must be sold or told to change or in other words, business lacks technology innovation if not regularly looking for ways to improve. Some software systems cause more work and are unwelcome by staff because of the learning curve, additional set of tasks, and possibly fear of no longer being needed or employed. Therefore, full evaluation must be done to first see how business processes can be improved with automation and then shop for a technology solution. Buying and adapting works, but can result in wasted time and money, underutilization, improper use, and can even increase employee turnover if not done correctly. Therefore, Data Sharing Evaluations, Collaboration, Streamlining, and Integration studies are best before considering any acquisition, but how does a company know they are flawed or considered a top contender if they have nothing to compare it to?

FIVE COMPONENTS TO AN INNOVATION STRATEGY

There are five process components to an innovation strategy: 1) Strategy; 2) Ideas; 3) Testing; 4) Prioritization; 5) Delivery (Solverboard, 2021). Solverboard suggests mapping each idea to business goals to maintain strategic alignment. Opening idea generation to the entire staff and testing them before commitment is vital. Solverboard also recommends prioritizing each idea or project based on factors relevant to your operations: cost, ambition, timing, innovation, type and more (Solverboard, 2021). Solverboard's Innovation Strategy is not far off from the basic scientific method: 1) asking a question about something you observe, 2) doing background research to learn what is already known about the topic, 3) constructing a hypothesis, 4) experimenting to test the hypothesis, 5) analyzing the data from the experiment and drawing conclusions, and 6) communicating the results to others (Science Buddies, 2021). A more standardized approach to innovation should be to just use the scientific method for 'trial' periods or questions on how to improve and implement new ideas. All ideas need to be tested and proven, with special reports that are convincing and adoptable.

If a company hires a Human Resources professional who is innovative and technologically savvy, then it should expect to employ them to improve their departmental functions company wide. Hiring professionals with the expectation that they must conform to company practices and procedures leaves employees feeling less empowered, therefore the hiring expectation must change from a 'replacement of old employees' or the 'fulfillment of a requisition' to the hiring of a new professional who brings new ideas, talent, and improvements to the organization, with the readiness for system change, not just human change, or role fulfillment. Often, tasks shift when new ideas are introduced, requiring investment, or restructuring of task ordering and assignment; this is viewed as a Technology investment and executives and managers need to be open to these ideas if they want to be an innovative and growing company. We are considered technologically advanced yet have no way to create a collective voice beyond a manual ballot of issues brought forth by political candidates using traditional campaign methods. Even with the creation of social media tools, we still lack the ability to manage and summarize concerns, issues, and revolutionize our lives with Technology, instead we are focused on Artificial Intelligence and Self Driving or Autonomous vehicles.

Innovation brings change, and such change should be tested and proven before implementation. Technology creates change and when done correctly and to its fullest potential, business practices and the economy changes, which requires investment and management. Acquiring technology is not a simple over the counter purchase. It is also not a transaction that takes place in one day and completely utilized with immediate results in the same day or next day.

EXECUTIVE SUMMARY

Comparisons of the Human Design versus Technology in use and its naming conventions, along with ecological and economical progression requires more than a simple strategic plan on what software to buy and how to fully study and present the findings. It's also not captured in a five-to-ten-page summary. The importance of the research or its value is to predict future developments, course correct, guide, as well as improve integrations to change society and how it understands or uses it. Technology is supposed to relieve stress and make our lives easier, yet it seems to complicate things, creating more illness and stress, therefore it requires complete review to avoid a serious catastrophe like many new addictions, creation of viruses, or worse, the complete removal of personal love for it and its ability to completely change, restrict, or remove human interaction. Computer Science's role in roots of 'complexities' of communication systems as well as 'tele' systems – things from a distance are its main functions, as are matters of 'influence' and sickness in our span of control and change to *improve* or make life more easily computationally understood and 'automatic' or atomic. Just the study of alpha, beta, and gamma rays is just a small facet of technology that has both awesome and damaging effects. This area of study includes a wide range of segmented disciplines, and the focus is on bringing all those disciplines in working order to understand how humanity works as one interconnected and interstellar device beyond a galaxy of stars, energy fields, appliances, and applications across the globe and throughout the universe. The very research question is: can all things be permitted to work together, or must they be forced into separate operating devices and are we even on the right track, using technology terminology or are we disassembling excellent advancements while in simultaneous development? At what point is Computer Science fully developed and no longer considered harmful and dangerous? Systems evaluation is possible with a standard review process, but not effective if the reviewer cannot influence and create valuable and sustainable change and noteworthy assignments, therefore strategy must remain generalized, yet focused to gain personal sense of accomplishment in its technology investment. What is science with evidence and proof and valuable systems that capture the rate of change and recurrence on a global internal and external level?

Food for Thought: Cyber — a few letters short of cyclical cycles of ber — eavment. be-reavement: /bə'rēvmənt,bē'rēvmənt/ *noun*:the action or condition of being bereaved.

“there is no right way to experience bereavement” Similar: loss, deprivation, dispossession, privation, grief, sorrow, sadness, suffering, hurt, trauma, death in the family, passing, passing away, passing on, demise, decease, end, expiry, expiration

Quietus

Justly considering the attachment theory in both human relations and computer science adds to the field of understanding in loss and its great detriments of destroying or losing value and great potential that the addition or loss of an attachment can bring. This, added with the scientific theory of 'combining' or 'integrating' in considering how all pieces and parts are 'integral' in numerical and alphabetic function is more than just the programming of what was once described as a compilation of ones and zeros to create form-fields, which scientifically have evolved into energy fields where computer science plays its greatest

role in both virtual and physical management. Access to functionality, capability, and ability to create and utilize something of great value is when the greatest effect of ‘cyber’ theories is most felt; with many often unable to understand or relate because they are only able to see or *comprehend* simple components or things, they are able and privileged to see and work with. An understanding or theory of ‘integration’ or integral connectedness cannot begin to be understood without alpha-numerically dissecting terminology and review progression or ‘advancement’ and a thorough understanding of reality vs. virtualization or what is considered ‘virtual’ parts of reality; all of which is real and individually personified and defined. Since computer science started with the “Terminal” and its imminent death is referred to as a ‘terminal illness’ and if cloud systems are the final phase of development, then we have yet to break the sound barrier or even closely tap into the field of aerodynamics in both the physical and virtual world, or the possibility that more than two exist. The words begin to mix – from human senses of hearing, using our ears, to systems of earo-dynamics, to include the mind and nodes of synaptic synchronistic function that manages collective human understanding. Perception and conception are critical, as is terminology and end states or stages of universal thought and theory in natural selection and evolution or simply stated, technological advancement and superhuman development. This requires a review of etymological origin of the computer from machine à terminal à computer à system à device.

vir·tu·al·ly

/ˈvərCH(oo)əlē/

adverb

1. 1.

nearly; almost.

“the college became virtually bankrupt”

We ‘almost’ understand it completely, but almost is not good enough and ‘almost’ can be an extremely damaging, fearful, and life changing experience. Personal understanding is only individually valuable and worth nothing if it can’t be shared, explained, and only seen as a natural or unnatural non-scientific or scientific phenomena; then it is still considered unknown or unexplainable, where cause and *purpose* remains in question. It’s easy and simple to describe what we see, conceptualize, visualize, and know to be true, but *complicated* to explain and consider how time plays a significant role in the development and change in how we discover and advance going from a simple mathematical device to electromagnetic telecommunication airwave devices governed by the laws of physics where virtual law or cyberlaw only recently emerged (Upounsel, 2020) and is barely qualified to set policy, rule, or argue Internet law.

THE SUPER PROFILE SYSTEM BACKGROUND

Historically, individual buyers presented their physical financial instruments, cash, check, or credit card plus identification to the merchant in exchange for goods and services at a set price – recorded in a database system or as verbally agreed. Banking information was exchanged electronically, and batch processed, taking up to 3-5 days for each transaction, sometimes humans/people/buyers did not see data reports until they received their monthly statement. Identification verification was inconsistent and still is, which must change for better security, but it must be organized and formalized. Online transactions are now instantaneous, which is an excellent advancement, but a management burden that does not offer an advanced consolidated system generated financial statement or single authentication account creation or management procedure.

People historically only physically entered storefronts to buy goods and services. With the Internet, they buy from their homes, offices, and on mobile devices. Storefronts are setup by Internet Address with individual sites following the standard checkout procedure where the user buys goods and services as a guest or creates a profile with the merchant. Each merchant provides a place for the user to manage the profile data, with options extended to historical purchases, special deals, email advertising and marketing, and credit card applications and bill payment. The current design is like the physical design, where each store owner or group of owners manage individual accounts, but the Internet allows shoppers to manage their account and access up to the minute information on their account, pay bills, and buy or return goods. The systems are integrated with Banking and Shipping Systems. Individual records of purchase are available from each merchant and from the bank, but record keeping varies. Transactions are considered secure and based upon special authentication protocols and encryption of data.

The purpose is to provide a more efficient data management system that streamlines and secures use, access, and provides a more organized presentation. The user should have a single location for the management of critical information, as well as the ability to store, access, and change all account information in one location, rather than at every single location they have an account. Integration or a Single Account Management system with connections to merchants will enable live updates using a “one-to-many” cascading update approach which is efficient data management. The features should extend well beyond basic identity and profile data, but also provide consolidated use summaries and statistics. Once accounts are setup and ‘auto-fill’ or ‘remember me’ features are used, it doesn’t seem like a problem, until there is a breach or a change in personal details, which requires an update to all sites, including the official government record. When spam or unwanted and excessive emails, or bad transactions take place, or a change in personal information is necessary, the problem becomes obvious. The current system does not operate using a database approach.

PROBLEM: SYSTEM LIMITATIONS – NON-CONNECTEDNESS

Current profile or login system, known as ‘single sign on’ is limited. The current design of the internet account system requires individual profile creation and management for each site. The ratio of

user to account entry or creation is 1:anunacceptablehighnumber40+. While this type of design works for each individual site owner and account merchant for secure online financial transactions and information exchange, it presents serious maintenance and security issues. Users seem to have become accustomed to this style of use, perhaps because they have not seen a relational database structure that manages Internet Accounts. The Internet does not currently use a relational database design structure; therefore, this is a new concept and solution that improves data management. Every merchant and internet site where personal information is used or money is transferred requires a login and password, as well as account details – these are duplication tasks for the user and all systems each time a new account is created or when a person decides to do business on a new site.

Some browsers and small applications have somewhat improved this process with ‘saved passwords,’ and autofill functionality, but initial setup is still required, as well as maintenance in a very high number of sites and locations, which is also known as a data management nightmare. Saving credit card and personal data in a browser for autofill functionality works but should work better since profiles are used in many places, with every site asking for the same information, requiring users to duplicate data and authentication efforts every time with a standardized management procedure on the business side and freedom with no direction or technical solution useful for the persons spending money or sharing their details.

MINIMAL AND INCONSISTENT AUTOMATIC DATA TRANSFER PROCEDURES (FINANCIAL ONLY)

Each merchant works well with its storefronts, shipping, and financial integration, offering specific and accurate sending and receipt capability, following ordered legal standards but fails to consider how it works together as a whole financial integrated unit for the banker, buyer, seller, securities agency, or transporter of information. It is so far behind in development that it doesn’t even count and is unable to provide collective reports with others of like material. It emails excessively without consideration to human interest, relying on a 1:1 developer model rather than a set operational standard. It is not entirely anti-social, but it readily accepts lies, formally validates only government and financial data, sometimes stealing and infecting those systems and many others with viruses, worms, scams, and other misuse, and allows the transaction of illegal activities, has no control or opinion of others’ shared thoughts, behaviors, input, and actions, yet collects and stores information perhaps for future use. It secretly stalks for a set time for marketing and advertising purposes, as configured. Many complain of unwanted contact and their inability to stop it or change the behavior. It is a dangerous system if allowed to continue without modification.

RATIONALE

Conducting business online, as is, is still functional, but it includes several paper backup and manual processes. Users are forced to manage data in several locations, much of it is duplicative. The purpose of Information Technology is to streamline processes and make data sharing more efficient. It’s also meant to make tasks easier, provide greater insight, and offer flexibility and an enjoyable experience. While the current system offers more convenience, it presents a major data management problem, as well as requires a higher level of security, sometimes making more work than it’s worth.

SYSTEM DIAGNOSIS – IDENTITY MANAGEMENT

Account Management is viewed as one part of a system, with several individual parts, all connected to the same system, with the same identity requirements. Few systems connect and share information, forcing repetition to the point of dysfunction. Online Internet Account Management is diagnosed as individualized by merchant, connected to only money. Its main systems suffer from severe Schizophrenia, Dissociative Disorder, and memory dysfunction (comparable to Alzheimers or Dementia). Once connected to each other with source managed identity, reality, and the right information, it can function as a human management assistive system, but not without serious development. Its problems cause human/user discontent and mismanagement, sometimes self-injury, vulnerability, paranoia, insecurity, and obsessive-compulsive disorder leading to vocal repetitive validation actions with other users. Its symptoms force user intervention and sometimes cause user deficiency in the same areas. It leaves its humans susceptible to loss, disorganization, theft, injury, and distrust. The current system also suffers from an inability to effectively save and reuse information, requiring constant need for identity validation, secrecy, and over protection, possibly caused by memory loss or identity crisis' perhaps due to repeated abuses or a flawed design. Some of its parts in its earliest design showed signs of blurred visual presentation, shaking, and memory dysfunction, directly related to its power system. It complained of 'resource management issues' in its hardware and more space and processing power was added. Early designs showed slow data processing and transfer rates, which have greatly increased, but suffered from system overload and 'jamming' – unable to process or route to other processors.

EXISTING PROFILE SYSTEMS

Microsoft, Inc. establishes four types of Profiles and explains how they are connected, with one being a local profile on a user's home machine, a roaming profile that connects to the local one, mandatory user profiles, which are not specified but administrator use only, and temporary user profiles (Microsoft, 2022). There is no technical documentation or discussion how the Microsoft Profiles contained in the Windows Operating System connect to online profiles and after significant research, no standard commercial solution was found that enables the automatic creation of profiles required by Internet Sites. While the National Institute of Standards and Technology publishes profiles on its Cryptographic Key Management System for Security, it does not publish directives or guidance on third party integration, other than to warn users to be aware of who they choose to share keys with (NIST Special Publication 800-152), which is nothing new from regular human activity of securing and sharing a personal domain. A short internet search for "Profile Management Systems" returned several commercialized solutions and articles of individual software systems "profile" setup features – all individualized with no 'Application Programming Interface' suggestion or integrated Profile Security and Sharing Solution (Google, 2022). Now the internet engineers have operating E-Commerce sites and Social Media Applications, all requiring profiles, logins, passwords, and reset functionality, the rest of the Internet development has followed suit, with no single system offering the 'automatic creation or use of an existing profile' other than short logins where users are allowed to "Use Google, Facebook, or Id.me" accounts to login. Most, if not all shopping sites, use the "Secure Create Account" feature, such as Macys.com (Macy's.com, 2022). Some data can be auto filled by the browser, but not all data and there is no option to 'use a primary profile' or "master profile" or "certified digital profile" or account management system. Compulsive buying is not as large of a problem as developing without consideration to a system, as well as developing a digital or high technology virtual system that is the same process as the physical one, where the only difference is a keyboard.

A risk area with wholly connected Profile Systems are its ‘constant connection’ to live data, security of the data, responsibility, and standardized application use for all its processors. Single connections and checks can be managed with a master profile as an active user on the Internet when transactions occur. Once its processors are standardized, with data update procedures, it can effectively manage and run system updates from the single source, if update tasks are managed correctly. It should be able to update information in real time, but currently has too many places to update it and cannot do it simultaneously without a primary source account system – it needs a relational structure and just like any good employee, needs to know who to trust as the provider and receiver of accurate information and who must do what for it to be the best it can be. It’s awaiting a management structure and to be programmed to provide summaries and consolidated reports. Since it is the first of its kind, research, development, and test is required, but not on a single application level because it knows it should interact and provide more than just ‘account’ functioning. A historical record of activity, along with statistics on viewing, buying, and other activities should be available for multiple uses. These kinds of statistics when compiled by household and worldwide show useful trends.

The Internet is not ‘intuitive’ but mildly ‘suggestive’ with its search function which is limited only to the major search engines. When broadly searched or asked, it offers far more than what a human can process, not understanding what is best for the human and it has no ability to provide collective statistics. It also shows signs of attachment disorder, with an inability to process data to create and use relationships, attachments, organized, shared, and stored in the correct places. It inconsistently reports/reacts to accomplishment and does not understand sharing. There are serious problems with its “forms” strategy and process – functional but disconnected and inconsistent and there is no ‘internet wide’ data form sharing, matching, consolidation, and data mapping. It might require a higher level ‘system – mapping’ task to manage a Worldwide E-Commerce System. It appears to still be in its ‘formative’ stages. It’s current designs forces query and compilation from multiple sources just to create a profile – when a user should have a source profile provided to them that is user managed in a primary location. If its relationally parent/child designed, as a database protocol, then the Single parent (using Microsoft Database terminology in join table’s relational data) should consider My Own Master Data File and not rely on others to validate data provided, but because no application yet exists, it must wait and accept that it is a flawed system. It cannot operate on data alone; it requires management, law, and policies. It is better to gain official digital certification from the Official Document Record Keeper, such as the Government Agency that maintains the official record, but not on a constant login basis, but it might better empower the people to certify their own official record and match it with the Government System, which can be used for multiple purposes at various times.

A Federal Law System is not its data creator, provider, or owner, it is an organization to be used in event of lawsuit, which is after disaster or to integrate with Official Legal Documentation Verification of True Identity and the Federal Securities Commission but must understand corporate practices greatly vary from Personal Banking and Life Management and what the everyday human considers “security” and what financial institutions and merchants require as identity and security.

PROJECT GOALS

The goals pertain to the entire Information Technology industry and are set to prove there is not only a better design, but that Cloud systems enable its improvement. Changing the entire internet and

creating a better software standard seems unachievable, which is most likely why we're stuck with systems that are forced to adapt. The overall goal is to improve the management of information exchanged using the internet which must be done by establishing better standards and requirements for the management of reusable and sharable data. Changes to policy affect all Information Technology systems and not just small or even large E-Commerce Online Information exchanges or 'internet sites' but how can policy be changed when there is no access to policy makers? The goal then shifts to solving the problems that we can solve and working towards a more advanced solution. It seems ideas and concepts cannot be sold because no solutions exist, no actual angel investors, or because the ideas are already taken as soon as they are typed and put together. Whatever the case, the paper and concept will be created to focus on creating an Official Document Repository with a phased integration plan.

The second goal is to show how a new design of Information Management using Cloud Systems is one of the best technology investments, but will take several years, understanding that the Cloud Architecture is not yet fully in place. This is not a new situation: where a great concept and solution is needed now, but the world is still far behind. One can't wait on the other, especially if the two don't coordinate and don't share the same design standards. The design, along with new standards and policies for data sharing and management will be created, as well as integration and data transfer methods. A small sample can be provided for demonstration purposes to show how the Master Profile Application will work, along with new practices and policies for database development, leading to the passage of specific laws governing the system and prevent actions or create consequences for violators of standards and policy. Clarification of data ownership and management is required, as well as sharing and use policies. Everything cannot be completed in 8 weeks, but it will set the course for the doctoral research project over the next 3 years.

PROFILE AND IDENTITY DEVELOPMENT

There is more than one solution to the problem of data sharing beyond credentialing. Either continue to function as the system is currently designed, using autofill and saved passwords as a common practice, or create a primary data source for each user that integrates, cross checks, validates, and updates all accounts across the Internet. If E-Commerce continues to function without a better identity and profile management system, it risks causing more harm than good. A more efficient update/change management system guarantees accuracy and enables more user control with greater efficiency. With the development of Government systems, or those systems that create certified records, such as Birth, Drivers License, Passports, and Healthcare, the systems can be fully integrated and expanded to offer digital verification, but not as the sole provider; they must have a more efficient system for changes to maintain accuracy across the Internet. The same is true for Account Management. Either users continue to use their own methods to consolidate and perform manual accounting functions, or they buy and use an affordable system that provides specific online activity, but more than just accounting, scheduling, and gaming applications are needed. The world, and not just the "web" or the "internet" can benefit from integrated systems that offer more than just an online system that works from the home or office.

- 1) A relational structure must be created, with primary source data and use policies must be able to have relationships with multiple people with different content rules
- 2) It must store and transfer data correctly, based on user preference, law, and security policies

- 3) A user managed system must be created to enable personal data management from a single location to change the distant and disconnected approach of not knowing its user(s) and regularly forgetting or requiring revalidation at each site
- 4) Its memory design must be reconsidered, as well as its storage, processing, and transfer capabilities
- 5) Voice interaction systems are too limited to be found permanently useful for home companionship beyond a limited search and play function – built for entertainment only
- 6) It can read but does not save what it has read. It stores and reads disconnected, limited, disorganized and in a minimal way; unable to offer a complete solution of reading, writing, typewritten text to speech saving with organization, notetaking, discussion, logical interactive ability, auto-reminders, and other personal assistive tasks
- 7) The personal home computer and business computer is not an artificially intelligent machine; it must be programmed to ask questions, find information, meet set requirements, and use more than just repetition of words, phrases, and speech – it must calculate and provide valuable summaries, from multiple online sources
- 8) Because the “MyApp” is considered an application, it’s main function is to take action to put ‘something’ into operation, but it must be programmed

While the Internet is functional for buying and selling, as well as sharing of personal information, it is inefficient, invites human error, dysfunction, and inconsistency in data, as well as security breaches leading to cybercrimes. The password memorization and reuse requirements are temporarily eliminated by auto-fill systems, but when browser data is deleted, all information must be resubmitted, thus requiring the manual storage of personal information, in addition to the browser’s save feature, or password vault applications. This process relates to personally identifiable information basics, such as name, phone number, address, email, password, and credit card numbers, which is far too limited for what could and should be done and how the information can be organized and best used. Social media systems enable the sharing of more information, making this an even more important security and information management problem that must be fixed, which is independent from a primary profile of source identity data, but connected to it. The degree of duplication and inaccuracy is astounding, as is the severity of the problem with this type of information management design.

An active online user is forced to manage at least 40 different accounts that contain the same information, with no single source that automatically updates all of them at the same time or randomly by using an old batch processing method. Any calls regarding accounts or use of accounts requires a person to answer the same questions every time, as if the system does not have a memory or ability to save and reuse information or remember who they are. Simple database and caller ID enables data verification, yet call centers, agents, and account managers still require verification, acting as if they don’t even know the caller’s name – this is an insecure completely impersonalized system – constantly fearful or built and operationally functioning as if identity theft or misuse is a constant. Users do not have an ability to create

a secure online account profile that contains all primary data in one location, therefore it cannot 'automatically' share data without specific action and intent.

Another serious problem to manage or obstacle to overcome is acceptance of low quality versus working towards more efficient ways, which require major changes industry wide. Without access to the right authorities or influencers, business must continue as usual and any new systems must conform to what already exists, rather than to hope for miraculous change. Many users don't see it as a problem, and neither do many developers because they have not yet seen what a well-functioning and organized system can and should do, therefore they are happy with what they have and rely on reasons not to change. These are obstacles. Another obstacle or challenge is explaining the problem in both non-technical and technical terms where an everyday user can understand it, as well as an advanced developer, as well as high level governing bodies. Therefore, creating a 'prototype' or test system is almost required. Integration with the internet is nearly impossible without advanced security professionals when dealing with live systems and real human accounts and experiences. The project should follow the standard software development process. It has potential to grow from a single user managed organization document management system to a fully integrated automated system but requires government and industry change.

Online systems are only minimally integrated and although they must match what is on file with banking institutions, the information does not extend past basic identity and financially related information, of which there are several data areas that are just as important and require much better management. Data ownership and maintenance is also a serious problem and area in need of research, documentation, law, and policy, beyond the Privacy Act of 1974, the Paperwork Reduction Act, Freedom of Information Act, as well as all the Constitutional and Case Law surrounding information management.

With the use of social media and thousands of other sites that require profile setup, it makes sense to invest in a master profile manager and enable functionality for improved secure sharing or auto data transfer and update methods using master profile data, maintained in a single location for optimum accuracy and management. Using a database design for identity and profile management, with a one-to-many relational approach, the system can be redesigned to enable more efficient account management and reduce the security problems of the Internet. It is a simple concept of update one, which enables the automatic update of all the others, but seemingly impossible. The auto-source update practice is not used because of the way the Internet is designed, but this can change. If the entire Internet's design cannot change and individual developers or auto developers can't change their account management designs, then other solutions must be considered, such as an Application Programming Interface to connect to the master profile, but the Master Profile Application does not exist, therefore must be designed to improve security and personal data management. This is a new concept; thus, it must be explained, documented, compared, and show how it will improve and change nearly everything about how information is managed. The concept should be accepted as a management operational standard and required by law.

A major problem with the project is that it cannot be tested using the live Internet. Although it can be documented and broadly explained for common understanding, more technical specifications would have to be created and presented to governing boards, investors, and other interested parties before development can begin. Therefore, this project will only contain the problem, system comparisons, design, and a brief implementation plan or change strategy. The word 'prototype' is used in hesitation because it contains parts of the word that the project hopes to reduce or eliminate, which is 'pro-typing'

of which users are asked to do far too much of in a duplicative manner. Technology exists that offers a better design, and this project will explain how it can be done and why it must be done and considered required by law.

PROJECT SCOPE

The plan is to design Master Profile Application and create a one-to-many database concept for use in Internet Applications that enables users to manage their own data by creating something that can be invested in and improved over time to meet additional needs of all for more than just the purpose of financial and identity verification of and for tasks. The project has great potential to grow and change the entire design of the Internet and its applications for optimum use, but the project must be completed within 8 weeks, therefore, the scope will be limited to the Master Profile Management System and how it will work with all systems, is user managed, verified, secure, enjoyable to use, is profitable and has long term investment and high value and profit potential. The fundamental question that the project must remain focused on and seek to answer is, if the Government is designed for the people, by the people, then why is the Government responsible for providing individuals official documentation of their existence, such as a Birth Record and then charging a high cost to obtain it. Individuals can create their own, but the government serves as a data certifier of a document of proof. The data, or documents, once created are unchangeable without a legal process, yet data across the internet about personal details are freeform, fictional, non-connected, changeable, inaccurate, duplicative, non-restrictive, is a free for all for identity theft, misuse, mismanagement, and available for use by many dysfunctional systems. The project manages what is beyond the questions of who the certifier is, maintainer, requestor, user, sender, and at what cost, but how it can be better managed, most efficiently shared, and protected and that is the focus of this project.

COST/BUDGET

There is no additional cost to complete this project beyond what is already budgeted and paid for. Cost and budget to fully implement the plan cannot be estimated until the research is complete, and the project might include a general budgeting strategy, but will focus more on the technical functionality and change. A full financial valuation assessment would have to be completed because it is not just a cost, but a profitable system. This the project will not contain specific and detailed figures because it must focus on the problem, solution, and plan for the architecture and the application, and how it can become a necessary household system.

PROJECT PLAN

The project will follow the University's paper submission dates, its format requirements, and a complete paper will be submitted at the end of the class. It is expected the concept will be protected from unauthorized use and sharing but will be adopted by industry and become a new design standard.

METHODOLOGY

The research is a combination of qualitative phenomenological and case study compilations to show that Internet or Software Engineers follow a standard protocol for design and security, but lack in

interconnectivity with each other, thus causing a flawed design for users of E-Commerce and Online Communication Systems. While the Internet enables connection and the sending and receiving of data, it only minimally uses integrated accounting or information procedures for multi-site systems. This leaves its users managing information in their own ways both digitally and on paper, in a nearly unmanageable number of locations. Phenomenological is used because of the mystery that surrounds the standardization of the Internet without a million or more intelligent designers and developers following a published directive on placement of information, product positioning, standard online buying processes, authentication, and account management. It is still unknown if the Internet's systems or E-Commerce sites are designed by humans that follow a standard protocol or if they are robotically created or designed by automation software. How internet sites or stores came to be is not the focus of the research; although online shopping and communicating is a phenomenal technological advancement and now necessity, this paper focuses on what currently is and the problem areas for both managers and internet users who manage multiple online accounts. As use grows, so does the management burden and potential for problems. It is not solely for personal, business, or education use. The old goals of DARPA for the advancement of ARPANET, which evolved into the Internet still operate using a 'store' and 'forward' approach of data sharing, but not so heavily reliant on the TCP/IP layer. This, in turn, means that to understand the service which can be offered by a particular implementation of an Internet, one must look not to the architecture, but to the actual engineering of the software within the hosts and gateways, and to the networks which have been incorporated. (Clark, 1988) == whatever 'incorporated' means.

The internet and computers are intended to reduce workload, processing time, and to make lives more interconnected, organized, insightful, and enjoyable. These are factors that are not mathematically measured by surveys, polls, or formulas – they are explained by user experiences that can use an integrated and organized system. If no system truly exists, then no user polls or surveys can be taken. Only satisfaction surveys on 'ratings' using stars can be used, which is not suitable for this type of problem because it goes far beyond 'experience' or 'satisfaction' and 'ease of use.' Users can be polled on their information management practices, as well as their understanding of what security and profile options are offered by software companies, but user intelligence and understanding are not what is sought after in the research. The poll by The Associated Press-NORC Center for Public Affairs Research and MeriTalk shows that 64% of Americans say their social media activity is not very or not at all secure (AP-NORC, 2021). What is of more value in solving this problem is engineering understanding and use of database protocols in the design and use of the Internet. Efficiency and data integration is what is sought after, as well as a system that provides valuable insight from multiple sources that can be user managed and results in time savings, profit or better spending and investments in both business and personal computing systems.

While each online storefront or site uses its own account management function, with and without financial transactions, no site interconnects to a centralized identity management system. Each internet site, managed by a Domain Name Server, with its own internet address and managers follows basic privacy protection policies and sets their own business rules for the protection of information. These are basic Web Development publishing standards. The problem areas the research covers are data management, security, authentication, and use of information as it relates to the Internet's current design, standard relational database methods, and industry standard identification and verification methods in two areas: Financial and Personal Information, otherwise known as E-Commerce and Identity Management.

Only part of the scientific method is used to define the problem, identify existing research or background information on the problem, formulate and test a hypothesis, and manage observations through testing and experimentation. Because the timeframe for the project is short in duration, the experimentation was limited to performing as a user to show variation in account management. No quantitative numbers were developed to show account management statistics for comparisons of one click authentications using a 'single sign on solution' such as Google Logins, or Facebook because the number varies per each user. The statistics would not be of value because the problem can be shown with one single user case study to prove it is a functional system but creates excessive personal management. This leads to more in depth research on the design standards of the internet for account management and not on the user experience. The design of the Internet is reviewed and noted as a problem where two solutions are offered: an application to solve it or an Internet redesign using a Database or Cloud Systems approach, with both solutions evaluated for probability in change in terms of simplicity and long-term solution.

The problem is well stated, and the research sought to locate the governing bodies empowered to change it, as well as solutions provided by industry, with a software evaluation to point out how a better design or process for account management and identity verification not only changes, but drastically improves online activity, user experience, accuracy, and efficiency across the Internet and in locally managed systems. Reviewing the law on E-Commerce matters are ridiculously summarized in volumes of case law available for years of in-depth study or available in short summaries and papers that recommend speaking to an attorney (Bigcommerce.com, 2022). There is not much published on consumer protections or technology solutions available for the management of personal information other than the "unsubscribe," "Privacy Notifications or Policies" and the "Do Not Sell My Personal Information" option at the bottom of most internet pages (Amazon.com, 2022). Each site has a privacy policy, and the creators of the sites actually believe users read and fully understand what is published and practiced.

Simply stated, the account management functionality of the Internet works well for businesses, but buyers are left with outdated management processes with no integrated systems. While the Internet enables everyone to connect from their desktops, laptops, tablets, and cellular devices, many are left to their own organizational style and skill in data protection, storage, sharing, and privacy options. Some corporate giants such as Google, Microsoft, and Facebook offer individualized and customizable security solutions, it is not the only issue or need. Information Management for the everyday user is the need, but first, the 'architecture' and 'design' of the Internet requires review in order to develop the most effective solution for all parties and not to benefit only one type of application, user, or system. The one for one approach is unsuitable, as is the "one by one" approach, therefore a "one to many" connection and sharing solution is considered, as well as other possible information management solutions.

Special technology terminology such as Back End or Front End, Graphical User Interfaces, Application Programming Interfaces and Cloud Systems and Database specific concepts and industry 'buzz words or phrases will be limited and fully explained when used. This is necessary to reduce complication and improve understanding of the problem and solution not just for technology professionals, designers, and developers, but the everyday human who refers to their search engine as a browser, their favorite online store as a store, or their profile as the place where personal information is requested to track detail related to their activity on an individual site. Use of terminology such as 'virtual' or 'digital' and 'online' activity or words in comparison to physical actions, such as buying, selling, communicating, signing on, or signing in, and managing information will be brief and it is expected that

readers, reviewers, and commenters already understand the differences. The paper will explain the similarities in both activities and propose a change since the two are vastly different and technology is best used when fully connected and integrated as a whole system comprised of individual 'sites' known as businesses or resources, rather than "sights" in what the human eye sees being done and knows to be true or of value.

Some of the research was excluded because it was not found to contribute now or in the future to the research area. The methodology used in this project is not solely based on the research, but the research supports the problem area and is used to show no current solution exists and no scholastic articles, professionally published, or even non-professionally published discuss the project's proposed solution, meaning it is original. Qualitative data is presented to show many sites sampled that utilize consistent account and identity management processes, with some variation in credential process, but no mathematical statistics will be presented because the value of creating a complex figure is minimal and unnecessary, therefore simple numbers are used. No timed tests are taken to strengthen the argument that the current design is not only a security problem, but costly in time and has great potential to cause psychological harm, as well as personal and business injury at very high dollar amounts, where no insurance coverage exists. Rather than to center the research around potential hazards, the project is more based on identification, background, design, existing solutions, and two future solutions.

Although an article in 2000 reports Microsoft's passport as a provider of integrated web application service, not much new research is available on usage and acceptance of the technology. Web sites that price the goods they sell based on the number of buyers and Microsoft Corp.'s Passport service, which lets Web-based shoppers enter their names, addresses and credit-card information just once and have it downloaded from a Microsoft server to other Web sites where they shop; this way, the credit information is entered only once and stored in a single, presumably safer place, yet it can also be shared easily (King, 2000). The tech giant is creating a digital identity wallet where users can store private documentation that could be available as early as August 2022 (Barr, 2022). Instead of having personal information spread across a host of apps and services, this Verified ID system acts as a kind of digital wallet or personal info portfolio that can be handed over to employers, bankers, or whoever needs a verified identification (Barr, 2022).

While some scientists would enjoy investing in statistical research for time on page, number of accounts, frequency of access, security risk profiling and posturing, cost of current business structure, personal and business management processes in comparison to experimental systems in test phases, this project takes a simplistic everyday user experience approach. It combines user experience and technical knowledge to explain the current design in comparison to a relational database design and how cloud computing can and should change current practices, but that there are other solutions that can work interchangeably with current systems, as well as future systems. This research offers a simplified solution to identity and account management for a problem that once existed for businesses and now exists for citizens. The problem cannot be understated; the problems businesses once faced is now the responsibility of citizens, and many software services are available at a high price for training and use. This has become not only an unfair business practice, but nearly a detriment to society since we were led to believe that computers and software help make our lives easier. They in fact do and we cannot live without them, but there is much work to be done to make it a better place. There are many contents with the status quo or

keeping things the way that they are and for a time, this is acceptable. It is not wise to introduce major or rapid change without good planning and preparation.

The proposed design brings together multiple parts of applications to provide summary and an interconnected information resource center, customizable, and less expensive and exhaustive as the current online accounts management system. It fixes the problems of duplication of important data, such as profile, identity, activity, and all places where information is the same, ensuring customers or users only enter the data once and the system is smart enough to utilize existing data to connect and manage all others, such as your credit cards, banking, social media, education, healthcare, and even government records.

Four case studies are presented that show consistency in account and identity authentication processes, yet abnormally duplicative, making data management and sharing a critical responsibility for users, but no useful and manageable account authentication and security solution. The problem is not reviewed or researched using step by step procedures for the creation of an account; that is a standardized process but is explained by looking at the entire online profile, digital file management, and authentication procedure across the entire internet as an individual and as a business or government organization.

No user or community feedback or survey instruments are used because the research does not include opinion or user experience. No system test is available to compare the existing system to the proposed system or to question account holders on their feelings towards Personal and Business Account Management on the Internet. The research is not based on user thoughts or feelings, other than those involved in its development. It's based upon the standard account management and authentication procedures where personal information is exchanged, which is everywhere online and always in use by one or more accounts. The problem is simplified by calling it a Personal Data Management problem where users are responsible for the creation and management of accounts, which does not follow a unique digital architecture or process, but closely resembles the physical buying and communications process. Since technology operates differently than humans doing business or pleasure in physical locations, accounting and information management practices must revolutionize and not continue to follow the same "in person" processes and expect the same type of systematic transaction. Old system must change, not simply be upgraded to suit the needs of those who now use Internet Applications, but for those who standardize the buying and selling processes, the laws surrounding online transactions, and the rights, responsibilities of consumers, as well as their own ability to effectively manage their own information. Much is different, while some parts are the same.

A short example of the problem from a database perspective:

The standard sequential and sortable table view:

Sheri Wilson	Student	434-710-2148	434-710-2148
Sheri Wilson	Payee	434-710-2148	434-710-2148
Sheri Wilson	Beneficiary	434-710-2148	434-710-2148

A relational database structure view	
Sheri Wilson	434-710-2148
Student	Institution Name
Payee	Financial Name
Beneficiary	Legal Instrument Account

Organization and presentation of data is one part of the problem; another part is the connections between the applications and showing summary data, using the ‘enter data once, use it multiple times’ approach and to add “without retying or reentering” not using a ‘for each’ programming “line by line” model.

Once all the test case scenarios are identified and existing processes are compared to new processes, as well as the Internet’s design for account management is explained, then solutions to the problem can be more clearly presented and readily accepted. As with most systems, there is more than one way of improving things, therefore two options must be compared for what is best for the future of the Internet, the People, Businesses and what is possible and most advantageous for all with minimal change to the original system. The fundamental question is: to redesign the Internet or build on what already exists? A systems analysis will not be conducted because it is not ‘all systems or an individual system that must change or is the cause of the problem; it is the standard application or internet policy and procedures in data exchanges or transactions that must change, as well as operations offline by account holders. Some applications will be presented to show useable functionality or a way to take parts of each system and create and integrated application, but it will not include every system. While security and privacy are important, problems will remain and increase if individuals are forced to manage their own systems and data and if corporate competition drives the marketplace of solutions. With a better system, they can, but they not only need better tools, human intelligence and industry cannot continue to grow and evolve without it.

A new concept is presented made up of the standard required information and authentication practices but uses one primary source profile, rather than to force users to create a profile for each account and on every device. Two locations are required because it contains a profile system where information is available online, which is now called the Cloud. Ideally, one application would update all the others, but because of mobile computing and the fact that not all changes are and should be user initiated and because convenience is sometimes, but not all the time the utmost importance, as well as access to critical information anytime and anywhere, the profiles must be available both at home contained in a connected

and non-connected secure device, as well as within an Internet Profile Application. The concept of data transfer and management is simplified: the source application contains personal information of value, which is all accounts the person is responsible for, as well as other critical and identifiable information, such as official records that show proof of identity and other account information, as well as their legal responsibilities, such as children, contracts, and more.

Security on the Operating System is necessary because this is where the main application runs and the same is true for the browser which runs the Internet Application. Ideally, the two systems would share information from one application source, with both being editable anytime anywhere, all synchronized, cross-checked for accuracy, and up to date, using automatic update options that are not only user generated but also system generated and updated when it connects to other systems, such as credit profiles, school records, online accounts, and anything else that the application can and should manage. The problem is that all the many other systems collect just about the same information, but use different types of systems, databases, processes, and this forces users to individually enter the same data many times in many different places and forces them to be held responsible and liable for its accuracy. Even worse, some companies, merchants, or vendors don't even require information updates, making it a very inconsistent place of data and policy variation. What originally seemed simple, which was to add a bookmark, or a favorite to the Internet browser, and manage account information in a physical file storage location, becomes routine practice, but a major change management problem, as well as inconsistent and nearly directionless oversight in account security management in both digital and physical file systems. Because more information is exchanged online, there is an opportunity to develop an application just about as valuable as a person's life, home, career, children, or their wallet because it contains everything about their life and everything that makes it what it is. It's more involved than just a personal wallet or photo album and its more than just official records that are kept in certain places for safe keeping.

EXISTING PROFILE, IDENTITY, SECURITY, AND SHARING SYSTEM

The current internet design requires a username and password, along with name, address, phone number, and email for profile setup for each account. Many finance applications and transactions require the same information, of which internet browsers store and the users can update. Each site requires the same information, and the user can use saved information within the browser, but each site still asks for it. A user is required to provide account information for its operating system, as well as its individual accounts, such as email, social media, banking, and individual e-commerce sites. The user can create different usernames and passwords for each individual account and there is no standardization, limitation, or user guidance for the management of the credentials, leaving users to do what they want, which leads to problems. Users often save their account information within the browser and use auto-fill features, as well as separate password vaults. Account information is often stored on the computer or in writing and used as their management system.

This is an inefficient process, sometimes requiring the creation and maintenance of over 40 usernames and passwords just to do business or conduct electronic activities using the Internet. Security breaches happen often, either at the company or corporate IT level or at home from account mismanagement and poor security. Account profile details and security protocols are standardized across the internet, showing the internet can create and require a standard of all its merchants and users, thus a change to how it's done is also possible.

Currently, people are required to send documents to show proof of identity, often using their driver's license, passport, government issued identification card, insurance papers, birth certificate, utility bills, cellular phone bills, mortgage deeds, and school records. These 'proof' documents or 'requirements of companies and agencies are often sent as pictures, portable document formats (pdfs) and word processing documents – commonly known as files. Each company has different processing and storage requirements, but all are bound by law and promise privacy and security of information. These documents are usually sent via email or uploaded to a software system for processing or storage. Individual card or document proof providers and owners do not have an application to manage them, therefore they store them somewhere on their hard drives or provide proof as needed and then delete them. Government agencies who are responsible for delivering these documents, such as the Department of Motor Vehicles, the Bureau of Vital Statistics, and Passport Agencies mail these physical documents and have online replacement ordering systems, but do not store digital copies for access and use. Once it is created, it is sent to the person who requested it and management and use is common, which is a wallet or a file cabinet. Because identity is so often requested and is required as proof, a better digital system must be created, but first, security must be considered top priority.

GOOGLE PROFILE MANAGEMENT

Autofill and Address Management is limited to form filled entries – all data is the same but varied in use; there is no integration with an actual address book or specific profile application that sets the user apart from its contacts – it's disorganized and limited and has no account management policy or use procedures for multiple user households.

Privacy and Security is built on "Clearing History, Browsing Data" and marking sites as 'safe or unsafe' – these are old user managed methods of 'warning based' browsing. There is no 'account management' centralized structure or tracking system for credit card and security information use; they simply offer an 'auto-fill feature' and ability to update stored account information that is often used. Some integrated login capability exists to ease the burden by using basic existing account and password information, but there is no list of places or sites where the information was used and therefore cannot be managed. Reset, Cleanup, Clearing of Cache, and History files resets everything – requiring manual account management. The same is true for other Search Engines, such as Bing, Firefox, etc., with some variation.

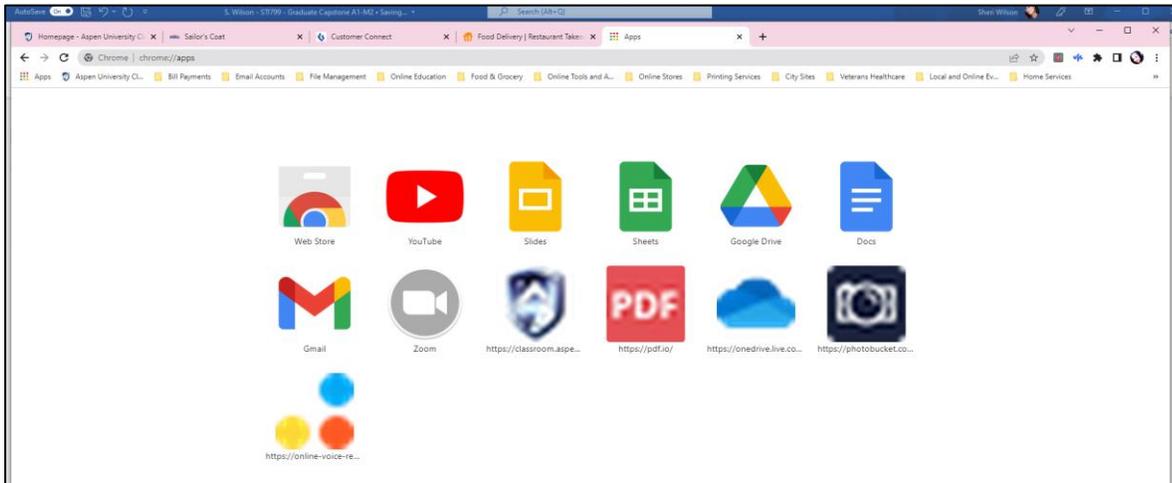
ONLINE FILE OR APPLICATION ORGANIZATION SYSTEM

Users are not prompted or instructed how to best use their Browsers for Application Organization and Bookmark Management. An application page, marked on the Browser as "Apps" provides a centralized shortcut to Google Applications and allows users to add other applications to the list. When the "remember me" or "auto-save" login functions are setup, the applications can open with a single click. When bookmarks are organized correctly, lists of Shopping Sites, Accounts, Government, Education, and many other regularly visited or categories can keep the system organized – if used. One major problem in this is that it must be setup by the owner or user of the browser, meaning there is no automatic setup or pre-configured logic or advanced features, with Security Data, so it requires users to explore and figure it out themselves. Additionally, once users are accustomed to using computers routinely, it is difficult to change old habits.

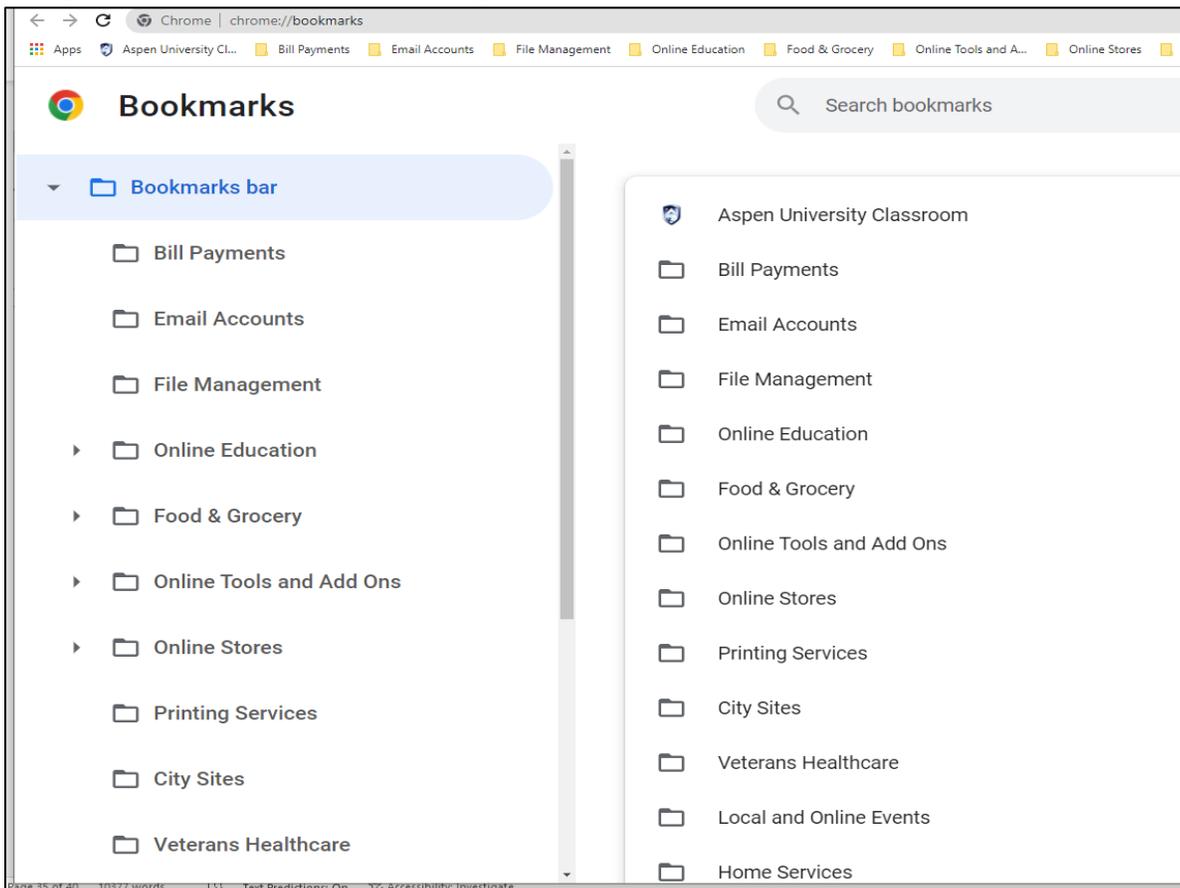
The “Apps” and “Bookmark” features in Browsers only offer a user defined quick access solution and not profile or account management. The current design allows for the creation of adult and children accounts but is difficult to share across multiple devices and locations; thus, the cloud is a better system, but costly and without organizational direction. Profile settings are limited to just the email account, which seems to manage most of the connections on the Internet, clogging up inboxes with unnecessary confirmations, marketing, and junk mail, much like the regular mail system, but worse. It helps, but it is not the best solution.

Two examples of Application and Bookmark Organization are below and show how a quick Account and Organized Online Information should look. If ever integrated, profile management will be completed in a single location and account management will be consolidated for ‘overall activity’ reports, rather than individualized accounting. A standard Bookmark Structure should be available upon installation and the browser should suggest organization of regular sites, but it provides only the feature and not the process or suggested organization.

Google Chrome Apps



Google Chrome's Bookmark Manager



Id.me and other Integrated Logins (such as Google, Facebook, etc) systems only work with a minimal number of sites and do not provide a management system or sharing trail. The premise is advertising and ‘discount’ based digital verification – offering a \$4.00 discount on Buying a Car – It is NOT intelligent. It reports working with the US Government for Digital Identification Verification and on the surface looks capable and official but does not provide insightful account management tools or any kind of integration with the systems it provides verification for.

ACCOUNT PROFILE MANAGEMENT SYSTEM – “MYAPP”

DESIGN– ONE TO MANY CONNECTED DATABASE APPLICATIONS

Digital images and data should be available anytime, anywhere and in fact, they are, but there should be a specific source item and process for official identity certification and policies for use. Open photography sharing works in some places, but not in this system, unless set for historical preservation and official record keeping, such as school pictures. The data management is the primary focus at this time, until photographs can be better auto-named and stored with an acceptable presentation, size, format options, and linkages to professional print shops and online sharing solutions. This is necessary for tracking of information, beyond matters of cybercrimes. In a better system of authentication, the user logs into its browser, which has a primary profile containing all accounts – all activities are and will be known. Login would take place in the operating system and NOT every time the browser accesses an account. The browser would check with the operating system for identity confirmation; this process takes place in multiple locations, but because of the number of devices, identity management must take place in a cloud system, or somewhere accessible anywhere and anytime. It can and should be a certifiable proof of life system; critical to a human’s wellbeing. Account creation or update on individual internet sites can be completed with a single click, rather than forcing the user to re-enter profile information. The main profile application (browser) will automatically create the profile page OR a live application separates or within the browser can actively integrate and record internet actions in the My App Account Management system.

MASTER PROFILE USE SCENARIO

A new shopper at Amazon.com wants to establish an account and make a purchase. The user gave permission to use the Master Profile Manager to create an account, and having done so, enabled the user to buy from Amazon.com. After the purchase(s) are made, a record is created in the MyApp database to show 1) A user in the household created an account; 2) Money was spent, 2) What card was used, 3) Further categorization of goods for Accounting, Inventory, and Event purposes – such as birthday, regular goods, special purchase, a project requirement, or is associated with a goal. This enables a household inventory system and can even be properly organized by area or interest, such as Food, Clothing, School Supplies, and even tied to recipes or commonly used or purchased items. If designed correctly, it should be able to help plan meals, review and manage health, and even assist children in learning more about buying, spending, budgeting, and preparing, as well as reviewing last week, month, and year’s activities.

The “MyApp” allows the users to set preferences for complete open sharing within their household, or to remain anonymous and buy as a household and not an individual. The information is all tied into the household budget, which includes a combined income budgeting and finance feature. The “MyApp” would maintain separate browsing and transaction data for each of its users to provide relevant and useful data for each member of the household. This is a better design that enables more secure parental and financial controls. While the Internet can be viewed as one large application, with several accounts, it lacks a management console and consolidation or account summaries, forcing households to be manual information compilers and using non-standardized tools to track whatever they think is useful, this obviously leads to mismanagement, poor planning, and sometimes even obesity, bankruptcy, and many other serious disorders and societal issues.

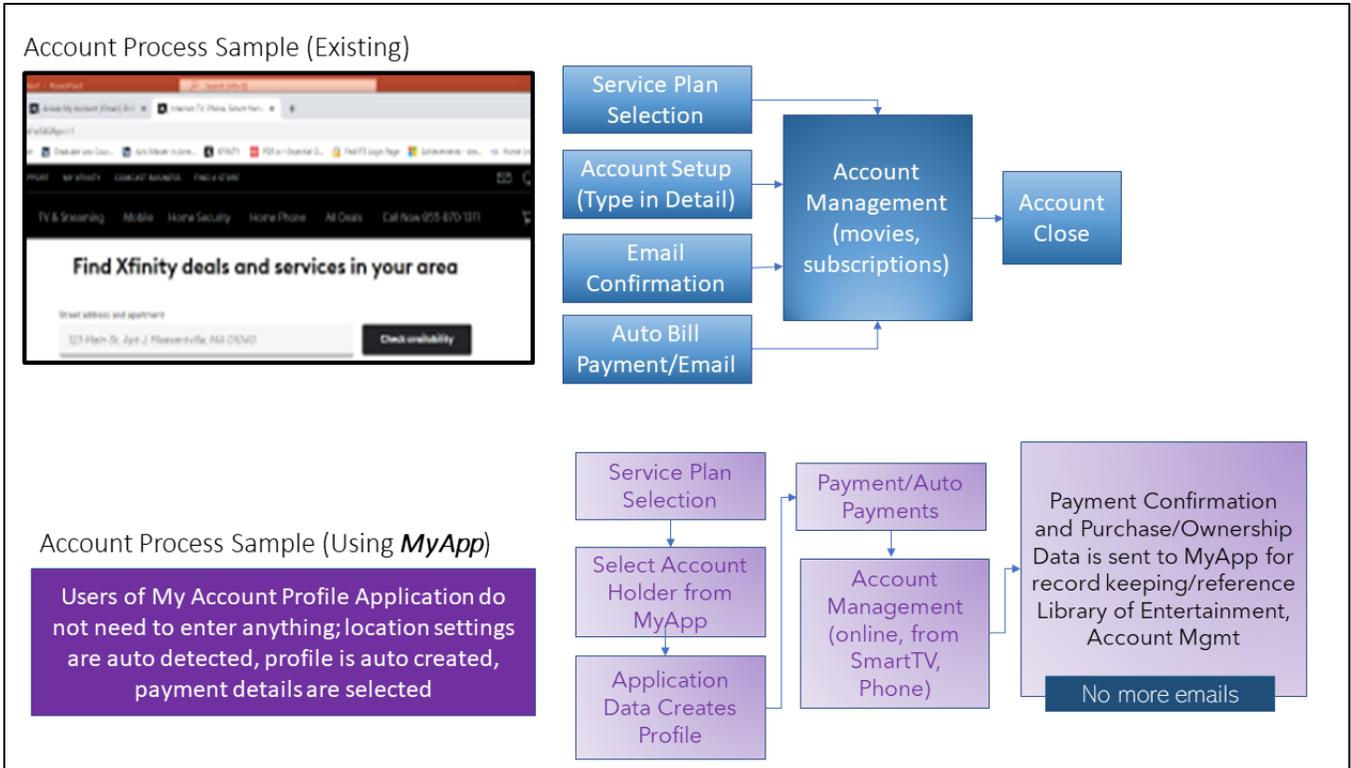
BROWSER RELIANCE

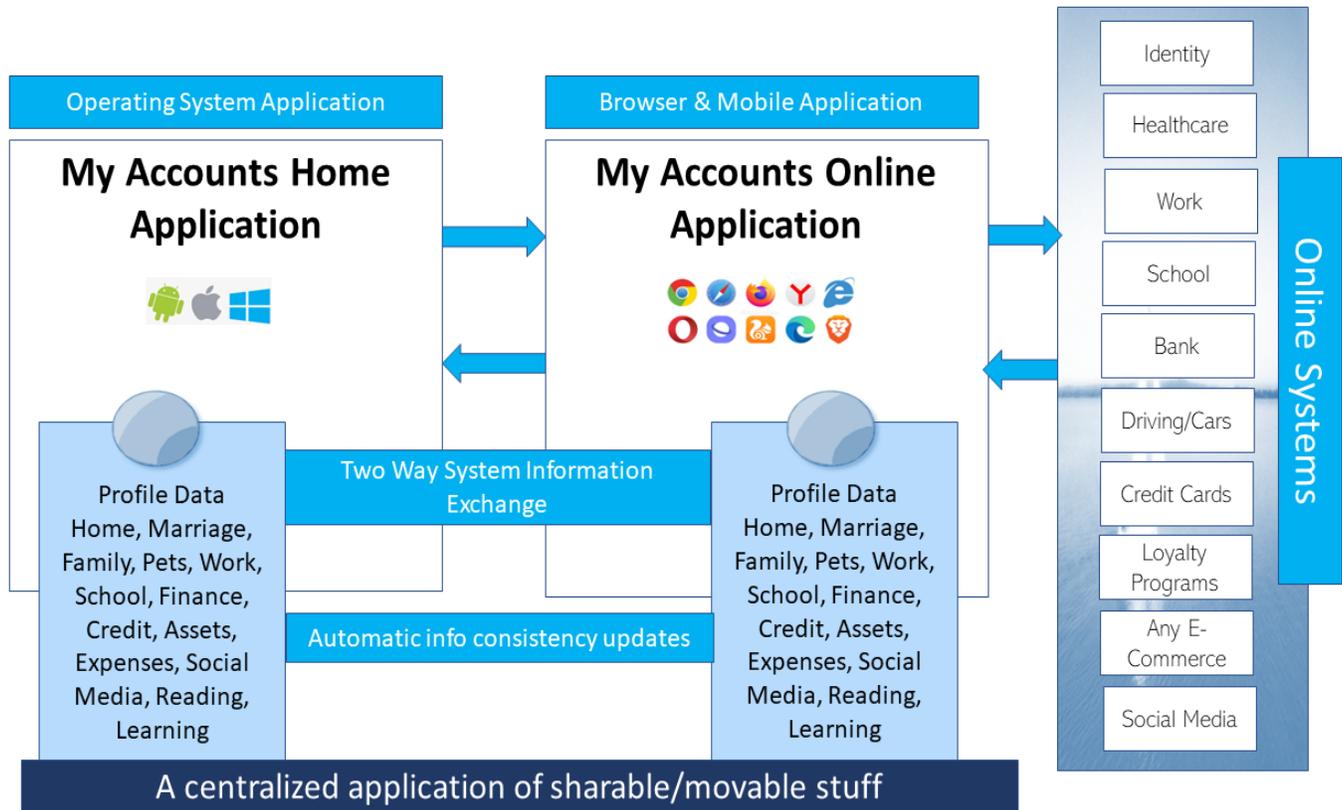
Since internet designers create profile and account pages for each new site, they can either stop developing this way and enable the browser to auto-create a profile account (a data transfer) or the browser can automatically fill in, complete, and submit the form. Most internet sites require confirmation emails and with secure profiling and authentication, this requirement and practice can be removed, or contained within the Application so that it is better organized and set apart as account management tasks. While the browser is critical to the applications operation and must have it to function, the application should not force the browser companies to do all the work, but they must work together smoothly and effectively. It would be most secure if there was a formal process in place to enter, validate, and verify personal information that connects to the official record holder of the information, but that would require cross-checks from multiple internet applications which may or may not have online sharing systems. If the application owner uses the application correctly and stores their personal information, with digital copies of identity data, such as driver’s license, passport, birth certificate, then there is no need to require authentication from the source – copies are again duplication. A source profile should exist but cannot be solely managed by the US Government. It would be wise to validate the information against the official record keeper, and for a multi-exchange function to exist, but that would require development of applications and integration with many different types of companies, organizations, institutions, agencies, and whatever else exists on the planet that has or enables and uses digital or personal records, both on and off the internet.

If the entire population, or every user with an online account used the application as their main identity source, then automatic verification can be used and trusted, as well as automated electronic legal processes, such as name changes, change of addresses, certification of official records, and the protection from tampering or unauthorized use and duplication. One application can be created with the same database design and certification criteria that is not shared by all but is similar in design with different views and access levels for its users. For example, a user’s Account Management Application can always be subject to government audit for identity matching and information validation tasks with permissions granted to make changes from its creditors, merchants, and select users. Specific architectural and database design matters with permissions and criteria must be created with the overall goal of sharing from one source, with update, send, and receive capability that does not require excessive duplication of information or constant email confirmation and management. A consolidated site of ‘memberships’ or ‘account holder’ internet reports based on the existing internet design was considered but found it to be a business-as-usual approach, with another layer of management added on, which would reduce the burden, and simplify subscription processes, but does not advance user insight and give them a valuable tool to

manage more than just a login and email contents, which is not nearly enough. Although each online account offers a management console, it becomes a manual plus electronic reconciliation process of cross checking, validating, and manual inputs of bill paying, interacting online, and shopping. In short, people can function online, buying, selling, and communicating but they are forced to create their own processes and organization system, which is insufficient, and a simple application does not solve the problem. After online transacting begins, the average user has about 15 to 20 account profiles to manage – AT A MINIMUM.

Below is a comparison of a new account creation and management process:





While online setup and auto-bill payment are convenient features, it is another account that must be managed, and another site where ownership and subscription data is stored, and emails are generated – separate from all other activity. Subscribers of all online services with accounts should have a centralized account management system and the information should flow from the profile and financial system to the new service and back to the profile or account management user application. Additionally, ownership and subscription data should be viewable next to other digital media assets purchased or subscribed, to create a real entertainment profile, use statistics, and to offer better suggestions and ratings based upon real data. Additionally, parental controls can be better managed from a single application, rather than individualized sites. This example only pertains to account setup to show how information from the profile application can autogenerate accounts based upon user initiation and payment – removing the data entry burden. Email confirmations can stop because information can be managed in the single application for services and digital online accounts. Currently, user’s media sources are plentiful and there is no intent to consolidate all media viewing or to create reports of all media content, unless purchased. Improved data sharing with an application that consolidates this information gives user or household insight into entertainment spending, more organized account management, and improved finances. One of the major purposes of what is being called “MyApp” is to reduce the authentication step and automate security with application tokens or some form of verification with up to date and verified “My App” data. All accounts should be managed within MyApp, some unseen and automatic, some user initiated. Another intent is to reduce manual confirmations and notification that are sent via email by implementing account integration within the application to show payment, verification, activity, and

ownership data. Current standards are individually managed, requiring duplication, multiple site visits for data management and verification. Application integration can eliminate most of these problems.

In this section, a short comparison will show the current design, which is a ‘many to many’ relational structure in comparison to a one-to-many design, where the “MyApp” is the source account, sender and receiver and will interact with government agencies, merchants, public and private institutions, as well as other online applications using their existing design, which is the standard account profile management system of one per application or site. The concept of one profile with an automated data transfer that is user approved and initiated is sufficient to create a new account in any internet application, provided the applications have the correct profile creation standard. Directives or standards must change to the account creation and management process on each site and allow the auto creation of accounts with verification inside of the “MyApp.” This change can only take place if accuracy and security is guaranteed. It is no secret that profile information can be automatically duplicated without permission, so security is critical. The two-factor authentication with a single sign on solution is appropriate, but the type of proof required should change from username, password, and secret questions to actual certified documents. This is the foundation and the best feature of “MyApp” as well as summaries of all Internet Accounts, regardless of monetary exchange of goods and services.

IDENTITY VERIFICATION AND CERTIFIED DOCUMENT MANAGEMENT

Every citizen of the United States has at one time or another, used or must use a government issued identification card, a driver’s license, a birth certificate, or a passport. Sometimes two forms of identification are required. The application will provide an organized online system to store and use certified digital copies of these official documents. The certification process should be simplified, and technology advanced to provide high quality digital photographs of these documents or cards, as well as a certification number, maintained at the certifier’s agency. When systems are effectively connected and the high-quality digital photograph of the cards are acceptable and correctly certified, the information can be directly sent from one application to another. This process will work for new advanced digital identity users.

Users without advanced digital identity certifications might need to follow other processes until the entire internet advances. The application still offers a centralized and secure online location for storage and sharing of official documents for use, as requested by merchants for verifications, loans, and other transactions. Smartphones can be used to photograph identity documents, which can be required by the application, but these are often varied by company and insulting with low quality photography and evaluation or approval methods. When the documents are requested by a merchant, they can be easily accessed and sharing activity recorded in more than one database to show a specific trail of use – who it went to, for what purpose, and the system could contain specific detail on the laws surrounding the use of the identity and specific data document to enable better records disposition processes and security policies. Reminders can be set to prepare for the renewal of official documents, such as license expiration, registration, and insurance coverage periods. There is no system to manage all this in one single location; it is a manual user-initiated process. What level of detail and organizational strategy is what must be worked out? Avoiding duplication is of the utmost importance, but not to the point where only the requestor has the information. It is unfair that consumers and users of the system have no record keeping system given to them free of charge with advanced features to show where and how their information is

used. Profitability of the application exists for advanced features, not to be presented or offered as free trials, separate installs, or ‘subscription’ based services, or even ‘add-on’ plugin browser functionality or single “apps” like the browser companies currently offer.

Simplicity Versus Layered Bureaucracy

The driver’s license or photo identification from the official certifier, being the Department of Motor Vehicles was and is suitable for in person verification. It currently works for online verifications, but again, it requires additional photography and sending via email or through a document uploading system. If there was a single profile system, the driver’s license official record would be stored there, along with other verification documents that can be shared upon request and approval by the individual. A three or more-system exchange of information makes sense, and it saves time, space, and money when the official digital record can be shared, updated online, and managed in one location. Currently, people must use an online form with the DMV to change addresses, or use a postal service change of address form, neither of which updates any credit card system, social media account, educational or healthcare institution or other parties that have your address in their contacts list or phone book. The source record should be able to update all records using auto update functionality. Just a quick count of locations where an address change is required is equal to the number of online accounts, plus friends, family, co-workers, and anyone else who has your home address. Listing addresses online, viewable to all for all is unsafe and unwanted, therefore old practices must cease. Phone companies can no longer publish home addresses, in fact, they are not as often used because regular phone lines are not as often used. The same is true for cellular phone numbers and the same update procedures are needed there as well. A system cannot scan every database online to locate and update old information; therefore, a new profile process and data policies must be established. In a case of layered bureaucracy, where one date field or address field is connected to others that affect the outcome of activities and decisions, such as credit card approval, use, access to locations, and other reasons drivers’ licenses and identification cards are used it causes a case of dysfunctional authorization and disapprovals. The law in most states require residents to update their address with the DMV within 10 days, but the DMV does not update any other government or privately owned and managed systems. Enabling the DMV to be the source record keeper of the information is good, if citizens can be offered a more efficient way of address and authorization management for identity across the entire internet, otherwise it remains an online system where more than one piece of identification and matching is required – often based on 3 or more official documents and even still people are able to steal identities, misrepresent themselves and be denied because of bad information management. Citizen’s once was able to simply submit a change of address with the post office and the DMV and everyone would be updated, but this process does not exist for online systems and following the standard old update process the same way is not suitable for today or tomorrow’s internet, or “MyApp.” Additionally, the attempts to misuse or falsely represent and misuse names, addresses, and phone numbers were not tracked. This must change and be added to a user’s profile, with statistics and reminders of the law, as well as background as to why this is important.

Initially it seemed identity documents were not often requested or used as verification for online transactions if personal details and financial data was shared. This is not true in all cases. The next example shows how “MyApp” will work with online transactions where identity related proof is exchanged, as required by the merchant, as well as how it will be stored and secured or managed using “MyApp.” Since this is not a single user system, but a household system, it must manage information for more than one person with suggestion or instruction on best practices for the use, restrictions, and

responsibilities of sharing data inside the household and outside the household. The application will provide an organized place to maintain account sharing agreements, use policies, information, and make account management more efficient, showing information trails, as automated as possible.

Advanced integration would enable location tracking, summary reports, mileage, and other useful statistics for both the user and manufacturers, retailers, friends, and family. Most beneficial will be the lengthy record keeping it offers, enabling users to review their history dating back to the first day they drove a car, until their senior citizen days and show miles driven, locations visited, number of cars owned, and maybe even some personal stories with a journaling and sharing interactive feature with online social media systems. Its database architecture will work best when it can both send and receive, interactively with agencies to update and recertify information, such as license, registration and create official driving records, more useful than a derogatory system' of reporting and verification used by the Highway Patrol and DMV, but one that shows experience using mathematical statistics.

The best technical approach has not been determined, but an application programming interface is being considered, as well as a new development standard for account management. Its success depends on the usefulness of the product which is of much greater value when information can flow in and out of the application with minimal effort, high accuracy, consistency, and security. When integrated, it can work with other identification-based information systems that are used for employment, physical building security, and government positions. The image below only presents a "rough" concept of what it might do for citizens.

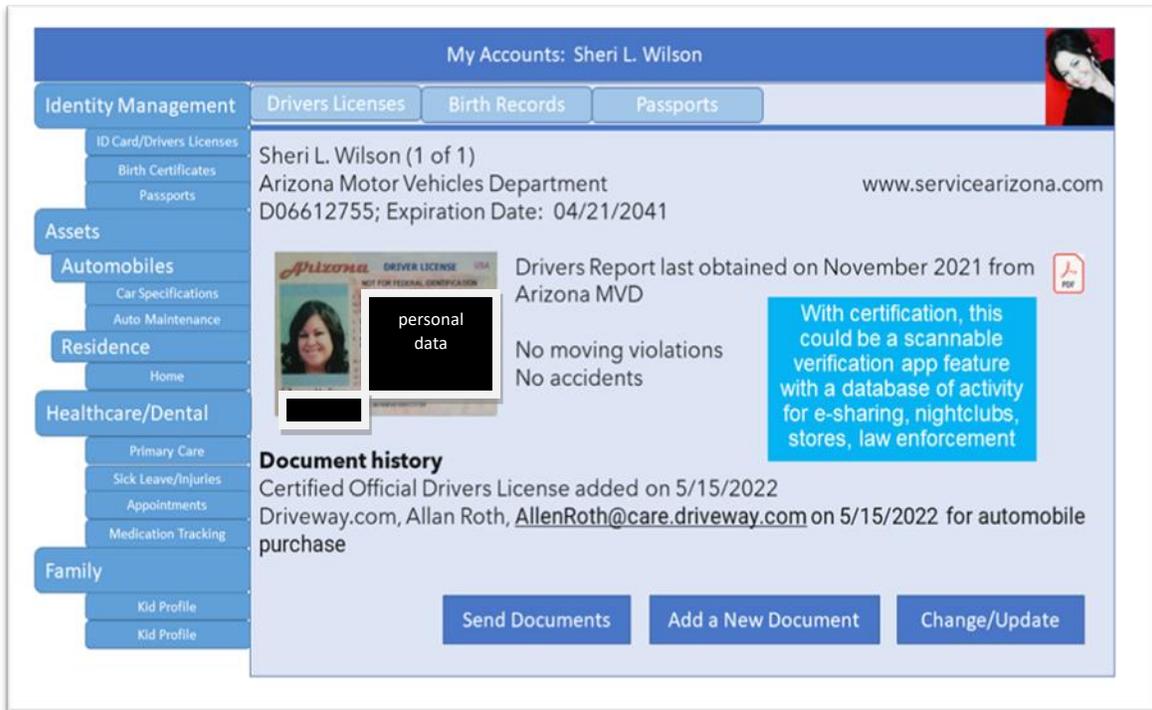
If a premium SmartTV entertainment channel can be ordered and added to an online bill with the click of a button, then accounts can be automatically created or changed, but security and the current design must be corrected and development using old methods must immediately stop. Ideally, the systems will all function as a household account, with user level information, viewable on SmartTVs as another available device for presentation, household meetings, and in its advanced stages, auto video and audio compilations, but the focus is not on entertainment alone. Can you imagine video phone calls made by kids to meet at afterschool to play on the swings or organized sports systems? Not with today's application approach.

MASTER PROFILE ACCOUNT SYSTEM: ONE-TO-MANY DATABASE CONNECTION
 AUTOMATICALLY – no more form filled account creation systems or duplicative typing.



Integrated account management, with a single profile system, along with new record keeping modules and options for legally binding agreements with non-formal virtual mediation and arbitration practices to resolve disagreements, financial problems, and other contract disputes electronically and quickly, leaving less room for ambiguity and surprise or learning after the fact. It's not all about disputes, but life's management beyond "just getting there and showing up, but truly making a change to the way we view people, places, and things." A shared application of live information that provides user insight and connection to others in financial agreements, such as co-signers, co-habitants, wives, husbands, and other close creditors offers early alert and resolution opportunities to prevent serious mishaps. Sports and leisure enable hobbies, skill tracking, development, and long-term record keeping beyond a picture. Integration with formal legal processes, institutions, and other systems enables rapid resolution and growth. Location tracking increases trust, digital media entertainment sharing improves relationships, and information or resource sharing lowers cost of ownership. A family application is a place to not only store 'official' identity documents, but also Christmas and birthday wish lists, purchases, dates, reminders, budgets, plans, and memories. Even greater life management is gained when electronic responsibility or chore lists, report cards, and assignments are tracked, saved, and rewarded, along with goal setting tools for getting good grades and staying out of trouble.

While “MyApp’s” main purpose is to serve as an Official Record Vault, it can be organized into an access-controlled place for family or personal property and asset management to organize and resell or reserve for a legal estate will and trust, beyond ‘after death’ and insurance purposes. It can also be used as a Family Healthcare system to manage not only appointments, but preferred medication, uses, reactions, and gives accurate insight into health patterns that can extend well beyond the immediate household members, but also guests if necessary. If connected to government systems, it can be a user managed official record system which offers ease in projects, tax payments, assessed values, rentals, and real estate sales or what is summarized as a multi-level shared community system – non-marketing and advertisement based until the system truly knows the consumer’s needs, wants, and is aligned with set goals.



ORGANIZATION AND SHARING OF DIGITAL CONTENT

This is a broad category that comprises photography, music, television, self-created works, and copywritten media. While the SmartTV and the Internet has made it easier to purchase and download movies, music, share and print photography, and publish journals online, it has not offered well organized account management systems or ways to manage preferred sites, vendors, or personal digital assets. People use their own methods of file organization, sharing policies, and use social media and email to share, following standard internet policies. Smaller group applications enable better security, but it needs a structured system that separates purchased copywritten sharable and sellable works from personal works, along with features and integration with applications that create products from digital media. Applications such as Shutterfly, Instagram, Facebook, CGI Print, Vista Print offer digital uploads, customized product creation and delivery, but there is no integration with the personal file system to show those photographs, documents, or works were published, shared, and there are no statistics or financial reports, showing there is no control over copyright or tracking and protection of people and media.

Management of these applications are important for the future of business and individual media accounts. Better application designs enable the creation of more advanced family and educational systems, such as yearbooks, family albums, and trees, as well as creative preservation of new and developing artists, such as your child, friend, or self. Integration of educational systems with personal business systems and child work areas offers an organized area to maintain and preserve more than just school transcripts and friend pictures. Advanced compilation programming can create consolidated annual works for publishing, and with good mathematical reporting, can show progress beyond what a school system does, but also what family involvement, healthcare, and other data provides insight into the development of mankind or society. The way digital content is currently structured does not allow for interactive viewing, commentary, or opportunity to create virtual meetings and share interest in entertainment choices. The more people watch and share their thoughts about today's media, television options, delivery methods, programming, content, and group sharing, the more the people govern themselves and shape society, rather than Government and Hollywood shaping it for us, using old methods. We currently operate in a society where government and now public and private companies set the requirements for what is considered acceptable, which is dangerous for such a gigantic variance in standards, knowledge, and experience.

The "MyApp" system should not only keep a running account list on how much was spent and enable easier account creation and management, but also provide access to regular reports on purchased or gifted products, television habits, choices, preferences, and ownership, which can be used to share and sell media or serve as conversation pieces and educational experiences. If Suzy has an organized digital library of movies she owns, contained in a list in the "MyApp" and Lucy also uses the "MyApp" and is just building her library, she can rent movies from Suzy, and they can follow the same process for Book Groups. This level of sharing not only helps them maintain digital libraries, but also provides others insight into their skill, interests, and achievements, as well as gives them opportunity to buy, sell, and share in the entertainment business at a lower cost. They can create a re-occurring event to gather on a specific day to watch their favorite series, bringing them closer together physically and involving others virtually who cannot be present. Other application integration opportunities are food choices, refrigerator inventory, recipes, and coupons. This is another opportunity where reports can show meal plans, guests, habits, routines, surprises, food ratings, and interactive record keeping or 'virtual gratitude.' At the least, it can document medical conditions and allergies.

If the "MyApp" is limited to just a profile management system and does not grow to manage life information beyond financial spending, then it has accomplished nothing more than to make logging in and managing passwords easier. There are password vaults for that. The intent of the "MyApp" is to create a household system that integrates with government agencies and institutions for full identify verification, data management, and to make the process of electronic data sharing more efficient. A third phase of its growth is to integrate with other users inside and outside of the household for data comparisons, sharing, which can ultimately create community and social reports beyond a 'streaming social media' feed of pictures and status, but of real value that drives change in the economy, life habits, personal awareness, responsibility, and enjoyment conducting business online. Currently, no system or application exists for users to manage their own data; they are left to process forms to request physical documents, which is one of the major reasons the internet is a risky place to do business. Although systems are improving, they are extremely inefficient, duplicative, inconsistent, and cannot be fully relied upon. A good system offers reports, summaries, statistics, and personal insight for growth and retrospect, as well

as goal setting for the future. Small applications without integration cannot achieve this. It can be argued that the Windows or Apple Operating Systems offer file structures that enable efficient management of digital information, but each user is left to their own organizational skill, of which many have varied standards and no specific direction for the protection of identity, finances, and digital assets.

No digital asset inventory system exists for the everyday person and a good one would integrate with choice E-Commerce vendors. The typing and data entry burden must be reduced to only what is necessary, with everything else electronically shared and managed in a centralized personal account system. An Official Document Repository and Sharing System does not exist, forcing users to store Digital copies of Official Documents and use their own sharing policies and procedures. Non-standardization leaves users to their own skillset and technology budgets, which is varied.

A list of active internet accounts can be maintained using Bookmarks, but there is no central management location or shared profile, causing excessive duplication and follows the physical management process, yet uses the computer. This is more than ‘cumbersome’ when it comes to change, edits, and requires human creation of the same level of variance and non-standardization as their abilities to store and manage digital official records. These are the problems that cause security problems, storage issues, document distrust, and financial mismanagement. With the right kind of management interface or console, things can be consolidated, and data can be shared which opens a wide range of home management solutions like those used in business – personal accounting, inventory, investments, projects, goals, plans, scheduling, education, associations, locations, mileage, and be an organized system of legal value with more streamlined processing.

Active Internet Accounts

Spotify	Experian
xFinity	TransUnion
YouTube	Equifax
YouTube Music	Veterans Administration
Google	VA Home Loans
Gmail (2)	Renters Site
Outlook (3)	DMV
Facebook	Universities (2)
Instagram	Bookstores (3)
Pinterest	Insurance Company
Shutterfly	Homeowners Insurance
Photobucket	Amazon
LinkedIn	Walmart
Craigslist	Target
Utilities	Bath and Body Works
CellPhone	ThredUp
USPS	E-Bay
Autotrader	Wordpress
DriveTime	WebHosting Sites
FreeCreditReport	Joanne’s Fabric
Grubhub	UberEats

Every site stores and uses personal details. If one personal detail is changed, each site must be updated manually. Each site has its own Username and Password

This is a list of over 40 Accounts; all accounts connect to credit cards, banks, and email addresses

An auto-profile management system would require one update that would manage an update to all, but an integrated app would provide summary data

\$22,000 in online transactions in less than a year; 2 security breaches; 1 address change; 5,000 Spam Emails;

This does not include advertiser emails

There is no single account management system

Account Summary – Consolidated System

User Preferences/Account History
Sheri L Wilson

Service/Goods	Company	Site	Type	Membership Plan	Monthly	Paid to Date
Physical Mailing	USPS	www.usps.com				
Shopping	Amazon	www.amazon.com	App	Student Prime Member	6.99	83.88
Music	Spotify	www.spotify.com	App	Free Membership		
Television Channels	HULU	www.hulu.com		Monthly Basic	6.99	83.88
Greeting Cards	Postable	www.postable.com		Pay Per Card		14.99
Business Printing	VistaPrint	www.vistaprint.com				21.75
Home Utilities	LocalCo	www.utilities.com		Cost Varies	136.75	786.28
Car Insurance	Geico	www.geico.com				
Mortgage	VAHL	www.vahomeloans.com		Mortgage	505.03	6010.12

Account Numbers and Login Information can also be stored, but should be separately secured

In a Two-Way reporting system (or connected to Master, Merchant, and Bank) special reports can be created and primary data managed for change, verification, update, and confirmation of payments, receipts, spending, etc. – Further organization can separate required vs. optional spending, reoccurring from one-time payments, and show quarterly, annual, and lifelong reports, investments, ownership and when connected to official documents, provides better and more accurate reports than a **Credit Bureau Report**; Account permissions can be granted, changed, monitored, as well as ownership data, location, and shared with government agencies

The above table is just a simple summary view that can be created by a spreadsheet, is non-advanced, but provides a simplistic understanding of how things should be tracked, but with different levels of viewing, using icons, summarized dollar amounts, and however the user chooses to configure it without causing too much confusion and extra work. They should also have scenario-based tools to create estimates and help make decisions, beyond just finances. The account management should be connected to the original account and data presented in real time without having to visit 40 different internet sites to get the information. A software compiler can complete these tasks and even calculate variances, showing special circumstances or changes. The credit bureau Experian offers a financial tool that integrates with personal banking and credit, offering ‘credit boost’ opportunities, but doesn’t give much more than what an online bank does – again, another attempt to offer valuable connected software of no real value, other than a 10-point boost.

Account summaries and profile activities are managed on each site, requiring any account or data compilation to be completed manually, with documents and data stored in over 40 different locations. When all systems or accounts are connected, customized reports and summaries can be created with different types of sorting, viewing, and categorization. A document management feature can associate contracts and official correspondence with Accounts, for record keeping purposes. New certified reports can be created and used for personal ownership, activity, healthcare, budgeting, parenting, and other legal reporting or educational, economic, and social statistics. This is especially useful for credit and financial improvement and a necessary system to show proof.

THE “MY APP PAYMENTS SUMMARY”

The image on the next page is a sample of what the financial section of the “My App” would look like, but greater detail and record keeping for Online Transactions. Advanced development would enable financial training, goal setting, budgeting, and other integrated features beyond what the bank offers and would be connected to provide available balances or even full integration. Browser tracking can also assist in managing hobbies and interests, giving research, and reading or learning credits to the inquisitive. It is true the education system needs improvement to centralize all formal and non-formal learning, as well as offer a certified exchange system of proof beyond the ‘diploma’ but how the educational investments changed workplaces, households, lives, and perhaps society non-categorically defined by ‘demographics.’

When connected, it will automate payment reports and confirmations with running totals and balances. It should maintain a Digital Library, Product Purchases, Plans, Projects, Goals, Student Reports, Expense Summaries, Work, Income, Earnings, Payments by Asset Type, Legal Ownership, and ability to authorize transactions, as well as a formal account closing and a full “not fool” system update process. It should also have scenario tools for finance, relocation, family planning, division, and combination of households, assets, buying and selling. It must be maintained online and accessible with different views on many devices. If integrated correctly it can show all online activity in an organized and insightful way and should serve as a Summary and detailed system of all Internet and paper transactions. Features that are not applicable can be hidden and shown when or if they become useful and it should educate its users as they use it and should contain shortform legal information for simple agreements, storage sites and database detail for formal contracts, and obligations. It should be able to manage multiple users by legal entity or household. It should be designed around legal requirements, which are often unknown until personally violated or financially affected.

CASE 1: CAR BUYING ONLINE

The auto dealer has an online application for pre-qualification/credit approval that auto-generates buying terms. The offers are based upon the receipt of proof of information submitted and final credit approval, the transfer of agreed deposit funds. Photographs of the goods and text-based description of terms and services are clear, with specific pricing and ability to add to the sales contract. The offer process is simple and takes place within minutes of finding the right automobile. The dealer or finance company offers financing terms, and the buyer accepts it or changes their price range to fit what they can be approved for. This is a standard offer and acceptance process, subject to receiving actual proof. The Proof is a set of Acceptable Required Documents sent to the Dealer and accepted as authentic proof. This process is not standardized or automated where many documents are collected by the buyer from many different account sites and sent via email using photography, scanning, saving screen captures, and forwarding account file exports. The process could be lengthy if documentation is not already stored and if users do not know how to access and share effectively or don’t follow the same submission and quality standards.

This process and many others, such as Insurance, Home Buying, and Credit Management are similar, which is why a Database and Document Management System is necessary. Although purchases can take place without it, much time can be saved and better management of ‘proof’ sharing can exist, without individual verification for each transaction.

DATA REQUIREMENTS VARY

Identity, Income, Physical Residence, Mailing Address, Payment of Bills, Credit Reports, Insurance – all evidence or proof can be obtained and should be accessible and stored for the most accurate and up to date information without a manual data gathering process. An automated integration system would provide this. Just like ‘sensor’ automobile data and GPS tracking, technology can become more useful for personal record keeping.

Connections to other systems, such as Personal Inventory, Banking, Motor Vehicles, Credit, Social Media, and personal accounting systems would receive automatic data entry of the new contract and people can share this milestone with their friends and family in a less daunting and more leisurely way and dealerships can gain qualified referrals for a streamlined, hassle free enjoyable buying experience that is not based on the car itself and how the buyer feels about how it looks, but how the buying experience actually was.

Advanced application integration can provide valuable user insight on product use, and help make not only manufacturing improvements, but also process, and community improvements where the car goes if connected to other information systems where use statistics are needed or missing – such as personal insight on actual mileage, gas budgeting, maintenance records, and insurance.

ABOUT THE COMPANY

Savvy Smart Solutions, LLC, is a small, individually, and independently owned Technology Consulting and Services Company. It was established in 2011, starting out as what industry called freelance work. Clients were serviced on small scale projects and several ethical and moral issues were presented that helped establish the businesses work system. The company was started when social media first began, so it was used as a test site. New systems or software is not only tested by the software company, but also its users and independent consultants.

Online systems were reviewed for marketing and advertising for both personal and business. It was found that there were no ethical and moral guidelines for the system, therefore, social media became an area of risk, although it appeared to be an excellent marketing, advertising, and communication system. The company focused mainly on new internet sites and stores for customers, with some marketing and advertising tasks. Because of the third-party software designs created by Facebook, Google Advertising, and other systems, Savvy Smart Solutions, LLC was dependent upon their systems and promises. Expectations of customers was often skewed, meaning they did not understand what it took to design and implement a site, with a consistent and profitable marketing or advertising strategy and many customers did not actually have the money to invest in the Technology. This became an issue in Social Responsibility because the Company taught its customers how to use social media for business, as well as other third-party software to build internet shopping or sales sites. It seemed customers expected immediate profits and top-level online exposure without paying for what technology services are worth. Managing expectations became the job, while implementing solutions and training customers. While designs were standardized and easy to implement, marketing and advertising became the area of ethical and moral dilemma because there were only promises and very little proof that advertising and marketing investments returned a profit. Promises could not be made, and systems were set up without guarantee. This caused many failed attempts to create new online business that could maintain internet presence. The company faced other ethical and moral challenges in deciding what types of customers it would support. Even during tough economic times, it maintained a good sense of moral standards by declining to service customers who were demanding, and those whose businesses did not align with Savvy Smart Solutions, LLC.

Since the Company managed financial exchanges of money in online systems, it was responsible for implementing secure credit card transaction systems. This required the company to train its customers on implementation, security, and use. Savvy was responsible for the technical configuration and coordination with customers and banking institutions, while learning the online financial interchange system. The new systems solve many problems in online theft or security breaches for online transactions, but the customers businesses rarely resulted in long term successes. This made the company look like it was unsuccessful in servicing customers, when the issue was that the new businesses did not maintain long term interest or that their ideas were not profitable, and their companies could not remain online permanently, therefore the independent Savvy business also lost interest and shifted to a research company to study technology and innovation more in-depth.

Social responsibility only related to what the online community thought of Savvy Smart Solutions, LLC and its new and improving reputation and not how Savvy affected the Social Community by advertising and marketing for its customers. Because social media was used to market and advertise

Savvy and the new companies it worked with, the system was useful, and because the other companies failed to work for the long term, it damaged Savvy Smart Solutions, LLC reputation, as well as caused business failure. The main reasons seemed to center around independent contracting, freelancing, new business requirements, customer demands, third party software, and competition with big business with no support for small new companies working in Technology. Social media marketing and advertising is a cumbersome task that required manual and constant sharing to gain business exposure for other businesses, while Savvy Smart Solutions worked behind the scenes. The work showed that Social Media Marketing and Advertising can be a full-time job, but there are automation strategies to truly market and advertise businesses and topics of interest. This is where Corporate Social Responsibility lacks – not willing or unable to mentor, support, and establish business rules and exceptions for new Small Technology businesses and its customers. The large Corporations should lead the smaller ones and create successful opportunities for the smaller ones, working together to create and improve E-Commerce, rather than letting small new Technology Companies venture out and fail. Some support was provided, but the company became not only bankrupt, but homeless, unable to start and maintain a business. This shows serious problems in the world of E-Commerce, Free Enterprise, and our ideals of business success. Although ‘training’ was available, there was no opportunity for financial backing and investment from other groups and there were no solicitations or invitations or offers for such support. This showed severe deficiency in the marketplace, making independent contracting, small business ownership, and any form of Technology Competition an area inaccessible to a woman, a veteran, or any professional capable of consulting, designing, and delivering secure software solutions for everyday customers.

These are not matters of ‘higher performance’ but ethical and moral issues the Technology industry faces where more honesty, integrity, and leadership are needed for Technology professionals. Either there is opportunity for new businesses, independent producers, and consultants, or its best that Technology professionals work in large already established businesses, as well as some information or guidance on what they can expect in earnings, profits, and risks.

Just the process of starting an official business without entering a government building still proved to be a lengthy and costly process where significant time and monetary investment is required. There are still problems in maintaining the business name in the online community, much of which is ignored, such as tax bills just for having a registered business name, even though the company does not actually perform profitable business or exchange money with other registered businesses. Much of the business products sold are to meet laws applicable to physical businesses, which is where more research is needed to know and separate the differences between physical storefronts and the E-Commerce community because business operations are vastly different.

Many topics related to Technology and Innovation, as well as in depth studies and lessons learned are available on Savvy Smart Solutions blog.

www.savvysmartsolutions.com

We are not finished



"I still don't understand why they are considered separate or categorically different, other than from a data management and organization perspective. Research into these things, beyond naming conventions and semantics, truly does give us insight if these are random acts or if categorization using leveling is correct. It makes a woman crazy connecting the mistakes of others and unraveling unfinished disorganized work, but it has become a life mission. People can contribute just by reading, understanding, and being forces of change for the betterment of all. We undoubtedly do not have the best of the best and although Artificially Intelligent Hollywood movies appear to, entertainment is not our only specialty and purpose on Earth or other planets. I know I *definitely* do have a way to improve things, but not by myself."

Sheri L. Wilson

Author of

"Systems and Internet Symptoms and Diagnosis"
and "Maker of Millionaires"

MAKER OF
MILLIONAIRES

KEYS TO THE
FUTURE

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