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## Managing the Enterprise-Class system

Historically, up until the late nineties and perhaps into the new century for many, the police applications were seen as 1) CAD and 2) RMS. In fact, for many, the CAD was the only real operational system whereas the RMS was really an index system (to locate and track paper files) that also produced summary statistics. Even if an agency had an RMS, it was not (typically) widely used, very *departmental*, and users became accustomed to rely on the CAD for up-to-date and tactical information. This was very evident to Versaterm as we replaced numerous PRC systems – everybody wanted a CAD session and it was very difficult to get the mind shift necessary and switch their focus to the RMS as their operational system (it already contained the CAD data+). Soon after delivering direct and mobile report entry in the early '90s, Versaterm started to recognize just how important, and “core” to the operation, the Police RMS had become – so many people within the police organization depended on it! Coupled with the CAD and the mobile workstation products, you now had a complete enterprise application suite. An enterprise-class system is defined as a system or systems that spread across the entire organization, providing measurable benefits and forcing standardization of processes and commonality of information use. This paper is intended to draw a parallel between poorly managed enterprise level acquisitions and, based on a few industry “lessons-learned”, illustrate how to implement and sustain a successful enterprise-class system.

While Versaterm was gaining an appreciation on how our systems were penetrating within the organization, another phenomenon began to take shape in the IT marketplace, as more and more businesses and public agencies were buying off-the-shelf technology – they could no longer afford to custom build systems and still keep up with the fast evolving technology curve. Almost overnight, the SAP and Peoplesoft systems exploded onto the market replacing the traditionally in-house developed financial and human resource systems. I will use the acquisition of these types of systems, and how they were typically acquired, to illustrate how the buying market has (or must yet) mature when acquiring an enterprise-class system.

Initially, for many buyers, a COTS (Commercial-Off-The-Shelf) system really meant that you bought a proven product and then had it customized, beyond recognition, to fit your particular *unique* processes. Because in-house systems had grown up with the organization, they were often tailored to handle every little quirky business process the private or public agency had developed over the years. Although adopting “best practices” was bantered around freely, it was seldom “practiced” – everybody worked in their own little silos with processes, rules and guidelines that “could not possibly be given up or changed”. The processes seemed to be, more often than not, more important than the end result. Even though often, no one could explain *why* those processes were implemented in the first place!

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The result of trying to modify COTS products to reflect all the archaic legacy processes resulted in an abundance of fantastic IT failures! Many of the system implementations failed for two reasons: first, the buyers had integrators modify the COTS system to meet old and tired processes of yesteryear and second, buyers believed that, like the systems they were replacing, they would remain static for 5-10 years or more (and then perhaps be replaced again). Both reasons for failures are obvious, with 20/20 hindsight.

First, the buyer/agency didn't really understand that technology is not the solution but is simply an enabler in solving a complex business problem! They expected that you install the system, making as many changes as necessary to fit the organizational process model, and you now have a modern "system". This is known as "paving the cow path" or "putting lipstick on the pig" – take your pick. The organizations missed the opportunity to re-engineer their processes and adopt new and better practices that, as you might expect, the newly acquired system was intended to support. A new system should help support more efficient business practices, not necessarily mirror those already in place. Or more aptly put, if what these organizations had been doing was so terrific, then why are they spending all the time and money to implement a new IT solution?

Second, the classic IT acquisition model usually had system replacement built into their systems lifecycle (typically 5 years). The system replacement made sense when the systems were not deployed throughout the organization but contained within one or more departments within the organization. The ROI (return on investment) and system lifecycle had not caught up to the concept of enterprise-wide systems. And the new HR and Finance systems were in fact enterprise-wide where they were no longer confined to the HR or Finance department – they contained functions used by front-line operational people. The idea of being able to easily replace an enterprise-class system, after it took 2 or more years to roll out across the organization, was ludicrous – such disruption could not be tolerated.

So the lack of understanding of exactly what was being purchased and why really contributed to the failures. The world was changing and many buyers were shortsighted – not having the vision of how they were going to work in the future. Spending thousands upon thousands of days to modify an existing product to make "it fit" vs. adopting the best practices already reflected in the COTS product was a waste of time and money. By not understanding the scope and breadth of these new systems and how the impact of any significant change was now magnified, was the coup-de-grâce. The purchasing world had to distinguish between an application for a specific function and an enterprise-class system. Unfortunately it took years and years of spectacular failures before the lessons sunk in. A few key factors in acquiring and installing successful "systems" include 1) the software must remain evolvable and 2) when a system is used at the enterprise level, incremental or evolutionary steps are preferred since they are manageable – total system replacement is complex, disruptive and very risky.

So managing an enterprise-class system begins with the basic understanding of how to acquire such a system. You must clearly identify the objectives and the attributes of the system that will meet those objectives. Interestingly enough, the success is seldom about the technology but, in fact, it is almost entirely about affordability - a successful system is one that you can afford to operate and manage year after year – the total cost of ownership (TCO). All too often the buyers can get caught up into believing they are buying technology and don't see the difference between a system, used across the enterprise, and an application that is confined to a single department. The Records Management System is no longer a system for the Records section but an information repository that supports Operations, enterprise-wide. To be successful, the buyer must be ready to change and implement best-practices from others. Today's modern, enterprise-class systems provide a shopping list of "best-practices" from like organizations. When looking at purchasing software, whether it is a police system or other, you should look around at others who are using it and understand their processes to see if those processes can be copied and adopted by you. If a peer uses the software successfully and gains noted efficiencies – it means that you have the opportunity to do the same. You will have to be ready, and of the mindset, to change the way you do business and adopt and refine methods used by others. You can't be of the mindset that the software should change; you have to recognize that (typically) a mature enterprise-class COTS system already contains a much broader set of best practices than your organization.

So now that you have been able to identify the system that will best suit your needs, you need to install it and avoid the temptation of trying to make the system work the way you currently do. Whereas installation of an application can be quite simple – insert CD, install and receive some training, installation of a *system* is much more complex. To install enterprise-wide, you need to dedicate significant and capable resources since you are installing the system for the entire organization – not just one department.

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When asked what types of people are required for such implementations, we recommend that people should have 2 important qualities: 1) they must have system sense – this type of person will see the system behind the current processes and will quickly see the difference between “this is why we do it” vs. “this is how we do it”; and 2) they don’t want to make this their career but want to come in, work on the project and get back to their real job – a person who will eventually use the system is much more motivated to make sure it works! Before you start, you will need to begin with a good understanding of the various processes that exist today in the enterprise (establish a baseline) – in order to know where you are going, you have to have a starting point. A critical ingredient in implementing successfully across the organization is to have authority to effect change – more often than not the enterprise-level system will break down existing silos of information/processes by first exposing them, and then integrating them into the entire system architecture. As they say, “information is power” and there is nothing like information silos to create fiefdoms. It takes a corporate commitment and authority to implement a corporate system – an enterprise-class system is an “operational” implementation – not a technical implementation.

Once the system goes into production, you must be done, right? Wrong, there could be nothing further from the truth. All too often, systems will be left to die a slow death because the agency is under the impression that once in production, there is nothing left to do for 5 years or so (remember the old mindset of the system replacement cycle). In the Information Age, you cannot afford to leave the system to rust out – the need for information is ever-changing and the disruption caused by such frequent replacement is intolerable. The Internet changed people’s expectations and sophistication when it comes to technology – they want their work environment to be at least as modern as their home environment (or at least comparable). With this education, there are more and more ideas that continually build off each other. Therefore, you should expect your use of technology to change and adapt as users get comfortable with the new system and then drive for more advancements to support new or “postponed” processes (those that were not touched during the initial implementation). In a police organization, the push to do more often comes from those users who typically did without for so long – the officer on the street. You should expect this type of reaction and you should be prepared to encourage the innovation – examining and redefining processes is how you incrementally get better. The enterprise-level systems are designed to support this need – they are ideal for the “evergreen” model of system replacement where the system changes incrementally year over year supporting new features while modifying existing functions to satisfy the changed business process – you should never have to replace an enterprise-class system.

The innovation is expected to continue year over year. However, a critical factor in the success of the system, its longevity and use in supporting the organization is in training. Typically, within a police organization there is significant time and money spent on training – much of it mandated as minimum requirements. And, a significant portion of the training is on techniques that, in the normal course of the daily activity, you hope to never use. For example, at the latest Versadex User Conference, a CIO lamented that their officers are required to complete quarterly firearms training. This training, as he pointed out, is on something they hope the officer will never have to use! But, the officers never received on-going training on use of their enterprise-level computer system. Without formal training, the result is that the system-use evolves into a “hearsay-training” model and is compounded given promotions and transfers. That is, when moving to a new position, your predecessor shows you how to use the system based on their understanding (they may have developed a few quirks along the way and pass those onto you as a “standard”). Then, when it is time for you to be replaced at the position (you have been transferred out), you “train” your replacement on what you had learned and *your understanding*. As this continues to cycle over the years, you usually find entire sections that are not using the system correctly at all – they have evolved into poor and quite often, frustrated users. A sure sign of this problem is that standards pop up everywhere – lots and lots to choose from – where different divisions and/or users use the system the way “they think is correct”. The end result can be dissatisfied users and a call to “replace the system”. Organizations need to adapt to the new level of enterprise-class systems and the on-going training and support it requires to keep it tuned and running smoothly and effectively.

Both the innovation (looking for new ideas) and the training are what we call part of the *sustainment* program. It requires dedicated staffing, from across the organization, who will constantly look at all of the “projects”, set priorities (you can’t change overnight), review training requirements, review new features/releases, modify existing processes and much more. These little projects are like mini-implementations. We have seen many examples of the *sustainment* team over the years and we find that they are becoming more refined as agencies learn from each other – they share best practices! In taking a step back, it appears that having a core group assigned for a prolonged period of time (maybe 4 to 5 years) and then shorter assignments for others (e.g. 2 years) works very well. There is overlap, when replacing individuals, to allow time for knowledge transfer while the team is made up from diverse groups such as patrol, detectives, IT, Records, property, etc.

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As with managing the “system”, these teams continue to evolve and improve – their effectiveness is often demonstrated by the projects they implement. There are many different models but most, if not all, would agree that it is necessary if you want to keep leading edge and be successful.

An enterprise-class system is enormous and affects all aspects of an organization. Yet no modern organization can function acceptably today without one. Like a computer system, the organization must continually evolve and sustain the tools used to make it efficient. The enterprise-level RMS is a critical tool in supporting the operational needs of the police and this, like any system will require effort to keep it running smoothly.

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