



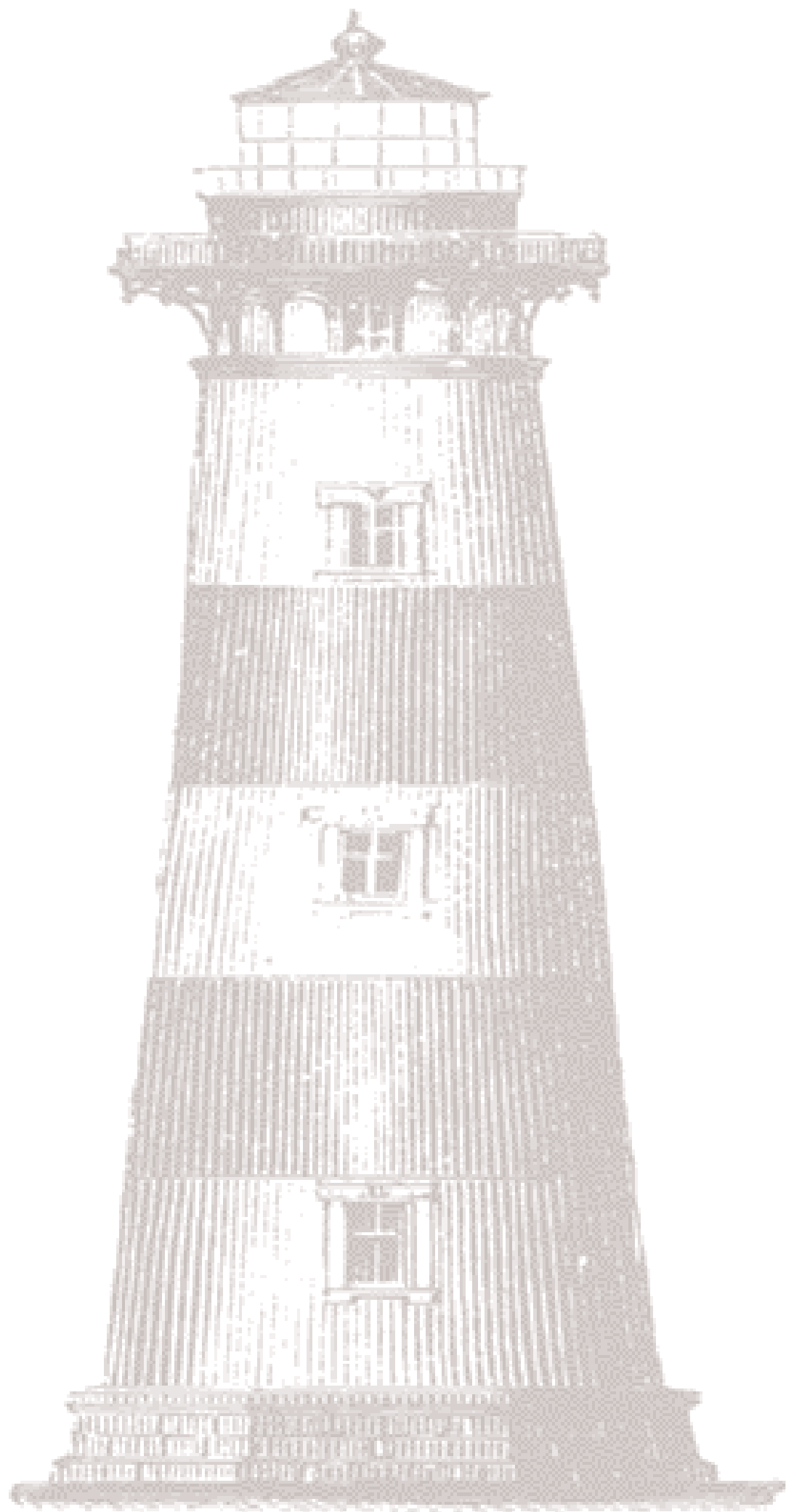
Reducing TCO: Keys to Selecting Government ERP Solutions

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About this Report

This report is based on independent research developed and executed by Saugatuck Technology Inc., who is solely responsible for the analysis, conclusions and recommendations presented in this report. The publication of this report is made possible through the sponsorship of CGI, makers of the AMS Advantage ERP solution for state and local government.

About Saugatuck Technology

Saugatuck provides research-based consulting and subscription research services that combine business planning and market assessment with first-hand research of executive technology buyer trends. Founded in 1999, Saugatuck is headquartered in Westport, CT. For more information, visit www.saugatech.com or call 203.454.3900

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Introduction

Driven by increasing costs, declining IT resources, aging infrastructures and workforces, state and local government organizations are shifting their traditional approaches to IT and embracing ERP.

Research shows a significant increase in government organization interest regarding enterprise resource planning – ERP – applications software. For most governmental agencies, ERP can deliver standardization of technology, data, skills, operations, and management. It can also create a unified layer of infrastructure upon which to cost-effectively build or adapt future technologies, systems, and operations – while enabling improved (and less expensive) management of both IT and business operations.

But there are crucial choices to be made when considering ERP software and providers. Most choices will enable standardization, unification, and other improvements. The right choices will enable significantly lower costs of acquisition, operation and ownership – lower total cost of ownership (TCO) that extends the useful life of the applications, simplifies the management of IT, and enables more and better management capabilities and flexibility.

This paper will present Saugatuck Technology research on the movement toward ERP in government organizations, with a focus on the IT and operational trends, needs and drivers as reported by U.S. state and municipal government agencies.

We will examine what state IT directors and other executives see as the most important aspects of ERP in state and local government, and what value they would most like to receive from ERP applications and vendors.

Finally, we will present guidelines for choosing ERP applications and providers, focusing on what state officials – and Saugatuck’s own research – indicate are the most important, most valuable factors.

ERP in Government – Not New, and Not Always Pretty

ERP has been present in many governmental operations for decades. ERP has been able to deliver significant improvements in governmental operations, usually through automation and standardization of specific operations or processes. But it has rarely been deployed or managed to reach its full potential. A variety of reasons have influenced this.

First, most implementations have been within specific organizations or departments, and/or have been partial – i.e., implementation of specific Financial or HR functions rather than of complete CGI, Oracle or SAP ERP suites.

Much of this has been influenced by budgetary restrictions. ERP suite implementation cost for state and local government in the U.S. has averaged tens of millions of dollars – and too many of these implementations have run over budget, and/or been incompletely implemented, both often due to the length of time required for implementation.

Additionally, the “siloe” nature of governmental organizations and departments, with mandated responsibilities and tasks, has required extensive (and expensive) customization of commercially-focused ERP applications. This customization in turn has been an contributing influence to many deadline- and budget-breaking implementations, as well as increasing long-term costs of maintenance, management, resources and integration with future systems and operations.

“Change in our IT, including legacy ERP, has been very slow in coming. We are undergoing lots of consideration and exploratory work right now, regarding replacing old ERP, implementing larger systems, looking at new solutions, and new ideas.”

- IT director, large western regional U.S. municipality.



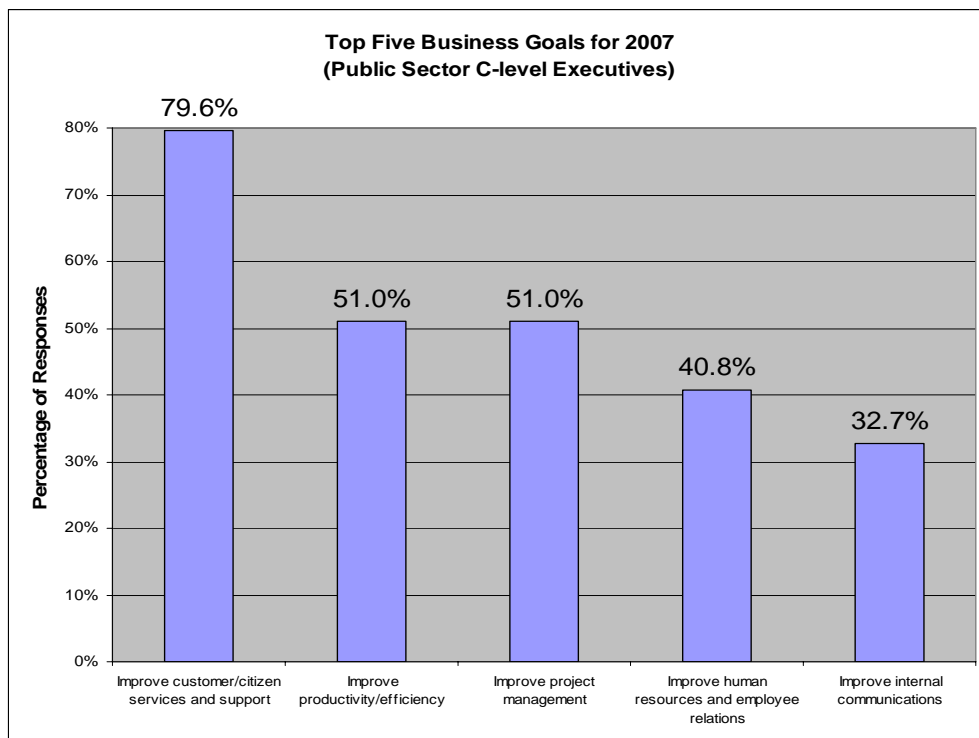
Unfortunately, some ERP applications and suites themselves have created additional “silos” based on technological restrictions. Most ERP vendors have built their applications, data types, and system/application interfaces around proprietary technologies that simply did not enable communication or interaction with other systems without expensive customization and integration skills and services.

In short, while ERP is not new to governments, it is also not realizing its potential often enough. It does play an important role in enabling standardization and simplification. But rarely do these improvements reach deep and far enough to deliver significantly improved costs, operation, and management.

ERP – Why Now?

Public sector executives, including government executives with responsibility for agency- and department-wide operations and IT, have some very definite business priorities for 2007 (and beyond). Figure 1 below summarizes these executives’ top five business goals according to survey and interviews research conducted by Saugatuck in late 2006 and early 2007. As can be seen, improvements in customer/citizen service, productivity, project management, and employee relations/ communications predominate executive’s plans at least through 2007.

Figure 1: Top Public Sector Business Goals for 2007



Source: Saugatuck Technology Inc. Data based on 2006 – 2007 research with senior (“C-level”) Public Sector IT and business executives.

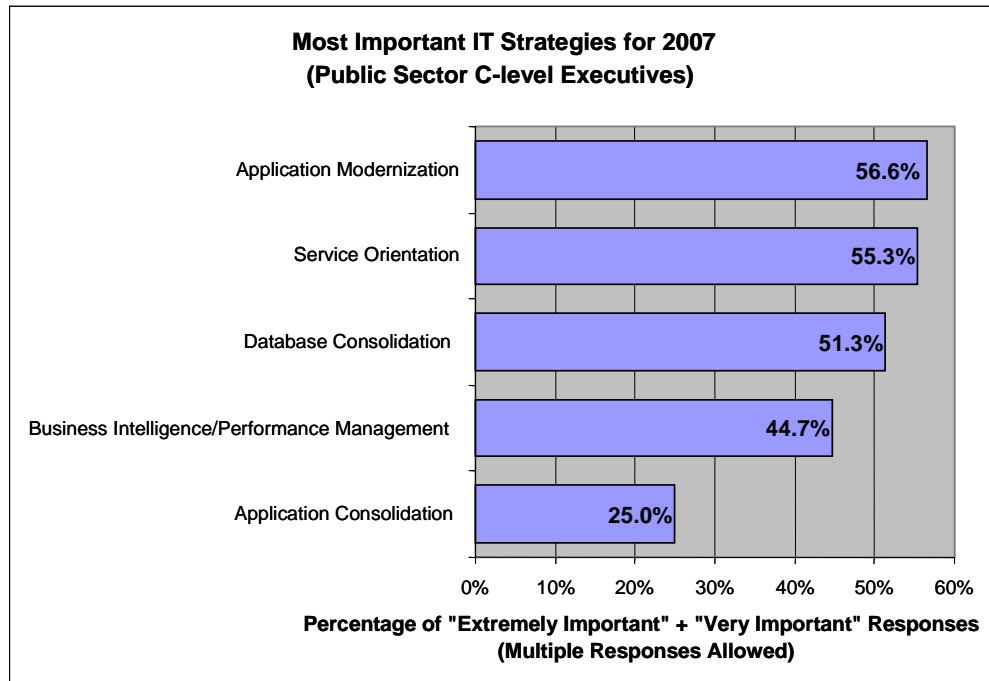
“The game has changed; the generational aspect of tech has changed. Client-server passed by us in government. The Web is big now – our users and constituents want to do everything via the web. ERP is a big part of enabling that.”

- CIO, central regional U.S. state government agency



Those same executives also indicated what strategic IT investments they plan to make to accomplish these goals. These investment priorities, summarized and presented in Figure 2 below, focus on core application and data improvement and consolidation.

Figure 2: Top Public Sector IT Investment Strategies for 2007



Source: Saugatuck Technology Inc. Data based on 2006 – 2007 research with senior ("C-level") Public Sector IT and business executives.

We can readily see how ERP, with its standardized and integrated platform, data, applications, and interfaces, can enable both the top five business goals and the top five IT strategies for these executives. Interviews conducted by Saugatuck with IT executives and directors at the U.S. state and municipal levels confirm that executives are looking to ERP to accomplish these goals.

"With ERP, we can finally get improved management reporting based on a standardized system. Management reporting is a huge issue, especially when it comes to budgeting, given all the disparate sources of data, types of data, analysis and interpretation work needed, and so on."

- CIO, Northwestern region U.S. state government.

However, these same executives indicate that the earlier issues of ERP cost, incompatibilities, and customization/integration continue to loom large. Most interviewees told Saugatuck that they already have at least one – often partial – ERP implementation that has provided hard-won, hands-on experience of these significant factors. Most were implemented ten to fifteen years ago, and customized to accomplish specific sets of tasks within a department. That customization has in turn required significant investments in specialized skills for management and maintenance. As a result, the total cost of ownership – TCO – of these ERP implementations has been significantly high.

The Role of TCO in ERP Acquisition

IT management centered on total cost of ownership (TCO) began to grow at about the same time as did interest in, and widespread deployment of, ERP solutions in the mid-1990s. TCO had long been a part of IT and business management, but had not played so significant a role as it did when enterprise software implementations



“The cost of maintaining enterprise systems is very large; there is always pressure on us regarding TCO, so we have a big push to deliver the lowest TCO possible.”

- IT director, large Mid-western U.S. city government

(and their attendant server, security, networking and access requirements) began to exceed tens of million dollars on a routine basis – and infiltrate business operations and processes on an enterprise-wide basis.

Today, TCO should be *a* key, if not *the* key, deciding factor in ERP acquisition.

Almost any ERP application or suite can be made to accomplish what the enterprise requires. As long-time IT professionals say with tongues firmly in cheek, it’s a “simple matter of programming” to make the system do what the user needs. But “simple matters of programming” can quickly escalate into millions of dollars in custom development and integration, and in long-term requirements for specialized skills and technologies to maintain and upgrade ERP suites years down the road. Acquisition price, though significant, is often the smallest cost of an ERP implementation. Customization, integration, and maintenance/upgrades/expansion are the real cost drivers.

TCO should be considered as especially important to government organizations considering ERP acquisitions. Governments tend to view such investments as long-term, even more so than do the most conservative commercial enterprises. The relatively complex nature of governmental organizational structures, processes, duties and responsibilities can require significant customization, integration and specialization of ERP suites, especially those designed for commercial environments. And of course, governments are under continued scrutiny and pressure to reduce costs while extending and expanding services – something which ERP can enable, but which ERP TCO can also add significantly to the costs of accomplishing over time.

Reducing TCO – 5 Keys to Selecting ERP Solutions

So how do we manage ERP TCO – and what role should TCO play in ERP selection?

First, we need to look at two core tenets of TCO. One is that *complexity is the single largest driver of IT costs. Complexity contributes to enterprise needs for skilled and specialized labor for integration, customization, maintenance, change, upgrades, and additional technologies.* So investments that reduce the complexity of the IT environment help to reduce TCO.

The second is the ability to manage IT. Management of IT is one of the single largest costs of IT in almost any enterprise. Effective and efficient IT management is a key to reducing TCO, because it enables the most effective and efficient use, care, and adaptations of IT. Therefore, investments that reduce the costs (and complexities) of managing IT help to reduce TCO.

As noted earlier, ERP itself is often touted as a means to reduce the complexity and costs of using and managing IT. Many governmental IT and business executives mention this as a driver of their interest in ERP solutions. But as we have also seen earlier in this report, many governmental ERP implementations have actually increased the complexities and costs of IT and IT management – and governmental operations. A variety of TCO models exist for use in evaluating ERP and other IT investments. Some are extremely complex; others are abbreviatedly simple. All share similar, basic assumptions on costs and impacts.

Based on our TCO experience, and interviews with state and municipal IT directors



and CIOs throughout the U.S., Saugatuck summarizes below what we see as the top five TCO factors that should be included in governmental ERP solution evaluation and selection.

1. Standardization of technology - and skills. Simply put, the more standardized the technologies and skills required (for implementation and ongoing maintenance/management), the lower the ERP solution's TCO will be. Widely-supported technologies enjoy larger and more available skills bases, as well as a broader array of third-party add-ons, applications and technologies. More choice based on industry standards tends to enable lower costs through market competition.

Almost any ERP solution can be considered to be "standardized," as most ERP vendors have developed technologies that are used throughout their solutions. But solutions built –"architected" is the term most used in IT - on such industry-wide, non-vendor-specific standardized technologies as Java/J2EE and XML can deliver significantly-reduced TCO – and reduce the likelihood of being "locked in" to a single vendor's technologies and services for the life of the ERP solution.

***Saugatuck guidance:** Establish use of industry-standardized technologies and skills (at application architecture and interface layers) as a key ERP selection criterion.*

2. Customization. Every user instance and environment will require ERP solution customization and configuration. Solutions requiring the least amount of customization tend to deliver lower TCO, because customization leads to increased needs for specialized integration, management and maintenance technologies and skills. Customization also forces changes in business processes, operation and management – further increasing TCO.

In Saugatuck's experience, ERP solutions developed for specific markets deliver lower TCO for enterprises within those markets. Solutions that are built "from the ground up" for market-specific business processes, operations, requirements, reporting, compliance, and other important factors, are less likely to require extensive customization. They are therefore more likely to be implemented more quickly (and therefore less expensively), and should require skills that are familiar to, and available within, those markets.

They are also less likely to require significant change in how business functions, processes and systems operate and are managed. Government is a prime example of a set of markets with very specialized business requirements (*please see the shaded box on page 6: "Sample Government-Specific ERP Requirements"*). Such requirements can be addressed by customization of commercial applications and modules. But such customization will add significantly to the solution TCO.

***Saugatuck guidance:** Look for ERP solutions that require the least amount of technological and operational customization.*

***Note that "customization" is not the same as "configuration."** Any and all applications will need to be configured to fit a specific environment. Those requiring the least customization while delivering the most configurability at the same price will deliver lower TCO.*

3. Scalability. ERP solutions are usually architected for growth; they are designed to scale. But growth and scalability, especially within Governmental agencies, are rarely a simple matter of increased processing power or additional users. Governmental



Sample Government-Specific ERP Requirements

Public Accountability:

- Fund and Program Accounting Compliance
- Encumbrance/Pre-encumbrance Accounting
- Governmental Accounting Standards Board Pronouncements
- Service Efforts and Accomplishments Reporting

Budgeting:

- Annual, Multi-Year and No Year Budgets
- Appropriations and Allocations
- Carry-over and Lapsed Budgets

Grants Management:

- Pre-Award to Receipt and Compliance Tracking
- Pass Thru Grants, In-Kind Contributions, and Sub-Grantee Monitoring
- Multi-Year Budgeting & Reporting for Grants and Projects

Accounting & Budget Structures:

- Fund, Program, Organization, Function, Location, Object, Grant, Project Structures
- Variable Funding Control Structures
- Complex Multiple Step Down Cost Allocation Processes
- Multiple Bases of Accounting (Accrual, Modified Accrual, Cash)

Procurement:

- Complex Acquisition Requirements
- Solicitation, Evaluation, Award & Contract Management Processes
- Vendor Diversity Procurement Programs

Human Resources:

- FLSA Processing for Police and Firefighters and Employees with Multiple Jobs
- Complex Leave Processing with Automated Leave Accruals for Longevity & Grandfather Clauses
- Position Control Supporting Multiple Grade/Step Pay Matrices

organizations tend to have a wide variety of both internal and external users – staff, appointees, bureaucrats, administrators, legislators, citizens, contractors, auditors, suppliers – each of which has different requirements. They also have unique reporting, relationships, and interactions at higher and lower levels as well as at the same levels of government. So scalability becomes almost a three-dimensional prospect for many Government organizations - and a daunting one when we consider that so many are trying to reduce IT budgets at the same time.

***Saugatuck guidance:** ERP solutions should be able to scale in the same ways that the government organization scales, from internal growth, to changes in responsibilities and constituencies, to changes in relationships with (and responsibilities to) outside entities. The scalability of communication, management, transactions, and other factors must be considered.*

4. Management/Governance. The modular nature of some ERP solutions makes it difficult to effectively and efficiently manage these solutions across the enterprise. Different modules can have different reporting capabilities and functions; or they may use different data types; or other technology and usability factors may



come into play. This may be a result of different modules or features being developed using different software development tools or languages, or from different capabilities acquired by the ERP vendors over time. ERP vendors constantly work to improve modular and functional communication, interfaces, reporting and management. But these factors also add to the complexity and cost of the ERP solution.

Saugatuck guidance: *ERP solutions are likely to always require integration improvements between functional applications and modules. Reduce TCO by choosing solutions that enable and deliver standardized reporting across the ERP suite –and to/from other key applications.. An investment in a core data warehouse that leverages ERP data can provide strategic, cost-effective data integration and sharing across all applications – and further reduce IT costs over time by reducing data integration requirements.*

We are looking for platform solutions instead of point solutions. We need to integrate applications and data better to improve our management, reduce our costs of management, and enable improvement of government operations and services provided to our users.”

- CIO, southern U.S. state government

5. Acquisition. TCO developed as an IT management discipline in part because too many IT acquisitions were made based solely, or significantly, on the perceived acquisition cost. But acquisition cost is still an important factor in TCO, especially for ERP solutions. Tens of millions of budget dollars are at stake up front. This makes it a big piece of the TCO puzzle. And of course, budgets are not unlimited – ERP solutions, like anything else, must be affordable.

As in any market, larger ERP solutions tend to have higher acquisition prices. Bundling of “nice to have” functions and features, and implementation and other services, can skew or obscure acquisition costs. And no two applications are written to work in the same manner, so head-to-head functional comparisons can require significant RFP phrasing challenges. And of course, enterprises must also guard against bargain shopping – “you get what you pay for” is not something an IT or business executive wants to hear.

Saugatuck guidance: *All ERP suites and functionalities are not the same. To compare acquisition cost, compare baseline ERP suite and module functionality as closely and carefully as possible. Write RFPs to address core functionality requirements and expected future scalability needs. Don’t acquire – and pay for – out-of-scope functionality and features. ERP vendors, especially brand-name vendors, are more willing than ever to negotiate on price. But look to avoid possible resulting higher implementation and services costs.*

Conclusion: ERP Choice is Fundamental

We are entering a new era of ERP in government, an era of expanded influence and importance for ERP. Choices made over the coming months will form the foundation, and much of the infrastructure, in government IT for at least the next decade.

ERP choice is no longer a functional, departmental, or even agency-specific choice. It is a choice that reflects and reverberates across government organizations and layers. It must perform core business functions in government-specific manners; it must scale within the government entity and beyond.

And in order to deliver the greatest value over time, ERP solutions must – absolutely must – deliver the lowest reasonable TCO over their useful lifetimes. Solutions built for government, using core industry-standard technologies, and using those technologies in standard ways to enable and improve management, will deliver the greatest value.



SPONSOR PERSPECTIVE - CGI

Saugatuck's research and analysis support our long-held belief and experience that ERP solutions hold the key to the strategic and tactical improvements and benefits that government agencies are looking for — simplification, unification and integration of technologies and management. They also support the importance CGI places on government-specific focus and low total cost of ownership (TCO) in addressing and satisfying these goals.

CGI is a leading IT provider with 30 years of experience and 25,000 professionals in 100+ worldwide offices. Government-focused ERP is a key means to our livelihood. We have designed and built CGI's AMS Advantage solutions specifically to serve government. No other ERP solution provider has approached the unique needs of government in this manner and, as a result, none have been able to replicate AMS Advantage's abilities and success within government organizations. And we evolve these solutions to adapt to new technologies and to the changing needs of government, working with government business and IT leaders and users to continuously support their requirements. As a result, we have built an ERP solution that revolves around the importance of low TCO and the advantages of standardized architectures and technologies.

Regarding TCO: Saugatuck's research states that ERP solutions developed for specific markets deliver lower TCO for enterprises within those markets. Built "from the ground up" for government, our solution incorporates the specific business processes, requirements, reporting, and compliance to reduce customization. CGI also partners with the AMS Advantage community to baseline customer funded enhancements to reduce TCO and provide configurable functionality to our client base, as well as other governments who plan to implement AMS Advantage solutions.

Regarding customization: CGI has helped clients of all sizes quickly implement scalable ERP solutions with very little customization. For a large U.S. county with a \$22 billion budget and 90,000 employees, we implemented an AMS Advantage Financial Management ERP solution within 14 months, and with a 98% fit out-of-the-box. Rapid deployment and streamlined implementation significantly reduced costs while improving the county's ability to enhance information access and reporting.

Regarding standardization: Saugatuck's research clearly shows that the use of standardized technologies provides significant advantages for users in all aspects of solution lifecycles — from acquisition, to implementation, to system use, management and change — by enabling the use of widespread, broadly-supported, lower-cost technologies and skills. These provide significant advantages to government entities seeking the most cost-effective, integrative solution. CGI's AMS Advantage web-based architecture incorporates government-specific functionality, and is built upon open standards, n-tiered and service-oriented architectures. It was the first ERP system of its kind to be developed from the ground up under a J2EE/Java/Web platform, provides native support for such key technologies as XML and SOAP, and exposes common business functions according to the WSDL standard. With its SOA foundation, AMS Advantage's architecture makes it easier and faster to integrate systems, services and data; respond to changing business requirements; and scale and deploy new functionality to meet the needs of large, geographically dispersed organizations. We also extend the solution's functionality footprint by incorporating best-of-breed software components from vendors that focus on specific business functions.

In short, we believe that ERP is the IT and business platform for government entities worldwide. No other solution type can deliver the capabilities being demanded by government executives for operational and technology management, integration, efficiency and effectiveness. Leveraging industry standards in a solution built for government from the ground up enables CGI's AMS Advantage ERP solutions to meet and exceed these requirements — while delivering the industry's lowest cost of ownership. For more information, visit www.cgi.com/stateandlocalerp.



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Saugatuck Technology Inc.
Westport, CT 06880
Phone: 203.454.3900
info@saugatech.com

