Things You Need To Know To Modernize Your IT Operation

It's About the Business,

Not Technology

IT modernization, despite its name, is about much more than IT and the CIO organization.

When done well, the goal of IT modernization should be to modernize an agency's operations and administrative activities, with one eye always on achieving the agency's mission. The process should begin with a strategic vision for the organization, including stretch goals developed by business and IT leaders and staff.

It pays to think big about what modernization could mean for the enterprise, so don't hyper focus on technology during the early stages of strategic visioning. And don't be constrained by the limitations of legacy systems. Most current business processes, designed to work within the limits of old technologies, are often costly, inefficient and not user-friendly. Modernizing IT opens the door to modernizing how agencies conduct business, resulting in streamlined operations, stronger information security, reduced costs and an improved customer experience.

At this stage, don't limit your organization's strategic vision by worrying about how to get there. First, decide where the organization wants to go. Then develop a plan for reaching the destination – with milestones along the way. Plan as you would for a trip, starting with the destination. The idea is to bolster the IT function in service of an organization's business goals, not to force your business folks into accommodating an IT initiative.

Business modernization through IT modernization requires agency-wide participation and stakeholder engagement. While the CIO organization may start the dialogue, it is critical to engage all stakeholders early. The most effective stakeholder engagement includes the entire range of management and staff, from the top executive to the end users of various systems that support the agency's mission. Having a top level executive sponsor who champions modernization will help to rally the support of agency leadership, to ensure funding and to provide political (small p) cover throughout the modernization effort. Remember, not everyone likes change, especially if it appears to encroach on established routines, relationships and funding priorities.

The CIO and staff might select targets for modernization by looking at systems built with obsolete or inefficient software that have high maintenance costs. Getting recommendations from the users of various systems might produce a different list that is more focused on usability, flexibility and stability. Some questions you might ask users: Which systems make it hard for program delivery and customer service personnel to do their jobs? If we modernize this particular system or process, will anyone know or care? Involving and engaging end users and external customers will promote acceptance of change later.

Strategic visioning should also include an external environmental scan. Yours is not the only organization that has undertaken an IT modernization program. Use your stakeholders and associates in other agencies to determine the art of the possible. You can evaluate whether they succeeded or failed and whether their model is one you want to follow. Look not only at what they did, but how they planned and managed the effort.

1 Start Small and Aim For Early Success

With a strategic vision document in place, the next step is to identify short-term projects for early action. Your stakeholders will need to see progress and real accomplishments from the modernization effort in months – not years. Picking the right targets means identifying systems and processes that can be reworked and put into production in 12 to 18 months. These projects should be the proverbial low-hanging fruit that get early successes that help to build momentum. They should be obvious and compelling.

These first projects should attack those annoying problems that generate the most griping in the organization. Things like system outages, service delays and help desk issues are quite common and cause a loss of faith in IT organizations. In a world dependent on mobility and work-anywhere demands, service delivery problems are the downfall of many IT organizations. Demonstrating early success will help to ensure stakeholder support throughout the longer term planning and execution. Use business case analysis to help choose high-priority targets.

2 Step it up for Citizen Services.

In the private sector, the number of businesses leveraging online platforms has dramatically increased the types of services that are available anywhere and at any time. As a result, consumers' expectations have changed, and systems that provide citizen services are becoming more prevalent as a means of supporting certain federal programs. These systems demand special attention in your strategic visioning and development processes.

The public has a realistic expectation that government services should be as accessible and user-friendly as commercial services. The customer experience should be paramount, and special efforts will be needed to obtain customer participation in the design, development and testing of those experiences.

Be brutal and objective in evaluating the organization and its operations. Get feedback from stakeholders, including employees, customers, contractors, oversight groups and the press. Analyze performance measures to supplement customer surveys, employee interviews and other methods of gathering information. Look particularly at measurements of how your organization uses its resources: people, money and time. Quantify customer satisfaction.

3 The Essential Discipline of Project Management

Although IT modernization is not all about technology, it is all about project management. Success depends on the rigorous application of a comprehensive project management methodology. Your agency or CIO organization probably has adopted one of the several flavors available, such as PMBOK or Agile, and probably has several staff members trained and certified. This is the time to put those skills to work. The selection of one methodology over the other isn't as critical as the commitment to consistently apply those principles during the planning and executing of the overall IT modernization effort. To do this requires the commitment, by management at all levels of the organization, to the project management discipline and tools, including metrics, reporting and rapid response to problems or schedule slippage.

Risk management is essential to ensure success in both the short and long terms. Managing risk starts with identifying priorities. Avoid the largest and most complex or mission-critical systems as your first effort. The federal IT landscape is littered with examples of failed attempts to modernize or replace such systems. Each project plan should include a formal risk management component. The implementation phase should incorporate continuous monitoring of risk factors and use of mitigating actions.

4 Commit to Continuous Communication

Keeping stakeholders informed as projects proceed is a key to keeping them engaged and supportive of the undertaking. The discipline of a set schedule of weekly or monthly progress reports helps with stakeholder relations and keeps pressure on the project team to stay on schedule and focus on hitting key milestones. Every effort must be made to be transparent and forthright. Both high tech and high touch methods should be used with all stakeholders involved. Managing perceptions is critical – and easier if facts and truthfulness are in abundance.

Social media is not a substitute for eye-to-eye contact, but it can part of a successful communications formula. Often the amount of communication required is underestimated. In its absence, rumors can overrun facts. When that happens, it is usually better to address rumors head on. Rumors don't go away by themselves, they fester. Deliver the bad news and the good. Your credibility is too valuable in the long run to tarnish it by less than full disclosure. Don't make the mistake of continuing to report

"all tasks on schedule" for a few months and then drop the bad news of a substantial delay a month before the final product is due.

5 Create a buzz and a sense of urgency.

During the PC revolution of a few decades ago, many large data centers were not responsive, and users often felt they could do the job better themselves. The powerful devices in users' hands today are vital to the productivity of those users. Their graduation to utility status means IT has to work like a utility. Flip the switch and the lights come on. When they don't, productivity grinds to a halt. During this phase, users should see change happen; employees should see and be involved in change happening; and agency leadership should be involved and supporting change happening.

Put resources and processes into place to execute the plan. Modernizing IT requires multiple resources, including money, people and program management. Transformation also requires a different leadership approach. Shifts in priorities must occur. While dollar resources are required, they are not likely to come from budget increases. Rather, these funds are likely to come from the reengineering and retirement of legacy systems, more cost-effective buying methods and resource-sharing with other organizations. This shift in culture will put a strain on the political, operational, economic and technical forces at play. Each of these forces must be dealt with to keep programs on track and to focus resources where they are needed at any given time.

6 Engage Your Employees.

The people in your organization are critical elements in any modernization effort. Failure to manage the human dimension can doom a project. Will the changes be done with employees or to them? How modernization is perceived can determine the teamwork of those involved. While all stakeholders are team members, all team members are or are perceived to be stakeholders. How these team members are treated, rewarded or included will most likely determine the enthusiasm with which they support and defend modernization.

Employees have the knowledge, technical and management skills and experience with existing systems. They will execute the modernization plan either as individual performers or as managers of in-house teams or contractors. Some may be directly affected by the changes. Some stakeholders will perceive benefits associated with those changes, while others may have concerns that IT advancements could threaten their jobs. For example, phasing out an in-house system and replacing it with a shared service will eliminate the need to maintain and manage the current system. Although some employees responsible for the in-house system will be happy to be rid of an old, inefficient and hard-to-maintain system, others will feel threatened by the change. Such fears may foster resistance.

It is important to anticipate and address these issues early so employees recognize that the management team values their work and will assist them in transitioning to a new future. Management must be prepared with personnel strategies, such as training programs and job placement assistance.

7 Collaborate Across the Organization

Although the talk about IT modernization may be initiated by the CIO, its success requires collaboration across the enterprise. This is one reason that top executive support and sponsorship is so critical. It is only from the top that leadership and clear direction can flow to the business line managers and core administrative offices so they buy into the effort and become invested in its success.

It is especially important to have the commitment of time and resources from the chief financial officer, chief acquisition officer, chief human resources officer, chief information security officer and general counsel. For some projects, several or all of these will be part of an integrated project team (IPT). Business line representatives will be added to the IPT for some systems. The senior public affairs officer can be an important ally when the modernization effort touches public-facing customer service systems.

The Chief Acquisition Officer is an especially critical partner since nearly every project will involve an acquisition. The CAO should use all of the flexibilities available under the FAR to streamline this process and keep the initiative on schedule

8 Time to Get with Cloud and Shared Services

Adoption of cloud services has been a mandate for federal agencies since the "cloud-first" policy was announced more than seven years ago. A few early adopters tested the water in small ways, such as email in the cloud, while others stayed on the sidelines and waited for results. Over time, cloud adoption has gained ground, but agencies have tended to take a fragmented approach with an unruly mix of cloud and traditional services. Now is the time. Make your IT modernization initiative the catalyst to adopt cloud services across the enterprise.

Initial uncertainty and concerns about security and integration of cloud services with other agency systems have largely been resolved. The benefits of moving to the cloud have been well documented, and lessons learned are available from many federal agencies. The benefits include more rapid deployment of new applications and less costly replacement of legacy systems. Services are rapidly deployed and in some cases ready for use in a matter of weeks or months versus the months or years of traditional methods. This translates into reduced commitment of in-house personnel and contractor resources that can be used for other pressing needs.

More important for the purpose of IT modernization is that cloud makes it much easier to stand up new, innovative services that help implement an agency's strategic vision, services that simply wouldn't be feasible using old models of system development. The stability and reliability of cloud services contribute to business continuity and reduce the time that the IT staff spends on operational problems. This frees up staff time to work on more productive and innovative projects of the IT modernization strategy.

Shared services is another alternative to traditional methods for deploying applications that has been promoted by OMB for years, but has lagged in implementation. Shared services offer a proven and cost-effective alternative to an agency's in-house and one-off systems for services such as financial management, human resources management and payroll. Using a shared service provider will help your agency reduce the risk of new system implementations, allow for faster and less expensive technological innovation, and provide long-term cost savings. Just as with cloud adoption, you will be able to focus more of your resources and leadership attention on other components of your strategic vision.

9 Future Proof Your Telecommunications Infrastructure

Telecommunications has become the backbone of every organization's operations, and it must evolve in concert with other elements of the IT environment. Is your agency's telecom infrastructure ready to support IT modernization over the long term? For many federal agencies the answer is no, in part because some of the underlying technologies will reach end of life in the near future. An example is TDM (Time-Division Multiplexing), for which logistical support and expertise is becoming less available. Manufacturers are ending support for many TDM products that were top of the line equipment just five years ago. The growth in mobile applications will increase demand for wireless services.

The future also means more applications moving to the cloud and more big data systems, both of which will boost demand for high-bandwidth networks. Another major trend that will have an impact on telecommunications is IoT – the internet of things – which will greatly increase the number of connected devices and result in massive growth of data volumes. Cost will factor into network planning decisions since legacy technologies cannot compete with newer services on the basis of cost per bit consumed.

Telecommunications technology available now and in the near future point to several telecommunications components that will be part of almost any IT modernization strategy:

- SDN (Software Defined Networking)
- MPLS (Multiprotocol Label Switching)
- Ethernet
- IP voice
- 5G wireless
- More security features in the network

10 Reduce Capital Expense (CapEx)

The current outlook for federal budgets means that getting new funds approved by OMB or Congress for capital expenditures will be difficult. New systems and capabilities sought for an IT modernization strategy will need to be funded by other means. One obvious source is through reinvestment of cost savings generated by the new and more efficient systems. Another source is to eliminate the need for capital investments by acquiring commercial managed services.

This approach shifts a capital expense (CapEx) model to an operational expense (OpEx) model. The contractor is responsible for providing, operating and maintaining a given system or service for a monthly charge or transaction fee that is paid out of the operations budget. The OpEx model is more attractive because there are fewer long-term financial commitments, and there is little or no upfront investment required. This separates projects from the lengthy federal budget process required for new capital funds, which enables projects to start faster and to end without loss of any investment. In general, the OpEx model reduces the risk to government, shortens the time needed to bring systems to the user, and brings financial costs in line with operations.

Keys to Success

Experience over many years and across many agencies has identified four primary keys to success for an IT modernization effort:

- **Leadership –** Business leadership must establish clear goals and priorities for this effort, demonstrate a clear commitment to those goals, and establish an IT governance structure that cuts through the stovepipes.

- **Buy-In –** The effort will not succeed unless business and technical leaders from the various business units are committed to the goals. This commitment can be obtained by establishing a framework that enables the leaders to collectively identify business goals for the various IT investments.

- **Resources –** Leadership must allocate sufficient resources (money and personnel) to complete the tasks. None of the recommendations can be completed in the margins – i.e. by existing staff, through heroic efforts, using budget scraps.

- **Agility –** Emphasis on agility and achieving incremental wins in small steps, balanced by an acknowledgement of the complexity and critical nature of established systems. Major IT initiatives can be crippled by too much analysis and/or the desire to design every aspect of the system at project outset.

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