Application Consolidation — Where the Real Savings Is

David Raths | June 27, 2011

As CIOs work through the thorny issues involved in consolidating IT hardware and personnel, another challenge appears on the horizon: dealing with the "application bloat" that has built up within agencies over the years.

In 2009, Massachusetts Gov. Deval Patrick issued an executive order to consolidate all executive IT operations. Curtis Wood, CIO of the Executive Office of Public Safety and Security (EOPSS), is charged with combining the IT programs and staff of 14 different agencies ranging from the Parole Board to fire services to emergency management.

As Wood surveyed the applications in use, he saw plenty of opportunities for streamlining and cost savings. "Why have 14 different inventory asset management or fleet management applications?" he asked. "In the e-learning arena, we have many different applications in use in the agencies — or in some cases, none at all. We think we can save money and provide a consistent platform."

After several months of planning work with agency stakeholders, Wood's application consolidation team is doing an inventory of all applications and determining where to host them. The enterprise applications, those that are statewide or public-facing, are being shifted to the public safety data center. "We are already realizing cost savings on licensing and physical support," he said. "We are reducing maintenance costs

while increasing security and temperature control." The team has also worked with Oracle and Microsoft on licensing flexibility. (A public dashboard wiki for the EOPSS IT consolidation project is available at http://tinyurl.com/EOPSSdashboard.)

Beyond Virtualization

Application consolidation may hold even more savings potential than server virtualization. It can merge redundant systems into a common platform that reduces complexity, saves money on software licensing and enhances information sharing. But what distinguishes the successful projects from those that disappoint?

IT trend watchers see public-sector application consolidation, driven by rising IT costs, taking place along two axes. The first involves software that supports a department's core mission, where there are often multiple best-of-breed applications loosely tied together.

For instance, a tax agency might have filing, assessing, case-management and audit applications. "Often these are homegrown legacy systems that are being converted to a single functional suite that is easier to support and has more interoperability," noted Max Claps, research director for Gartner Research. Besides direct cost savings, this can offer more consistent views of the data and more ways to drill down for analysis, he said.

The other parallel axis is consolidating across all departments in a government. For instance, unifying multiple general ledger systems in a city or state. "In the last few years, we have seen many states work toward a statewide ERP system," Claps said.

Peter Doolan, vice president and CTO of Oracle Public Sector, said CIOs are looking beyond data center virtualization to simplify their software environment.

"Over the past few years, many of our customers focused like a laser on virtualizing their environments, only to realize they still are managing a lot of complexity in the software stack and in the rest of their portfolio, in terms of governance and architecture," he said.

"They are having what I call a 'post-virtualization hangover.' Virtualization is part of the solution, but not a silver bullet."

CIOs are focusing on their agency's mission and understanding the rigor needed for architecture and portfolio management, Doolan said. Many have adopted Information Technology Infrastructure Library (ITIL) and other portfolio management methodologies. "They look at the 8,000 applications in use in their organization and ask themselves how many they can turn off," he said.

Avoiding the Pitfalls

Despite the promise of cost savings, this type of consolidation has several potential pitfalls, including some unhappy users forced to give up familiar software. "The worst mistake is to treat these as technology projects with the CIO taking the lead and gathering requirements," Claps said. That leads customization and change orders to please everyone, which makes the software hard to maintain and pushes the project

beyond its budget. Instead, see it as a business re-engineering effort, Claps said. "If it's ERP, the treasurer or CFO should take the lead; if it involves tax systems, a revenue commissioner; in state government, you need the deputy secretary level of commitment."

To tell how well these projects are going, Claps said analyze the level of stakeholders leading the projects and how much they're spending on customization. "If they are spending 10 to 20 percent of project budget on customizations to make customers happy," he said, "that is probably too much."

Massachusetts' Wood said his team must leap several organizational and cultural hurdles since not every consolidation choice is going to meet each agency's needs. For instance, the state police collects much data around fleet management, while other agencies collect less information and have much smaller fleets. "You have to work to meet their needs," Wood said. "I am not an IT person by trade. I focus to make sure the business case is there and that the business-line people understand what we are trying to achieve."

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Wood's team is taking the right step by first taking inventory of all its applications, said Deborah Wilcox, a senior research analyst at Info-Tech Research Group in London, Ontario. "Every application consolidation should begin with an investigation," she said, adding that people typically see poor results because they don't plan well enough.

CIOs need a strong, well researched business analysis capability in their IT department before they eliminate specific applications just to appease a mandate to reduce costs or a footprint in the application space, said Wilcox.

"You have to identify best consolidation candidates, study the licensing costs and savings over time," Wilcox said. You can make a conscious decision to live without certain features, she said, "but it shouldn't be unconscious and then you find out later that you've given them up."

Part of the research process involves mapping the software to business functions and identify capability gaps, said Wilcox. If not, organizations sometimes come across

unintended consequences of a consolidation. For example, it will install a new platform, then realize that for some reason it can't migrate data out of the old platform or that it is obligated to pay for the older systems' licenses for the next three years. An application portfolio management solution could help, she said, but it mainly requires having conversations with people.

Tackle Low-Hanging Fruit First

During her tenure as CIO, she has systematically eliminated dozens of applications and replaced them with a handful of commercial solutions that are more tightly integrated and tied into the county GIS.

"First, I put in a help desk tracking function to see which applications required most handholding by IT and which had the highest overhead," she said. "Some required a lot of work for my staff to handle the business processes because they weren't end-user friendly."

Before replacing them, Terry took a spreadsheet of all her applications to a peer group called Virginia Local Government IT Executives. "I asked other county CIOs what they were using for those functions," she said. "From their answers I could see if there were viable commercial offerings and a clear market leader," she said.

Franklin County's work involving land management staff and software is a good example of how application consolidation can help improve business processes. In January 2008, a new land management system was installed that called for a huge cultural change. "One of my IT people spent 60 days in that functional area modifying their business processes to better use the system," Terry said.

Previously one group had its own software to handle building permits and inspections while another group used different software to handle zoning applications. "Each had its own stovepiped application and didn't share data," she recalled. "This new commercial land management solution replaces both of those with one tightly integrated system, and in fact the employees are now in one physical space."

Terry's advice to other CIOs who are just starting down this road? " Tackle the low-hanging fruit first," she said. "Let your team in IT gradually get better at implementing these changes, especially if staff in functional areas are being consolidated at the same time."

A Road Map for Kansas

Application consolidation is a huge undertaking that does not happen overnight. In October 2010, the Office of the Chief Information Technology Architect of Kansas prepared an IT consolidation feasibility study at the request of the state Legislature.

Among other things, the report recommended that Kansas develop a consolidation strategy and road map for all middleware applications used by state agencies, including document management, workflow, enterprise service buses, business intelligence, call center, customer relationship management and data warehouse.

"We are still in the studying and planning stage, although we have received positive feedback from the legislative group that requested the report and the new administration," said Bill Roth, the state's chief information technology architect. His office found six different products in use after just looking into document management systems. "If we start to look at things from an enterprise level, we can help stabilize investment in IT," he said. "But it is a big task, and we have to develop a framework and attack it one step at a time."

http://www.govtech.com/pcio/articles/Application-Consolidation-Where-the-Real-Savings-Is.html