

A STRATEGY PAPER FROM

CENTER FOR
DIGITAL
GOVERNMENT



Shared Services Today:

An Integrated Path to the Cloud



The Verdict Is In:

Government Cannot Afford Business as Usual

Introduction

At least one thing is clear in today's chaotic policy and economic climate — state, local and federal governments need shared services more than ever. It's a message IT managers are hearing loud and clear, which is why shared services and related private cloud initiatives will be high priorities over the next 12 months. In fact, shared services ranked as the highest 2012 technology initiative for state governments in the 2012 Midyear Market Assessment by the Center for Digital Government. City and county governments were similarly committed to the approach, placing it third and fourth on their respective to-do lists for 2012.

Why the intense interest in shared services? CIOs understand that by pooling IT resources among many clients, they can derive economies of scale, reduce redundant and obsolete solutions, and potentially roll out new services more quickly to individual clients.

Unfortunately, shared services don't come with any guarantees. Stumbling blocks are many, ranging from underperforming service-center technology infrastructures to making program managers become comfortable with replacing in-house servers and applications with resources managed by a third party. This helps explain why real progress has remained outside of the grasp of many jurisdictions. Without a solid strategy for implementing and governing shared services, problems like these will only intensify as continued staff losses and tight budgets in the

public sector add increasing pressure on IT departments and make the transition all the more difficult.

But now there's help. Maturing best practices have emerged to assist agencies in implementing shared services right — the first time. At the top of the list is the adoption of an integrated approach that incorporates four critical areas:

- Governance
- Communications
- Program management
- Technology

Note that while technology is important to shared services, success requires government agencies to look beyond just the IT department to include senior executives

and program managers in their planning and implementation activities.

With the right shared services foundation in place, government agencies could see the ripple effects of related advantages, including a clear path to private and community clouds, which build on core shared services components, such as resource pooling and service delivery models.

How do agencies create an integrated path to shared services and ultimately to the cloud? Here are details about each of the key components of a shared services transition, with critical guidance in each area. Together, these four pillars provide a framework for enabling organizations to map their own road to shared services.

Executive Summary

Shared services are becoming more important than ever for state, local and federal agencies. The reason: In the midst of policy and financial uncertainties, shared services offer money-saving economies of scale and opportunities for rolling out new services more quickly to clients.

Unfortunately, shared services face a number of stumbling blocks that get in the way to wider adoption rates. But maturing best practices have emerged to help agencies implement shared services right — the first time. At the top of the list is the adoption of an integrated approach that incorporates four critical areas:

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Start on the Same Page

When explaining shared services to agency colleagues, agency CIOs may find themselves fighting some entrenched ideas. Many colleagues will understand hosting services, a venerable IT option where an organization hires a third-party service provider to manage IT resources dedicated to one particular customer. Hosting often succeeds in delivering high levels of performance while reducing management overhead for a client's internal staff.

However, shared services go a significant step further than hosting. One example is multi-tenancy, which means that instead of dedicated resources, customers take what they need from pools of resources that provide server processing power or case management capabilities. With the right technologies and policies in place, service providers can partition these mutual resources securely and provide necessary performance levels.

Chargebacks are another key component of shared services. Service centers deliver resources using a pay-as-you go model, similar to how utility companies charge customers. With electricity as well as IT shared services, customers pay for what they use, unlike in traditional IT architectures where organizations may incur excessive capital and operational expenses from redundant or underutilized equipment.

What's not to like with shared services? Sticker shock is one factor — not because shared services are necessarily more expensive, but because customers may not have a clear idea of traditional IT spending,

including "soft" costs for power and cooling or service and support personnel.

Governance — Skip This Crucial Step at Your Peril

The challenge of navigating these hazards helps explain why shared services strategies don't always succeed. But IT organizations can increase the odds by concentrating on the four pillars of an integrated migration plan, starting with building a formal governance framework.

Effective governance often hinges on one key factor — having friends in high places. Without executive sponsorship — ranging from the governor's office to a town council or a federal cabinet secretary — an IT evangelist has only a slim chance of gaining the necessary buy-in of program managers and front-line staff to adopt the new service delivery model. Reticence runs the gamut from fears about inadequate performance that will make it impossible to execute core missions to uneasiness about cutting the direct connections to an internal IT department.

These are valid questions that IT managers will be able to answer with well-documented presentations and workflow charts that illustrate the technical underpinnings that will maintain and often improve the support department heads need. Executive evangelists add weight to these presentations and can step in to break up roadblocks created by less rational fears, such as that shared services is just a technology-for-technology's-sake plan or that forfeiting internal IT services is a first step toward a larger downsizing strategy. Senior executives can step in

with carrot and stick incentives that give shared services a chance for success.

Jason Albuquerque, director of information technology for the town of North Kingstown, R.I., credits high-level support with furthering an innovative initiative that brought the nearby town of Exeter into North Kingstown's shared services fold. "I wouldn't have been able to do this without the support of our town manager and town council," he says. "Their support meant I wasn't tied up by bureaucracy when it came time for me to go in front of Exeter's town council and pitch the case for shared services."

Next, CIOs must create a permanent governance board directly responsible for creating the long-term shared services roadmap; monitoring the progress of current activities; addressing problems; and presenting proposals to governors, mayors and other top executives.

Along with executive participation, the board should include IT managers and stakeholders from each department using a shared service. For states, this means agency heads or their designees; for local municipalities, members include liaisons appointed by the fire chief, police chief, department heads or maybe even members of a regional planning council. For example, the town of North Kingstown is exploring ways to offer shared services to area cities and towns and is discussing county-wide technology projects with the Washington County Regional Planning Council.

Once appointed, the governance board should meet no less than monthly to keep the project moving forward and to

tackle concerns before they grow large enough to threaten the entire effort. A consistent governance process and executive support are required to ensure projects move forward for the good of the enterprise. Smaller working groups that meet more frequently are also valuable for targeting specific initiatives.

For example, in the state of Ohio the governance authority consists of the Office of Budget and Management and Department of Administrative Services. The state CIO also receives advisory support from two smaller bodies, the Multi-Agency CIO Advisory Council (MAC) and the Leadership Management Committee (LMC), staffed by eight department CIOs and the CTO of the Board of Regents. The LMC looks out for grassroots initiatives.

"This is how we incubate new ideas and make proposals to the MAC," explains Stu Davis, Ohio's CIO and assistant director of the Ohio Department of Administrative Services. This bottom-up process recently led the MAC to consider a plan for state-wide mobile device management services.

The governance board and subgroups also provide a reality check to assure new initiatives won't be redundant with existing or planned shared services. The board will also be essential for tackling a fundamental decision — whether to make shared services voluntary or mandatory for individual departments. Full participation maximizes the collective power of the services model — spreading the costs among a large group of customers reduces the individual burden for all and eliminates the redundant expenses that saddle many states and municipalities today. But a forced march to shared

services requires well-honed change management skills to cultivate acceptance. Even more significantly, shared services providers must have a technology infrastructure in place that delivers expected performance and security levels — skeptics will see any shortfalls in service quality as justifications for returning to traditional and costly IT models.

Keep Communications Lines Open

Open and regular communications are essential to getting department heads, program managers, rank-and-file staff and IT personnel to buy into the shared services philosophy. But the communications strategy must be flexible enough to resonate with individual audience segments and provide a two-way flow of information. Also important: The governance board and service implementers must customize messages for each of these stakeholder groups:

- **Senior executives** — focus on enterprise-wide cost savings opportunities, management efficiencies, and the potential to improve or expand mission activities within current budget restrictions.
- **Program managers** — explain how IT resources will perform at levels at least as good — or even better — than what their departments currently experience.
- **End users** — help them understand that moving from a familiar in-house email platform or ERP application, for example, could mean new resources for helping them do their jobs more efficiently.

- **IT staffs at individual departments and agencies** — doing more with increasingly smaller budgets will likely be a fact of business life for years to come. Finding solutions within these constraints will keep them viable within their organizations. "It's important for IT that they know that shared services is bigger than all of us individually," Davis says. "If we don't do this together, the likelihood that senior executives will find somebody else to do it is pretty high."

No matter which group is the targeted audience, helping them understand the full implications of shared services is key. One of the biggest hurdles is explaining the difference between traditional hosting services and the shared model. Resolving misunderstandings upfront will avoid concerns later on about the performance, security and reliability of multi-tenancy services later on.

Effective communications requires shared services administrators to be well versed in the needs of individual agencies, not only for current operations but over time as mission goals evolve. Done right, gathering this information can be an education process for both service providers and recipients. For example, a program manager may unnecessarily reign in his or her aspirations for the future — not for a lack of imagination but because of an incomplete understanding of how available technologies can create higher levels of service for constituents.

Discussions at the early stage of a new shared services engagement may be more successful if they're limited to department heads and program staff,

without the input at least initially of the department's IT organization. Ohio's Office of Information Technology is seeing advantages in this approach in talks around a new initiative for improving data sharing for the Health and Human Services organization. "We don't want to define what the technical solution is until we know what the mission requirements are," Davis says.

Finally, shared services veterans warn that steady communications aren't important only at the beginning of projects; ongoing interactions are also necessary to keep efforts on track. Face-to-face meetings are the main vehicle, but online tools can also help keep parties connected. One option is formal or informal surveys that seek feedback from users about service performance. Consider semi-annual or annual in-depth information gathering — using online tools like FluidSurveys, SurveyMonkey or Zoomerang — to uncover both successes and areas where services fall short. Regular, informal emails throughout the year augment formal surveys with a question or two that solicit end-user comments and perhaps uncover emerging problems.

Formalize Program Management

Successful program management faces some additional challenges. Service providers need to work closely with clients to formalize service levels, so customers receive the resources they need for their missions and so providers can provision their IT infrastructures at reliable levels. This requires a three-step process: profile a new client's existing

resources, negotiate and formalize a shared services contract, and regularly report on performance levels once the customer migrates to the shared services implementation.

CIOs can create the necessary customer baselines with on-site visits to the client's data center to assess the current IT operations. Focus on server and storage resources and the networking infrastructure, including the wide area network and switches that will act as the main components for delivering services. North Kingstown takes assessments a step further. "We ask the town managers where they see inefficiencies and where they want to be in five years," Albuquerque explains. That feedback provides a clear "before" and "after" picture of IT expectations, he adds.

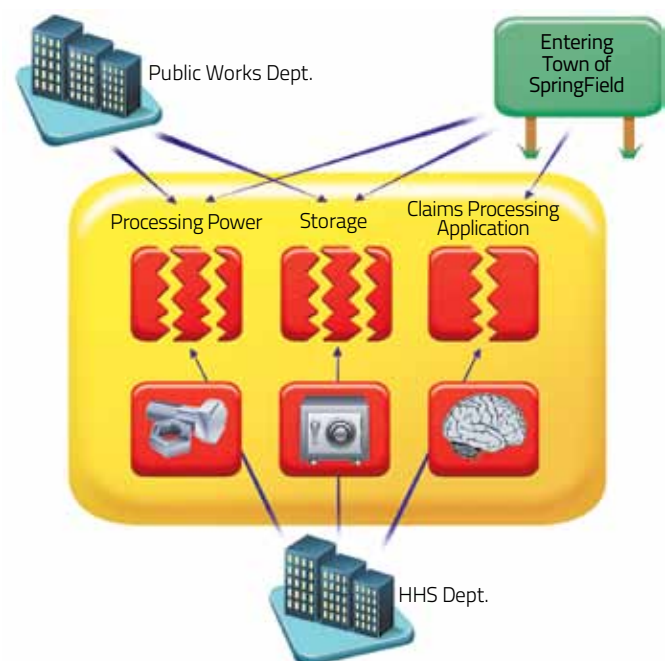
Next, the two parties need to formalize their relationship. Service providers favor standardized services to avoid custom tailoring for each individual client that increases costs for IT investments, management and upgrades. But that doesn't mean customers have to accept one-size-fits-all agreements. For example, one section of the contract can reflect the necessary standardization by defining the service and its per-unit costs. A second

section addresses specific needs of the customer, including contingency plans negotiated by the two parties. The service provider may guarantee that a disruption in a non-vital resource will be corrected within 24 to 48 hours, while a mission-critical service will be repaired within four hours, with regular updates in between.

Collaboration may produce an even more detailed response where an agency says it can't live without a particular enterprise service for specific times of the year. In some cases this may result in additional

Shared Services Model

With shared services, a number of agencies and departments tap into common resources owned and managed by a host agency using a computing model known as multi-tenancy. This differs from traditional hosting services, where an agency purchases its own IT resources and hires an outside service provider to manage them.



costs for a higher service level to keep uptime at the highest rates during those times. In others the service level objectives can be modified to provide the requested technical support and coverage. For example, Ohio's DOT relies on email services during the winter months to coordinate storm responses. So in addition to working with the IT office to set higher service standards, DOT sends weather updates to the shared service provider before a coming

storm so additional IT staff are aware and can be deployed in anticipation of any service problems.

Once the SLA is completed and services are being delivered, providers should continuously gather data about performance levels and summarize the information into reports delivered monthly or quarterly. Log reports, network management tools, enterprise monitoring applications and some server

virtualization platforms can provide the needed statistics and charge-back tools to create these reports. These documents will quantify the effectiveness of the relationship for both parties and allow them to resolve problems, whether in service shortfalls by providers or excessive demand from clients.

The reports can also be a starting point for renewed negotiations between providers and customers. If one department

A Shared Services Checklist

Governance	<ul style="list-style-type: none">✓ Cultivate senior-level sponsorship✓ Create a governance board with multi-departmental representation✓ Establish a monthly meeting schedule for the board✓ Encourage the formation of small working groups to evaluate new ideas✓ Decide whether to make shared services mandatory or voluntary
Communications	<ul style="list-style-type: none">✓ Tailor individual messages to explain shared services to core stakeholder groups✓ Schedule regular meetings among stakeholders in new projects✓ Use emails, surveys and other tools to solicit feedback from clients✓ Determine the unique needs of individual clients✓ Target program managers rather than IT officials during initial project planning stages✓ Make sure regular communications continue even after clients adopt new services
Program Management	<ul style="list-style-type: none">✓ Work with clients to formalize service levels✓ Profile a new client's "as-is" operations✓ Negotiate service level agreements✓ Continuously monitor post-implementation service delivery and demand
Remote Access and VPN	<ul style="list-style-type: none">✓ Determine what services are appropriate for sharing✓ Target solutions that support multi-tenancy and scalability✓ Avoid custom, one-off solutions✓ Find ways to keep internal technology costs low✓ Identify investments required to upgrade the shared service center's IT infrastructure✓ Train IT staff in new skills✓ Cultivate a culture of shared services

regularly draws higher service levels than what's been established in the SLA, the provider may either ask to rewrite the contract or find an alternative adjustment — for example, running some projects during off-peak hours.

Create a Solid Technology Foundation

Shared services aren't an IT-only initiative. Senior executives, program managers and agency staff at all levels must be part of the governance, design and management processes. Nevertheless, technology is the foundation for the services being delivered and the ability to create the right infrastructure is an important part of a successful foundation.

First, service providers must determine what services are right for sharing and which ones don't easily fit the model. Good candidates include general business systems that multiple departments use, including word processing and spreadsheet programs, email applications and core services like voice-over-IP phone systems. But shared services don't have to be limited to general purpose resources. A variety of departments may take advantage of more specialized solutions, such as the multi-tenancy building and permitting system used by North Kingstown that is being evaluated for use by Exeter — a move that could provide additional capabilities without the expensive new capital investments.

Poor options for shared services are resources that can't be expanded or contracted to meet predictable demand levels of existing users or grow exponentially as

entire departments or agencies sign on. Similarly, custom applications designed to meet one organization's exclusive needs, without an opportunity for multi-tenancy are more appropriate for in-house or hosted services.

IT managers also must work to keep internal technology costs low to make chargeback services a viable alternative to internal data centers. Server virtualization, which can reduce capital investments and resource management overhead, is one answer. This option also serves scalability requirements because IT managers can provision new virtual services within a day or so to meet a demand spike, versus the weeks typically required to purchase, receive, implement and test a physical server.

The challenge is balancing cost containment with quality of service requirements. In many cases the latter goal requires new spending to upgrade the supporting IT infrastructure. Two key performance areas that directly impact performance are networking systems, to optimize the flow of data and services to clients, and networked storage systems, to make data and virtual machines available with the least amount of latency.

The IT department in charge of a shared service center will likely require additional training to master new skills. For example, when Ohio's computing center consolidated six call centers down to two, it required some of its mainframe staff to field after-hours service calls. This assures that shared services clients will speak with a representative even if an outage occurs in the middle of the night



and that technical resources are on hand to quickly restore services.

In addition to more extensive training, the new after-hours reps had to learn a call center mindset, and this illustrates another fundamental change in the shared services model. The service center's IT department needs to evolve from traditional ways of thinking to what some veterans call a culture of shared services, which is characterized by the ability to maintain multi-tenancy systems, deliver services to a large and varied customer base and adhere to the service-quality agreements of multiple clients. The transition might be rocky at first, but there's a payoff for IT organizations — it moves them a step further into the future.

"Shared services develops the mentality of cloud computing — our centralized data center is a private government cloud, for all intents and purposes," Albuquerque explains. "Our staff needs to embrace that and become comfortable with it." ■



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Acknowledgements:



Alan Joch specializes in technology best practices for the public sector, education, and industry. Areas of expertise include cloud computing, mobile applications, server and desktop virtualization, and enterprise storage. His feature articles appear in *The New York Times*, *Federal Computer Week*, *Engineering Inc.*, and other industry publications. Previously, Alan spent seven years as a senior editor at *Byte Magazine*, where he alternately ran the product testing lab and the features department. He also is author of the book "How to Find Money Online: An Internet-Based Capital Guide for Entrepreneurs."