David Ash – Chip Schutte – Michael Hobert - Sharon Keeler – Dr. Michael Murphy

AGENDA
Joint Administrative Services Board
April 16, 2014 1:00 p.m.
Joint Government Center

1. **Call to Order.**

2. **Approval of Minutes. (March 24 Minutes Attached).**

3. **Closed Session ERP Contract Negotiation.**

    VA Code2.2-33711(A)(30)

    See also: GFOA article attached for background.

4. **Set Next Meeting.** May 7.

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Joint Administrative Services Board

March 24, 2014   Regular Meeting   1:00 pm

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At a regular meeting of the Joint Administrative Services Board held on Monday, March 24, 2014 at 1:00 pm in Meeting Room AB, Berryville Clarke County Joint Government Center, 101 Chalmers Court, 2nd Floor, Berryville, Virginia.

Members Present

David Ash; J. Michael Hobert; Michael Murphy; Chip Schutte

Members Absent

Sharon Keeler

Staff Present

Tom Judge; Lora Walburn

Others Present

Val Van Meter

1. Call To Order - Determination of Quorum

At 1:00 pm, Michael Hobert called the meeting to order.

By consensus, the agenda was adopted as modified removing Item 2 Approval of Minutes.

2. Approval of Minutes

The Board passed to its next meeting approval of the March 17 meeting minutes, which were unavailable at the time of the meeting.

3. ERP Discussion

Tom Judge initiated a conference call with Dennis Bagley and Jennifer Baranski, Plante Moran.

Vendor hosted versus self-hosted cost comparison [Software As a Service]

Discussion highlights:

- The Board reviewed Tyler's Financial Impact Analysis – Executive Summary comparing the two options.

- Per Dennis Baley, Tyler advised him today that it will be providing updated pricing.

- Plante Moran has requested two separate quotes that should be available later today: 1) Implementation fee; 2) Annual SaaS Fee.

Chip Schutte, seconded by Mike Murphy, moved to reaffirm the Board's prior decision. The motion carried by the following vote:

David Ash	-	Aye
J. Michael Hobert	-	Aye
Sharon Keeler	-	Absent
Michael Murphy	-	Aye
Charles "Chip" Schutte	-	Aye

Motion From the January 27, 2014 Joint Administrative Services Board Meeting Minutes: Chip Schutte, seconded by David Ash, moved that the County was willing to go with software as a service but making it contingent upon meeting value requirements and being competitively priced, and competitive with the services provided, as traditional licensing software. The motion carried as follows:

David Ash	-	*Aye*
J. Michael Hobert	-	*Aye*
Sharon Keeler	-	*Aye*
Michael Murphy	-	*Absent*
Charles "Chip" Schutte	-	*Aye*

Contract Negotiation Strategy

Chip Schutte, seconded by Mike Murphy, moved to convene into Closed Session: "Be it resolved that the Joint Administrative Services Board go into Closed Session pursuant to Code of Virginia Section 2.2-3711(A)(30) for the purpose of discussing Contract Negotiation Strategy. The motion carried as follows:

David Ash	-	Aye
J. Michael Hobert	-	Aye
Sharon Keeler	-	Absent
Michael Murphy	-	Aye
Charles "Chip" Schutte	-	Absent

At 2:20 pm, Chip Schutte left the meeting.

The members of the Joint Administrative Services Board being assembled within the designated meeting place, with open doors and in the presence of members of the public and/or the media desiring to attend, **Mike Murphy, seconded by J. Michael Hobert, moved to reconvene in open session. The motion carried as follows:**

David Ash	-	Aye
J. Michael Hobert	-	Aye
Sharon Keeler	-	Absent
Michael Murphy	-	Aye
Charles "Chip" Schutte	-	Absent

Subsequent to reconvening in open session, Chairman Hobert called for a Certification.

CERTIFICATION OF CLOSED SESSION

WHEREAS, the Joint Administrative Services Board of the County of Clarke, Virginia, has convened a closed meeting on the date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and

WHEREAS, Section 2.2-3700 of the Code of Virginia requires a certification by the Joint Administrative Services Board of the County of Clarke, Virginia that such closed meeting was conducted in conformity with Virginia law.

NOW, THEREFORE BE IT RESOLVED, that the Joint Administrative Services Board of the County of Clarke, Virginia, hereby certifies that, to the best of each members knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which the certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Joint Administrative Services Board of the County of Clarke, Virginia.

The motion was approved by the following roll-call vote:

David Ash	-	Aye
J. Michael Hobert	-	Aye
Sharon Keeler	-	Absent
Michael Murphy	-	Aye
Charles "Chip" Schutte	-	Absent

4. Pay and Classification Studies

Although the Government and Schools were not able to find a common vendor for their Pay and Classification Studies, the goal of obtaining a common set of benchmark communities remains. Springsted has suggested the following communities of comparison, though no decision has been made by the government:

Loudoun County

Fauquier County

Warren County

Shenandoah County

Page County

City of Winchester

Town of Front Royal

Clarke County Schools

Frederick County

Evergreen has proposed some 30 communities to which Clarke PS could compare, but has not narrowed this further, nor has Clarke PS established its preference. It is therefore an opportune time to revisit this issue and further discuss how to achieve the goal of a common set of benchmark communities.

- Mike Murphy indicated that he and Rick Catlett agreed to allow Evergreen to make the benchmark recommendations.
- Evergreen recommendations for benchmark communities:
  1. Loudoun County Public Schools
  2. Fauquier County Public Schools
  3. Warren County Public Schools
  4. Shenandoah County Public Schools
  5. Page County Public Schools
  6. City of Winchester Public Schools
  7. Frederick County Public Schools
- School recommendations for additional benchmark communities up to 10:
  1. Rappahannock County Public Schools
  2. City of Manassas Park Public Schools
  3. Prince William County Public Schools
- Mike Hobert suggested using the same jurisdictions used for audit comparisons:
  1. Amelia County
  2. King George County
  3. King William County
  4. Madison County
  5. Rappahannock County
  6. Green County
- Mike Murphy indicated that per Rick Catlett 95% of schools in the United States use the step scale system.
- Per Tom Judge, the step scale is a salary guide; but there is no automatic movement if there are no raises given in a particular year.
- The Schools' FY2014 raise was applied as a 2% increase to each step of the scale.
- David Ash suggested that the Schools and the County compare benchmark communities, valuation and methodology.
- Mike Murphy indicated that the Schools do offer signing bonuses to some teachers, as well as stipends for master degrees and doctorates.
- Tom Judge suggested having the consultants, Evergreen and Springsted, discuss and recommend benchmark communities.
- Springsted recommendations for benchmark communities:

1. Loudoun County
2. Fauquier County
3. Warren County
4. Shenandoah County
5. Page County

6. City of Winchester
7. Town of Front Royal
8. Clarke County Schools
9. Frederick County

- David Ash, noting that Springsted had listed Fauquier County twice, suggested the County add Rappahannock or Prince William.
- Mike Murphy will provide David Ash a clean copy of the Schools' list to forward to Springsted.

7. Set Next Meeting

A called meeting of the Board was set for Wednesday, April 16, 2014 at 1:00 pm in Meeting Room C at the Berryville Clarke County Government Center.

The next regularly scheduled meeting of the Board is Monday, April 28, 2014 at 1:00 pm in Meeting Room AB at the Berryville Clarke County Government Center.

8. Adjournment

At 3:27 pm, Chairman Hobert adjourned the meeting.

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Minutes Recorded and Transcribed by: Lora B. Walburn
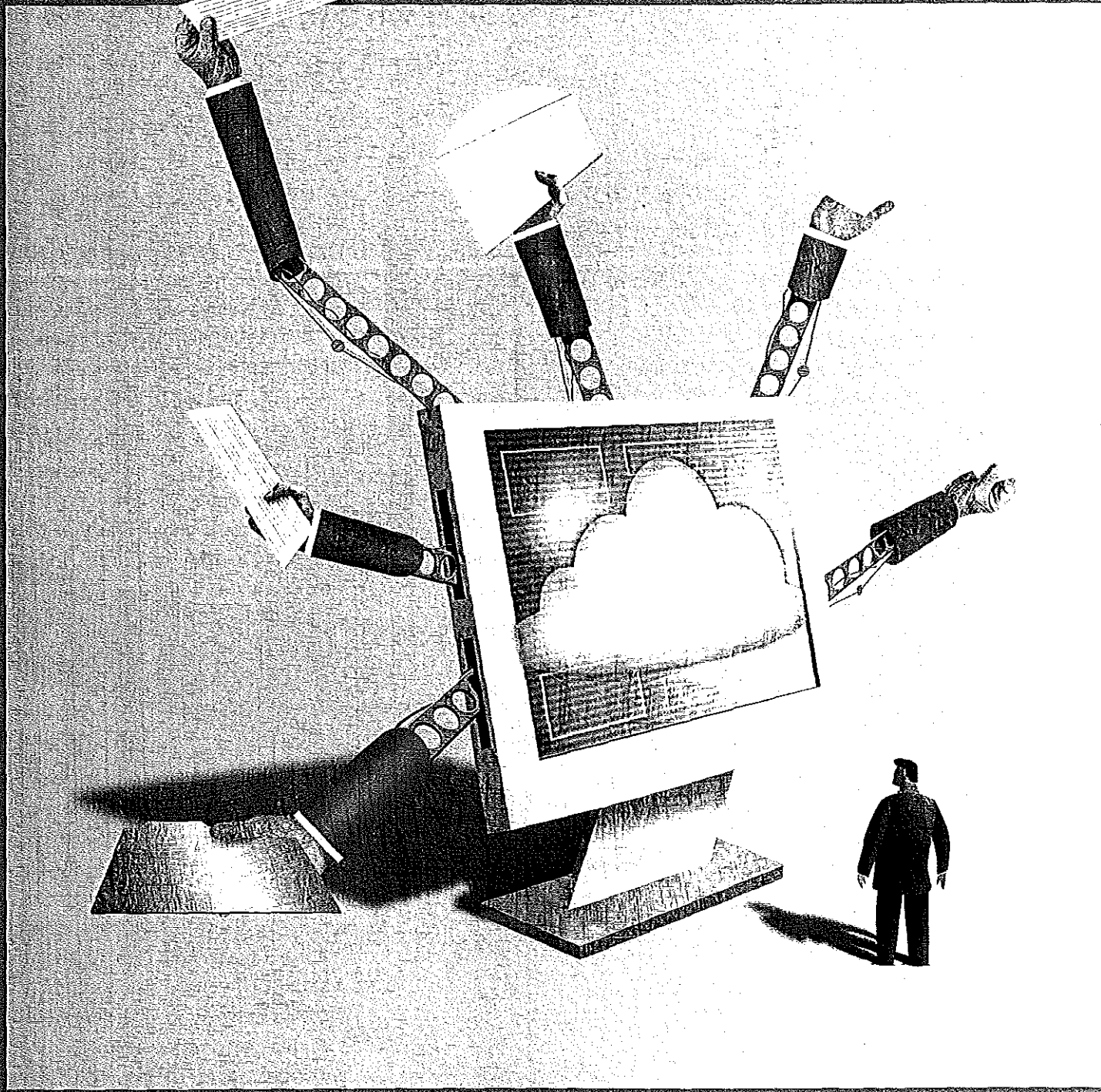
GRABBING THE SILVER LINING
Purchasing Cloud-Based Solutions in the Public Sector

BY ROB ROQUE

eading research organizations agree in predicting that cloud-based technologies will grow substantially during the next few years, in all industrial sectors. Public-sector investment in cloud solutions is expected to follow these trends through 2017 or longer. Although benefits of cloud solutions range from the obvious — maximizing technology cost savings — to the not-so-obvious — saving money on energy costs — state and local governments still have concerns about adopting cloud solutions. Wider acceptance will depend on changes in definitions of the technology, subscription pricing, acceptance of risk, and procurement practices.

A STANDARD DEFINITION

What the term "cloud" really means is not entirely clear. It is often misdefined as any type of data or content that is delivered via the Internet, a remote hosting facility for an organization's enterprise applications, or any content that is delivered through an Internet browser (meaning it does not matter whether the source data is hosted off-premises or is running on in-house servers or even on a desktop computer — data is being delivered to the browser). Quicker adoption of cloud-based technologies begins with agreeing on a definition.

> Quicker adoption of cloud-based technologies begins with agreeing on a definition.

The National Institute of Standards and Technology, the standards agency for the U.S. Chamber of Commerce, defines cloud-based technologies as having the following five characteristics:[1]

- On-demand self-service — customers can automatically choose the computing capabilities they need, such as server time and network storage, without having to interact with the provider of each service.

- Broad network access — services can be accessed through a variety of technologies, including web browsers, laptops, and smart phones.

- Resource pooling — a pool of resources serves multiple customers, and customers can choose only the resources they need.

- Rapid elasticity — users can easily add more services or scale down the level of services they need.

- Measured services — resources are monitored, controlled, and priced based on metered results.

NIST has further defined cloud-based service models: software as a service (often known as SaaS), platform as a service (PaaS), and infrastructure as a service (IaaS).

SaaS customers rent applications from a provider, and those applications are provided on the provider's infrastructure. The customer does not, in general, control or manage the application or underlying infrastructure. Popular online e-mail services are an example of SaaS.

Platform as a service runs applications the customer has purchased on hosted platforms. These customers typically have full control over the configuration and management of their applications, but limited control over the underlying platforms on which the applications are installed. Web hosting companies offer platform as a service when they allow customers to choose their own content management systems and install them on their systems (e.g., content management software that is available online for blog publishing and website building). In these instances, the customers have full control over the content management system but do not control and manage the virtual servers and databases.

Customers who use infrastructure as a service run applications and operating software in provider data centers. These customers control everything but the underlying infrastructure, which is provided by the vendor. In essence, the customer's environment exists on hardware maintained by the vendor.

Finally, NIST has defined four deployment models for cloud-based solutions:

- Private cloud, which is operated on- or off-premises for the sole use of the customer and managed by either the customer or a third-party vendor.

- Community cloud, which is operated on- or off-premises by a group of customers that have similar missions and is managed by community organizations or a third-party vendor.

- Public cloud, which is operated off-premises by a vendor for the general public or a large industry group.

- Hybrid cloud, which is a combination of two or more of the four cloud deployment models.

Although the term "cloud" is somewhat trendy, the model has been around in some shape or form for decades. Until a few years ago, application service providers — hosted solutions offered in a platform as a service environment — were all the rage. Many governments have used software as a service for years (e.g., online bidding services and online recruitment management systems). Recent SaaS examples include citizen relationship management software.

Cloud solutions typically use utility-grounded pricing models to deliver services. This means that cloud vendors provide services based on demand, like a power or water company. Service prices are usually based on a per seat (or per user) subscription fee or a per transaction fee. Customers that use platform as a service or infrastructure as a service might also pay technical fees based on the number of databases or virtual servers.

Deployment models also affect price. Public cloud services tend to be the least costly, and private clouds are the most expensive because they require the provider to deliver more customized services. Vendor pricing for public and private clouds vary and can be confusing.

Unlike traditional software licenses, customers rent the use of the software in cloud environments; they do not own the software as part of the agreement. In most cases, the customer does not own the hardware infrastructure, either. In return for a subscription fee, the customer receives access to the software and associated services such as software maintenance, data storage, and help desk services.

CHALLENGES TO THE PUBLIC SECTOR

The U.S. federal government is leading the charge in procuring cloud-based solutions for the public sector. Although there have been several publicized cases of major local governments purchasing cloud-based services, the research available indicates that these governments had limited or no guidance during the procurement stage. The federal government is attempting to establish a purchasing framework for its agencies, but there is no national framework for state and local governments to use in purchasing cloud solutions. Local governments rely on standards boards such as NIST and Institute of Electrical and Electronics Engineers to establish leading practices. (Although states may also provide frameworks, local governments rarely look to the state for direction.)

Local governments have a long-established history of purchasing cloud-based services such as online bidding, e-mail, and desktop functions, but they have been slow to adopt enterprise-wide business applications such as enterprise resource planning systems in the cloud. This is partly because ERP cloud solutions are limited, and because the cloud market has yet to prove scalability, reliability, and security. Solutions to these dilemmas are on the horizon, however, and local governments need to be prepared.

RETHINKING STEWARDSHIP

Most procurement policies are geared toward the customer buying and owning the software. An agreement is negotiated to define the number of licenses the customer owns and the annual maintenance fees. The software license agreement is often followed by a separate professional services agreement for hiring consultants to install and configure the software.

Unsurprisingly, the goal of all parties involved in contract negotiations is to get the best deal with the least amount of risk. This is particularly important to the public sector, where there is extra scrutiny of public money used to purchase goods and services that are generally invisible to the citizens.

> ERP cloud solutions are limited, and the cloud market has yet to prove scalability, reliability, and security — but solutions to these dilemmas are on the horizon, and local governments need to be prepared.

Enterprise applications are complex. They typically employ complicated license models. They require a complicated hardware-server infrastructure with their own software and associated license agreements. On top of this, a single solution can rarely meet all of the customer's business requirements, so third-party software is usually required to complement the primary system — and each

third-party system may have its own separate hardware and supporting software requirements.

When faced with these multi-dimensional systems, many organizations covet an all-encompassing contract that covers every aspect of software, services, maintenance, and support. Companies that sell traditional software and services are rarely willing to bundle all of these services into a single contract. Cloud-based services fill this gap.

Cloud-based services address complex software architecture and maintenance and support issues by bundling them into a single service contract with a subscription-based fee. Under this scenario, it is no longer necessary to maintain a software license and a separate maintenance agreement, the commonly accepted approach today. The cloud-based approach, however, does not adequately address scenarios requiring third-party software solutions to compliment SaaS functions.

In cases where third-party options are required, managed services may be an option. Managed service providers support operating environments, provide certain software services, and provide maintenance and support. Under this model, customers subscribe to a managed service provider for servers and technical infrastructure (meaning the customer wants the provider to maintain the servers and supporting network). Customers only need an Internet connection to access the servers. Then, customers, or their contracted software integrators, install the third-party software on the managed servers. If the managed service provider supports the third-party software, the jurisdiction purchases additional services to support them, including the servers, infrastructure, maintenance, and support. Managed service environments meet the goal of encompassing multiple complex technology solutions into a minimum number of contracts.

RETHINKING PRICING

If cloud service solutions are to gain momentum in the public sector, vendors will have to rethink their pricing models for SaaS and managed services. Popular pricing models are based on paying per-user subscription fees to gain access to the application or service. Subscriptions for services are marketed as "on-demand" services — the customer pays for consumption. In reality, pricing for SaaS and managed services
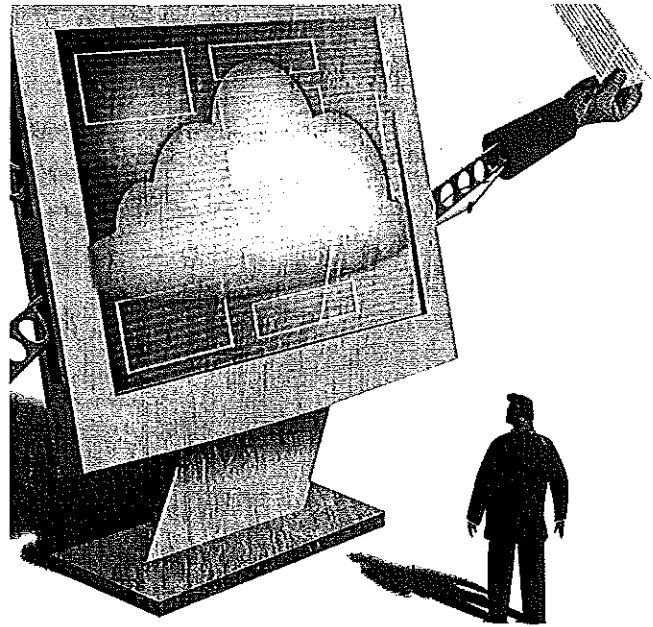
follows the same tier subscription price models used by cable and satellite television companies, with the customer purchasing groups of services rather than individual services.

Tiered pricing is challenging for the public sector. It is difficult, particularly for larger organizations, to justify their investment in the enterprise applications offered in the cloud environment. That's because subscription licenses typically assume that all users will consume the same amount of functions, making little distinction between casual and heavier users.

Current on-premises software licenses offer tiers of pricing based on types and number of users — for "inquiry," or casual users, "power" users (e.g., employees who initiate transactions such as creating journal entries or approving time sheets), and self-service users. The licenses are also purchased by function (e.g., financials, human resources, payroll). Enterprise licenses are based on the size of the operating budget or the total number of employees. Software licenses can be sold as a combination of user-based licenses and enterprise licenses. Purchasing on-premises licenses can be confusing — this is what makes subscription licenses attractive.

The market somewhat accepts that SaaS companies need to recover their investments in their offerings, which are rela-

tively new for enterprise applications. As the market matures and as the number of public-sector customers grows, vendors should expect customers to demand more services for their annual subscription price.

Ironically, managed services offerings could force SaaS vendors into rethinking the "one price fits all" model, as it may be cheaper to purchase on-premises software and install it in a managed services environment. The challenges of maintaining the software then fall to the customer, but competitive advantages of purchasing on-premises licensing may outweigh the benefits of current SaaS price models. Until the cloud-based subscriptions models are rethought, on-premises software will probably continue to outpace cloud solutions.

RETHINKING FUNCTIONS

The leading approach to selecting software is to develop a list of functional and technical requirements and have software vendors respond to each requirement by indicating how their proposed solution is the best fit. The theory is that, when properly written, the listing of requirements conveys the functions the customer already has, as well as those it wants to have. Cloud-based vendors complain that this format leaves little room to highlight future or potential functions, since the cloud model is based on fluidity.

Yet, software customers need some assurance that their investment will address their needs. Presenting a listing of requirements provides jurisdictions with a way of comparing software products, with an outline for implementation, and a

way of ensuring warranty. In short, they protect the customer and vendor from vagueness in scope.

The answer to this challenge is for customers to emphasize process, rather than specific functions and features, when listing their functional requirements. Under this model, the customer presents a list of business processes in the request for proposals, and software vendors respond with explanations of how their software can be used to accommodate each process. Assembling the requirements in this fashion can be difficult, requiring the organization to map its current business processes and develop future maps, as well. The complexity and effort required may mean that hybrid representations are more practical. For example, classical functional and technical requirements might be included in the RFP, complimented by process maps depicting high-level current and future processes.

RETHINKING SERVICE-LEVEL AGREEMENTS

Since the customer is usually leasing applications offered in the cloud, cloud services contracts focus on the scope of services and managing expectations rather than defining the product that will be delivered. Contracts typically entail clauses addressing uptime and availability, performance, disaster recovery, and similar services. Guarantees focus on the service levels that will be provided. Naturally, one expects to pay premium prices for higher service levels, but it doesn't necessarily make sense for customers to pay for premium services all the time.

Since cloud-based solutions are linked to consumption, vendors need to take seasonality into account. For example, paying for higher service levels for budget preparation software during budget season is justifiable, but not during the off-budget season. Cloud-based vendors could look to the utility industry and offer more competitive pricing, including price averaging, for seasonal functions.

Customers also need to be realistic about availability. Cloud-based solutions typically guarantee availability as a percentage of uptime, meaning the service is guaranteed to be available for a certain percentage of time and at a certain level of performance. Vendors cannot guarantee 100 percent performance, and customers should not expect it. Most contracts promise 95 percent or 99.5 percent uptime. There are currently no recommended standards, but jurisdictions should expect to pay more as service-level agreements approach 100 percent uptime.
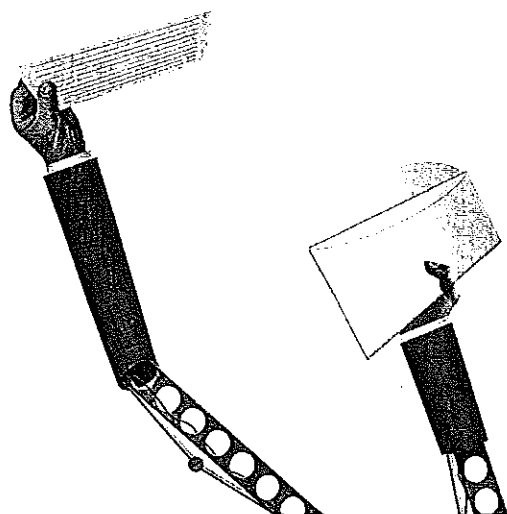
Unfortunately, if there are problems with uptime, most contracts require the customer to prove that a service was not available. Consider what would be involved in proving a system was down for approximately three hours over four weeks, assuming a 99.5 percent uptime agreement. Better vendor performance reporting, including dashboard reports and automated self-reporting of downtime, would be helpful in addressing this issue, and organizations might not want to purchase premium service-level agreements until robust self-reporting features are available.

RETHINKING RISK

Some organizations report that they hesitate to purchase cloud services because these types of technologies are seen as highly proprietary and difficult to disengage — which is true. However, it is also true for just about any other alternative. For example, if an organization wants to switch from one on-premises product to another, the challenges of accommodating different technologies are similar to those involved in moving from one cloud product to another or moving from a cloud product to an on-premises product. Even moving between products that are under one brand typically requires major rework of underlying data and, possibly, substantial configuration of software. Given these factors, customers need to think differently about risk.

Before dismissing cloud-based solutions, consider whether switching to another on-premises solution requires substantial configuration of software and migration of data. If it does, moving away from a cloud-based solution wouldn't be much different. The risks are similar, whether the organization is switching to an on-premises solution or a cloud-based solution.

SaaS solutions do present a unique set of challenges, but many of these can be addressed by incorporating a detailed services agreement into the overall cloud agreement. For example, clauses can be included to protect data, access to data, security, and similar items. These contracts can also address availability or uptime by assigning penalties for failure to meet minimum levels of service. And, most important, procedures for disengagement can also be included in cloud solution contracts. (Specific recommendations will be addressed in future *Government Finance Review* articles.)

> If cloud service solutions are to gain momentum in the public sector, vendors need to rethink their pricing models for SaaS and managed services.

RETHINKING IMPLEMENTATION

The ease with which cloud solutions can be implemented is commonly oversold, and the public sector needs better education from the software industry about implementing cloud solutions. Activating cloud-based services requires a good deal of effort — converting data, configuring software and infrastructure, training users, and so on. The process is not so simple as signing a contract and logging onto an Internet site. Jurisdictions that are considering moving to a cloud platform should anticipate an implementation effort almost as complex as installing an on-premises solution. Future savings are based on continuing to outsource infrastructure and maintenance.

The procurement process should create a clear understanding of what cloud services entail. The scope of work included in an RFP should incorporate implementation, and that component should be clearly separated from the software components. Cloud services arrangements still include asset and services components, and they should be considered separately throughout the procurement process. Even if a cloud solution provider proposes a single subscription price for a solution, the prospective customer should insist on having the price itemized by asset and implementation components.

Implementation comes in various forms for cloud solutions. Consulting services related to configuring the application for the customer is one of the most visible; those associated with activating services are not so visible. New customers typically pay for one-time activation fees to set up the shared service or technology. Customers should expect activation fees for every new feature that is accessed during the service relationship. Also associated with cloud services are backup and other services that are traditionally completed by internal staff. Although many of these services are automated, providers argue that they provide some oversight for these functions. In short, vendors need to be transparent about the true cost of providing these services, and customers need to be diligent about assessing the services and costs associated with these technologies.

RETHINKING FUNDING

Most organizations rely on capital funding for implementing enterprise applications because they are usually too costly to include in the operating

budget. The Governmental Accounting Standards Board is quite clear about what public-sector organizations may capitalize during a software procurement and implementation project. However, a general reading of the statements pertaining to software assumes the software is an on-premises solution with associated infrastructure and implementation services. But where do cloud services fit? The financing standards for implementing subscription-based services are not explicit, and some organizations have argued that some subscription-based services are considered capital lease assets.

Since implementing cloud solutions is not a simple process, complex and expensive activities are generally required before the customer can access the features of the technology. Some of these setup costs may be eligible for capital funding — consulting fees related to creating the configuration of the subscription services, for example, may be one of these. Ongoing subscription fees, however, are probably not eligible. Organizations should check with their bond counsel to establish which services and activities can and should be capitalized.

CONCLUSIONS

The GFOA will continue to explore the cloud market and its impact in the public sector. This article represents an initial look at issues that are seldom addressed in the general research on cloud technologies. Future articles will focus on each of the ideas presented here, particularly emphasizing the GFOA's research findings into issues, case studies, and recommendations. I

Note

1. U.S. Government Cloud Computing Technology Roadmap Volume II Release 1.0 (Draft) Special Publication 500 — 293, National Institute of Standards and Technology. NIST is also working with the federal government to establish principles around cloud technologies for the public and private sectors.

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