



HOW AND WHEN TO MOVE GOVERNMENT AGENCIES INTO THE CLOUD

A Decision Guide for Federal CIOs



Cloud computing offers a powerful complement to the more established IT solutions federal agencies have long used to conduct their operations. In the right circumstances, it holds the potential to deliver significant cost savings through resource sharing and elimination of redundancies. It also can offer instant scalability to meet expected or unexpected surges in demand. But the acquisition of cloud solutions represents a new approach that brings with it a host of new considerations for government CIOs.

Deciding on the most appropriate IT solution for any given organizational need requires a keen focus on needs, functional capabilities and operational outcomes, a clear view of what exactly is being purchased (either physical or cloud), and an eye toward economies of scale wherever possible. To help federal CIOs navigate this decision process, BSA and its member companies have developed a decision guide for assessing how and when government agencies should adopt cloud-based solutions to augment or optimize their IT infrastructure.

THE PLANNING PHASE: STRATEGIC CONSIDERATIONS

- » **What are the operational priorities for your agency or department?**
- » **What is the “lay of the land” in your agency and what is needed to move cloud solutions forward?**
 - Educate personnel and management on cloud solutions.
 - Focus on needs and outcomes.
 - Identify opportunities to partner with other agencies to achieve economies of scale and decrease risks.
- » **Do you have enough flexibility in your IT budgeting to allow reprogramming and pooling of funds?**
- » **Is there a clear-enough protocol for procuring IT solutions?**
 - Start with clearly defined functional requirements.
 - Ensure the procurement process is consistent with established rules, and is designed to identify the widest range of technology options. The process should be transparent and technology-neutral.
 - Avoid technology preferences by instead casting the widest-possible net for the best solution to fit your department or agency needs:
 - » Steer clear of sole-source contracting.
 - » Take advantage of the best of all development models. “Mixed-source” software is just about everywhere. The “open-source” versus “proprietary” software debate limits choice and can obscure the right solution.

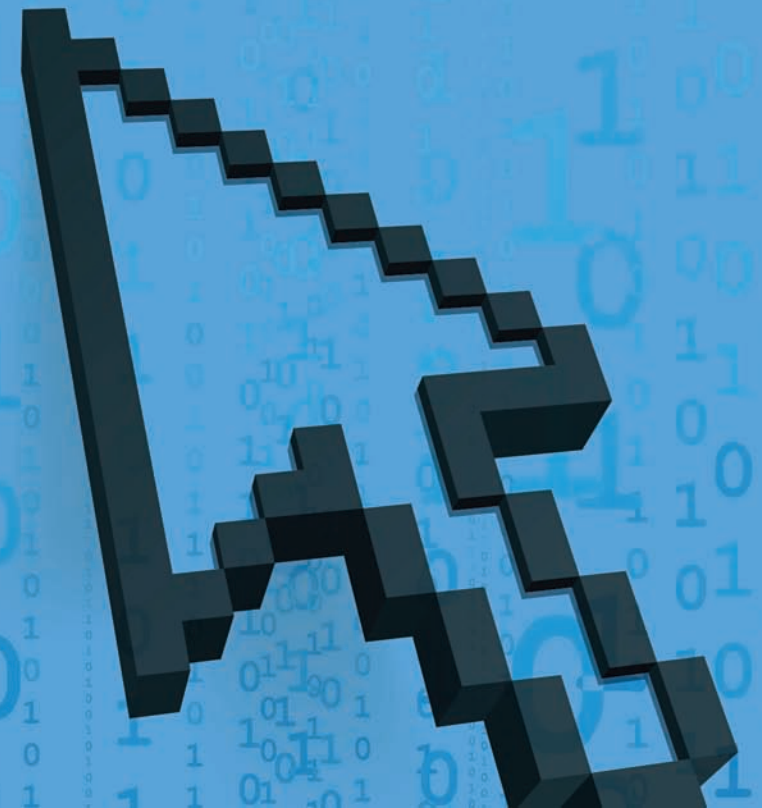
THE IMPLEMENTATION PHASE: AN OPERATIONAL CHECKLIST

- » **How much and what type of computing power is used by whom and where?**
 - Technology decisions should map to and support:
 - » Department objectives.
 - » Current workloads.
 - » Existing systems.
 - » IT usage.
 - » Expenditures.
- » **How is the data used to perform the department's or agency's mission?**
 - Determine what kind of data is being used:
 - » Transactional data versus content (for example, agency email logs versus agency email text).
 - » Single-use versus multiple, serial or parallel use.
 - » Raw versus structured data.
 - » Private and/or confidential — such as medical records, financial records or information about race or ethnicity, religious beliefs or sexual orientation.
 - » Is it regulated — for example, health care, financial transactions, children's data.
 - » Evaluate the current cost of storing, managing and using the data.

- » **Which cloud solution, if any, best meets the needs and data constraints that flow from the answers to the questions outlined above?**
 - Evaluate the spectrum of cloud solutions, including the benefits and risks of each.
 - Prioritize which cloud offerings might best suit needs: software, platform or infrastructure as a service.
 - Apply clear metrics to current situation and potential cloud solutions.
 - » Costs:
 - Reduced or avoided up-front capital costs.
 - Reduced operating costs.
 - Energy efficiency gains that may come from virtualization of hardware and software services and less overbuilding of data center and server capacity.
 - » Timing:
 - Accelerated deployment of systems.
 - » Improved access to information.
 - » Increased productivity.
 - » Scalability:
 - Improved ability to quickly “ramp up” to account for surges in demand and unusual events.
 - Reduce vulnerabilities by:
 - » Relying on common risk-management/vulnerability assessments.
 - » Implementing consistent data-protection applications.

A COMMITMENT TO INTELLECTUAL PROPERTY

Government adoption of cloud solutions can help build public trust and confidence in the cloud. As with all solutions — cloud or traditional — government agencies must ensure their technology solutions are legally licensed and implemented in accordance with contract terms.





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