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The Adoption Architect

A NEW APPROACH TO DRIVING EFFECTIVE TECHNOLOGY ADOPTION IN GOVERNMENT

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Defense and federal agencies across government are implementing advanced analytic and digital technologies to help improve mission performance. Oftentimes these innovative technologies underpin a set of broader digital transformation goals for these organizations. However, maximizing the potential of any new technology and achieving transformational goals do not simply happen when a new technology is inserted. To get the most value out of investments in technology, organizations must start early to deliberately and continuously manage how they integrate new digital capabilities into their operating environment. Facilitating the type of technology adoption that drives transformation is the realm of the adoption architect.

A CHALLENGING OPERATING ENVIRONMENT

Such a considered approach is necessary because of the unprecedented complexity of today's digital operating environment and the obstacles it presents to technology adoption. When it comes to technology, change is the only constant. Not only are the new technologies themselves inherently complex and evolving quickly, but how they interconnect with an organization's existing solutions and platforms further increases the intricacies of adoption. In the past, periodically inserting an off-the-shelf solution — whether unmodified or tailored — was a relatively straightforward process. Today, this plug-and-play approach is no longer viable. The proliferation and interconnectedness of technology have introduced numerous potential challenges, including incompatibility with legacy technologies, suitability of existing infrastructures and exposure to data protection and control risks, among others.

Organizational and cultural changes have also influenced, and been influenced by, today's digital operating environment. As the connections between technologies, platforms and capabilities expand, the demand for even more new technology has also increased. This propagation has fundamentally changed the nature of technology adoption — it has moved from an elective course of action that

occasionally popped up in an organization into an ongoing process that demands almost constant attention. This relentless pace of change can lead to change fatigue, with staff simply soldiering on through transition by rote, or at a surface level, rather than embracing the technology and their new roles and responsibilities.

A Poor Track Record for Tech Adoption

Technology adoption in the federal government is a persistent problem and standard implementation methods are often inadequate. Federal and defense employees are well aware of the government's poor track record in acquiring, developing and managing technology initiatives, according to a recent survey conducted by the Government Business Council for Booz Allen Hamilton.

In the survey[1], which included 450 employees representing more than 35 federal agencies, more than 75% of respondents said their organization's technology initiatives either take more time than expected or are never completed at all. In addition, 66% of respondents said their organizations do not consistently derive the expected value from technology adoption efforts, and 42% of respondents said their organization's technology adoption fails to meet operational needs.

Traditionally, the many challenges to successful digital adoption and transformation programs — and the efforts to address them — have been viewed through the lenses of people, process and the new technology itself. But like almost all initiatives in the government, an implementation that lacks leadership is likely to fail. And even with today's highly skilled workforce, employee resistance to change and organizational inertia are bound to curtail implementations.

An uncoordinated process without clear deliverables, milestones and pilot efforts may be subject to delays, naysayers and the whims of competing agendas. As a result, some technology implementations take so long that the new systems are out of date before they can take effect. Alternately, some are abandoned, or only partially implemented, leaving uneven, inefficient and overlapping applications.

In some cases, across large organizations, a technology can have dozens of iterations, with each organizational subunit applying it differently. The new technology seems to never progress far enough to fully replace the outdated one it was meant to oust, leaving both in operation and creating redundancies that undermine the integration, efficiency and cost-effectiveness that were the original goals.

The Government Business Council survey also revealed that examining the adoption issues through the lens of people, process and technology challenges is necessary but not sufficient in the face of today's operating environment. Those lenses must be expanded — and integrated — in order to harness the full power of digital transformation. Moreover, they must focus more attention on the organization's technology ecosystem and its broader transformational goals.

In other words, because of the inherent complexity in technology transformations, as well as in the nature of the desired larger organizational changes, it is critical for technology adoption to be undertaken in a holistic, deliberate and continuous manner. Advanced analytic and digital technologies reach their full potential only when the technologies are working within the enterprise's overall digital ecosystem while driving toward a larger goal of continuous improvement.

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[1] Survey available at: *https://www.govexec.com/insights/reports/getting-ready-survey-trends-and-challenges-government-technology-adoption-initiatives/162526/*

The Adoption Architect Approach

Achieving this kind of broad transformation in today's complex digital operating environment requires planning, structure and effort, with a strategy that is anchored to the end goal. It requires the facilitation of an adoption architect.

The adoption architect concept offers an entirely new mindset and approach to a challenge that is only going to expand and accelerate. It combines a deep understanding of the advanced technologies with an equally deep understanding of the organization and its mission. With this unique combination — and an outsider's perspective — the adoption architect guides the transformation towards its goal and brings the new technologies to their full power.

The role is similar to that of a building's architect, spanning design, planning and construction. The adoption architect helps guide a deliberate and structured approach to technology selection, planning and implementation. The adoption architect helps the organization understand the true nature of its challenges and opportunities to define a clear vision of the future and how to apply the most advanced and suitable solutions. In terms of planning, the adoption architect assesses the viability of the technology to work within the digital ecosystem and architects a holistic implementation plan to achieve the envisioned state. Finally, the adoption architect accelerates overall adoption by facilitating the plan's execution, applying technical, functional and change management expertise.

By clearly assessing the path ahead and coordinating all technical, change management and communications aspects of the transformation through a recognized agenda — including the mapping of both successes and obstacles ahead of time — the adoption architect ensures an integrated, successful tech adoption process. Inevitably, the payoff is a quicker, smoother arrival at realizing the value of the change.

CRITERIA FOR SUCCESSFUL TECHNOLOGY ADOPTION

Results of the Government Business Council survey further illuminate the challenges government faces in effectively executing technology programs and how the adoption architect can help organizations overcome them. The survey covered a wide range of issues, but as it relates to driving timely and integrated technology adoption that derives the intended value, we believe there are five key findings. These five represent the criteria for effective technology adoption: defined governance models, clear decision rights, deliberate agendas, considered digital ecosystems and intentional tech-user intersections. The adoption architect plays a key role in each of these areas.

Defined Governance Models

Successful technology implementation requires a deliberately planned strategic agenda for how to achieve the goal. Among the many components of such a roadmap is a governance model that guides decision making, designates who has overall responsibility and defines roles and responsibilities. Putting in place a governance structure that helps organizations prioritize requirements and changes will help control costs and avoid scope creep along the way.

Not surprisingly given the struggles government agencies have implementing technologies, the lack of a clear governance model is evident in respondents' answers to a number of survey questions. For example, 50% of respondents reported that expectations for clearly defined roles, responsibilities and accountability for those involved in technology adoption initiatives were not met. In addition, asked if their organization has a designated individual who is responsible for aligning technology implementation with strategic business needs, nearly two-thirds of respondents either do not know if there is a designated individual responsible for ensuring that technology implementation aligns with strategic business needs or say there is no such individual (39% said no such individual exists and 24% were uncertain).

This lack of clear consensus on who is ultimately responsible for technology adoption and who has what roles also reinforces the need for a deliberate agenda with designated leadership. It's important for someone to be responsible; otherwise no one is responsible, which guarantees failure.

What's required is a more deliberate and comprehensive planning strategy from the outset so that a governance model is designed into the plan. In this construct, the adoption architect brings a broader view of the mission than the sponsors, technologists or program managers working on any one piece of it. The architect thinks through and coordinates essential components from start to finish, focusing on realizing the end goals from the beginning.

Furthermore, throughout a tech adoption effort, the adoption architect actively manages the "how we are going to go about it." For example, the adoption architect facilitates the arbitration of the many decisions that must be made during an implementation effort, guided by the governance model. This structure allows for agility and speed to adapt changing circumstances, based on the end goals.

For large implementation efforts that last months and often years, one additional benefit of this approach is that the adoption architect can bridge gaps in leadership due to changes in organization structure and leadership rotation that may happen during a program's life cycle. The adoption architect has an understanding of all the stakeholders, processes, systems and technology needed to deliver a better solution.

Clear Decision Rights

Whereas the governance structure guides the myriad decisions that need to be made over the course of the technology adoption life cycle, decision rights determine who has the responsibility for making decisions on the key points specified in the agenda.

In the Government Business Council survey, decision rights are defined as "those with a defined role as either a decider or as a formal or informal influencer in technology adoption processes." Nearly one-third of respondents (28%) did not know who is accountable when it comes to decision rights for technology adoption in their organization. The rest of the respondents' answers were spread across senior management (46%), the IT department (38%), operation leads/program owners (21%), and the external vendor/integrator (7%). This wide range of responses indicates a lack of deliberate planning and confusion about who is in charge and what they are responsible for.

Given the complexity of today's technology adoption efforts, the reality is that, depending on what activities are under way, different people or entities should have decision rights about particular components at different points in the adoption life cycle. And it should be clear to all stakeholders who has this responsibility. Technology adoption is ultimately a shared responsibility throughout much of an organization, but each specific stage of the technology adoption life cycle requires specific responsibility and expertise.

The adoption architect is responsible for facilitating the technology adoption plan or agenda. In this capacity, the architect serves as a sort of general contractor overseeing a large construction project, ensuring that hand-offs occur seamlessly and that everyone involved knows what activities are under way and who is responsible for each component. But beforehand, deliberate planning of the entire technology adoption agenda is imperative to identify who has what decision rights at specific stages.

Deliberate Agendas

Adding new technology is no longer a turnkey operation of inserting a single new technology every five or six years, or even through a waterfall progression over time. Today's technology systems are so numerous and interconnected that a change in one area is bound to affect many other areas. This complexity means that implementation is no longer about just getting the technology to work. All phases of technology adoption — from problem definition to operation — are interrelated and must be planned for.

Survey results reinforce this need for a holistic approach. When asked what phase of the technology adoption life cycle creates the greatest challenge in their organization — research, procurement, deployment, training, or evaluation — 41% of respondents said, "all of the above." In other words, they recognize the problem is much bigger than simply plugging in a new technology, flipping a "switch," and watching it work. Instead, every part of the adoption life cycle is posing a challenge.

The survey revealed other areas where expectations for adoption are not being met. A full 57% of respondents reported that expectations that their organization have an "actionable plan to address technology/system gaps" were not met. In addition, well over half of respondents (63%) believed their organization does not have metrics in place that measure whether the outcomes of technology adoption initiatives meet their intended goals (20% neither agreed or disagreed, 23% somewhat disagreed, and 20% strongly disagreed).

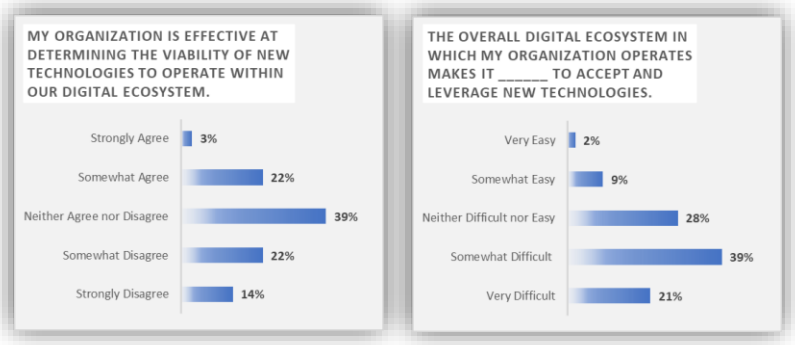
Taken together, these results and today's tech complexity further demonstrate the need for an end-to-end agenda for technology adoption. In other words, the adoption process itself, not just the technology, requires a conscious consideration at the outset and a clear blueprint for action.

The adoption architect provides integral support across the entire implementation life cycle, from developing the agenda to ensuring operational sustainability over time. Ideally, the adoption architect engages early in the planning phase — starting with the problem definition, option consideration and selection of the particular solution — and sees the effort through to the end state. However, the adoption architect can also be inserted into an adoption effort midstream to evaluate what's not working and get it back on track.

Considered Digital Ecosystems

An organization's technical operating environment is dynamic and constantly evolving. Oftentimes technology adoption initiatives assess the viability of the new technology but fail to adequately take into account the implication of its insertion on the broader digital ecosystem. What's more, an organization's technology landscape itself may not be ready to support smooth tech adoption.

These characteristics were identified by a majority of survey respondents as barriers to successful technology adoption. Only 25% of respondents agreed with the statement, "My organization is effective at determining the viability of new technologies to operate within our digital ecosystem." Moreover, 39% said that the overall digital ecosystem in which their organization operates makes it "somewhat difficult" to accept and leverage new technologies, and 21% said "very difficult." Conversely, only 11% of respondents believed their digital ecosystem's design enables the implementation of new technology.

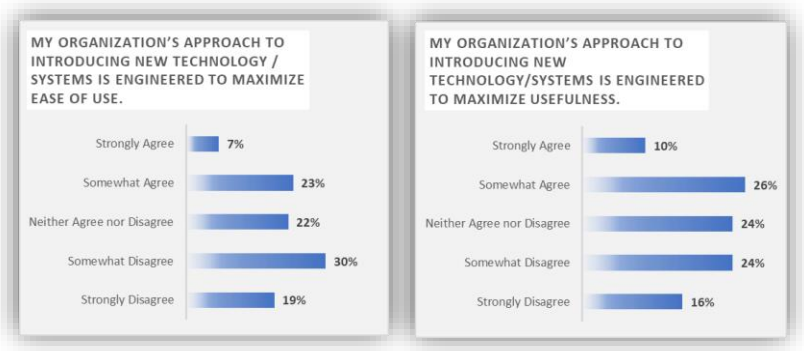


Because technology adoption does not take place in a vacuum, an integral part of a technology adoption agenda is an assessment of the two-way interplay among new technologies and the organization's existing (and planned) digital ecosystem. Given today's complex digital environments, it's no longer realistic to assume that a new technology will slip in seamlessly. What's more, the organization's underlying technology landscape influences its readiness to adopt technology, making it a key factor in shaping the agenda and thus must also be understood.

The adoption architect also determines what barriers to adoption exist in the technical environment. Elements that influence tech adoption readiness include cybersecurity controls, physical and virtual infrastructure, data engineering and analytic tools, software applications and how people and technology interact. With an understanding of these areas, the adoption architect can recommend ways to improve the broader digital ecosystem so that it will be primed for tech adoption.

The adoption architect plays an important role in all aspects of technology adoption. Possessing both a deep understanding of the advanced technologies and the desired goals of implementing them, the adoption architect is positioned to not only assess the viability of a selected technology to solve the problem, but also assess the viability of that solution when it's integrated into the larger ecosystem, including how the performance and security of the ecosystem itself could be impacted by each addition.

Intentional Tech-User Intersections



The intersection of technology and users is a significant point of friction in new technology uptake. Unsurprisingly, survey respondents have experienced such challenges. Some 71% of respondents did not agree, or were neutral about whether their organization's approach to introducing new technology is engineered to maximize ease of use. When asked if their organization's approach to introducing new technology is engineered to maximize usefulness, 40% somewhat or strongly disagreed and 24% were neutral. And 34% said engagement with stakeholders in technology adoption initiatives was ill defined, sporadic and/or narrow in outreach.

This disconnect can happen for a variety of reasons. The team selecting the solution can do a good job of gathering user requirements, but users typically want the system to do everything equally well and don't understand necessary trade-offs in functionality. Rare is the off-the-shelf solution that meets all of the requirements. Yet, even if a technology is selected that meets all user requirements, its implementation may not happen in an integrated way that is user-friendly and maximizes support to mission execution.

People do not tend to adopt new technology just because it is there, so the adoption architect assesses the organization's overall culture and receptiveness to change. The resulting understanding of where the organization sits on the spectrum of adoption maturity informs the technology adoption agenda and what changes are needed to create an environment more conducive to rapid and effective technology adoption.

Increasingly, the best approach is not tailoring a new technology platform to an organization but transforming an organization's culture into one of readiness to adapt to the incessant waves of new

technology. This makes the organization more flexible and efficient in adoption than if it has highly customized platforms that need to be reconfigured for every advance. This is a significant departure from previous methods of implementation.

MODERNIZED TECH ADOPTION

Defense and federal agencies across government depend on technology more than ever to achieve their missions. Operating environments are becoming more digitally based, and the scale and scope of innovations that need integration into those environments are growing.

When implemented successfully, technology can catalyze broader digital transformation and help agencies more effectively fulfill their missions. But as survey respondents indicated, many opportunities for improving technology adoption efforts exist.

The reality is that the principles for successful technology adoption of the past no longer apply. Today's technology ecosystems are so complex and the speed at which system modernizations must happen are so fast that the approach to technology adoption itself must be modernized.

Based on our analysis of the survey results and decades of client experience, we believe solving the technology adoption challenge requires deliberate planning and a structured agenda. And it requires an adoption architect to guide an organization through the agenda to achieve the desired outcomes and value.

About Booz Allen

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