Losing Your Minds: Capturing, Retaining and Leveraging Organizational Knowledge

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Chapter 1: The challenge

AFTER THREE years in a government program office as a project manager, John competed for and won a senior leadership position as a program director in another office, assuming responsibility for several government programs.

The previous program director, Susan, had left to accept a once in a lifetime opportunity in the private sector and several of her senior project managers had retired or accepted promotions of their own. For the past five years, Susan and her program leadership team had developed a successful history not only of managing these programs serving several government clients, but also of successfully acquiring and managing the delivery of critical services and solutions from the organization’s several supporting contractors. Having started at the beginning of the program and grown with the program as its requirements evolved, Susan and her team had overall responsibility for the successful acquisition of the needed products and solutions. When problems arose concerning delivery, funding, and other programmatic issues, Susan and her team generally knew with whom to talk within the contractor organizations and within their own government organization. Because of their corporate program history, they knew how to approach ‘sticky’ issues and how to resolve them while delivering continuing value to their government customers and the agency’s overall mission.

Their success had as much to do with their skill in knowing what to do and how to do it as it did with the relationships they had built with everyone and the culture of all involved. When there was a problem, Susan and her leadership team knew what to say, how to say it, and whom to contact. Learning all of this over a long period of time, she never wrote any of this down… she didn’t need to since she ‘just knew it.’ She never expected to have to leave so abruptly.

John did not take over as program director until four weeks after Susan had left. The last of the senior program leadership left just as John signed in. After initial on-boarding, John was introduced to the contractor leads and provided guidance by his boss, an Assistant Secretary of a major agency. During the first few weeks, John attended program meetings, and worked with the program management teams and his peers to understand as best he could what the programs, the relationships, and the business were all about. John was clear about his formal ‘responsibilities’ and understood what he was responsible for accomplishing, since he was assuming this position with good solid experience from his previous job. He also had to take on the additional work of hiring new project managers. However, he was a bit ‘in the dark’ regarding the formal ‘know how and know why’ of Susan’s success and the context in which this all occurred.

After about three months, John was trying to decide if he was up to the new job and his new responsibilities. Some of his programs were experiencing recent and
dramatic funding changes that were driving requirements changes. In addition, some of the deliverables from his contractors were not up to quality standards to which his government customers had become accustomed. The program office’s relationships with its contractors were experiencing some challenges due to the funding changes and the quality issues had begun to show strain. John still did not have all positions filled and was working through this with people in ‘acting’ leadership roles.

Without Susan, without access to what she knew, John faced real challenges not only in understanding the program dynamics both inside and outside of the government, but also how to resolve these issues as quickly as was needed. While his team was helpful in resolving some issues, the really relevant knowledge that he needed wasn’t available anywhere in the program office or the agency. He had a tough time finding the answers he needed both for his agency and for his own success.

The ongoing challenge of workforce turnover and knowledge loss

The challenges of workforce turnover and the risk of organizational knowledge loss described above face all organizations, public and private. These challenges are assuming a growing urgency because of the many ways and reasons that knowledge can be lost in an organization. Whether through retirement, promotion, career change, dismissal, layoff, economic or other ‘transition’ reasons, inevitably, all organizations lose good people. Organizations must recognize that even their most knowledgeable leaders and members of their workforce will leave along with critical know how and know why necessary for organizational and mission success.

The threat that both public and private sector organizations face today is a threat they faced in the past and will continue to face in the future. The concepts, strategies, and suggested solutions shared in this report recognize that knowledge loss and retention challenges and the subsequent risk that they pose to an organization’s success are primarily the same in either sector; the context within which decisions to address these challenges are made can be different.

Workforce turnover and knowledge loss are challenges at both the workforce and the leadership levels because there isn’t always a ready supply of skilled and experienced replacements who can easily step into their predecessors’ shoes. Challenges exist due to changing demographics and generational differences that encompass skills, cultural norms, and work expectations. This simple fact results in losses in productivity, reduced cycle time, and errors that could be avoided with a more consistent and disciplined approach for capturing, retaining, and reusing the critical and relevant knowledge of the organization.

The challenge is much broader than Baby Boomer retirement. While the graying of the workforce and the brain drain due to boomer retirements dominates discussions of knowledge loss, the true challenge and the rationale for concern is much broader. Failure to recognize this broader dimension will impact how successfully an organization eventually addresses these challenges.

Creating a resilient, agile organization

The ability to leverage knowledge in the midst of ongoing change is a crucial ingredient of organization resilience and agility. Resilience is defined as the ability of an organization to operate effectively in the face of change, such as employee turnover, work disruptions, emergencies and other
change events that are beyond initial control of the organization. Resilient organizations are also prepared to prevent or respond to, and recover from, catastrophic events outside or within their organizations.

Agility is defined as an organization’s ability to address the unknown and to adapt effectively to change. To be successful, organizations must preserve leadership and strategic abilities to detect and address relevant changes in their environments, assess capability (and mission) gaps, and adapt and respond quickly and effectively while facing new and challenging conditions - all the while continuing to deliver on mission requirements.

Success is enabled and measured by the organization’s ability to capture, adapt, transfer, and reuse ‘what it knows about what it does’ to consistently deliver the highest quality support and services that the customer requires and expects. It is through this ability to leverage key organizational (and personal) knowledge as part of the organization’s strategic thinking and normal business operations that new knowledge is not only created, but also leveraged to drive innovation in the delivery and creation of the services expected. The ability to leverage this accumulated organizational knowledge drives institutional memory, which is retained in the form of experience, judgment, know how and know why that must be characterized in context for reuse by individuals and the organization in forms that can be used in the absence of those who know.

Approaches to retaining critical knowledge and the timing of these retention activities across the organization have been addressed in many ways, some more or less effective than others. Unfortunately, these methods often only target a small fraction of the content making up true institutional memory. To be effective, solutions must focus on establishing a culture (and supporting technology) geared to collaboration, knowledge sharing, and the capture and retention of relevant and critical individual and organizational learning on a continual basis as part of normal business operations.

Figure 1 makes the point that change can have a major impact on an organization and its ability to operate. The kind of change determines (1) what kind of knowledge is needed and (2) how important that

![Figure 1: KM mitigates the impact of change on an organization](image-url)
knowledge is to mitigating the impact of change and the critical event on the normal operating performance of the organization. Organizations that can effectively leverage their knowledge will shorten not only the severity of the impact, but also the duration of the impact.

Why is this? Organizations that routinely and consistently capture and retain knowledge about the know how and know why of their operations, the decisions they have made about how they have addressed challenges and opportunities in the past, and have enabled their workforce and leadership to connect, collect, and collaborate in addressing these challenges and opportunities, will possess the ability to respond quickly to ‘right the ship’ or take advantage of an opportunity driving a better outcome.

When the organization faces new or unfamiliar factors that can impact performance, the ability to quickly leverage its knowledge base will improve the ability to deal more effectively with change, increasing the probability that performance will return to a more normal state more quickly. Based on the level of innovation driven by the decisions made and solutions implemented, the organization may actually exceed previous performance levels because the new knowledge created in addressing this change event enabled improvements that helped the organization plan and execute more effectively.

The potential impact on mission success is immense
As an example, look at the US federal (central) government for a moment. The US federal government employs over 1.9 million workers and hires hundreds of thousands each year to replace civil service workers who transfer to other federal government jobs, retire, or leave for other reasons. The US government is the largest employer in the United States, hiring about two percent of the nation’s workforce, and the workforce is expanding significantly under the Obama administration. Federal government jobs can be found in every state and large metropolitan area, including overseas in over 200 countries.¹

The median number of years that wage and salary workers, including federal service, were with their current employer was 4.1 years in January 2008, little changed from 4.0 years in January 2006, according to the US Bureau of Labor Statistics of the US Department of Labor. The average worker starting today will have 11 jobs in the span of his or her career; and each year, roughly 60 million American workers will change roles within their current organizations.²

The turnover poses a multi-dimensional dilemma for federal agencies. When key employees move or shift roles – through promotion, transfer, retirement, or other reasons – the knowledge gap created by their absence generates significant costs to employers, but even more troubling is the potential loss of institutional knowledge. Organizations are often unaware of the knowledge their departing workers possess. These gaps in knowledge can fundamentally damage an agency’s ability to accomplish its mission. Federal agencies must be aware that knowledge retention and knowledge loss occur on a continuum – from short-term inability to access knowledge, such as when a subject matter expert is out of the office, to a long-term loss of knowledge due to a worker leaving the organization.

People have always left organizations, so what’s different now?
Underlying this summary answer are major factors contributing not only to the loss of knowledge, but also to the challenge of
Examples of knowledge loss

US National Nuclear Security Administration

In 2009, the US National Nuclear Security Administration (NNSA) revealed it had spent US$69m largely because it had failed to maintain its knowledge base for manufacturing critical components of nuclear weapons that are being refurbished. NNSA is responsible for programs that will extend the operational life of US nuclear weapons by 20 to 30 years, since new weapons are not currently being developed. But efforts to rebuild the warheads used on Trident missiles were halted when it was discovered that NNSA had lost the knowledge of how to manufacture an essential component of the bomb. According to an audit by the Government Accountability Office, the agency failed to document the original manufacturing process and those with production expertise had retired or left the agency.

BP

In 2006, more than 200,000 gallons of crude oil spilled onto Alaska’s North Slope forcing energy giant BP to shut down the largest US oil field. Suddenly, eight percent of US domestic oil production was unavailable because of extensive corrosion in BP’s oil pipeline. Follow up investigations revealed that BP had failed to retain its critical knowledge base on pipeline corrosion needed to monitor the state of its pipeline infrastructure. Before a series of leaks were discovered, the job of BP’s senior corrosion engineer had gone unfilled for over a year, which meant the firm no longer had an adequate strategic overview of its corrosion prevention activities. Not only did the company sustain extensive losses in revenues, but it also faced embarrassing Congressional hearings where leaders had to admit that BP had failed to meet its obligations to customers and the public. In addition, the company has been forced to rebuild its corrosion prevention capabilities, hiring expensive outside experts to evaluate existing capabilities and to improve its corrosion prevention policies.

Microsoft

According to Bill Gates, when Microsoft made plans to expand its Redmond campus some years ago, management couldn’t find the blueprints for its existing buildings. These drawings were essential for the new project. They called the company’s recently retired head of real estate and facilities to try to locate the plans. This retiree referred them to an electrician who happened to still be working for one of Microsoft’s outside vendors. It turned out this electrician was the only person in the world who had all of the blueprints for all of Microsoft’s buildings. Describing this nearly-lost knowledge, Gates wrote in Business @ The Speed of Thought, “Here we were the largest developer of office space in the Seattle area... and our entire knowledge base of crucial information was being carried around in the heads of just a few people and in a few stacks of blueprints we didn’t even have on file.”

mitigating this loss effectively. Some of these are particular to government organizations but many of the cultural and people challenges will apply equally to private sector organizations.

1. Across the federal government, there are not any formal, consistent knowledge capture and reuse frameworks that are an integral part of government operating or business
processes – a framework that is part of the way government works.

2. Broad senior leadership commitment to provide the necessary resources and take the necessary action to address knowledge capture and retention doesn’t exist. Senior leadership in the organization must require that the ability to capture and reuse knowledge be integrated into the organization and demand that collaboration becomes part of operations.

3. Workforce dynamics include the organization’s leadership, culture and working environment and must be accounted for in addressing knowledge loss. For example, people often leave due to dissatisfaction with first level supervisors who may have been promoted based on their technical knowledge rather than their managerial skill. Further, if people are leaving due to the leadership/management climate, word gets out and talented people with employment options will join other organizations.

4. It is difficult and labor intensive (costly) to capture what is in people’s heads – their experience and insight including how they ‘connect the dots’ or what they really do to work through a process. This ability to effectively make sense out of knowledge and characterize it for reuse is more art than science. Few people are trained to do this or have the experience to do it effectively… and technology is not the answer.

5. There is often no real and explicit encouragement for knowledge and skills capture and transfer, especially across organizational boundaries. It is a low priority in organizations. The challenge is recognized but money and resources are not applied to address the challenge.

6. There is a lack of will to tackle the problem. Knowledge and skills transfer is seen as a luxury to be tackled ‘when we have time.’ If not part of the business processes of the organization, this will always be viewed as ‘extra’ work and the time will never be available.

7. Time is required to build expertise because filling positions with new hires often requires extensive education and on-the-job training which can take many years to deliver competence. Sending someone to training can provide a skill set, but cannot provide the competence that comes from practical application and reuse of what is learned from applying the skill.

8. Backfilling positions isn’t easy because replacing a highly experienced employee can be expensive, even when salaries offered are lower. For example, in one organization it required two to 2.5 new employees to replace a highly experienced subject matter expert, partly because the maturity and operational experience didn’t compare.

9. Knowledge capture and retention efforts may not provide immediate visible and measurable value. Deciding what knowledge is critical and relevant to capture and retain is a labor intensive task and expensive upfront effort that technology cannot deliver. For example, are you interested in capturing information or experience, or both? Characterizing each for reuse is approached differently and requires support up and down the organization.

10. Developing and sustaining Communities of Practice (online groups of like practitioners) requires cross-organizational support and resources by senior leadership and general management that see the value in this interaction… during business hours.

11. Consider that the two most recent recessions changed the perspective of many older workers because the impact on their retirement savings required them to make the decision to continue working in order to mitigate the losses in their investments. Those that were going to retire didn’t but may be at an age where it now makes sense to do so.

12. Uniquely, government agency planning is focused on the fiscal year and aligned with the near term budget process. Longer term investments in areas such as knowledge management are viewed on a year by year basis and as such are budgeted the same way. Immediate returns or demonstrations of value are demanded due to the nature of the political process and its influence and impact on agency decision making. So it is not surprising that the patience for long term investment in knowledge management doesn’t make the investment cut.

13. Also specific to the government is a growing discussion about cutting workforce. With projections of huge government deficits for years to come, policymakers are looking for places to cut spending. One area being examined in the US is the compensation paid to the federal government’s 1.9 million civilian workers. Total wages and benefits paid to executive branch civilians was US$230bn in 2010, indicating that compensation is a major federal expense that critics believe could be trimmed.4 In the United Kingdom, public sector job losses of up to 500,000 are anticipated, following austerity measures announced in October 2010. There is a real challenge in addressing knowledge loss from these workers leaving the workforce.

Compliance versus performance

It is not an oversimplification to say that the government operates in a compliance environment, rather than the performance environment in which private sector organizations operate. Yes, performance is important to evaluating and measuring government success. In general, however, the track record and actual behavior exhibited by many government agencies seems to be more of talking about performance (remember the Government Performance and Results Act?) than actually achieving planned performance goals.5

Private sector measures of success generally focus on revenue, cost, and profit. The motivation to capture, retain, and share knowledge has a direct impact on jobs and organizational survival and is measured in business cycles and across fiscal years where long term thinking about performance drives necessary efforts to improve one’s competitive advantage, and ensure an organization’s growth and survival.

This necessary sense of urgency and the willingness to embrace new thinking, disciplines and practices required for an organization’s continued existence is not the environment in which the government seems to operate with respect to this challenge. Consider that the government operates on an annual fiscal year basis where there is less willingness to make the long term investment particularly when senior agency leadership changes quickly and measurement of one’s individual performance can be quickly decided.

In the public sector, most everything is subject to public review so there is a different willingness to openly review performance. Even though success and failure in the private sector aren’t subject to exactly the same spotlight, there is also a challenge in the private sector to review performance.
in an open environment. But, the ability to ‘perform and learn and perform’ is more widespread especially when this kind of open review and learning behavior drives improvement and success in the bottom line.

In the public sector, however, this performing and learning behavior seems to be much more of a challenge. Not only is everything generally visible to the public, the media are focused on the mistakes of government rather than the successes. Think about critical events that have occurred over the past year including the mining disasters in West Virginia and the oil spill in the Gulf of Mexico. Did you ever hear that the first order of business would be on capturing the knowledge about what happened in each of these disasters so as to make sense out of what happened, and how it happened, so that what was learned could be captured and retained for later reuse?

More likely, as I did, you heard discussion about responsibility, accountability, and cost. So while a project manager in the private sector might say ‘this project could have gone better and here is what we learned so we will do it differently in the future,’ this behavior is much less likely in the public sector given the environment in which government operates.

Finally, in the government organizations that attempt to address workforce turnover and knowledge loss, success, when it occurs, is neither widely shared across the organization nor between organizations. The early adapter who ‘gets it’ and can see long term value introduces concepts and practices to address the challenge and then moves on or runs into challenges including changes in funding or priorities. The process runs out of steam due to lack of understanding of what’s involved in sustaining the effort and support at the senior level recedes.

So, it sounds bleak, but it doesn’t have to be. Let’s look at what can be done to develop the right concepts, strategies, and practices to ensure that organizations can address the ongoing challenge of workforce turnover and knowledge loss by becoming high performing knowledge enabled organizations.

References
5. See http://www.ombwatch.org/node/758.