Agile Knowledge Management at the General Services Administration’s Public Buildings Service: Piloting New Knowledge Management Approaches with a Dedicated Team, Direct Dialogue, Flexible Applications, and a Limited Budget

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Abstract

The General Services Administration’s (GSA’s) Public Buildings Service (PBS) needed better knowledge management (KM) approaches for supporting their building maintenance, leasing, construction, and renovation projects delivered annually across the United States. A national KM team was formed and conducted an internal inventory of potential KM approaches. Google Sites/websites and Salesforce Chatter were available within PBS as potential KM tools, and were subsequently configured to support a KM pilot program with Region 8 property managers. After the successful pilot, additional KM initiatives using combinations of the Google Sites/Chatter format were developed as part of the current KM initiative, and as independent initiatives. This rapid piloting approach was later referred to by the team leadership as “Agile Knowledge Management,” given its emphasis on the customization of preexisting/prepaid software tools for quickly meeting the information needs of PBS professionals. Lessons learned and critical success factors included the importance of sustained leadership support; the availability of cost effective tools that can be easily customized to serve users; dedicated staffing to coordinate regular system maintenance and updates; and direct team dialogue for sustaining agility in fluid or turbulent organizational environments.

Introduction

Knowledge management (KM) has challenged humankind since the emergence of communications. How do we create an approach for storing and sharing information on what works, so that our entire family, tribe, organization, or nation can benefit from the lessons of the past, and the wisdom of the present?

All organizations have knowledge management systems, though they may not be labeled as such. Some are very informal and rely primarily on personal expertise and direct interpersonal communications. Others are quite formal and rely primarily on software applications, information systems, and data repositories that can quickly be accessed for relevant information and insights. As our team’s initial thinking and discussions about KM progressed, we aspired to supplement the effectiveness of informal knowledge-sharing communications with formal approaches using customized applications and systems. Given our limited budget for the initiative, we were compelled to do this using the most cost-effective means available. In this sense, we were fortunate in terms of timing, as GSA was investing in several new cloud-based tools that could be customized to support specific missions within the organization.
At the time GSA’s PBS started reemphasizing knowledge management, the entire GSA organization was emerging from a successful cost-savings transition within their internal IT infrastructure, which included a move to Google Cloud services as the organization’s email platform. The Google suite of tools also included Google Docs, Google Forms, and Google Sites, which all provided user-friendly applications for sharing information. In addition, GSA was also investing in the implementation of Salesforce software solutions, including a communications application called Chatter. Tools such as these, combined with PBS’s current knowledge-sharing approaches, offered the opportunity to expand the information available to more teams across the organization, while creating greater efficiencies in operations.

As the landlord for the federal civilian government, GSA’s Public Buildings Service (PBS) needed better knowledge-management approaches for guiding the wide variety of building maintenance, construction, and renovation projects undertaken across the country every year. Managing one of the largest real estate portfolios in the world, including federal and leased office space throughout the United States, PBS regularly sought ways to improve building functionality for its tenants/customers, representing a client base from virtually every federal agency. Improving knowledge access for PBS project teams as they were serving these customers would provide better clarity in identifying requirements, better coordination in managing project team activities, more opportunities for sharing best practices, and more consistency in delivering workplace solutions. This was particularly important given the continued evolution in sustainable space design, and the need to support the diverse missions of an increasingly mobile federal workforce.

In addition, as more federal employees were becoming eligible for retirement, the urgency was increasing to establish knowledge management practices and systems for retaining and sharing their expertise before it was lost. While the Office of Personnel Management was looking to address this exodus with a new program called “Phased Retirement,” each federal agency also had a responsibility for ensuring the organizational knowledge that was unique to their mission was somehow preserved for use by newer employees.

GSA’s challenge was to establish a knowledge management approach within their Public Buildings Service (PBS) that could gather, store, and share program guidance and best practices across their operations so that project managers and teams could benefit. Such approaches offered PBS professionals the potential for faster answers, better projects, happier customers, and accelerated cost savings through easier access to the best ways of doing things, as demonstrated by their counterparts within their region, and across regions.

Project Initiation and Setting a Foundation for Team Dialogue

In the fall of 2011, PBS established a cross-regional team charged with developing knowledge management approaches to help capture and sustain the organization’s accumulated know-how. The team was sponsored and managed from the National Capital Region in Washington, DC, with additional sponsorship and representation coming from the GSA Central Office, from several regions (particularly
Region 8, based in Denver), and from the recently rolled-out global Project Management (gPM) program for improving project team operations, and the Perfect Customer Experience (PCE) initiative designed to improve customer service.

Planning for the kickoff of the initiative, as well as its ongoing management, depended on perhaps the most basic and essential knowledge management practice: direct team dialogue. The KM project’s core team and extended team benefited tremendously from this level of candid discussion throughout the term of the initiative. Over a series of weekly meetings, facilitated in-person and via conference call, we continued to utilize direct team dialogue to discern knowledge management approaches that worked from those that didn’t within the unique business areas we were focusing on. This candor allowed us to remain agile in our approach, and to make fast course corrections when project management realities didn’t fit with our initial plans.

**Project Planning and Managing Project Scope**

While our initial aspirations involved solving the entire knowledge management challenge across the entire organization, counsel from GSA Central Office experts, who had previously attempted to undertake the same mission, suggested a more measured approach. Previous initiatives had taken on too broad a scope, had emphasized large technology-based systems, and proceeded with the mindset that “if we build it they will come.” They didn’t. Hence their caution to us: “Don’t try to boil the ocean.” This became a guiding theme throughout this renewed effort as we worked with our team to narrow our initial focus.

**Kicking Off the National Knowledge Management Team**

The enthusiasm expressed during the kick-off meetings and conference calls with KM team members, who represented 8 of the 11 regional offices, was accompanied by broad aspirations to address the entire knowledge management challenge once and for all. The earlier cautions shared with us were reiterated—“Let’s not try to boil the ocean.” Let’s start with part of it. But where?

As in all organizations, there were already knowledge management processes in place across GSA and PBS. Many of these approaches did not involve information systems, but rather word of mouth guidance (sometimes shared in meetings, via email, or stories told over a beer). These traditional KM mechanisms could potentially be supplemented and magnified with the right technology, leading to a broader information-sharing program with greater consistency. As our team’s discussions progressed, both during and in between meetings, we concluded that any program we developed would need to include focused technology components while supporting and magnifying traditional interpersonal components.

As our team dialogue continued over the course of our initial meetings, the team articulated several reasons why PBS needed better knowledge management (KM):

1. KM improves our process efficiency by allowing us to access and provide answers to each other and to customers more quickly and more accurately. Because time is money, KM creates cost savings and time savings by disseminating information and new ideas more quickly.
2. KM allows us to share the best of what’s being done across the regions (Why reinvent the wheel?), and allows us to better assimilate innovations, enhancing our ability to respond to change better.
3. KM helps us to establish more consistent customer approaches as we gravitate toward best practices; it also helps us to provide more consistent answers to customers.
4. KM helps us to capture key know-how from our staff who are retiring.
5. KM allows us to identify and access internal experts more quickly.
6. KM can support greater work mobility as our knowledge resources/references are accessible from places other than our desks.
7. KM is important for guiding the information that we share with the public.

Eventually, the above reasons were summarized as an initiative tagline: “Faster Answers, Better Projects, Happier Customers.” Two elements were subsequently added including “More Efficient Space,” and “Taxpayer Cost Savings.”

The team articulated major goals for the initiative and began to establish a more focused initial scope as part of the first draft of the project plan, while maintaining the possibility of scope expansion in subsequent phases of the project.

Major Phase I Goals for the initiative were identified as follows:

- Establish a knowledge management team to identify the best KM approaches for supporting very specific PBS functions (initially).
- Identify approaches for bringing communities of practice together to promote the identification and use of knowledge management for improving project management and customer service, thus maintaining alignment with the global Project Management (gPM) and Perfect Customer Experience (PCE) initiatives.
- Identify a specific PBS group for developing/prototyping an initial KM approach. The group selected should manage projects (gPM), or routinely participate as part of a project team, and perform a customer facing role (PCE).
- Create a prototype KM approach for supporting the specific KM group selected.

If evaluation of the Phase I approach proved to be successful, Phase II of the project would involve adjusting/customizing the KM approach for more groups within PBS, while Phase III would involve developing documentation and recommendations to support expanding the KM approach across the entire PBS organization.

We anticipated we would need to select and combine a series of tools and approaches, and then prototype/pilot them with a live group that could provide improvement feedback. As the team’s initial discussions progressed: the logical next questions involved:

- What are the KM tools and processes that already exist at GSA’s Public Buildings Service?
- Are there particular tools/approaches we should spotlight, customize, and expand?
- Which PBS group should we start with, and what are their unique KM needs?
- How should we create a coherent approach for serving a select group, utilizing the tools that are available to us given our resources and limited budget?

As we were identifying potential tools, the KM team considered how they could be reconfigured as part of an integrated KM approach. In keeping with the initial guidance to avoid “boiling the ocean,” the team agreed that a KM pilot program with a particular PBS group would be a good place to start. But which group?

PBS had several broad pockets of expertise within each of its major business areas including:

- Leasing—ongoing management of contracted leased space, involving a complex set of processes to ensure that rental rates being charged to GSA customers were competitive within the unique market where a customer agency’s office was located.
• Large Construction—major renovation or construction of federal facilities, such as development of a Federal Courthouse or other Federal building.
• Small Projects—renovations typically within existing buildings to update or upgrade facilities while ensuring standards for safety codes are met.
• Property Management—managing day to day operations and maintenance of facilities, including management of some small project work.

Given part of our sponsorship was through the global Project Management initiative, as well as the Perfect Customer Experience initiative, it made sense to focus the KM pilot program on PBS users that had a customer-facing role, and responsibilities for managing projects.

After careful deliberation, property managers were selected as the initial KM group for the pilot program, as they typically managed projects as part of their customer-facing/customer service mission.

Property Manager Focus Group

As part of our weekly team discussions, KM representatives who had experience as property managers began the process of identifying KM requirements for serving this group. In addition, a focus group was planned and facilitated with property managers representing regional offices from across PBS to further clarify how this group collaborated internally, and how they tended to access information. Representative comments from focus group participants included the following:

“…there is a lot of cross pollination between the property managers…there is a lot of geographic separation—but they (other property managers) are only an email or phone call away—and folks are great at helping one another.”

“…we have a property management leadership team where we share information to try to create consistency across the region, and this allows us to leverage the technical knowledge across the region.”

Another focus group participant noted the importance of being able to access/recall valuable information months after it was initially communicated. Their perception of needed knowledge resources reflected a data storage/library approach, where one could easily access such information long after its initial dissemination.

Property managers’ heavy emphasis on collaborative knowledge sharing, combined with the perceived need to have more user-friendly data repository resources available, further reinforced our KM team’s focus on utilizing a combination of tools to magnify collaboration, information storage, and sharing. Over the course of several meetings, the team conducted brainstorming activities as part of a continued inventory of KM tools and approaches that were potentially available for customization to support PBS, and now, more specifically, PBS property managers. Over 25 potential tools were identified.

In addition, several of our KM team members from GSA’s Region 8 (based in Denver, CO) agreed to approach their leadership, requesting that their property managers serve as our initial KM pilot group. They received strong leadership support, and their property managers were selected to pilot-test our initial KM approach, which was still in development.

Selecting KM Approaches and Tools

When GSA migrated its email system to Google and the cloud, several additional Google tools had been included in the transition. Staff adjusted to the new email platform quickly, and were now becoming fairly comfortable utilizing these additional tools including Google Docs and Google sites/website tools, which could potentially be configured to support better collaboration within and across teams. Google Docs allowed multiple team members to simultaneously view and/or edit the same document, while Google
sites provided a relatively easy platform for creating internal GSA websites that could be used to share project or program level information. Members of the KM team had already experimented with using the Google website features to support the recently rolled-out global Project Management (gPM) initiative, as well as several internal PBS initiatives.

After the initial KM tools inventory, several tools, including Google websites, were reviewed with the KM team as part of a series of live WebEx online demonstrations. A survey of team members was conducted after the online demonstrations to gather team input on which tools showed the most promise for supporting knowledge management. The Lease Administration Management (LAM) Google Website, designed in Region 10 (based in Seattle) to organize leasing information, templates, and policy guidance, received very enthusiastic feedback from the KM team as a potential model for supporting PBS property managers. Comments from the KM team’s survey regarding the LAM website are noted below:

“Love it! It’s fast, informative, accurate, attractive, up-to-date, and rich with information.”

“Excellent home base for any initiative. Resources and templates are easy to find. Great search feature. I also like the Forum feature.”

“Of the world of possibilities we considered, it certainly seems to be the most applicable.”

Ultimately, the team agreed that there was a clear role for a customized Google website in supporting an overall approach to KM at PBS. The Lease Administration Management Google site would be utilized as a template/model for expanded use as part of the KM Initiative, with customization for our selected pilot group of PBS property managers.

Additional tools that were inventoried and assessed included the new “Chatter” application that was being rolled out at GSA as part of the Salesforce suite of tools. While several applications supporting GSA activities were being developed using Salesforce software, the Chatter component had only been rolled out to the Federal Acquisition Service (FAS) staff at the time the KM initiative was started. Few PBS staff, with the exception of some of our KM team members, had any experience with Chatter. Chatter provided a Facebook-like account for staff members inside the GSA firewall, allowing them to establish online personal work profiles and workgroups, while enabling them to post comments and attach documents in support of team discussions/communications.

The KM team members who had participated in initial roll-outs of the Chatter application expressed a high degree of enthusiasm regarding its capabilities for sharing and storing information. Though the application had not yet been rolled out to the PBS workforce, it was included in the demonstrations and ultimately selected for additional consideration as part of the team’s KM pilot approach. Chatter offered the potential to expand and formalize the word of mouth guidance that was central to the underlying PBS culture, which was particularly relevant for property managers.

A home-grown web application called “Guru” also received support from the team as a potential KM pilot application. Guru was designed to identify experts within Region 8 and across PBS in a variety of areas. Essentially providing an online yellow pages of GSA/PBS Subject Matter Experts (SMEs), users could also post questions for experts to answer, providing easier access to program guidance.
Project Execution: Establishing the KM Approach

The 60 Region 8 property managers selected as our KM pilot group were dispersed over a very broad geographic area, and in many ways were an ideal pilot group. The geographic distance that separated them provided a sound test situation for potentially improving information access and information sharing.

In addition, property managers perform a customer-facing role in managing buildings, while also managing small projects on a regular basis within those buildings, thus meeting the requirements of our sponsors from the Perfect Customer Experience Initiative, as well as sponsors from the global Project Management Initiative.

We were fortunate that the Region 8 property managers had an all-hands meeting coming up, which would bring most of them to the Denver Regional Office, providing an opportunity to introduce them to the KM tools and the KM pilot program approach. We still needed to craft the overall KM approach however—and with only a few weeks before the all-hands meeting, several challenges needed to be addressed:

1. We needed to consider how a customized Google site should be configured to provide easier access to guidance on programs, policy, and project information for property managers. We had a very good template in the Region 10 Lease Administration Management Google website the team previously assessed, but we still needed to customize the information so that it was relevant for the property manager pilot group.
2. We still needed to figure out how the KM tools would be introduced to the R8 property managers. This was particularly important regarding the Salesforce Chatter application, as it had not yet been rolled out to PBS staff for general use.
3. On a more basic level, we needed to determine how the tools would be configured on the property managers’ laptops, desktops, iPads, and cell phones to help ensure a smooth user experience.
4. We still needed to figure out the overall KM approach—and communicate what the property managers were expected to do with the new tools.
5. We clearly needed some type of event to kickoff the pilot program while addressing the above challenges and answering property managers’ questions about the initiative.

The KM Development Sprint: Using Agile Approaches to Accelerate KM Development

After establishing a broad milestone schedule of what needed to be done, our Region 8 KM team representatives led a subteam focused on developing the KM pilot approach. During this development sprint, our project management leadership in Region 11 (National Capital Region) was available to answer questions about requirements while providing support for the team. This was somewhat challenging, as we needed to insulate the efforts of the development team while providing updates to the rest of our team representatives from the other regions.

The KM pilot kick-off meeting would occur in Region 8 in concert with the all-hands meeting for property managers that was already scheduled. There would be two kick-off training sessions, each lasting two hours. Our project management leadership, based within the National Capital Region, would travel to the event and introduce the sessions while taking note of the training process so that it could potentially be repeated in other regions. Major development milestones are outlined in the table below:
The development team worked at an accelerated pace for four weeks. In keeping with the Agile Project Management framework we contained our desire to see numerous progress reports, instead providing the team with the elbow room needed to complete working products given the short development timeframe. Our local representatives in DC, who were participating virtually on the development team, provided us with brief snapshots of the specific KM approaches as they were being operationalized.

The team established a KM Google website, partially modeled on the Region 10 Lease Administration Management Google Website, but populated with information that would be essential to property managers. Knowing that they would not be able to achieve comprehensiveness in the short development timeframe, the team supplemented our previous focus group information with information gathered from their local Region 8 property managers that they felt would be useful. The team then configured the Google Site tools around these initial requirements, subsequently adding information, new topics, reference documents, and links as the site continued to evolve. Expansion of the working system continued to progress throughout the pilot program. In this sense, the team was building the plane while it was flying it, a development process we would later refer to as “Agile Knowledge Management.”

A Chatter group was also established to further enhance communications between our pilot program property managers, and to expand the word-of-mouth guidance and answers that property managers were comfortable with. The KM Google Site and the Chatter group were supplemented with the Guru application for accessing GSA expertise from across the region and nationally. Demonstrations of the tools as part of the kick-off training were also being considered.

**Mitigating Risk: Information Technology Pre-Work with the Pilot Participants**

One of the potential stumbling blocks we wanted to address involved problems with information technology setup for the new KM tools. Because Region 8 property managers were dispersed over such
a broad geographic area, we wanted to ensure that the KM tools could easily be accessed through mobile devices such as their iPads and smartphones. We felt that challenges in this area could derail the entire pilot program, as property managers could easily become frustrated with the tools if they simply didn’t work the first time. Several steps were taken to mitigate this:

1. All of the participants were set up with Chatter accounts and were invited to participate in the pilot Chatter group before the kick-off training.
2. Setup of the tools on the property managers’ laptops and iPads was also completed prior to the kickoff. This was considered an essential step, as the property managers frequently needed to travel to the buildings they were managing, and having iPad access to the KM tools would provide continuity in their access to knowledge needed to perform their jobs.
3. A helpdesk approach was established that could be accessed via the KM Google Site, email, or by phone with established points of contact who could address participant concerns quickly.

Planning for the Pilot Kick-Off Training

The pilot kick-off training was planned for April 10, with an additional session on April 11. Project management and sponsor team members from our Washington, DC office would travel to Region 8 (Denver) to introduce the kick-off training, while supplementing the training session with answers to questions about the pilot approach, the anticipated program evaluation, and next steps for expanding the roll-out if the evaluation demonstrated usefulness of the approach.

Adjusting Our Plan

No plan can meet the demands of reality without careful adjustments. As we were gearing up for the KM pilot kick-off training, national news reports spotlighted a GSA Inspector General (IG) investigation of a GSA conference held the previous year in Las Vegas during the October 2010 timeframe. Ultimately, the fall-out from this would substantially affect GSA operations, as well as business travel and conference attendance across the federal government. With this happening, the “optics” of any business travel merited serious consideration. Fortunately, most of our development team was already based in Denver, so we were able to reduce the number of KM team members who were traveling for the kick-off meeting. In DC, we set up a small conference room utilizing iPad cameras that were connected via WebEx/teleconference to the kick-off presentations in Denver. This allowed us to open the meeting as planned while providing additional input as questions arose. Ultimately, teleconferencing via a variety of software and mobile devices became a valued KM tool we didn’t initially plan on using.

The KM Approach: It All Starts at the HUB

The development team established a central HUB concept, utilizing a Google website as the starting point for easy access to the KM tools. The HUB offered several benefits in terms of accessibility, expandability, and simplicity. At the same time, it kept the initial scope focused primarily on the needs of property managers. The HUB included links to the recently developed Property Management Google website, to a dedicated Property Management Chatter group, and to the Guru application as planned. It also included links to the global Project Management webpage on GSA Insite, and the Perfect Customer Experience initiative website, which created consistency with the two initiatives that were contributing co-sponsorship for KM.
Once accessed through the KM hub, the original Property Management Google Website provided a variety of information and guidance that could easily be reached through the tool bars at the top of the screen, or by using the Google search function incorporated into the site.

The effectiveness of the Google search feature was particularly well received during the kick-off training sessions. Over the course of these sessions, the development team demonstrated how quickly information could be found by searching the site. Demonstrations of the Chatter and Guru applications were also provided, and showcased how quickly information could be shared across the entire property management team.

Pilot Roll-Out and Program Evaluation Results

After the pilot kick-off training sessions on April 10 and 11, 2012, property managers within Region 8 continued to utilize the KM tools through May 18, when formal program evaluation activities were initiated. The original pilot completion date of May 4 was extended to May 18 to allow more time for participants to negotiate the learning curve and to get comfortable using the tools.

Program evaluation combined a qualitative assessment of participant opinions on the KM Google Sites, Chatter, and Guru tools with a quantitative assessment of tool usage.

Google analytics provided quantitative information on how frequently the 60 pilot participants utilized the KM hub and the KM Google website for property managers. Results are summarized in the table below and represent site usage from April 10 through May 18. Our criteria for success was 20 regular users of the KM tools each week.

Approximately 20% (12 of 60) of R8 property managers participating in the pilot utilized the KM Hub and/or the Property Management Google Site each day to access knowledge resources. These statistics indicated we were likely meeting the 20 unique users per week success criteria we had set. However, we couldn’t confirm this until we received the survey results (as we may have been getting the same 12 individuals each day).

<table>
<thead>
<tr>
<th>KM Hub and Google Website for Property Managers (Information gathered via Google Analytics, April 10 - May 18, 2012)</th>
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<tbody>
<tr>
<td><strong>Percent of participants who visit the KM websites per day</strong></td>
</tr>
<tr>
<td>20% (approximately 12 per day)</td>
</tr>
<tr>
<td><strong>Total visits to date since the kickoff of the KM pilot on April 10</strong></td>
</tr>
<tr>
<td>361</td>
</tr>
<tr>
<td><strong>Total web pages viewed</strong></td>
</tr>
<tr>
<td>1,363 or 60/day</td>
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</tbody>
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While Google Analytics tools were not available to assess Chatter use, we were able to simply count unique posts, comments, and “Likes.” Initial use of Chatter appeared to be less robust than the KM
Google Sites based on these quantitative measures. However, these statistics did not take into account “views” of Chatter information by participants who did not contribute posts, comments, or “Likes” to the group.

We did not have a separate quantitative assessment available to evaluate use of the Guru online tool, and so, our overall perspective on it was predominantly shaped by the survey information.

The survey was constructed and administered utilizing the Google Forms survey feature. The survey was sent to all 60 pilot participants, with 55 completing it, for a 92% response rate. Survey results validated several of the quantitative results noted above, and showed that pilot participants had the most enthusiasm for the user-friendly approach provided by the hub, and the Property Management Google Site, which allowed quick access to property management information, guidance, policy updates, and templates via an online library feature, as well as the efficient Google search feature.

Over a third of the pilot participants (21) indicated they utilized the Property Management Google Site each week, slightly exceeding our success criteria of 20. In response to a follow-up question on the “helpfulness” of the site for getting their job done, 25 participants indicated they found the site either “Helpful” (18) or “Quite Helpful” (7). Sample comments on the site’s most useful features included:

“Easy search engine; reducing the time in searching various sites in the past.”

“The forms library was extremely useful.”

“The entire site contained useful content and the Google search engine proved to be better…”

“Liked the information sharing and information user upload (tools).”

Responses to the KM Chatter group included 19 participants who indicated they visited the group at least a few times per week, which was slightly less than our success criteria of 20. Nine participants found the Chatter group to be helpful or very helpful in doing their job over the course of the five-week pilot, which may have been affected by the newness of this type of communications medium within the PBS environment. The table below summarizes survey results for usage across the pilot tools.

<table>
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<tr>
<th>KM Chatter Group</th>
<th>(Manual Count of Posts, Comments, and Likes from April 10 - May 18, 2012)</th>
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<tbody>
<tr>
<td>Total unique posts of specific property management content</td>
<td>20</td>
</tr>
<tr>
<td>Total comments on these content items</td>
<td>45</td>
</tr>
<tr>
<td>Total “Likes” on content items</td>
<td>42</td>
</tr>
</tbody>
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<tr>
<th>PBS Region 8 KM Pilot with Property Managers</th>
<th>Program Evaluation Survey Results (N=55)</th>
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<tr>
<td>Knowledge Resource:</td>
<td># of survey/pilot participants who visited the site each week</td>
</tr>
<tr>
<td>Property Management Google Site</td>
<td>21</td>
</tr>
<tr>
<td>Chatter group</td>
<td>19</td>
</tr>
<tr>
<td>Guru</td>
<td>7</td>
</tr>
</tbody>
</table>
Use of the Guru system for accessing subject matter experts received lower scores on the survey in contrast to the Google Sites and Chatter applications, with only 7 participants stating they visited the Guru site each week, and only 6 stating they found it “Helpful” or “Quite Helpful” in doing their job.

When specifically asked which sites/applications they visited most frequently, most of the 55 survey participants selected the Property Management Google Site (42), followed by Chatter (24), with Guru as a distant third (7). Survey participants were able to select multiple answers to this question.

This survey question further validated the customized Google website as the preferred tool for improving knowledge access for our pilot program property managers. While Chatter showed potential, over the short course of the pilot program it didn’t appear that the participants were able to develop a strong comfort zone in using the tool for helping them to share information and do their jobs more effectively. As noted, Chatter was just being rolled out PBS-wide as our pilot KM program was progressing. The rate at which Chatter groups began to develop independent of our efforts influenced our later thinking on its broad potential, even though our pilot program did not validate its initial use as a tool for expanding the informal information exchange between property managers.

Ultimately, we concluded that the pilot demonstrated the viability of using Google Sites as an agile tool that could quickly be configured and customized to support the knowledge management needs of specific groups within PBS. This provided enough information to expand on leadership briefings with GSA’s Central Office, with PBS and GSA information technology leaders, with leadership across the 11 regions, and to solicit input on next steps for developing broader knowledge management initiatives.

**KM Project Phase II: Adjusting the Pilot Approach for Roll-Out to Additional Groups**

Phase II of the KM initiative did not roll out as systematically as we had planned. While we were still on track with our original strategy to expand on the original pilot, the broader PBS roll out of knowledge applications, including Google tools and Chatter, was being accompanied by continuous improvement in staff ability to independently configure these tools to meet the needs of multiple groups within PBS. This section summarizes several of these initiatives, some operating within the umbrella of our KM hub/pilot initiative, and others which were being developed independent of our efforts.

**The Customer Intelligencer Initiative**

As briefings on the knowledge management pilot were being presented to GSA/PBS leadership, a new KM initiative was being developed within the National Capital Region (NCR) called the Customer Intelligencer. The Intelligencer offered a customized Google website, configured in a three-column, newspaper-like format that provided regional and national information on GSA’s federal customers. Initially developed as a tool for providing NCR leadership with quick snapshots of customer information, the
Intelligencer was ultimately incorporated into the KM hub as an additional tool for supporting property managers and all PBS staff who served in a customer-facing role, including account managers, project managers, staff, and GSA leadership, both regionally and nationally.

The three-column format offered by the Intelligencer made it easy to access Internal GSA information on each customer (such as the Department of Justice), including internal GSA customer points of contact (POCs), fact sheets, and links to relevant Chatter groups. The center column provided External Customer information, including customer contact lists, agency space standards, and links to agency web pages. The third column captured live feeds from The Outside World, including updates about the customer from news outlets such as CBS News, The Federal Times, and The Washington Post, to name a few.

The information presented by the Intelligencer continued to expand as the KM initiative evolved. Dedicated resources from NCR, in collaboration with account managers from each of the GSA regions, continued to populate local/regional pages with customer information that was unique to each region. This structured approach, combined with its user-friendly design and the continued focus of dedicated staff, helped make the Intelligencer one of the most-used KM tools we worked with throughout the initiative. The addition of the Intelligencer essentially accelerated what we had envisioned as a Phase II initiative as part of our original project plan, where we anticipated expanding KM support for additional areas within PBS. While our initial vision involved a systematic, stepwise expansion of our initial pilot, the accelerated approach offered by the Intelligencer was welcomed as a tool that brought clear value, as well as additional dedicated personnel to its continued development and maintenance.

Coordination and Collaboration with Additional KM Initiatives

While we had plans to also initiate a KM pilot program with the PBS Office of Leasing, resource constraints limited our ability to spearhead this while concurrently managing next steps for the original pilot group, and the expansion of the Intelligencer. However, there was a separate group from the National Office of Leasing that had developed a Leasing Google Site, making access to information on leasing more accessible via the Google search engine. We subsequently added a link on the KM hub to this new site with the intention of later developing a dedicated pilot program for this area when our KM personnel resources stabilized.

Additional KM initiatives under development included work in Region 5 (based in Chicago), which was developing KM tools for cataloguing building information, and an additional approach for capturing project lessons-learned. In Region 10 (based in Seattle), staff were creating a customized Google Site to improve sharing of information across their building management teams. We anticipated that these initiatives might later be incorporated into the KM hub approach we were spearheading, with some elements being combined with our KM pilot Google Site for property managers.

An upgraded global Project Management (gPM) Google Site was also developed to support our sponsors with the gPM National Team, providing easier access to gPM policy, guidance, and tools through use of the Google search engine. In addition, work initially being completed in Region 5 on capturing lessons learned from their local projects was expanded by the gPM National Team to include lessons learned
from across the other regions. Both the gPM Google Site and the national lessons-learned approach were subsequently incorporated into the KM hub.

**Independent KM Initiatives Developing Across PBS**

Independent of our efforts, KM initiatives continued to expand across PBS as new Google websites were being customized by business areas for supporting their unique needs. New Chatter groups were also springing up at a rapid pace. While our own experience with Chatter during the pilot program yielded mixed results, other PBS areas were developing a strong comfort zone with the tool, and could use it to quickly set up a group, establish posts/information exchanges, and link documents directly to the group for easy access. In this respect, Chatter became one of the easiest tools available within PBS for quickly establishing an internal online presence for sharing information within a team or across teams. Google Sites were generally easy and fast to develop, but the site designer still needed to acquire the skills for configuring the software. While the Chatter application was narrower in its focus, the learning curve for setting it up was also much shorter, allowing users to establish online groups for sharing information in a matter of minutes.

Prior to the rapidly expanding work customizing Google websites and Chatter as knowledge management tools across PBS, GSA/PBS Insite was the predominant repository of online information in support of PBS operations. Offering a stable, web-based platform for cataloguing information, PBS Insite was historically more difficult to customize and search for relevant information. Renovations to PBS Insite were continuing as we concluded the original KM pilot program for property managers in Region 8. Upgrades to PBS Insite included a more consistent user interface and an improved search engine. Because most PBS knowledge was still housed within Insite web pages, we needed to think through how this platform could be integrated with the other tools and approaches we were testing.

**Making Sense Out of the Expanding KM Ecosystem**

By the summer of 2012, nine months after we had initiated the National KM Team, we considered the integration challenge across the three IT knowledge platforms we were working with. While Chatter groups and Google Sites were expanding at an accelerated pace and providing easier access to program information and guidance, GSA/PBS Insite was still the standard for web accessible policy information. As KM approaches using Google Sites and Chatter were being developed, enhancements to PBS Insite continued. To make sense of this expanding KM ecosystem, we developed a three-tiered approach for explaining the interplay between the three KM tools as part of our briefing strategy with PBS leadership.

At the base of the pyramid, we saw the role of Chatter as being a valuable tool for enhancing the word-of-mouth information exchanges that were a core part of the PBS culture. We called this the "Bronze Standard" as Chatter offered speed of setup and information sharing among teams; providing fast, short-term answers and clarifications. If monitored and curated by local leadership, we envisioned those clarifications evolving into local best practices and tools that could be captured and housed in regionally-maintained Google Sites, which we referred to as the "Silver Standard," as it was likely that someone in authority would review the information before it was posted to the Google Site. Information on best
practices from these regional Google Sites could then be harvested, assessed, refined, and posted on PBS Insite, as officially-approved policy and guidance, which we referred to as the “Gold Standard.”

**KM in the Second Year of the Initiative**

By January 2013, we had completed numerous briefings with GSA leadership, both nationally and regionally, regarding the potential of KM tools for supporting “faster answers, better projects, happier customers, more efficient space, and accelerated cost savings.” With over a year invested into the initiative, the R8 Property Management site was still operational, as was the original pilot Chatter group. In addition, the Customer Intelligencer KM initiative had added an important emphasis on customer knowledge as a key component of customer service. We also benefited from the ideas and influences of additional KM initiatives in Region 5 and Region 10.

As we looked to roll-out the Property Management component of KM to an additional region, we found that the design of the initial Google Site used to support R8 property managers did not easily lend itself to expansion. In addition, reassignment of KM team members to other responsibilities began to dilute our available resources for keeping the Property Management Google Site current and relevant, which also affected our ability to effectively expand and pilot it with an additional region(s). While we were able to sponsor a second property management pilot, results were not as robust as those we had achieved originally, as our fluctuating staff resources diminished our ability to establish comparable preparation, training, and ongoing user support.

**How the Customer Intelligencer Initiative Was Able to Sustain its Momentum**

The Intelligencer had staff dedicated to its ongoing update and maintenance, even as the overall KM initiative started to lose momentum. The Property Management Google Site was established by members of our KM team, who were assigned temporarily to our team as an additional responsibility. As these staff acquired new assignments and responsibilities, they had less time for the ongoing care and update of the property management site.

The Intelligencer design was also more amenable to accommodating information from across the regions. The Intelligencer was based on a more structured format, involving a dedicated Google webpage for each major federal customer within each region and at the national level.

In contrast, the vision for the Property Management Google Site involved a dedicated website that could be customized to broadly serve all of the property management programs across all of the regions, essentially a one-size-fits-all approach. However, this approach became challenging to sustain, as each region had their own preferences regarding the customized property management information they wanted to access. As we moved to accommodate these regional differences, it became challenging to sustain the coherence of the broader website. Our ideas regarding how crowdsourcing input might ultimately create a self-organizing solution to this did not materialize as elegantly as we had anticipated. While this approach worked very well during the development and expansion of the original property management site, the staff who were sustaining the site were eventually being pulled into other initiatives/areas of responsibility, which divided the level of attention and level of effort they had available to maintain, expand, and reconcile approaches for the property management site. We were not surprised at this, as we had achieved rigorous and dedicated participation to the initiative for well over 17 months, and knew that the substantial commitment and energy our team had contributed as an “extra duty” could not be sustained indefinitely.

Eventually, we concluded that this reconciliation process for expanding the Google Site for Property Managers would require national program oversight. However, as personnel changes continued to affect the initiative, we began to run out of momentum prior to our being able to make this transition effectively. In contrast, expanded design and development of the Intelligencer continued through the work of dedicated staff resources who were assigned to it as one of their primary responsibilities.
Project Closeout: Program Status at the Conclusion of the Initiative

As we began planning for an orderly project closeout, several of the initiatives we had spearheaded were scheduled for continued use as independent KM resources. The final closeout meeting of the KM team was conducted on November 21, 2013, approximately two years after the project kick-off meeting. The team reviewed a summary of the current status of KM initiatives, and discussed key learning points based on our experience. The status of these initiatives, as of the November 21 timeframe, is outlined below:

- **Knowledge Management HUB**: The central jumping-off point for accessing a variety of KM resources, the HUB concept was a key component in allowing the KM initiative to focus resources in support of the original Region 8 Property Management Pilot Program, while leaving room for expandability into other knowledge areas. The KM hub concept remains relevant, as future KM teams are formed to address knowledge capture, information sharing, and potential information overload challenges. As of the official closeout of the National KM team, the KM hub included links to the original Property Management Google Site and Chatter group, links to the gPM Google Site, and Lessons Learned Library, as well as a link to the PBS National Office of Leasing and a link to the Customer Intelligencer Google application. Upon closeout, the KM team was coordinating transfer of ownership of the KM hub to the gPM National Team.

- **The Property Management Google Site**: The Property Management Google Site was well received as a knowledge tool in Region 8 in support of property management activities. Subsequent evaluation of the first KM pilot, which included this site, suggested that it could provide an interim level of information not currently being provided by PBS Insite pages. Expansion of the site to property managers in additional regions was less successful due to staffing and design challenges. Subsequent review indicated that ongoing staffing, promotion, and update of such sites was pivotal for maintaining them as viable tools in the eyes of users, while any expansion to additional regions would require a decision-making group to reconcile design questions. Upon project closeout of the KM initiative, the Property Management Google Site was scheduled to continue in its original form as a tool for supporting Region 8 property management/facilities management activities.

- **Salesforce Chatter**: Included as part of the initial KM pilot, the Chatter application initially received a mixed response from pilot property managers. At the time of the pilot evaluation, we surmised this might be due to the lack of comfort with the application’s format, and the fact that our piloting of the application occurred prior to its general roll out across PBS. As Chatter continued its roll out PBS-wide, its popularity grew considerably as a tool for quickly establishing an individual online presence, and for groups in support of discussions and document sharing. Upon closeout of the KM initiative, the dedicated Region 8 Property Management Chatter Group was still operational and had been opened up for participation across PBS. Additional Chatter groups continued to develop at a rapid pace, offering a user-friendly approach for creating an online presence to support knowledge sharing across the organization.

- **The Customer Intelligencer**: The Intelligencer Google Site, designed for acquiring quick access to GSA customer information, continued to expand in terms of features and users. The Intelligencer's dedicated staff ensured the site’s customer information remained up-to-date and relevant for users. Ultimately, the Intelligencer was selected by the PBS IT Governance Board for incorporation into the Salesforce software platform, with plans for it to become the front page for the PBS Salesforce Customer Relationship Management (CRM) application. The Intelligencer provides a newspaper-like interface that summarizes customer information from a variety of GSA sources. Upon closeout of the KM initiative, the Intelligencer was still fully operational.

- **The gPM Google Site and the Lessons Learned Library**: The Lessons Learned Library was a rapidly prototyped Google application introduced in Region 5, which was then expanded nationally across the regions. The application’s Google documents spreadsheet format utilized an easy interface for project managers and team members to quickly add lessons learned over the course of their projects.
Expansion of the Lessons Learned Library involved a collaborative effort with its Region 5 proponent group, the gPM National Team, and KM team members from the National KM Initiative. The Lessons Learned Library was formally rolled out nationwide in November, 2013, with links to it from the KM hub, the gPM Google Site, and from the upgraded gPM Insite page. Upon official closeout of the KM initiative, the Lessons Learned Library was fully operational and being managed by the gPM National Team. While the gPM Google Site remained operational as a KM hub application, the gPM National Team began utilizing their upgraded Insite page as their primary means of sharing information.

- **Regional KM Initiatives:** As part of team coordination activities conducted over the course of the KM initiative, parallel efforts were being conducted in Regions 5 and 10. The Region 5 initiative focused on establishing an approach for cataloguing building information so that it was organized in a standard way that is more easily accessible. A primary focus involved creating a structure that could be utilized regardless of the software platform being used. The Region 10 approach was built on the Google Site platform and involved developing building information and information-sharing tools that could be easily accessed and updated by property managers. Upon official closeout of our KM initiative, both the Region 5 and Region 10 initiatives were still operational.

- **GSA/PBS Insite:** With improvements to the Insite search engine and a new, consistent look and feel, PBS Insite reemerged as a KM tool for supporting PBS business areas. At the conclusion of the KM initiative, some PBS knowledge management Google Sites across the regions were being moved back to Insite, and their information was being reviewed and updated as part of what we had envisioned as the “Gold Standard” for knowledge accuracy. In this sense, several of the regional and national Google websites that were being incorporated into the new, PBS Insite had served as a rapid development laboratory for articulating knowledge requirements in a way that was much more tangible and concrete than traditional requirements-development methods. Ultimately, we referred to this development approach as “agile knowledge management.”

**What We Learned:**

**Knowledge management is already happening independently across the organization.**

Large organizations that function across a broad geographic area like GSA will inevitably have both formal and informal knowledge management initiatives developing on a regular basis. The growing availability of software applications that are easily customizable to meet these knowledge needs will likely increase the pace at which these initiatives develop. At GSA’s Public Buildings Service, we found that an entire ecosystem of independent KM approaches, based on customized Google Sites and Chatter groups, was developing around us as we spearheaded our “official” KM approach. We were able to learn from and share best practices with several of these groups as we continued to refine our approach. The leadership challenge in this case involves identifying the best of what’s being done, assessing its potential, and adopting the best approaches for a broader roll out, if appropriate.

**User-friendly software tools can accelerate development of KM approaches, and free up more time for clearly identifying and meeting user requirements. Some of these tools/approaches may already be available and paid for.**

Our initial inventory of KM tools and approaches at PBS allowed us to identify resources we could potentially customize for our pilot group that were already available and paid for. This inventory activity also reduced the likelihood of duplicating the efforts of other initiatives, while providing us with more options for developing knowledge solutions on a limited budget. We were fortunate in the timing of the KM initiative, as GSA’s investment in Google and Chatter applications were relatively recent events.
The initial Google website developed to serve Region 8 property managers was by no means comprehensive, but it was built on a platform that supported fast development and it provided property managers with easy access to relevant information that helped them do their jobs more efficiently. As the pilot continued, requests for additions to the site were easily accommodated, given the innate agility and user-friendliness of the Google Sites application and the customer-centric focus of our team. This allowed us to maximize our focus on the needs of the pilot participants and learning from their experience, versus laboring over how to make changes to the application.

Pilot testing new KM approaches with a smaller group before a larger roll out can provide key learning and input for refining the initial KM approach and a foundation for accelerating subsequent approaches.

In terms of roll outs of new KM approaches on a limited budget, we found that starting out with a small pilot was helpful in testing new approaches, providing feedback for continuous improvement, and building insights into developing next steps. The pilot approach was also helpful in providing an informal think tank within our team and outside of our team in conceptualizing new knowledge initiatives. Information from the pilot was shared across PBS via a series of briefings with PBS leadership, regional leadership, and with other teams who were developing KM approaches within the regions. This informal organizational learning approach positively influenced other KM initiatives that were happening across PBS, and provided additional insights to members of our team on improving our approaches. In many ways, the Intelligencer initiative grew from this ongoing exchange of ideas.

Originally developed to summarize customer information for leadership in the National Capital Region, the Intelligencer continued to evolve at an accelerated rate, based on its sound approach and ongoing learning from the broader KM initiative. Similar to the Property Management KM pilot, the Intelligencer met a critical need for access to targeted information, and provided it in a very user-friendly format that was easy to digest. However, the Intelligencer also had dedicated staff assigned to its ongoing care, maintenance, update, and expansion, thus sustaining its relevance for a broad user base of GSA professionals serving in customer-facing roles. In addition, the Intelligencer was structured so that it could easily accommodate expansion across all 11 regions by utilizing additional Google Site webpages for each regional customer, whereas expansion of the original Property Management site ran into design challenges when accommodating expansion across regions. Finally, briefings on Intelligencer functions and benefits were easily incorporated into our broader KM briefing strategy, thus providing an additional forum for building awareness and additional input for the Intelligencer initiative. These key factors and continuous learning from the broader KM initiative established a strong foundation and helped build momentum for the expanded roll out of the Intelligencer.

Leadership support is the first of several critical success factors for addressing risk and sustaining a new initiative, even through turbulent times.

Our initial success was also due to the substantial support we had from PBS leadership, both regionally and nationally. While leadership from our property management group helped to ensure a successful pilot roll out in Region 8, national leadership continued to support our efforts, even as the organization was going through some of its most difficult times. Their major goal, and ours, was to find out what approaches worked best in serving the knowledge needs of PBS professionals. The initial pilot group helped to clarify potential approaches for meeting these needs.

In addition to leadership support, there were several critical success factors with the original pilot that we implemented to help reduce our risk and increase our chances for success:
(1) Several of our onsite KM team members had functional knowledge of property management challenges, and were thus able to quickly create a highly relevant KM Google Site, and a dedicated Chatter group, which provided fast, easy access to information needed by our 60 pilot participants.

(2) Pre-work with the 60 Region 8 property managers included assistance configuring their computers, iPads, and cell phones with the pilot program tools prior to the actual program kickoff, thus reducing potential frustrations which frequently accompany the setup of new information technology tools.

(3) We conducted a pilot program kick-off training to orient the 60 Region 8 property managers in how to use the knowledge tools (Chatter, Google website, and Guru), to answer their questions, and to clarify expectations for participation.

(4) The original pilot included onsite and offsite mentoring, coaching, and technical support, which continued throughout the pilot and helped participants to quickly address challenges and reduce frustrations before they had an impact on the initiative.

(5) The KM Google Site was managed closely by KM team members who regularly updated the site with new information, thus sustaining it as a relevant tool for the pilot participants.

Even good KM initiatives can lose momentum without assigned staff to manage the ongoing maintenance needed to keep the selected tools updated and relevant.

Most of our KM team members were contributing as an additional assignment to their regular duties. As we progressed into the second year of the overall KM initiative, our team members were slowly being pulled into other assignments, thus reducing their availability to maintain ongoing updates needed for the Property Management Google Site. While we were able to coordinate a second pilot with property managers in an additional region, the reduced team availability to support the initiative diluted implementation of the critical success factors we found so valuable during the first pilot. Additional challenges with reconciling the original site design to serve the information needs of multiple regions also reinforced our conclusion that continued expansion of the KM approach for property managers beyond a single region would require dedicated staff assigned to its ongoing update and maintenance, as well as a cross-regional authority who could guide decisions for resolving design questions. While in some cases, the expansion of an initiative can become self-sustaining through grassroots interest and investment, the factors that make this possible can vary substantially and are difficult to predict.

Information technology tools such as Salesforce Chatter that provide an additional venue for supporting interpersonal communications may require a more customized roll-out strategy than more traditional KM approaches involving information repositories.

Our assessment of Salesforce Chatter use indicated that our original pilot participants didn’t seem sure about how to use it as a tool to help them do their jobs better. As mentioned, our pilot program preceded the general roll out of Chatter at PBS, and so our participants didn’t have the benefit of the additional training that accompanied it. In addition, IT systems that support interpersonal communications may simply require a more customized roll-out approach when implementing them effectively, as they require a broader change in an interpersonal work habit. Visiting and searching knowledge repositories like the Google websites we were configuring is very similar to general use of the internet. In contrast, active use of Chatter requires interactivity with other users in an online environment that may initially be unfamiliar. Ultimately, use of Chatter groups outside of our KM initiative began to accelerate as PBS professionals became more comfortable with its format over time, and eventually grassroots adoption and use of the tool outpaced our planned KM efforts. Comfort with social media tools prior to the broader Chatter implementation was likely a key factor in influencing the varying pace of its adoption among different individuals and groups within PBS.
Establishing a project team culture that promotes direct, candid dialogue early in the project can help create a foundation for faster issue identification, faster problem solving, and common sense adjustments to keep the project on track in the face of changing organizational circumstances.

The environment at GSA while we were managing the KM initiative was typically fluid, and sometimes turbulent. This level of ongoing organizational change is likely becoming the normal working environment for most project-related work. In order to accommodate this developing reality, we found that regular dialogue within our core team and our extended team helped us to make regular course corrections as necessary for keeping the KM initiative moving forward. This direct dialogue, in our weekly planning meetings, our regular team meetings, and numerous ad-hoc meetings was our key business practice for staying agile, and effectively adjusting our approaches to the changing realities of the organization and the project. Agile is more than an outstanding approach for developing software solutions; it is also a management approach that embraces change and encourages project teams to adapt accordingly. Our thanks to all of our KM team members and sponsors for their contributions, candor, commitment, and adaptability throughout the course of the KM initiative.

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