Digital asset management in the public sector

Derek Fine

is Senior Product Manager for Extensis. Derek, an expert in digital asset management, has spoken at partner, reseller, and industry seminars and events including Comdex, PC Expo, and the Design Automation Conference (DAC).

Tamarie Johnson

is a partner at TNT Communication Inc., a high-tech communications firm specializing in customer research and strategic communication for the public and private sectors.

Keywords: *digital asset management, public sector, content management*

Abstract Public sector companies face many of the same challenges that private sector companies do when managing digital assets. A growing dependence on electronic information as a basis for decision making, along with growing stores of data, have made managing digital assets a priority for companies, countries, and international organizations alike. Yet additional constraints and increased pressures further exacerbate these issues for government organizations. This paper explores the challenges impacting public sector organizations and profiles the use of practical DAM solutions in the US by the Bureau of Land Management and the Bonneville Power Administration.

INTRODUCTION

When managing digital assets public sector companies face many of the same challenges as private sector companies. A growing dependence on electronic information as a basis for decision making, along with growing stores of data, have made managing digital assets a priority for companies, countries, and international organizations alike. Yet additional constraints and increased pressures further exacerbate these issues for government organizations.

CRITICAL INFORMATION NEEDS

Like private businesses, public sector groups have increasingly become information-based, making data — the intellectual property of a company or agency — one of their most valuable assets. In our electronic society, these data have become more and more digital, and the number of our assets has increased exponentially. Every organization, regardless of size, industry sector, and public or private status, must now face the challenge of organizing, distributing, and providing controlled access to its constituents. Public sector companies, however, have unique challenges in managing these digital assets.

Agency transparency

National and local governments worldwide are seeing an increasing need for transparency — to document and demonstrate activities and results, and provide controlled access to share documents easily with appropriate parties. The primary role of many government organizations is to gather and disseminate information for decision making. In our real-time, wired, global economy, both staff and an increasingly connected constituency expect instant access to government data. To operate more effectively, government organizations need to share and analyze information across many levels, departments, agencies, and geographies. Personal information stores and inaccessible data silos result in limited service to partners and constituents, as well as an inability to track and record adherence to important federal regulations.

Regulation

Companies in the public sector also have the obligation to archive data, meet data storage regulations, and provide a historical record, adding to the volume and complexity of managing digital assets. New data management

Derek Fine
Extensis Inc.,
1800 SW First Avenue,
Suite 500, Portland,
OR 97201, USA
Tel: +1 503 274 2020
Fax: +1 503 275 0530
Email: dfine@extensis.com

policies have come into regulation, and intergovernmental bodies such as the European Union mean public sector companies must implement rigorous policy around data. Regulation and data go hand-in-hand, and data management can involve intensive preparation, organization and consolidation.

Financing

Public sector organizations operate on notoriously restrictive budgets, which can automatically exclude some digital asset management solutions from consideration. Even more than private sector companies, companies in the public sector need to follow strict budget and product or service approval guidelines. There is constant pressure to increase performance. Government organizations must capture, manage, store, preserve, and deliver the content that drives and enhances business operations. Technology solutions need to innovate and streamline existing processes to maintain or increase the current level of service. Solutions also need to be effective off the shelf; agencies cannot afford to risk implementing solutions that require so much customization that they may not be cost-effective once implemented.

Data quality and access

At odds with a need to keep the budget low is the need to keep the quality of data high. The incredible volume of newly produced data is only eclipsed by the backlog of data to be digitized. Such voluminous tasks are often the responsibility of contractors, librarians, interns, clerks, and other staff, who, for budgetary reasons, have been tasked with entering the data, but may not have the training to ensure a high level of quality and consistency. However, in data management, the product is only as good as the metadata attached to it; mislabeled assets can be lost forever, violating regulatory requirements or changing the outcomes of critical decisions.

Geography

Most government bodies have geographically distributed field offices that need to share information between one another, with headquarters, and with third parties. A decentralized structure increases the need for collaborative technology and the ability to share

data between workgroups. Integrating with legacy systems and continuously extending and sharing services between governmental bodies can be challenging, calling for broad, flexible applications that can support a variety of services to a broad and dispersed community.

Workflow

Time is an issue with any business whether it is private or public. Budgetary restrictions placed on governmental organizations mean that these organizations have to strive for utmost efficiency with their systems and processes. In regards to digital assets, the goal should be to implement systems that are nimble and workflow-friendly. To provide significant return on investment (ROI), these systems must be able to fit into the workflow of the people that come into direct contact with digital assets, namely the end-users. If the systems fail to do this, they risk creating more work instead of reducing it.

Good IT citizenship

Although not exclusive to the public sector, government organizations place greater emphasis on the concept of piloting a program prior to broader implementation. This can be difficult to do with solutions billed as enterprise, requiring extensive customization and complex, lengthy deployments. With changing administrations, IT directives and managers also change. Solutions need to be flexible, operate on a variety of platforms, and integrate well with other technology and databases. To be viable, solutions must be able to be demonstrated in a proof-of-concept state before a final decision is made.

PRACTICAL SOLUTIONS FOR PUBLIC SECTOR ORGANIZATIONS

The Bonneville Power Administration (BPA) and the Bureau of Land Management (BLM) are two public sector organizations that recognized a growing need to find a system to manage their digital assets efficiently. Their status as government bodies meant there were unique challenges in procuring the right solution, but both agencies were able to address these challenges and meet their business goals by implementing the same solution — Extensis Portfolio.

Extensis' flexible, workflow-friendly digital asset management solution is rooted in its years

Figure 1: Extensis Portfolio — A flexible, workflow-friendly digital asset management solution

of experience serving content creation professionals. By approaching the problem of digital asset management from the bottom up (at the workgroup level) instead of the top down (the enterprise level), Portfolio can be easily integrated into everyday workgroup use with minimum impact on existing workflow processes (see Figure 1). Many digital asset management solutions and content management solutions require heavy infrastructure investments and extensive business process engineering, which can mean high consulting fees, but Portfolio's price tag, rich feature set, and out-of-the-box usability make it an attractive solution for public sector companies.

Bonneville Power Administration centralizes images to preserve history and document environmental events

Challenge

The Bonneville Power Administration operates one of the most reliable transmission grids in the world. BPA markets electricity at cost from 31 federally owned dams, one non-federal nuclear plant, and several non-federal hydroelectric projects and wind energy generation facilities to utilities in the North-West USA. Critical to the agency's mission is its commitment to involve the public in decisions, acquire cost-effective conservation, and improve conditions

for fish and wildlife in the Columbia River Basin.

With more than 70 years' worth of historical photographs and video archives, BPA manages more than 250,000 negative slides and artworks, and more than 1,000 videos. The BPA is challenged to provide the public, customers, field staff, and other organizations with quick and easy access to these images in a timely manner with little impact to their resources. With more than 600 cameras in the area, the number of images BPA must manage increases at an exponential rate.

According to BPA, its archiving team was fielding numerous weekly requests from third parties spanning the agency's different lines of business, including power, corporate, and transmission lines. Unfortunately, each request typically resulted in pure downtime. In order to address these requests, the team manually sorted through boxes of images to search, scan, copy to disk, and manually distribute the requested files and images. BPA decided to pursue a technology solution that would help it manage its mounting digital assets and improve service levels to its constituents.

BPA established three key criteria for a technology solution. First, they needed to centralize the image database and create a system which allowed the geographically distributed field agents to upload images from any location

and make them accessible in the main structured query language (SQL) database. Secondly, the solution should allow them to reference images in “agency language” and not rely on predetermined categories. Finally, it needed to provide a way to instantly distribute images that allowed the team to focus on their main priorities. Underlying all these criteria, the implementation needed to be easy, rapid, and cost-effective.

Solution

Extensis Portfolio provided the flexibility and cost-effectiveness that the BPA was looking for to meet its criteria. The BPA determined that Portfolio was the best solution available to create an intuitive workflow process keeping its unique range of media archives up-to-date while providing controlled access to those who need it.

Many field agents had developed their own image libraries and needed to migrate them to the centralized database. Using Portfolio, a customized upload page was designed to enable the field and area offices to share their images easily across the organization. Portfolio automatically tracks the user ID of the person who placed the content in the database or who made the most recent modifications, providing an audit trail of where the images have come from. BPA is currently cataloging and adding metadata to its backlog of images. It is now able to edit keywords and create custom fields to represent its personal agency language. Through automated metadata tagging, the process is simplified and the time involved to create consistent, valuable search criteria is kept to a minimum. Now, field offices are able to search quickly and use the terminology with which they are most familiar, resulting in effective and timely retrieval of images.

BPA also has about 1,000 16mm films, including training and historical movies that will be transferred to VHS, digitized, and made available as both videos and individual frames. The Portfolio solution captures individual frames and provides an easy method of adding search criteria, making the final images easy to find and accessible simply by clicking on that frame.

Portfolio also reads and displays RAW file formats from commonly used digital cameras (original information captured by a camera sensor prior to any in-camera processing), and is

able to extract metadata and embed that information into original files for retention of information from program to program. By providing easy addition of search criteria and metadata, the BPA team can save countless hours and resources by minimizing the need for manual searches, which were resource-intensive and lacked the ability to track usage. In addition, BPA now has a simple way to email original files or low-resolution preview files from directly within the Portfolio application.

Results

Portfolio has significantly enhanced the productivity at the BPA, which is now able to browse and retrieve digital assets at a higher rate and instantly bring up subject matter data. Time previously spent finding information about the photos and looking in indexes and different sources to find the subject matter is now saved by easy access to data included with the images. Sharing, searching, and distributing images can be accomplished without the manual wear and tear. Customizing the image metadata by adding familiar terms made searching the BPA database easier and more effective.

Since the implementation of Portfolio, BPA has been able to efficiently and affordably accomplish its mission of centralizing images and providing the public with faster and wider access to its library of photographs and footage. All of this has been accomplished while meeting the BPA’s budgetary and time-sensitive requirements.

Like BPA, BLM was facing the challenge of mounting numbers of historical photographs and a commitment to providing these images to internal and external parties. The BLM’s investment in automation and information technology is fundamental to its ability to manage public lands and provide the best ROI to US citizens. BLM took special care to evaluate digital asset management systems thoroughly and ensure guidelines were met before purchasing the Extensis Portfolio solution.

Bureau of Land Management provides easy access to land usage data

Challenge

The BLM is an agency of the US Department of the Interior with responsibility for managing

more than 260 million surface acres of America's public lands and their natural resources primarily in 12 Western states. The agency is also responsible for administering 700 million acres of sub-surface mineral estate throughout the nation.

The BLM maintains photographs dating back to the 1800s that document the track of Western expansion and the changing landscape of the nation. The photographs provide valuable historical data and documentation about lands and the effects of both natural and man-made impacts such as fire and grazing on the flora and fauna of the region. Such data provide valuable information that can be used for setting preservation and use policies and can be shared with third parties, such as the media, to illustrate regional events or provide scenic images to promote tourism. Historically, most stock photographs were manually stored in file drawers, making finding appropriate images an onerous process involving significant labor resources, and exhaustive, time-intensive searches. The cost of acquiring, storing, duplicating, and distributing physical copies of BLM photographs was high and inhibited their ability to provide public access to thousands of multiple-use images of BLM's public lands.

Adding to the challenge, BLM's offices are even more geographically dispersed than the BPA's, with field offices in many states. The National Photo Database currently holds more than 13,500 multiple-use images from a dozen Western states, the Eastern states region, and two centers: Washington, DC and the National Office of Fire and Aviation. The BLM needed to feel confident that whatever digital asset management solution they selected would be able to scale to their expected need of more than 200,000 images in a short period of time.

BLM's technology goals include developing an integrated, nationwide outdoor recreation information system that will give the US public rapid and easy electronic access to information about recreation on federal lands, recreation use permits, and reservations. As early as 1997, a team, including public affairs and visual information specialists, was formed to begin evaluating possible alternatives for managing the system and to identify potential process

improvements. The team concluded that a digital asset management system would significantly improve access to visual resources and reduce time and labor costs associated with the acquisition of these resources. Budget restrictions meant the BLM team could not invest in costly professional services and an expensive, enterprise-level product. However, the product needed to be robust enough to manage the high volume of images and anticipated requests. The system also needed to be intuitive to learn and easy to implement, limiting training costs. Prior to embarking on development of the project, team members made visits and inquiries to a wide variety of organizations and media outlets involved in cataloging digital images, including the Discovery Channel, USDA Forest Service, Department of the Navy, and Associated Press. Over the span of a year, the team tested and evaluated more than 100 database software packages, ultimately settling on an off-the-shelf solution, Extensis Portfolio.

Solution

Choosing the right digital asset management solution enabled BLM to expand the National Photo Database. The primary function of the National Photo Database is to facilitate access to the Bureau's electronic images and improve the processes associated with finding and distributing visual material. Its intended users include Bureau employees and managers, news media, public interest groups, non-government organizations, and interested private individuals. For the BLM, Portfolio has become the critical glue to providing other federal agencies, the general public, and nonprofit organizations with access to the information they need. In BLM's commitment to customer service, the National Photo Database provides standardized visual information over the internet using a digital asset management system. Page views have increased nearly ten-fold since implementing the system in January 2001 and have dramatically reduced the time involved in fulfilling requests and the cost to taxpayers.

To simplify expansion of the database, Portfolio provided the BLM with the ability to upload documents from any field office and create a cross-catalog of images, allowing individuals to search for a subject among many

states. Creating a system that easily fit into existing workflow allowed employees to move assets from their personal databases into a centralized database, a process which created valuable digital assets.

“By providing a low-impact process to get photographs out of desk drawers and file cabinets, we were able to create this comprehensive database that can be used by people anywhere in the world,” said Jeffrey Krausse, public information officer for BLM. “It’s hard to attribute a dollar value to that because it is provided as a free service — part of our core mission — but it’s something that was really only made fiscally feasible by automating existing processes.”¹

Now, each state, office or center has a designated photo database manager who is responsible for oversight of the images and metadata. Metadata are easily added to images during cataloging, using predefined keywords and contexts by BLM employees in the state, district, or field office. The images are then uploaded by the photo database manager, thus assuring the quality of associated photo information and the overall state, office, or center image catalog. The National Photo Database significantly reduces time and labor costs compared with acquiring, storing, duplicating, and distributing physical copies of BLM photographs.

In addition to saving time and monetary resources, the photo database is helping set sound policy. “Because of the information we saw detailing the condition of various ranges, we were able to enact changes in riparian usages such as seasonal grazing patterns that have significantly improved land use practices in those areas,” Krausse notes.

The BLM strives to realize healthier and more productive public lands through better informed citizens who are willing to participate and assist in solving complex environmental problems. The National Photo Database makes visual resources more accessible to internal and external customers for use in a wide range of applications, including: publications, presentations, websites, and electronic and print media. Images from BLM’s National Photo Database have appeared in *CNN On-line*, *The Washington Post*, *USA Today*, and numerous other national magazines.

Results

BLM’s National Photo Database, powered by Portfolio, enables sharing images across agencies and with the public. By purchasing an off-the-shelf, scalable solution, BLM met its budget and piloting requirements as well as its technology goals.

BLM’s evaluation team chose an off-the-shelf solution which was robust and flexible enough to meet their growing needs and budget. Portfolio provided BLM with the ability to manage their image database efficiently from geographically dispersed stations and provide access to third parties.

BPA and BLM illustrate that procuring and deploying a digital asset management solution can be accomplished with relatively little investment of time, money, and resources. Their success in improving efficiencies and the ability to provide constituents with access to data and images demonstrate how the right digital asset management system can streamline processes and workflow to help organizations accomplish their mission. By reducing the amount of labor involved and taking steps to automate the value-add aspects, such as metadata, agencies can keep costs low while providing a high-level and quality service.

KEY LEARNINGS FOR THE PUBLIC SECTOR

As previously discussed, public sector companies have special considerations to make when evaluating solutions to help manage their digital assets. Their organizational missions often include collecting and contributing information from disparate locations to centralized databases. They need to share information across their department, agency, and the government as well as with a growing global community. This requires a solution that can support multiple platforms and integrate with existing systems and common databases. Technology services are often shared and must be scalable and extensible through phased rollouts. Technology expenditures must stand up to high scrutiny, provide a recognizable value to the public, and are expected to streamline or automate existing process.

With digital asset management solutions, one size does not fit all. Some content management systems equate to implementing entire new

business strategy — an ongoing, high-cost investment, which may include an extensive re-engineering of business processes. For companies and organizations unable to invest in these high-cost solutions or wishing to avoid significantly disrupting existing workflow, off-the-shelf solutions such as Portfolio can be an effective alternative. With low-impact deployment and training, and cost-effective price tags, these off-the-shelf solutions can provide many of the features of the high-cost custom installations, but at a fraction of the price, providing the “best bang for the buck.” While the trend continues toward IT centralization, specialized digital asset management solutions can readily complement broader content management systems and produce immediate results at the workgroup or

departmental level. Providing the public with the services their mission outlines has never been more challenging or a higher priority for government organizations. Changing economic and community conditions require public sector groups to rethink their responsibilities as well as their methods for delivering services, controlling costs, and providing constituents, businesses, and other stakeholders with the access and ability to acquire the information they need. While these challenges linger, it should be comforting to know that solid solutions exist to help organizations address their needs and those of their constituents.

Reference

- 1 Krausse, J. Personal conversation with the authors.