IBM

IT Standardization and Consolidation: The Role of Enterprise Content Management in Improving States' Abilities to Streamline Operations and Increase Efficiencies

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Executive Summary

State governments must find a way to make the most of their already limited funds. At the same time, they are under increasing pressure to make their growing volume of data more accessible – to the public, within individual departments and across state agencies. Purchasing several IT solutions for individual state agencies improves a single agency internally in the short term, but over time, the state will have to invest time and money attempting to link departments to one another. To provide the best and fastest response as well as improve service to citizens, a better strategy is for state governments to implement a single, enterprise-wide platform across all state agencies for immediate and efficient information sharing and collaboration. Such a platform provides the best service to citizens while simultaneously decreasing administrative functions.

To achieve information management agility, states turn to integrated Business Process Management (BPM) and Enterprise Content Management (ECM) systems. BPM/ECM systems not only manage many forms of content – for example, electronic documents, email, rich media and records – but also they "activate" content by integrating it with process management. This allows for analysis and decision cycles to occur more rapidly and across several agencies and departments. BPM/ECM systems also automate the discovery and movement of information, thereby freeing state employees from the time-consuming tasks of "content management" and allowing them to focus on complex issues that require human intervention. Considering limited state budgets and the ever-expanding population, state governments should seek an enterprise system that addresses today's needs, while providing the scalability to accommodate future requirements.

IBM's FileNet BPM/ECM solutions answer this challenge. With an integrated suite of BPM/ECM solutions, IBM enables state governments to streamline and automate business processes, share information from agency to agency, as well as access and manage content enterprise wide. IBM's FileNet BPM/ECM solutions are built on IBM FileNet P8, a reliable, scalable and highly available enterprise platform that integrates content and business processes across individual organizations and inter-connected communities.

Endless Demands, Limited Resources

"Do more with less" remained the mantra of state and local government operations since 2002, when, according to the National Conference of State Legislatures, budget deficits were at their worst since World War II, with 24 states experiencing a deficit of more than $50 billion. Though state governments recently noted a stable environment in terms of budget and revenue growth, they expect future costs associated with entitlement programs to rise. Several specific areas continue to present budgetary challenges in the face of expected increasing costs. For example, Medicaid, which occupies 22 percent of states' overall revenue, is expected to consume 75 percent of all new state revenue in 10 states by 2009.[1]

These budgetary restraints force state governments to identify means of maintaining quality of both internal and external services on limited resources. Also, because budget and deficit constraints are a constant; state governments must identify solutions that will offer long-term benefits, remain inexpensive to maintain and minimize the size of the workforce required.

The Baby Boomer Effect

Presenting a second resource challenge, state governments must prepare for the impending retirement of baby boomers. According to a study by the National Governors Association Center for Best Practices, on average, more than 40 percent of state government workforces are 45 years or older. This looming workforce exodus expounds the need for efficient internal systems that enable agencies to address knowledge management retention. Further compounding the problem, states must update communication and documentation technologies to ease the transition of employees and ensure minimal information loss.

Beyond addressing internal staffing concerns, states must also prepare to provide retirement and other services to America's 36 million citizens over the age 65 – a number expected to top 40 million in just 10 years and surpass 70 million by the year 2030. Furthermore, because this group makes up the fastest-growing segment of Internet users, states must deliver these services across multiple service delivery channels. As a result, rather than requesting paper forms in person, these citizens are likely to demand online access to government services and individual records. Once online, retirees will want to check their accounts and view claims, as well as verify policies and benefits.

While increasing electronic access to services increases citizen service level expectations, it also offers state agencies new means of accountability. Integrating automated processes with online services, states can handle all citizen requests in an identical manner and in the order in which they were received. As a result, agencies can not only guarantee equitable treatment and fair response time, but also justify the same upon questioning. Additionally, with these integrated, online systems, agencies can more quickly and easily fulfill Freedom of Information Act or "shared access" requests – doing so with confidence that reports are comprehensive and inclusive of all relevant data.

[1] Government Technology, "Beyond the Beltway 2006: State and Local Government IT Watch," March 15, 2006

Population Increases

The current U.S. population is slightly below 300 million people – up nearly 31 percent in just the past two decades. Further, the U.S. Census Bureau predicts the population growth trend will continue to increase from immigration and birth rates, with the number of residents expected to exceed 335 million by 2020. Notably, states along the border of Mexico have seen an even more dramatic increase in population; California alone adds 400,000 new residents annually. As the nation's population continues to rise, the quantity of citizen information, records and files increases accordingly – presenting yet another information management challenge for state government agencies. The broadening diversity of the population also adds pressure on state agencies to incorporate changing demographic and cultural requirements into the policies and processes by which they provide service to the citizens.

The State Government Operating Environment

Individual state agencies have unique requirements that dictate how they manage information, provide service and execute operations. As a result, for years, agencies worked independently of one another in silos, with each agency managing its own specific requirements, information and files. As information management requirements for single agencies presented themselves, the agency would work to address a "quick fix" that met its immediate needs and requirements. However, the model failed to address broader, statewide issues, thereby minimizing economies of scale and reducing collaboration capabilities.

Despite the benefits of consolidation and collaboration, moving to a more centralized operating model can intimidate employees accustomed to the old environment. The adoption of enterprise-wide systems requires agencies with existing software and solutions to migrate to new platforms – relinquishing a certain level of autonomy and leading some to favor inefficient, non-interoperable systems. While system standardization across state departments can present adoption challenges, the ability to share information at the click of a button and other significant benefits far outweigh the cultural challenges.

Without question, standardization is a clear priority for state government leadership nationwide. A survey by the National Association of State Chief Information Officers (NASCIO) found that in consensus, state CIOs identified state consolidation and shared services as a "high priority" for 2006. Further, a study on managing the Information Technology (IT) investment conducted by the National Governor's Association (NGA) found that "development of an effective IT management structure begins with consolidation and standardization of IT infrastructure functions that are common to, and shared by, agencies across state government (such as purchasing, payroll, email systems, data and voice networks, as well as data centers) and moves toward, as one official put it, 'creating a bridge between technology and the business of state government' that allows the CIO to influence and coordinate the development of policy that affects the use of IT to support state agency business processes."

BPM and ECM – The Information Integrators

Integrated BPM and ECM solutions offer states opportunities to achieve these key priority areas – unifying content and processes, automating information and knowledge management, integrating data and delivering information to the right individuals at the right time.

By standardizing on a single integrated BPM/ECM platform, all state agencies operate in a common information management environment that enables easier sharing and exchange of information – critical in today's government operating environment characterized by inter-agency collaboration and electronic records. Files and content can be shared across departments and agencies without the requirement for additional systems integration. Furthermore, ECM enables agencies to provide authorized users with immediate access to information and records across state departments and to disparate locations – limiting information management costs and increasing operating efficiencies.

Moving to electronic files reduces the likelihood of lost or misfiled documents and allows for simultaneous access to a single document by more than one designated user. With files available at the click of a button for designated state staff, agencies can dramatically reduce the amount of time a citizen waits for document processing. States can store archived files electronically, creating a Web database of any important document in the state's history. As the population continues to grow, electronic capture and storage offers states the opportunity to save millions of dollars in printing, mail and storage costs.

By managing and containing information while allowing all relevant stakeholders across state governments to access vital information – present and archived – states can reap a number of noteworthy benefits that include:

- **Budget Optimization:** With all agencies leveraging a single platform, states and the respective agencies can capitalize on economies of scale and reduce total cost of ownership. State IT departments can manage enterprise systems for the entire state, allowing smaller agencies with smaller budgets to "buy-in" – securing access to technology otherwise cost prohibitive for a smaller organization

- **Seamless Collaboration:** As state governments look to develop consolidated, shared ECM infrastructures, many are driven by the requirement to effectively share information within agencies, as well as across departments and between levels of government. While most individual agencies maintain some level of imaging and/or electronic capture solution for filing, these disparate systems do not allow cross-agency access often required to collaborate. For example, a department of justice may have case files on a child support case that a human services department will need to enforce support payments or childcare. By enabling these two separate – but complementary – agencies to share information, each agency, and the state as a whole, saves considerable time and money

- **Efficient Records Management:** The requirement to manage an increasing quantity of citizen, business and internal records with limited storage space presents another key driver for ECM. All state agencies must comply with federal and state requirements for records management and duration of file retention, with some requirements insisting on hundreds of years of archival material. ECM permits electronic archiving of files, significantly reducing physical storage requirements while enabling regulatory compliance

The BPM/ECM Toolkit

A robust, fully integrated ECM architecture provides states with a solid foundation to reap the benefits associated with unified ECM and BPM by removing the need to integrate disparate software packages that provide common services. This increases operational efficiency by reducing the number of vendors required to support state government, while providing a common, unified foundation for the state. A complete BPM and ECM architecture allows the state to develop and maintain one compatible system with all the necessary and integrated components to allow for instantaneous electronic communication, document capture and management.

Specific components of a comprehensive ECM suite that provides the tools required for statewide deployment include:

Business Process Management

BPM creates, manages and enforces a unified process management infrastructure that connects state agency employees, the governor's office and decision-makers to one another and to applications. BPM controls the flow of work throughout an organization by streamlining, automating and optimizing processes. These refinements create the opportunity to save millions of work-hours and free staff to focus on higher-value tasks.

Beyond its individual benefits, BPM works hand-in-hand with ECM solutions to activate content in the state environment. For example, documents can be scanned at one agency site, and then the images can be automatically routed to additional offices via secure communication. Specifically, a department of motor vehicles office in one county can scan identity verification documents as required by the Real ID Act of 2005 and immediately cross-check these materials against the statewide database – and make the documentation immediately available to other DMV offices around the state. Further, state agencies can automatically generate alerts to notify state employees that new material requires attention in their inboxes or case folders. With these documents in hand, workers fuse the new information with data from other sources (also automatically routed to them) to produce targeted recommendations. Once routing and approvals are complete, finished work is then sent to pre-determined recipients in the appropriate offices, based on individual roles – dramatically reducing turnaround time from data input to actionable information.

Enterprise Content Management

ECM improves a state's ability to manage, find and share information. Content management allows all relevant departments and agencies to share and access information from numerous repositories. Further, it federates critical information to provide a single source for content – providing state employees with visibility and access to all the available information, thereby allowing for more accurate and timely management of state activities. With ECM solutions, for example, departments of corrections can share information with the state courts – allowing for improved and rapid response time to prisoners' files and court hearings.

State systems architects should seek out ECM products that deliver active content – content and documents that actively drive process automation to completion without human intervention. With active content, architects can ensure that processes continue to progress toward task resolution, thereby reducing time, cost and risk. With an integrated content and process foundation, states can respond immediately to events – setting critical processes automatically in motion upon arrival of new data or other parameters, increasing organizational responsiveness and agility.

Records Management

Records Management (RM) for state governments is critical for information management and mitigating risk associated with the potential for lost or misplaced information. A robust RM capability is a key component of any ECM suite. RM ensures compliance with regulatory, legislative and organizational policies by easily capturing, archiving and retrieving designated records. RM not only allows state organizations to meet records retention requirements, but also provides a means to quickly respond to inquiries, requests from the press and other similar events.

To be truly effective, an RM solution should enforce RM policies at the technology layer – eliminating user-related error by removing the burden of records declaration from the individual. By letting the software system manage creation, storage, usage and eventual destruction of records, states can reduce risk, lower operational costs and improve productivity. State governments should seek RM systems that scale to meet the records management and regulatory compliance needs of the entire state.

Email Management

State governments increasingly rely on email as the communications tool of choice for rapid information sharing. Without effective management, however, email can quickly become a liability or security issue.

The Email Management (EM) component of an ECM suite automatically indexes and archives email and attachments to a repository – removing any need for the end-user to allocate time and energy to email filing, and therefore, reducing the chance of error along with reducing the end-user workload. Further, states can schedule this action to occur during off-hours or maintenance periods as appropriate to support the states' needs.

An EM system for state governments should automate the process of capturing email messages as official records, simplify the retrieval of messages and effectively solve email storage issues. At the same time, it should offer significant opportunities for improving business processes and access to information. Organizational managers must be able to set up rules so that email messages are kept for required periods, destroyed when no longer needed and available when it counts.

Forms Management

Forms Management (FM) technologies reduce an organization's paperwork burden by facilitating the design and deployment of electronic forms (eforms). Eforms speed operations and compress decision-making cycles by transforming cumbersome paperwork into fully interactive documents. Eforms let users view any form, anytime, at any given point in a process. In addition, eforms support digital signatures and tracking for audit trails to meet regulatory compliance requirements. With eforms, states can quickly produce formatted messages, reports and other such documents without losing the flexibility of being able to change templates as needed. To a large degree, states can automate tasks such as licensing applications, land records requests, and compensation and benefits requests.

A robust FM solution for state governments must provide data validation that ensures that users fill out forms with the proper data, in the proper format. In addition, lookups must minimize errors by reducing the amount of data that must be entered manually.

Web Content Management

Web Content Management (WCM) enables and simplifies the creation, approval and publication of Web content and complex documents to multiple Internet, intranet and extranet sites in multiple formats – an essential component in today's information-driven society. WCM provides a fast, secure and widely available means of information distribution – enabling rapid and widespread distribution of information regarding state issues and alerts. It also offers an easy-to-use tool to update information about the state and supports public information systems such as weather alerts and emergency notifications. Together with ECM and BPM, WCM can convert state Web sites and portals into valuable information resources and drivers of productivity and effectiveness.

ECM at Work: FileNet Solutions Streamline Operations and Improve Information Sharing

Like many state government departments and agencies across the country, one state government in the Midwest used paper and microfilm-based document management and recordkeeping systems. As a result, the states' agencies faced challenges securing access to state records and other documentation in a timely fashion, as the same documents were often required for use at the same time, by multiple parties, in varying departments and offices. In addition, public access to these materials was nearly impossible considering the difficult-to-view document formats. Citizen service also suffered due to these challenges, as the outdated document and records management systems hindered state representatives' abilities to provide rapid response to inquiries.

Rather than implement new systems in each department and agency, the state sought to deploy a single enterprise-wide system to provide access across state departments in the capital and remote facilities. The state desired an imaging and content management solution capable of providing enterprise-wide access on a common infrastructure. Additionally, the agency responsible for the delivery of IT services to all state agencies wanted to leverage the combined purchasing power of all state departments and agencies to make the solution more affordable for smaller agencies with lower budgets.

Today, the IBM FileNet ECM suite of solutions is in place and operational at 12 of this states' agencies, including the Office of Public Instruction, Boards of Housing and Investments, as well as the Departments of Labor, Corrections, Justice and Natural Resources. The system enables this states' agencies to streamline internal processes, efficiently manage content and improve citizen service – automating previously tedious, time-consuming, paper-based processes using business process management. For example, FileNet electronic forms and business process management solutions helped improve the Department of Corrections Inmate Grievance Program by putting business processes in place to automate grievance routing to appropriate personnel for resolution.

Additionally, this Midwest states' IT department is working to extend the availability of its IBM's FileNet platform to county and municipal government agencies across the entire state. As these organizations come online, document sharing across all levels of government will significantly improve – increasing efficiencies for collaborating agencies such as the state Department of Justice and local police jurisdictions.

Why FileNet for Integrated BPM and ECM?

Today, more than 1,300 government organizations at all levels, in more than 80 countries worldwide, use FileNet ECM solutions to streamline and automate business processes, connect with information systems, as well as access and manage content enterprise-wide.

IBM's FileNet BPM and ECM solutions are built on FileNet P8, a reliable, scalable and highly-available enterprise platform that integrates content and business processes across individual organizations and inter-connected communities. Key benefits include:

- ***Improved Foundation to Manage Risk and Ensure Compliance:*** Controlling the use of, and access to, information, FileNet P8 enables state agencies to protect and authorize content access as dictated by authorization level, individual identity or role. Further, by utilizing the advanced security, comprehensive auditing, events, lifecycle management and workflow capabilities of FileNet P8, agencies can comply with federal and state recordkeeping requirements.

- ***Increased Agility and Responsiveness:*** The IBM FileNet Content Engine, a key component of the FileNet P8 platform, manages a full range of structured and unstructured data and processes information securely and reliably. An object-oriented metadata repository, the FileNet Content Engine provides maximum flexibility in setting up document and folder classes, as well as content storage options. This service provides state agencies with the agility they need to adapt to a constantly

evolving operating environment in real time, offering the tools necessary to manage the continuous influx of large amounts of citizen data.

- **Maximize Existing IT Investments Through Support of Industry Standards:** The FileNet P8 platform is based on industry standards, such as J2EE and XML Web Services, to enable state agencies to maximize their existing IT investments. Extensive testing with industry-leading infrastructure products is regularly conducted to ensure FileNet P8 applications can be deployed rapidly in any environment.

- **Real-time Performance and System Monitoring:** The FileNet P8 platform provides a comprehensive set of system and performance monitoring features including integration with leading Enterprise System Management (ESM) tools. This enables system administrators and data center operators to view the systems health and welfare in real-time – identifying potential problems before they occur and ensuring optimal uptime for the entire state network and individual employees. In addition, FileNet supports the leading clustering, high-availability and disaster recovery products – critical to support continuity of operations planning for state relief organizations.

- **Broad Range of Integration Options:** The FileNet P8 platform provides a powerful set of capabilities for integrating with desktop and packaged applications, content repositories and legacy systems – enabling state agencies to communicate with one another, regardless of installed platforms or individual application requirements.

- **Unparalleled Support for Storage Media Types and Vendors:** FileNet supports the leading storage vendors in the industry and a comprehensive range of both hardware and software offerings over all popular media types. This allows maximum flexibility when choosing the best-fit storage solution and lowered data storage costs – regardless of the quantity or type of data. Both rewritable and write-once technologies are supported for magnetic disk, optical and magnetic tape media and overall relevant storage networking topologies, including SAN, NAS and iSCSI.

Conclusion

An enterprise-wide integrated BPM/ECM system offers state governments an opportunity to accelerate the drive to become more effective, efficient and collaborative on a limited budget. By embracing BPM/ECM technology, states can quickly build the desired architectures, platforms and applications that greatly increased productivity and savings in private industry around the globe. State governments can derive powerful lessons from these companies, which, through mergers and acquisitions, learned to more efficiently manage information across business units and more effectively manage and use disparate information sources spread throughout the enterprise. By arming themselves with best available knowledge and leveraging leading-edge BPM/ECM solutions, analysts, operators and policy-makers will gain a more holistic view of the decision-making environment – a first step to success in any enterprise.

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About IBM ECM

As the clear market leader in Enterprise Content Management (ECM), IBM's ECM solutions help organizations make better decisions, faster by managing content, optimizing business processes and enabling compliance through an integrated information infrastructure. IBM's ECM portfolio delivers a broad set of capabilities and solutions that integrate with existing information systems to help organizations drive greater value from their content to solve today's top business challenges. The world's leading organizations rely on IBM enterprise content management to manage their mission-critical business content and processes.

For more information, visit **ibm.com**/software/data/cm.

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