



**DB2** Information Management Software

## **Delivering information on demand with IBM enterprise content management solutions**

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### The evolution of e-business in an on demand era

Today, demands from customers and suppliers are escalating. They want levels of service, responsiveness and efficiency never before required. To survive in this new era, companies must sense and respond to fluctuating market conditions. Organizations must adopt business processes in realtime, accelerating their time to market. They must derive every bit of potential value and eliminate the fat from their business models. Companies must understand what their customers are going to need before they actually need it—in other words, delivering products and services on demand. To succeed in such an era, businesses need to be responsive, flexible, focused and resilient.

In a recent survey of 33,000 organizations, IBM found that 80 percent of businesses are at some stage of e-business adoption. And they are realizing that the benefits from becoming e-businesses come from achieving end-to-end integration—not just inside the organization, but connecting multiple processes internally and externally with customers, partners and suppliers.

In industry after industry, organizations are linking together to form enterprises, increasing market reach, delivering services more quickly and dramatically reducing costs. In the financial services industry, for example, banks and insurers, which were previously separated not only by tradition but also by law, have been allowed to converge and now offer a wide range of specialized services to customers. Imagine if a retail firm could eliminate inventory-carrying costs by housing only the stock required for that day's sale. That requires giving suppliers direct insight into customer buying patterns. Companies are transforming their business models to become e-businesses on demand.

But becoming an on demand e-business isn't easy. Businesses are challenged to transform themselves into around-the-clock organizations. To meet this challenge, companies are turning to a key asset to gain a competitive edge: their valuable information resources. From the healthcare industry to the world of high finance, many businesses are seeking to leverage their information to facilitate quick decision-making among all their stakeholders.

### **The need for information on demand**

To keep pace in today's economy, it's more critical than ever for businesses to maximize efficiencies, while minimizing costs. Across industries, companies are struggling to manage information effectively, as the average knowledge worker spends 25 to 30 percent of the workday looking for various types of information to complete assigned tasks. Such lost productivity can adversely affect an organization's ability to control costs and capitalize on new opportunities—leading companies to identify methods to securely deliver integrated, consistent information not only to their employees, but to customers and trading partners. This information must be available 24x7x365 and needs to be personalized and distributed globally, when and how users want it, for maximum impact on the bottom line.

To meet the challenges of the on demand world, organizations must first ensure that their business operations and infrastructures are robust enough to deliver information on demand. Many organizations are turning to enterprise content management (ECM) solutions, which provide a framework for creating, managing, integrating, Web-enabling and delivering all forms of content across the enterprise and beyond. A recent Gartner Group study indicates that ECM has become a core infrastructure component that enterprises must embrace for success in a business environment that has become increasingly e-business- and document-centric.<sup>1</sup>

ECM addresses four core technologies: Web content management, document management, digital media asset management and records management. Sharing similar needs, all of these content types leverage the capabilities that ECM solutions bring: mass storage, search and access, workflow, personalization, integration, access and version control, collaboration and rapid delivery over the Internet.

IBM is a leader in delivering ECM solutions, with the IBM DB2® Content Manager portfolio of products. DB2 Content Management solutions enable you to deliver information on demand across your enterprise and beyond.

### **Harnessing the power of information**

Business content is growing exponentially, and companies are struggling to manage and use their information effectively. Analysts estimate that corporate transaction data is increasing at a rate of 61 percent annually and reference information is growing even faster at 92 percent per year. In fact, experts agree that during the next three years, companies will create more information than has been created in all of history.

These corporate data resources aren't limited to structured information that fits inside a relational database. As much as 85 percent of the information an organization processes is unstructured data, such as paper documents, reports, video, audio files, photographs, faxes and correspondence. Enabling ready access to all information—structured and unstructured—is essential. Healthcare providers, for instance, need to review patient data, including x-ray images and test results. Auto manufacturers need to access vehicle servicing information, such as repair statistics and diagrams. And using ECM solutions, virtually any employee, customer or partner of today's enterprises can access and share unstructured data, just as easily as structured data.

### **Creating an infrastructure for content lifecycle management**

Managing all this content may appear to be a daunting task, but with the right information infrastructure in place, organizations can leverage the power of their data. As you consider building an information infrastructure that will meet your needs, it is important to consider how you will support content throughout its lifecycle, including:

- Capture of unstructured content in a digital format and management of content in repositories to provide storage, archiving, workflow, search and access capabilities
- Integration of content into business applications and processes
- Lifecycle management where applicable retention rules are applied to records through a formal, multistage process
- Delivery of content to the users requesting it—integrated from multiple sources, personalized to their needs and delivered through the appropriate transaction channels, such as intranet portals, Web browsers, mobile devices and application clients.

In addition, you must consider the size of your user community when creating your information infrastructure, and deploy an ECM solution that can scale to support content management and delivery to your anticipated users. Historically, content management systems have been implemented to address specific, defined tasks, such as insurance claims processing or capturing employee performance information. In these cases, the pool of content users is well defined and often contained within a single department. However, as we move into the on demand era, an increasing number of users, within and beyond the enterprise, will need access to this content—increasing the user base from hundreds of users to thousands.

Consider the National Geographic Society. The nonprofit scientific and educational organization created a digital repository to store, search, manage and preserve thousands of photographic images. The organization utilized IBM content management solutions to extend availability of the photos beyond the staff to its business customers through a business-to-business portal—significantly increasing its customer base. By utilizing a scalable IBM content management solution, National Geographic Society implemented a new on demand business model and easily met the increase in demand for content delivery.

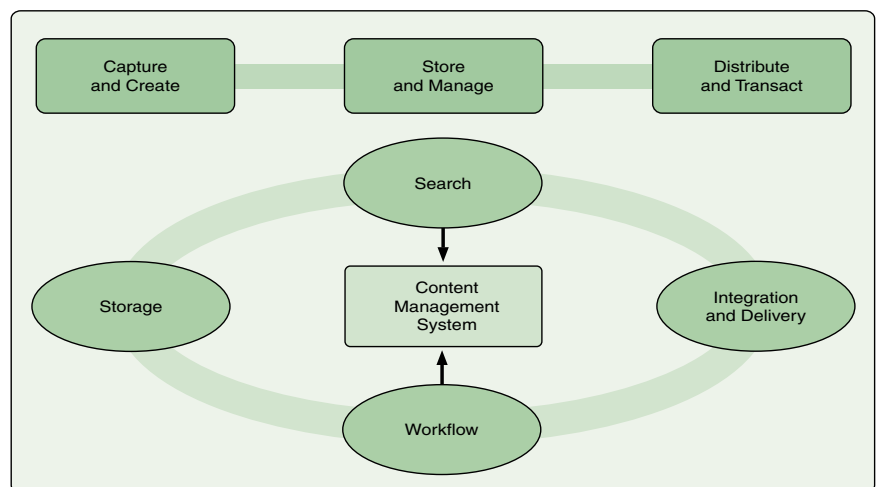
### **Utilizing an ECM framework**

Managing a wide range of content, from rich Web images to e-mail and other documents, an enterprise content management solution should feature:

- *A robust repository.* Enterprise content management platforms must be scalable, robust, reliable and secure to address unpredictable numbers and disparate types of users, both inside and outside the corporate firewall. In the past, content management systems were typically operated by a relatively small numbers of users with predictable access patterns, such as a finance department accessing employee timesheets locally on a weekly basis. Today, content management platforms must support the delivery of secure, personalized content through portals and other delivery channels, in addition to the volume of information created by potentially tens of thousands of users with widely divergent demands.

IBM's content management platform scales from small departmental solutions to enterprisewide applications used by thousands of employees, as well as customer-facing e-business Web sites receiving millions of hits per day. This scalability is particularly important for e-business settings where repositories may house hundreds of gigabytes of documents and rich media, yet must provide quick information access.

- *An open architecture.* A content management platform should be based on open standards and support leading server platforms, database management systems and packaged business applications. IBM's content management platform has the flexibility to connect to and access any application, including those of other vendors, through a set of published application program interfaces (APIs). By enabling you to use your current IT investments in software and hardware, the open standards-based architecture of IBM's content management products enables the seamless and automated movement of content between organizations, consumers, partners and employees.



The Enterprise Content Management framework.

- *Options for integrations.* An enterprise content management platform should easily integrate within existing hardware and software environments, enabling you to leverage your information investments and to create a virtual repository for all of your content sources. IBM DB2 Information Integrator for Content brings together content and data from multiple sources across the enterprise in an open, extensible information integration framework. With distributed data access capabilities for structured and unstructured content, the software helps users access, manipulate and integrate existing IBM and non-IBM data repositories and applications.

In addition, IBM has relationships with a number of independent software vendors (ISVs), such as PeopleSoft, SAP<sup>®</sup> and Siebel, which extends the capabilities of their software by ensuring that it can take full advantage of the power of IBM ECM solutions. For instance, DB2 Content Manager provides both a connection to unstructured data that may reside outside the PeopleSoft system for use in PeopleSoft applications and a store for unstructured information to support Siebel eBusiness Applications. DB2 CommonStore for SAP archives data and documents from SAP systems.

- *Lifecycle management.* Digital assets must be managed throughout the lifecycle — from creation to disposition. An integral part of content management implementations, IBM DB2 Records Manager provides lifecycle management for all types of e-records. Utilizing user-defined retention/disposition rules and policies, DB2 Records Manager applies them against declared records, so that relevant documents are managed to comply with industry or government regulations.
- *Portals and collaboration.* Web content and rich media assets share numerous management requirements including distributed mass storage, access control, rights management, version control and efficient delivery to standard Web browsers. By integrating Web portals with ECM infrastructures, legacy content can be easily portal-enabled for secure, personalized delivery to facilitate collaboration among partners and employees. Suddenly e-learning media, business records and other dynamic business data are easily accessible not only within, but beyond the enterprise.

*Spherion Technology Services Group, a services provider, has merged the power of a portal with content management and collaboration tools to enable e-business on demand. Combining the power of WebSphere software with Content Manager, SameTime® and QuickPlace®, the company delivers personalized information to employees to facilitate realtime communications. Now, Spherion responds to service requests 60 percent faster due to quick and secure access to critical documents and customer information.*

And because the IBM content management infrastructure is extensible, there's no need to deploy everything at the same time. The IBM content management framework grows with your needs, so you can implement components as you need them, which enables you to reduce the up-front costs and risks to your content management investment. Once installed, content management solutions provide an integrated view of business content enterprise-wide that can help your organization improve customer relationships and enable employees, partners and suppliers to work together more effectively.

**The business value—maximizing return on information**

More than ever, businesses are examining not only the capabilities of their technology solutions, but also their ability to support a rapid return on investment (ROI). With tight cost controls in place, it's imperative for IT managers to have lower ownership expenses. Where a 12- to 24-month ROI may have been acceptable in the past, organizations now want to see immediate payoff on their IT expenditures. Improving operational efficiencies, enhancing customer experiences and creating new revenue opportunities are three strategies that are helping organizations to maximize ROI. IBM content management solutions help business realize these goals.



- *Improve operational efficiencies.* Sharing information assets across multiple applications reduces physical storage costs and simplifies administration and maintenance. Additionally, when information is integrated across various repositories, such as relational databases, mail systems and Web sites, search and access times are reduced, thereby helping to increase employee productivity.

For example, Sharp Electronics Corporation is utilizing IBM DB2 CommonStore to efficiently manage its bill of lading process. Before deploying DB2 CommonStore, these critical shipping documents were printed and outsourced to a microfiche imaging bureau for safekeeping — a costly process that took more than a month to complete. Once outsourced, bills of lading (B/Ls) were difficult to track and retrieve, and were routinely misplaced — wasting valuable time and resources.

To increase operations efficiency, Sharp worked with IBM Business Partner Image Architects, a software developer and consulting firm, to implement an integrated, digital B/L management system. Using IBM DB2 Content Manager OnDemand, IBM DB2 Content Manager CommonStore for SAP and IBM DB2 Universal Database, Image Architects created a system to store, retrieve and view B/Ls electronically, saving time, reducing costs and improving warehouse operations.

- *Demonstrate compliance.* In today's business climate, companies face increasing pressure to meet audit and regulatory requirements. Whatever your business, you need to be aware of these regulations, understand the impact to your organization, keep up with any changes, and be able to implement these capabilities quickly based upon upcoming deadlines. With integrated records management and information archiving capabilities, the IBM DB2 Content Management platform can help firms gain control over critical information and provide increased efficiency with effective business processes and controls based upon your company needs.

- *Enhance customer experiences and improve customer care.* Integrating information across organizations and business processes facilitates collaboration and streamlines communications. For instance, by delivering critical business information to customers and partners through Web portals or other forms of Internet-based self-service, organizations enrich customer contact by empowering them with up-to-date information, accessible at their convenience.

By delivering information that is complete and personalized, organizations can become more competitive. For instance, Wisconsin-based Acuity Insurance Company has upgraded its claims processing information system so that customer policy information and claims details are accessible to customer service agents through a corporate intranet. By deploying an IBM content management solution, Acuity has transformed its business and can now respond to claims inquiries in realtime.

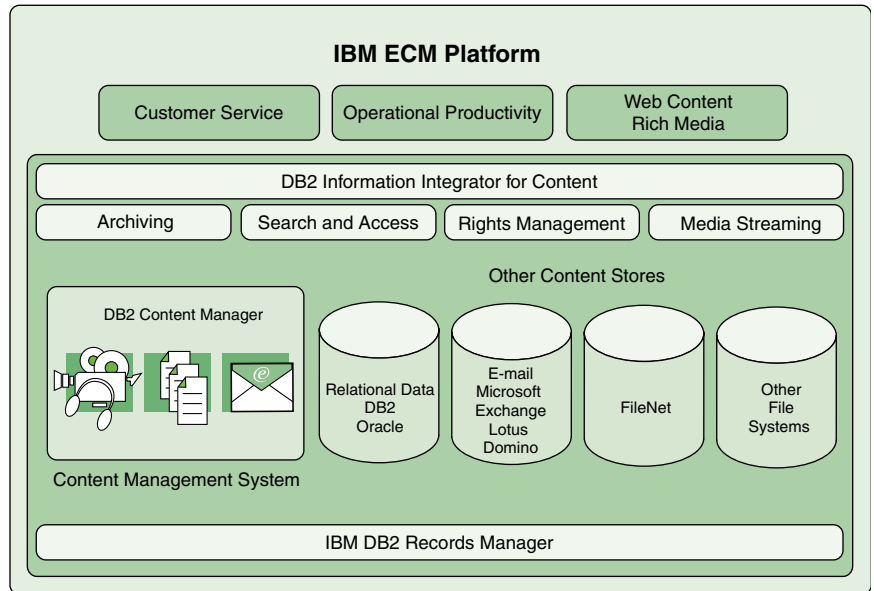
Another prime example is Genesys Health Systems, which is using DB2 Content Manager to help save lives. The 412-bed hospital was coping with many of the same efficiency and quality care issues that most hospitals face, such as operations that involve a wide variety of departments and a number of disparate computer systems. Seeking to improve patient care, Genesys contacted BlueWare, a software developer whose medical records management system captures patient information in a virtual electronic chart. X-rays, blood tests and even handwritten notes are consolidated in a patient's electronic record, so that a doctor has everything needed to make the best medical decisions.

Leveraging wireless technology, doctors can now conduct virtual rounds any time. And since information is quickly scanned, lab results can be reviewed within 30 minutes—rather than the 24 hours that it used to take. As a result, doctors can diagnose and prescribe medications faster, which leads to enhanced healthcare delivery.

- *Create new business opportunities.* Deploying content management solutions to utilize information and resources enterprisewide helps organizations gain a competitive advantage. By enhancing marketing programs and taking advantage of up-selling and cross-selling opportunities, businesses are tapping into previously unrealized revenue potential. For example, Viewpointe Archive Services, which archives 40 percent of all checks written in the U.S. each year, manages more than 55 million items daily, totaling 1 billion monthly. Using Content Manager OnDemand and digital imaging, Viewpointe enables banks to share the same digital image of a check — rather than multiple banks manually processing, imaging and storing the same check. In addition, bank customers can receive digital images of their checks within seconds, which creates a seamless integration across the industry. This type of integration is helping banks to move into the e-business on demand era by enabling them to respond to the marketplace in realtime.

### **IBM delivers a comprehensive platform**

IBM — a content management pioneer and the first company to offer a single platform for managing for all types of content — continues its tradition of delivering innovative technology with the DB2 Content Manager portfolio of products. Designed to support and accelerate business processes, from claims processing to e-commerce, the suite provides a comprehensive, integrated and scalable ECM platform.



IBM delivers a comprehensive suite of enterprise content management solutions to help meet myriad business needs.

The DB2 Content Management portfolio includes the following product families:

**IBM DB2 Content Manager.**

DB2 Content Manager is designed to deliver unparalleled performance, scalability and extensibility for managing information throughout the enterprise. Leveraging IBM DB2® Universal Database™ for meta data management, security handling and backup and recovery, DB2 Content Manager provides a single, open and consistent framework for managing, sharing and archiving all types of digitized content. With transaction, process integration and lifecycle services, DB2 Content Manager integrates with diverse business solutions, including Adobe, PeopleSoft, SAP and Siebel, enabling organizations to extend existing information resources. Together with Lotus® Workplace Web Content Management for DB2 Content Manager, DB2 Content Manager delivers an easy way to create, publish, manage and archive Web-based content within a corporate intranet, extranet and Internet

environment. And the architecture supports XML content, document images and rich media, and is designed to grow as your business needs expand. The software scales from a single PC to an enterprisewide solution running on IBM @server systems—complete with magnetic and optical storage devices under system-managed storage control.

A single DB2 Content Manager system can support multiple content stores distributed across the enterprise or the Internet—allowing content to be stored close to its point of origin. This distribution method reduces bandwidth requirements and increases disaster protection, while still allowing central data management for easy administration.

***IBM DB2 Content Manager OnDemand for instant access.***

DB2 Content Manager OnDemand is a high-performance repository optimized for managing very large groups of objects, such as statements, reports and checks. The software transforms any type of print output into searchable, Web-accessible content. Offering immediate availability and instant access to digitized content, DB2 Content Manager OnDemand maintains secure data access that provides an ideal option for portal integration within customer relationship management or Web self-service applications.

***IBM DB2 Information Integrator for Content to unify content resources.***

DB2 Information Integrator for Content is the follow-on release to IBM Enterprise Information Portal. Enabling simultaneous, distributed data access to all types of content, the software provides broad information integration features such as workflow, content categorization and automatic summarization. With access to IBM Lotus Notes® and IBM Lotus Domino™ databases and popular Web search engines, DB2 Information Integrator for Content includes a browser-based client that supports federated search across IBM and non-IBM repositories.

***IBM DB2 Records Manager to control e-records throughout their lifecycle.***

DB2 Records Manager brings formal, structured document retention and disposition to business applications. When used within a context of clear and consistent corporate policy, it can reduce litigation risk and evidence discovery costs and help you demonstrate compliance with government and industry regulations. A scalable, Web-based infrastructure tool, DB2 Records Manager applies structured lifecycle management to documents and other information in business applications.

***IBM DB2 CommonStore for optimal archiving.***

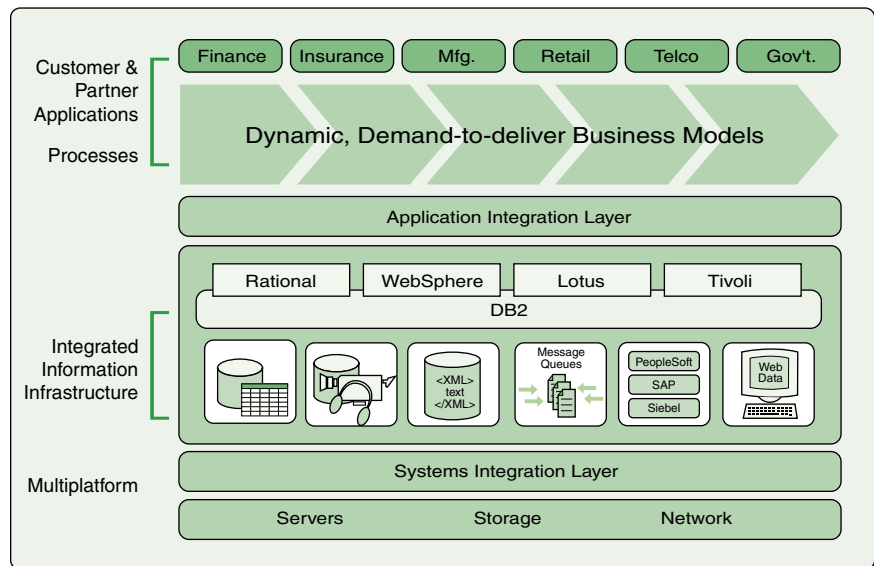
DB2 CommonStore archives key data, documents and e-mail for SAP R/3, Lotus Domino and Microsoft Exchange Server. Transferring the data to DB2 Content Manager or DB2 Content Manager OnDemand, the software greatly improves application performance and manageability by using business rules to archive content.

***IBM Content Manager VideoCharger™ for real-time multimedia streaming.***

DB2 Content Manager VideoCharger enhances the industry-leading rich media capabilities of DB2 Content Manager. Enabling realtime delivery of streamed digital audio and video content over the Internet through conventional Web browsers, DB2 Content Manager VideoCharger is a high impact tool for e-commerce, e-learning and corporate communications. Because the content is streamed, it can be “pushed” from the server and played in realtime, for a live audio and video experience for multiple users on the network.

***IBM Digital Rights Management for secure information access.***

IBM Digital Rights Management is a suite of enabling technologies that allows organizations to govern the use of business information as it is distributed electronically to its employees, customers and business partners. For instance, an information provider can decide who can receive information, how it can be used (view, print, copy, modify) and when the use expires. With reporting and payment interfacing capabilities, the software is an excellent choice for any security-conscious environment.



IBM ECM products enable a seamless flow of information, built on an open integration strategy.

To further extend its capabilities, the DB2 Content Manager portfolio integrates with other core IBM software solutions, including:

*WebSphere*<sup>®</sup> software. DB2 Content Manager integrates with IBM WebSphere Portal, delivering an integrated Web interface with a single content access point that is available enterprisewide.

*Lotus* software. DB2 Content Manager is integrated with the full suite of Lotus collaborative solutions, which include Lotus Workplace Web Content Management software, Domino and Lotus Domino.Doc.

*Tivoli*<sup>®</sup> software. DB2 Content Manager easily integrates with IBM Tivoli Global Enterprise Monitor and IBM Tivoli Enterprise Console<sup>®</sup> for systems monitoring. For hierarchical storage management, both DB2 Content Manager and DB2 Content Manager OnDemand use Tivoli Storage Manager.

**Ready for e-business on demand**

Delivering easy access to integrated information, IBM content management solutions are a key element in any e-business infrastructure. Designed to join dynamic business data, customer statements and other records in support of existing business processes, the portfolio provides a cost-efficient foundation to jumpstart your business or to empower you to maintain your momentum in the marketplace.

IBM's leadership in the content management market complements its position at the forefront of the e-business space, making it a natural ally to help you realize your business goals. With the expertise to deliver streamlined, integrated information access across your organization, IBM delivers solutions designed to meet a variety of industry-specific needs, such as:

- Claims and correspondence for property and casualty insurance
- Loan applications and customer statements for financial services
- Online information access for e-government portals
- Catalog and merchandising management for retail and CPG customers
- Medical records and billing statements for healthcare.

An expert in content management design and deployment, IBM is helping organizations like yours to utilize their information assets to their fullest potential. Using the DB2 Content Manager portfolio of products, you can create an infrastructure for secure, robust and reliable information management, which enables you to maximize the return on your information assets.

**For more information**

Please contact your IBM marketing representative or an IBM Business Partner, or call 1-800 IBM CALL within the U.S. Also, visit our Web site at:

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<sup>1</sup> Mark R. Gilbert, Growing Content Management Revenue Bucks Technology Trend, Gartner Group, April 25, 2003.

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