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THE BUSINESS NEEDS

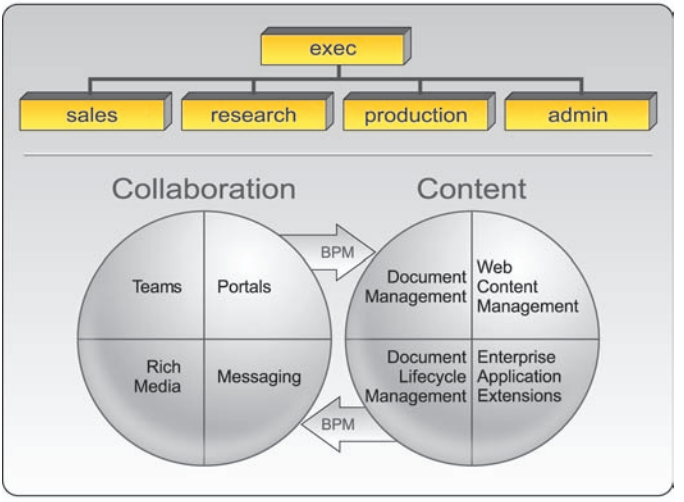

Figure 1.1: ECM Applications

The business needs for ECM and its benefits are identified in this chapter, along with its many departmental applications in a variety of industries.

Figure 1.1 displays a grid of applications by department. All ECM technologies and applications can be mapped to an organizational chart. The figure above shows a simplified representation of such an organizational chart to include Sales, Research, Production and Administration.

In some applications of ECM, such as Sarbanes-Oxley for regulatory compliance, multiple departments work within a single application, which is delivered by a common set of technologies. This type of cross-departmental application highlights the need for companies to invest in applications delivered by a common set of technologies. This chapter focuses on how ECM enables organizations to lower their total cost of ownership by delivering an enterprise data model and core applications that provide an infrastructure for additional business applications.

CHAPTER 1

THE BUSINESS NEEDS

In order to succeed, companies need to know how to make use of the information and content that exists within and around their organizations. But what information should they know? How do they establish an infrastructure that enables them to understand their content?

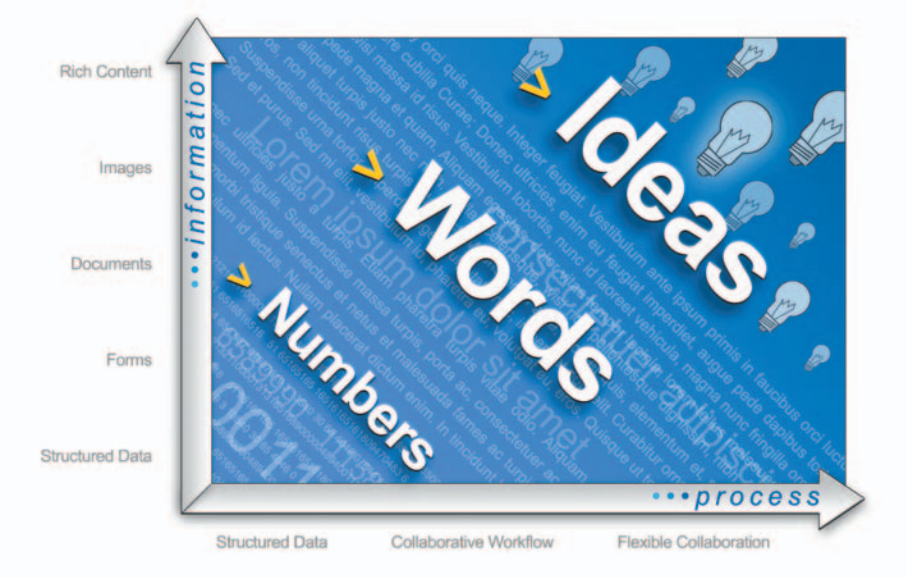

Figure 1.2: Working With Information

Companies that understand their content implement Enterprise Content Management (ECM) systems. Enterprise Content Management is technology that provides a means to create, store, manage, secure, distribute and publish any digital content for enterprise use. ECM is not about numbers; it is about words. Much of the Information Technology (IT) industry in the past 50 years has focused on back office databases and their management in Enterprise Resource Planning (ERP) systems. ECM is unique in that it was developed to manage the creation and consumption of growing amounts of non-numeric content such as documents, Web pages, spreadsheets, diagrams and images, largely affected by the rise in popularity of the Internet.

Figure 1.3: The Evolving Challenge

For ECM systems to be widely adopted, they need to emulate the way people work without disrupting their daily routines. This involves creating a digital place where people can work in much the same way they would work together in departments or at office locations. For ECM to be effective, it needs to automatically capture the content that is produced as a by-product of this work. The best ECM solutions deliver applications at the departmental level that integrate content management invisibly within the very act of collaboration. The transparent combination of content and collaboration benefits organizations tremendously by providing a place where simple ideas take root, are nurtured and finally mature into market-leading innovations. It is a critical point and one that we will explore in detail in this book.

People work together within a particular line of business or work group. Companies are normally organized by departments around these lines of business, such as sales or manufacturing or administration. Typical ECM applications are built to meet the content management needs of a particular department and are driven by a line of business manager with a particular productivity problem. These departmental solutions provide a shoe-in for larger enterprise installations.

ECM as a set of departmental applications is most effective when supported by a common data structure and a combined set of technologies. To put it another way, each departmental application typically requires the same basic technologies and infrastructure, but has a specific set of needs that are unique to that line of business. ECM systems that can be easily adapted to meet each department's unique needs, while maintaining a common data model are inherently more flexible and future proof. Implementing ECM applications on a common data model results in lower total cost of ownership and faster implementation, leading to greater productivity and higher returns on technology investments.

Content-Based Applications

Let's consider group level applications that are closely aligned to the way people work. The following represents a typical organization chart for a company:

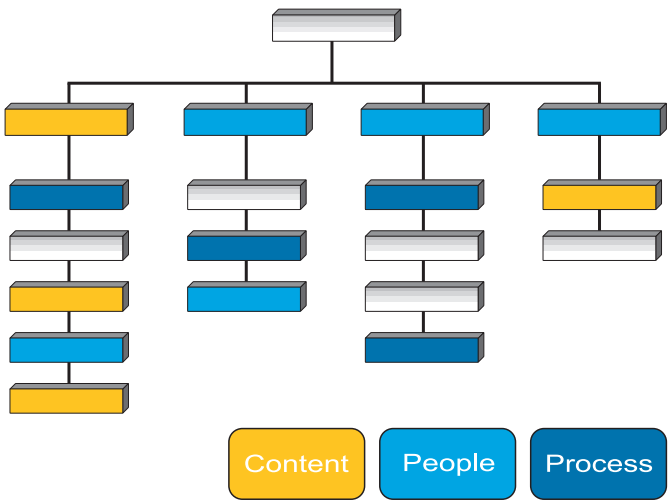

Figure 1.4: Typical Organization Chart

Companies consists of many separate departments—accounting and finance, legal, administration, marketing, sales, IT, research and development, and so on. Each department has its own needs and requirements for content management. ECM business solutions have been designed to meet many of these requirements and solve problems specific to a particular department. Typically, these solutions are driven by the need to improve efficiency or save money. Examples include: Purchase Order Processing, Invoicing, Project Management, Claims Processing, FDA Compliance, Product Lifecycle Management (PLM), and Sales Readiness, to mention a few.

ECM solutions often support core business functions. That is, if the solution were to be used inappropriately or did not exist, the business would not function. In the pharmaceutical business, for example, the development of new drugs must follow a regulated content management and approval process known as 21 CFR Part 11. The entire corporation is at risk if this process is not precisely followed. ECM business solutions for pharmaceutical companies must therefore support 21 CFR Part 11. Other industries such as financial services and healthcare have very similar needs controlled by their own industry regulations.

Figure 1.5: ECM Architecture Simplified

Once an application has been deployed at the departmental or group level, the IT department involved in implementing the first application can use the lessons learned to solve other content issues in other departments. While the first deployment may take place in the sales department, the next deployment may occur in the manufacturing area, and so on. Some of the most advanced ECM-enabled organizations in the world today have more than 20 distinct department-level applications supported by a common underlying suite of technologies and a common data model.

> DaimlerChrysler Services

Operating at over 100 locations in 39 countries, DaimlerChrysler Services is one of the biggest financial services providers in the world outside the banking and insurance sector. The company's core business, ranging from financing concepts for all DaimlerChrysler group vehicle brands to non brand-specific fleet management, requires efficient and effective contract management.

The implementation of an ECM-based contract management system at several subsidiaries has meant that for the first time all leasing contracts and related documents (copies of driver's licenses, identification cards, insurance contracts, etc.) can be managed centrally. The contract system is also used to manage all general contractual customer correspondence, as well as any damage or insurance claims relating to leasing contracts.

With the right information at their fingertips at all times, the staff of the DaimlerChrysler call center can now provide an efficient response to the many and varied requests of their customers. Response times are considerably shorter and there has been a significant increase in the satisfaction of leasing customers. More than 60,000 electronic customer files are available, offering individual customer contract data at the touch of a button and guaranteeing smooth processing—from applications to insurance claims.

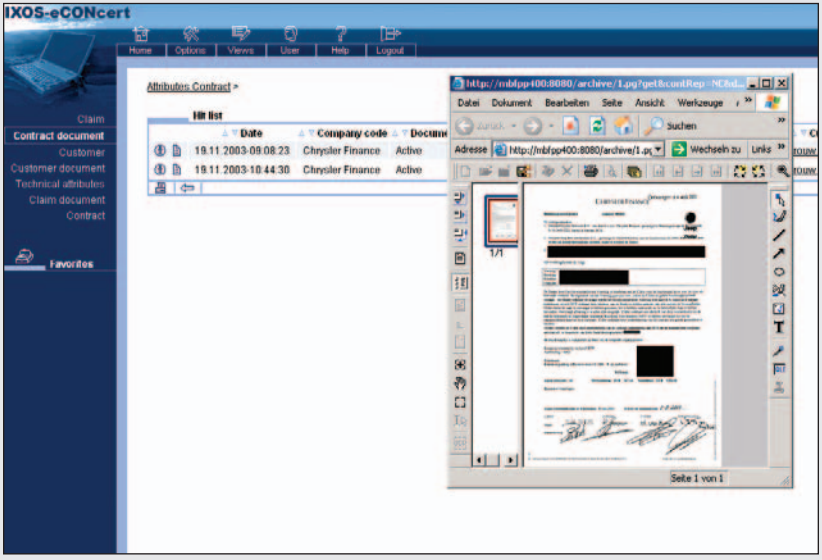

Figure 1.6: DaimlerChrysler's ECM-based Contract Management System

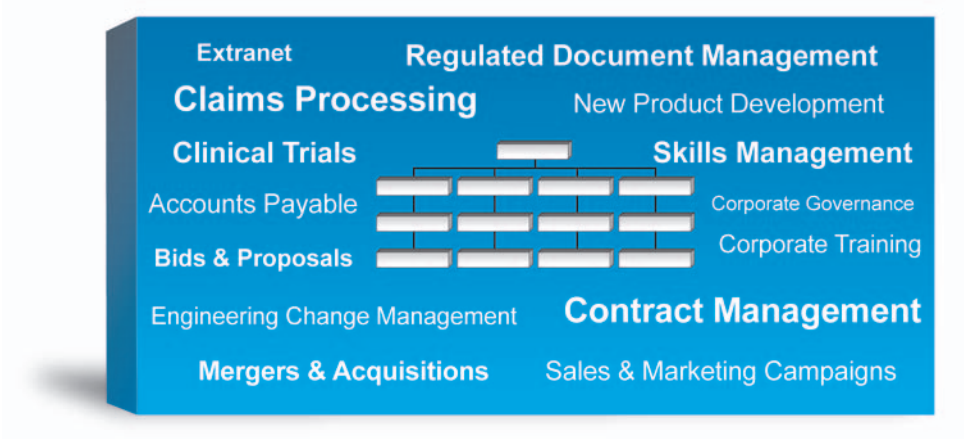

Figure 1.7: ECM Applications

Some of the solutions that have been developed for ECM include:

- Accounts payable administration
- Bid management
- Content management
- Court case management
- Customer care centers
- Customer due diligence
- Derivatives management
- Digital asset management
- Engineering change management
- Government publications management
- Vendor communications
- Human resources
- ISO 9000 quality assurance
- Managing marketing extranets
- Manufacturing processes
- New hire induction/Education
- New product development
- Policies and procedures
- Project collaboration
- Records management
- Vacation time management

As organizations move to leverage the same infrastructure for process improvements company-wide, finding a solution often turns into a long-term strategic Enterprise Content Management solution. This involves deploying a complete series of applications across an entire organization. In order to make these applications simple to deploy and cost effective to replicate, a common set of technologies with the same content model is required as an underlying infrastructure. This means the suite of technologies must be sufficient to deliver all applications across the enterprise.

There are hundreds of ECM solutions implemented in organizations in major industries throughout the world. This book profiles many of those ECM success stories.

As the deployments of ECM reach critical mass within major corporations, ECM applications are finding their way into every department. At the time of the writing of this book, there were more than 100 different kinds of applications using ECM technologies known to the author. On average a single enterprise-wide deployment of ECM involves more than 20 unique solutions, ranging from engineering departments using ECM applications for new product development to accounting departments using ECM to track changes to contract bid documents.

Inter-Departmental Requirements

In many applications that are critical to the operation of an organization, collaboration requires cross-departmental cooperation. In many companies, achieving this cooperation is the very basis for long term competitive advantage. For example, when planning and implementing New Product Development (NPD) within a research group, the interaction between this group and manufacturing and marketing is vital to the success of the project. This implies strong cross-functional cooperation and collaboration, and the sharing of critical documents from all three departments.

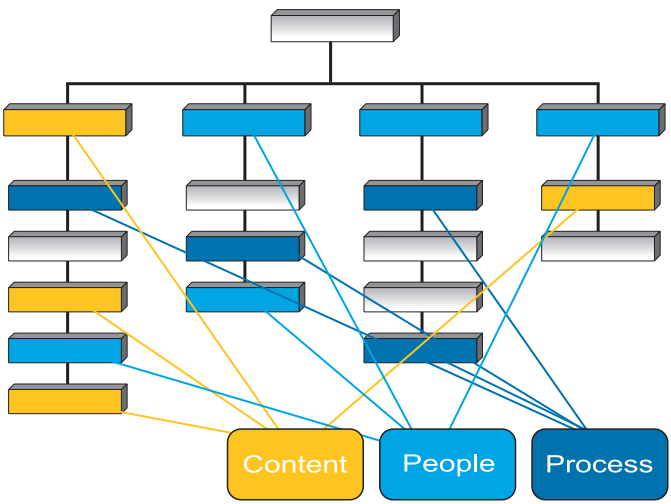

Figure 1.8: ECM Crosses Departments

The issue of cross-departmental functionality raises two important concerns for the ECM architecture. First, in order for multiple departments to collaborate or work together efficiently, both business and IT people outside of a particular department require infrastructure support. Secondly, an underlying common data model is required to allow people in different departments to share information contained in separate applications at a cost-effective rate. While it can be argued that some applications can be delivered within a department, most ECM applications need to be enterprise-wide in nature so that they can be accessed easily across departments. Otherwise, organizations are fragmented into isolated "islands of information" and critical content remains buried. Departmental implementations are limited in scope and will eventually be replaced by similar applications based on a broad underlying set of technologies that scale across the entire organization.

Industry Requirements

ECM customers are looking for a solution that provides a common technology for many different applications. Departmental applications have evolved to add elements that address specific vertical market needs. Many ECM vendors today are delivering solutions in specific industries based on their initial success in developing solutions in one or more markets. An organization's pain points are often specific to a particular industry, so customers prefer a vendor that has expertise in their industry. An ECM solution gains traction in an industry when one organization begins to use a solution and other organizations expect this solution to resolve their issues as well.

Within many industries, managing content is absolutely critical. Pharmaceutical companies are early adopters of ECM because managing documents is a regulatory requirement for doing business. We have seen how pharmaceutical organizations face stringent consensus standards. The New Drug Application (NDA) challenges organizations to provide detailed information about what happened during clinical tests, what the ingredients of a drug are, the results of test studies, how a drug behaves in the body and how a drug is manufactured, processed and packaged. The integrated document and records management, collaboration and workflow functionality of a comprehensive ECM solution enables pharmaceutical organizations to detail the lifecycle of a product from start to finish. Using a comprehensive ECM suite, pharmaceutical employees can seamlessly review new drug targets, deploy personnel and resources, manage drug discovery projects and accelerate time-to-market.

> Roche

Pharmaceutical product development cycles—from conception to marketing—require on average four to ten years longer than in most other industries. Increasing the efficiency at which global development teams cooperate is critical in determining the speed at which new drugs can be readied for the market.

Roche's ECM-based platform for information sharing, entitled ShareWeb, supports the full lifecycle of global team projects. Providing a single point of access to training information, compliance programs and a broad range of documents, ECM helps improve efficiency at each stage of Roche's new product development cycles.

Since the launch of ShareWeb, access to documents is independent of formats, knowledge from previous projects is available and updated at all times, international teams can be assembled faster, and new team members are easily inaugurated. "ShareWeb brings the various countries in the Asia-Pacific region into one community," says Roche's Medical Director, Taiwan.

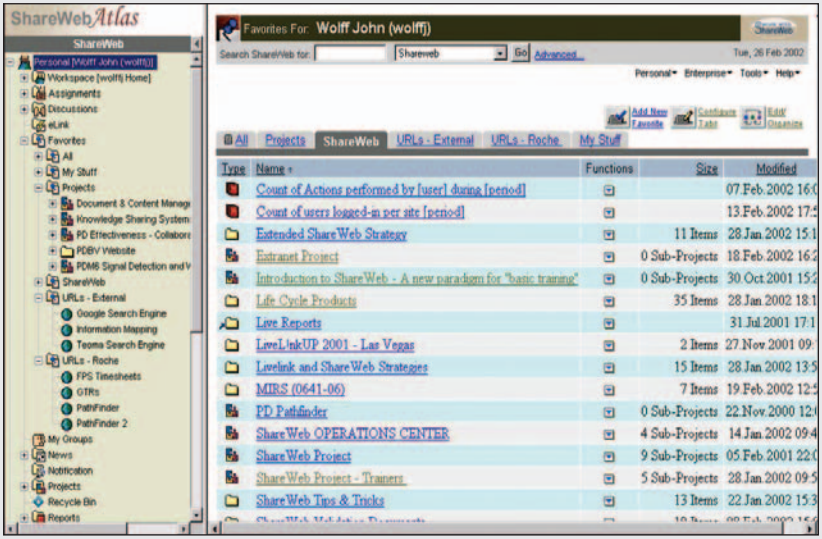

Figure 1.9: Roche's ShareWeb

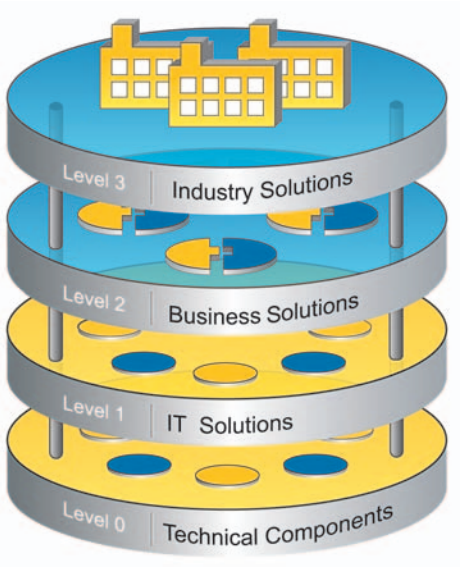

Figure 1.10: ECM Solution Stack

Productivity Gains

ECM has its roots in document management. In the early eighties, the benefits of investing in a document management system were savings in print or paper costs and storage space and higher productivity. Today, ECM is evolving into a blend of proven technologies designed to solve a variety of content and process centric problems. It follows that customer investment is moving from departmental solutions to an entire enterprise infrastructure that promises return on investment on many levels.

The key to success among earlier implementations has been the recognition of collaboration and its role in creating context for content. It is simply not enough to know that content exists without being aware of the situation (how, when and why) in which it was created. Collaboration provides this context since it records what was happening at the time of content creation. This provides far greater insight into the relevance of information.

The current trend in collaboration and content management is toward departmental or group level solutions. Currently, the Internet is still new and technically driven. In the future, companies will hide the technology beneath purpose-built solutions. Functionality will be there but it will be virtually transparent. Internet software will evolve and ECM will lead the evolution in collaboration by making solutions easier to use without having to know anything more about the Web than how to click on a hyperlink.

> Siemens OSRAM

OSRAM, a subsidiary of Siemens AG, is one of the leading lamp manufacturers in the world. As customer demand increasingly required sophisticated materials and technology, OSRAM found its customers were asking very detailed questions about the lighting systems the company was producing.

To arm its sales force with detailed technical information, OSRAM's marketing department turned to Web-based document management and collaboration technology to develop the OSRAM Product Information System (OPIS). OPIS makes technical documents immediately available to all marketing and sales employees. New documents are fully indexed and searchable within 24 hours.

IDC calculated all costs associated with the project and was conservative in estimating the increased productivity for the sales and marketing staff and the savings in paper, distribution and telephone costs. These savings, combined with the low startup and deployment costs, provided a 201 percent return on OSRAM's OPIS investment.

Figure 1.11: OSRAM's Product Information System

While many organizations still regard content management solutions as self-contained solutions, they will increasingly deploy technology with a larger ECM strategy in mind. Leading ECM solutions will evolve into comprehensive infrastructures offering fully integrated collaboration and content management functionality deployed at the departmental level and then rolled out to the entire enterprise. More and more customers will embrace an ECM approach that aligns with business needs on many levels. Companies will be encouraged to grow their ECM solution—whether it be improving corporate governance, streamlining processes or effectively managing content—as their business requirements evolve.

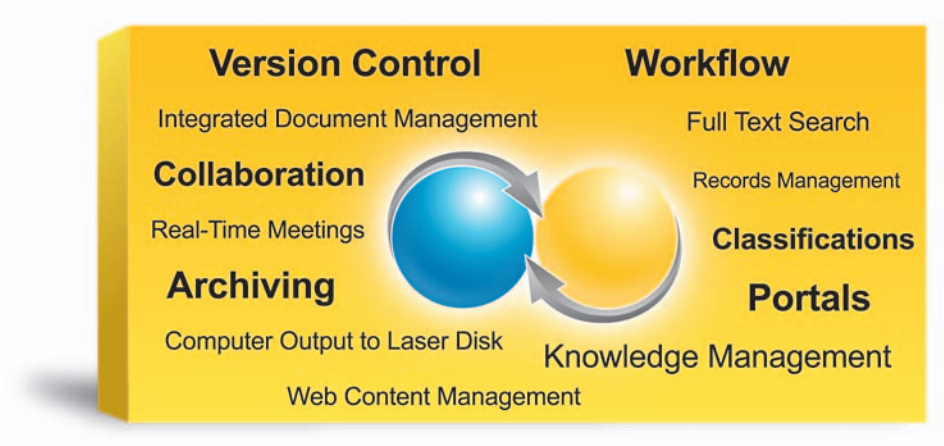

Figure 1.12: ECM Technologies

From a more academic standpoint, a new market is emerging which addresses the higher-level needs of the knowledge-intensive organization, namely, how to increase overall organizational effectiveness in a volatile business environment. In order to realize return on investment in technology—and to adhere to new regulations and legislation—organizations will move toward implementing an underlying infrastructure that supports many repositories and combines key applications.

Vendors will offer customized views and applications for specific departments and processes that are cross-industry applicable. The infrastructure will have to scale and support new technologies. Customers of ECM solutions will become interested in newer technologies and expanding these systems to support more content types, such as e-mail and rich media files.

> Airbus

The aircraft industry demands rigorous standards in the storage of documents and data relating to all areas of the manufacturing, sales and support of aircraft and related products. Some documents and data must be kept for up to 50 and 60 years.

Airbus UK implemented a single repository data archiving and legacy document archiving solution to meet these standards and to ensure that the business and transactional data produced by its enterprise wide ERP system could be stored in a cost-effective, yet readily accessible way.

“The integrated ECM system provides a simple yet effective solution to several of our objectives. The predicted growth of our ERP data had the potential to affect the responsiveness of the ERP system, and we had data in a number of legacy systems that we needed to transfer. The new solution is giving us the capability to achieve both of these aims with a single archive that integrates seamlessly with our ERP system,” says Airbus UK’s IS National Coordinator.

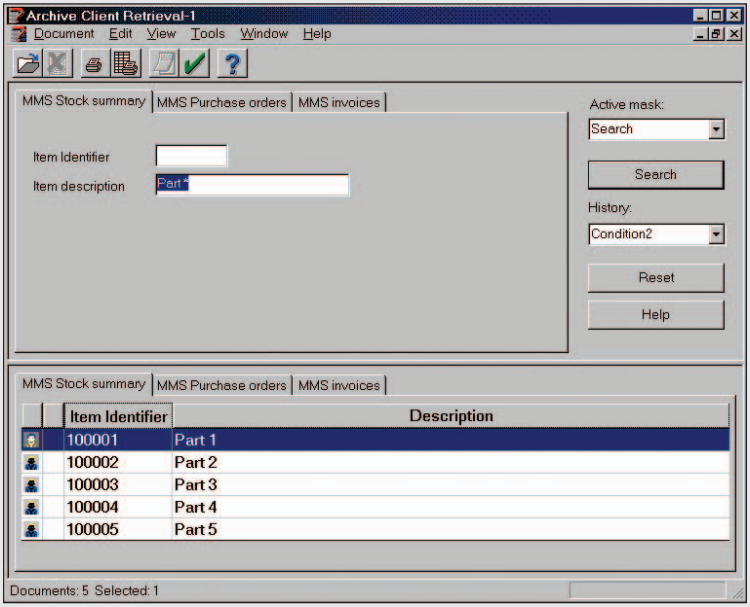

Figure 1.13: Airbus’ Integrated ERP and ECM