1. Product Review

EMC® Documentum® Process Suite is a comprehensive business process management (BPM) solution for analyzing, modeling, orchestrating, and optimizing a wide range of enterprise processes involving people, systems, content, and data. The Documentum Process Suite delivers:

- A complete, integrated BPM suite that provides end-to-end process lifecycle management from design and analysis through execution and monitoring, along with capabilities to optimize process performance at each stage in the process lifecycle.
- Process analysis and real-time performance monitoring that enable business managers to actively understand, control, and improve the processes that are critical to their business operations.
- A scalable process execution engine that can orchestrate processes combining human, systems, and SOA-based integration activities for both high-volume transactional and complex, collaborative applications.
- The ability to support information-rich processes through EMC technologies, including front-end input and capture of content; in-process management of both structured data and unstructured content; knowledge collaboration environments; and back-end records management, archiving, and storage.

2. BPM Engine

Documentum Process Engine executes and orchestrates running instances of a business process (evaluating business rules, assigning process tasks to the correct system, group, role, queue, or individual at the appropriate time) and tracks process activities against designated deadlines and goals. It uses configurable policies and queue management to efficiently handle high volumes of work and provides audit event data that supports business activity monitoring, process tuning, and compliance initiatives.

Process Engine addresses and evaluates process data for conditional expressions to drive flow decisions. Documentum provides the ability to model and manage structured process data and process variables through configurable mapping with external data sources and schemas, along with native ability to manage unstructured and semi-structured content plus associated metadata in business processes. This includes the ability to directly address XML as process-relevant data, using XPath and XML schemas in the business rules that govern business process control. The ease of handling structured, semi-structured (XML), and content-based process data allows the Documentum Process Suite to deal with all forms of information as process-relevant data. It is not restricted to purely structured data, XML, or content.
Process Engine is highly scalable to thousands of concurrent users, has been proven capable of handling over a million activities per hour, and is configurable for both failover and redundancy. The engine reliably manages long running processes with execution state information securely stored in a persistent repository. It interacts with end users through a set of GUI-driven clients that manage and provide context for tasks, work lists, escalations, process data, reports, and notifications. Using Documentum Process Integrator, the suite’s integration layer, Process Engine can also orchestrate interactions with external systems, whether they are SOA, legacy, or application server-based.

Process Engine assigns tasks to work queues based on process definitions and automates queue-level monitoring, task priority escalation and aging, and the suspension and auto-resumption of tasks. Through the work queue management interface, supervisors can create roles, monitor queues, view task progression, reassign tasks, and create reports. At a glance, they can see how many items are in a queue versus its maximum expected threshold, the highest priority items, the number of users eligible to work on tasks, and how many items are assigned, waiting, or suspended. Supervisors can assign tasks to specific users, enable users to manually pull down tasks, and move items to another queue.

Process Engine enables repeat, as well as escalating, timers, and deadlines. It supports configurable actions on timer deadline triggers such as auto-complete, launch an exception subprocess, auto-delegate, or start a new workflow. It also notifies affected users when events are triggered by timeouts, application errors, or exceptions. There are several ways in which users can be notified, such as through the Documentum Inbox (exposed through Documentum WDK-based applications, such as Documentum TaskSpace), within BAM dashboards, or via email. Notifications include contextual information about the process, its originator, a description of the required task, and a link for retrieving content associated with (and invoking) the application needed to complete the task.
Client Elements

The Documentum Process Suite provides a number of different options for client interfaces. Typically, customers use a Documentum client, such as TaskSpace (more information on this is provided in the User Interface section below), Webtop, or Documentum Forms, but custom clients can also be created using the Documentum Web Development Kit (WDK). EMC also provides specialized clients that allow process information to be viewed and managed in 3rd-party application clients such as Microsoft Outlook or Sharepoint. Another option allows a portal environment to be used as the client interface.

Web Services

Documentum Process Integrator is the integration layer for the Documentum Process Suite, correlating outbound and inbound messages and events. It connects Documentum-managed business processes with external systems, applications, data sources, and people. Process Integrator uses a Service-Oriented Architecture (SOA), supporting HTTP/S, XML/SOAP, Web Services, REST, JMS, JDBC, EJB, JCA, SMTP, S/FTP, and FAX protocols, and enabling participation with enterprise application integration frameworks such as BEA WebLogic Integration, IBM WebSphere MQ, Sun Java Integration Suite, TIBCO, WebMethods, and others.

2.1 Platforms

Operating systems include Solaris 8 - 10, AIX 5L 5.2 and 5.3, HP-UX 11 and 11i, Windows XP, Windows 2000, Windows Server 2003, SuSE Linux Enterprise Server 9, SuSE Linux Professional 10, Red Hat Enterprise Linux 3.0 and 4.0, and Mac OS X.

Application servers include BEA WebLogic Server and Express 8.1, Tomcat 5.0 and 5.5, IBM WebSphere AS V5 and V6, Oracle AS 10g, and Sun Java System AS7.

Databases include Oracle 9i and 10g, SQL Server 2000, DB2 UDB 8.1 and 8.2, Sybase ASE 12.5.3.

2.2 User Interface

Documentum TaskSpace is a highly configurable user interface designed to optimize task processing and information retrieval in BPM applications. TaskSpace provides significant productivity enhancements for people/groups who are directly involved in managing large volumes of tasks, such as claims processing, new account enrollment, case management, or loan origination. Some of the key features of TaskSpace are:

- The ability to view both unstructured content (documents and images) and process data in the same screen, as well as to easily access multiple content files that are associated with a process activity.
- Work queue administration, allowing tasks to be manually pushed/pulled or transferred to (or from) specific individuals by queue managers (note: the Process Engine can automatically assign tasks, but there are use cases for manual intervention or re-routing).
- The ability to search for both process-related content and data.
- The ability to annotate content directly within the UI, and to pre-cache content for faster access to large files.
- Ease of configuration and deployment through a graphical design environment, allowing the UI to be quickly designed/revised and put into production without any programming or scripting required.
2.3 Scalability

The Documentum Process Engine scales both horizontally (multiple machines running the same process) or vertically (multiple servers running on the same machine). It supports any number of servers managing the execution of a process. Process Engine is configurable for both failover and redundancy, and servers can be deployed in a clustered, high-availability scheme as well. Execution information is securely stored in a persistent repository, ensuring reliability even when systems go down or are offline for maintenance.

For scale-up, a single server can manage parallel execution of multiple process instances in a multi-threaded manner; for scale-out, additional servers can be applied against a single process system-of-record. In our published benchmarks, we have shown that the scale-out model provides almost linear scalability in both throughput and concurrent user response times.

In addition, Documentum provides predictive caching to manage load for access to large, fixed-content files (such as multi-page TIFF files) within processes, enabling page-aware streaming to document viewers and optimizing the end-user response time experience for large content files.

3. Processing Modeling

Documentum Process Analyzer provides a rich environment for Model Driven Development (MDD). Process Analyzer provides powerful tools that allow business analysts to

- Discover existing business processes
- Diagnose and analyze these processes
- Design, automate, and optimize new processes

The modeling environment allows the user to easily create processes through a drag- and-drop interface.
The analyst will then enter attributes of the process, such as timing, resources, data, etc. In addition, it is possible to create user-defined attributes that enable unlimited dimensions of analysis. These attributes can be related to technology, strategy, internal plans, lean six sigma, and so forth. Processes can be decomposed hierarchically, so that complex processes are composed of medium-sized processes, which are composed of simple processes, which are composed of subprocesses, and so on.

**Process as Data**

Process Analyzer deconstructs all process information into elemental data entities and relations. Treating processes as data provides many benefits. It gives the user the ability to dynamically render views of business processes at different levels of detail and with different styles of views. For example, the analyst can generate swim lanes automatically (without any drawing), highlight activities that meet user-defined criteria, filter out unwanted activities, and concatenate multiple, individual processes. This last feature provides the foundation for the discovery of complex value chains in an enterprise.

**Rule Modeling**

Analysts can model simple or elaborate business rules for controlling flow logic. This includes rules for when an activity will trigger as well as rules for how to determine the next activity in a process at a branch point. These rules are linked into the underlying business data structures that flow through the process. The analyst can construct Boolean expressions that are based on the values of the process variables at each activity.

**Enterprise Modeling**

Users can model other dimensions of enterprise business and technical architecture, including Business Goals and Objectives

- Organization Hierarchy
- Technology and SOA Infrastructure
- Location Structure

Moreover, each of these dimensions can be directly related back to business processes. For example, if the analyst links process activities to business objectives, then the process can automatically be rendered in swim lanes based on those objectives. This provides a fuller view of business processes than traditional swim lanes based on organization.
Process Analytics

Another important benefit of treating processes as data is the analysis that can be performed on business processes. Process Analyzer allows the analyst to create hundreds of analytical reports in an ad hoc manner. These reports can provide deep insights into process diagnosis for individual processes and across multiple processes. Here are some simple examples:

![Pie chart showing process activities]

Figure 5.

This pie chart looks across six processes and summarizes the activities by resources associated with the activities. The next analysis calculates variable cost for a manufacturing process:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
<th>Touch Time</th>
<th>Labor Hours</th>
<th>Hourly Rate</th>
<th>Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1.1 Identify Availability of Customer Part Numbers in the Master Schedule</td>
<td>90</td>
<td>1</td>
<td>90</td>
<td>12</td>
<td>1080</td>
</tr>
<tr>
<td>1.3.1.6 Negotiate Delivery Date with the Customer</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>12</td>
<td>72</td>
</tr>
<tr>
<td>1.3.1.5 Customer Order Issues Acknowledgement</td>
<td>10</td>
<td>0.5</td>
<td>4</td>
<td>12</td>
<td>48</td>
</tr>
<tr>
<td>1.3.1.2 Update Master Schedule with New Part Numbers</td>
<td>3</td>
<td>0.5</td>
<td>1.5</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>1.3.1.7 Review Raw Material Requirements for the Order</td>
<td>90</td>
<td>2</td>
<td>180</td>
<td>12</td>
<td>2160</td>
</tr>
<tr>
<td>1.3.1.8 Update Master Production Schedule with New Dates</td>
<td>5</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12.3</strong></td>
<td><strong>291.5</strong></td>
<td></td>
<td></td>
<td><strong>3498</strong></td>
</tr>
</tbody>
</table>

Figure 6.

Process reports can be used to generate a complete set of documentation on processes, in Word, Excel, or HTML. Processes and reports can be shared with all stakeholders via the Web using Documentum Process Navigator (more information on this product is provided in the User and Group Collaboration section).

Collaboration between Analyst and Developer

Once a process has been defined and approved, it can then be shared with the process developer. This involves a transfer of control and allows the developer to see the business process, add technical implementation details, and prepare the process for execution. “Activity templates” are provided for the developer to configure all implementation aspects without requiring programming, even for the creation of complex web services. When the developer has completed this work, the process can then be shared with the analyst for validation before deployment.

Documentum Process Builder is a drag-and-drop process modeling tool, designed for process developers who are responsible for the implementation and deployment of processes into the production
environment. Process models created in Documentum Process Analyzer are seamlessly transferred into Process Builder, so that process developers can take a business-level process design and add the technical runtime details that will be used by Documentum Process Engine. Process Builder graphically defines multiple routing types, including conditional, branching, joining, parallel, and sequential, and it:

- Details work activities and queues, user roles, task interfaces, and priorities
- Defines rules that will be used to automate and track activities, and streamline/manage process flow
- Models external events that link with, or affect, process execution
- Configures explicit exception handling or “compensating” paths via drag-and-drop lines
- Specifies use of electronic forms inputs for any task
- Accesses a robust user model that supports standard directory services such as LDAP and allows proxies, roles, and dynamic selection of process participants
- Applies version control for change management and process improvement

3.1 Subprocesses

Subprocesses can be modeled and executed to run either asynchronously or synchronously from the corresponding parent process. Subprocesses can be nested within any number of other subprocesses, and they can be modeled as distinct, re-useable assets that can be applied to any process within the Documentum repository.

3.2 Shared Data Space

Documentum Process Builder also defines how information is used to support processes, with the ability to handle structured, semi-structured, and unstructured data. Structured data can be derived from XML Schemas and persistent Object Types, and data fields can be easily mapped and transformed between the data source and the process activity using the built-in graphical data mapping and transformation tool.
Data models can be defined in Process Builder, enabling the process to read and write transient data, which can then be displayed to the process performer in TaskSpace or mapped to external systems. Structured data types (or process variables) represent data that flow through a business process; they are defined in a hierarchical manner and can be used in multiple process templates within the same repository. These data types can be simple data types (a string, Boolean, or date value) or they can be complex data types; groups of logically related data such as purchase orders or manufacturing items.

A wizard function can also be used to import XML schemas and convert them into a structured data type. Structured data elements can also be identified for use in reporting. The Documentum Process Engine exposes the elements so that reporting tools can consume the data and create historical reports and real-time BAM reports.

Content-based information — such as documents, images, faxes, and email — retains all of its attributes (e.g. metadata, security, lifecycle context, retention policies) and can invoke the complete range of Documentum content services while actively participating in the content lifecycle — including promotion or demotion between lifecycle stages and varied format renditions, user permissions, and physical locations.

3.3 Forms

Documentum Forms Builder helps organizations to quickly build dynamic, web-based electronic forms as an essential user interface component for business processes. This easy-to-use tool is based on the Documentum Web Development Kit (WDK) component framework. It allows organizations to design e-forms that permit users to interact with workflows, business processes, and repository objects.
Forms Builder is tightly integrated with Process Builder, enabling process developers to link form layout elements with process data, facilitating direct interaction with processes, underlying workflows, and content repository objects. Forms Builder is W3C XForms standard-compliant and meets the declarative XML GUI specification. Its WYSIWYG design interface streamlines the task of creating forms in multiple platform renderings that conform to the W3C XML schema data model.

Forms Builder is context-aware, ensuring that forms present the appropriate UI based on user type, activity, and locale. Forms data inputs can be captured as XML, or database records, or as both simultaneously, and data is automatically synchronized with the process repository. Forms Builder also features:

- Robust UI controls and data field options including tables, tabs, rich text, date fields, comment history, dynamic links, and content attachments
- External data source connectors
- Initialization and validation adapters
- Conditional value and auto-calculation adapters
- Event processors such as submit, save, reset, and more
- ACL-based security
- Form template creation, allowing a single form design to be used for multiple localized versions

### 3.4 Time

The Process Engine uses an absolute time clock which is based on UTC. Timers can be defined for individual process activities or for sets of activities (subprocesses, entire process), with the ability to trigger alerts and escalations when defined deadlines are violated. When work is assigned for systems or
people outside of the system, the Process Engine will create a timestamp for when the activity leaves and returns to the system.

3.5 Process Optimization & Simulation

Documentum Process Simulator provides significant value at two different points in the process lifecycle. Business Analysts use offline simulation in the analyze phase of the process lifecycle to get a quantitative understanding of processes that have not been automated. The simulation shows how the process will behave under different assumptions of load and capacity.

The simulation view comes directly from the process model:

![Simulation View](image)

Running the simulation sheds light on costs, cycle time, throughput, resource utilization, and bottlenecks.

![Simulation Example](image)

The analyst can simulate two or more processes running in parallel, providing insight into what happens when processes are competing for the same resources. The analyst can also create different simulation scenarios by changing the simulation parameters; for example, by changing the number of resources or the offered load. One simulation scenario might apply to the western region while another scenario might apply to the eastern region. Or scenarios could differ based on time of year – busy season vs. off-season. Simulation scenarios can be saved in the repository for later access by the business analyst.

Simulations can also be performed on running processes during the execute phase of the process lifecycle. This leverages the Documentum Process Suite’s business activity monitoring (BAM) capabilities, which automatically adjusts the simulation parameters based on monitored results. Thus, the inter-arrival time and activity mean time are set based on actual values for this hour, day, or week. More importantly, BAM simulation allows analysts to perform predictive calculations; for example, to estimate the time to complete for an in-flight process.
4. **Business Rules**

EMC provides a rich set of alternatives for managing business rules in processes.

**Event Based Rules**

It is necessary to know what action to take when an event occurs, even when no process is actually in progress. Documentum Process Integrator can listen for events and then initiate the appropriate process for the type of event. This takes place automatically. The triggering event can be a web service, a JMS message, or an incoming email, as well as many others.

**Flow Logic Rules**

In the case of the Documentum Process Suite, this is done by means of triggers, transitions, and timers. Triggers define the rules that govern whether an activity will fire. For example, it might require two out of five inputs before it will fire. This is called the “M out of N” rule. Transitions define the path or paths that are taken when an activity completes. A transition can be based on a decision made by a process performer. It can also be based on automated rules in which process variables are examined, calculated, and compared. Timers govern what should happen when an activity does not complete on time, or even when the entire process does not complete on time. These techniques build in a great deal of runtime agility into the process execution.

**Business Rules Engines**

A BRE can add further flexibility to a business process by isolating the definition, thresholds, and calculations needed for complex rules. Many customers of the Documentum Process Suite use a BRE as a key component of the process solution. In particular, EMC provides rule templates for integrating ILOG’s JRules and Corticon into Business Processes. These templates make rule invocation a simple matter of configuration. The rules can even be exposed to the business analyst in the modeling of the business process. For example, the analyst can start in Process Analyzer:

![Image](image1)

Figure 12.

…and go directly from there to the Corticon Rules Modeler:
ILOG and Corticon are strategic partners of EMC. Their products provide capabilities for defining inference-based rules as well as extensive tools for rule testing and debugging.

5. Integration and Integration Engines

Documentum Process Integrator supports an event-action model for ESB-based (loosely coupled) integration. For tight coupling, integration adapters can be based on either a web services or J2EE Connection Architecture (JCA) standard. Through Process Integrator, events generated from a Documentum business process can trigger actions in external systems and applications, and, conversely, external systems can trigger actions to occur within a Documentum business process; it consumes or invokes web services through nodes or activities in a business process, and can orchestrate any number of external web services through the Process Engine.

Process Integrator also provides email integration, allowing users outside the organizational firewall to easily interact with a Documentum process. It can automatically send email as part of a process activity, with the option of providing a unique identifier, allowing for the return email to be incorporated directly into the correct point in the associated process.

The automated activity execution framework (J2EE-based) supports transactions with external data sources using both programmatic and declarative boundaries. In addition, the Process Engine can manage external data sources that are committed in an XA transaction using a Transaction Manager.

Documentum provides the ability to model and manage structured process data and process variables through configurable mapping with external data sources and schemas, along with facilities to store and re-use transient process data within running processes and BAM reports.

Process Services for SAP is a new set of functionality which provides out-of-the-box templates in Documentum Process Builder, allowing the Process Engine to interact directly with SAP applications and business processes. Documentum also provides an API allowing Documentum’s BPM functionality to be exposed through 3rd-party applications (there are currently several partners that have used this API to create BPM solutions built on the Documentum Process Suite).

6. Organizational Structure

Organizations, roles, and skill-set definitions can be modeled within Documentum, or the Process Engine can interact with external directory servers (LDAP, Active Directory) to define the correct person or organization for work routing.
7. Process Adaptability

The Documentum Process Suite allows for process adaptation of in-flight processes through two mechanisms:

1. Business rules associated with activity timers/deadlines
2. Business rules associated with BAM KPI events

For both conditions, the Process Engine can perform a number of actions to the process including notifications, priority escalation, process flow re-routing, subprocess invocation, alternate/new process invocation, or termination.

One interesting option for process adaptation is the ability of the Documentum Process Suite to incorporate collaboration activities to be part of any process, whether that process is collaborative by nature or tightly structured. In a process where collaboration is the norm (for example, clinical trial management in the life sciences industry), collaboration activities can be designed as regularly occurring activities in the process model. In a structured process, where collaboration may be required to resolve exceptions, Process Engine can create secure, collaborative team rooms during process execution based on process conditions.

Figure 14.

Team rooms, provided through the EMC eRoom and Documentum Collaborative Edition products, capture discussions, voting, notes, best practices, or any type of interaction; these can then be managed with repository content services, such as check-in/check-out, versioning, and retention policy services. In addition, business processes can be triggered and managed from collaboration activities within team rooms, allowing full, bidirectional integration of BPM and collaboration with no loss of information or context.
8. Process Lifecycle Management

EMC defines the process lifecycle as consisting of four interconnected stages: Analyze, Deploy, Execute, and Monitor. The Documentum Process Suite consists of a tightly integrated set of products, allowing processes to be managed and optimized throughout the entire lifecycle, as well as providing closed-loop optimization for iterative process improvement.

The Documentum Process Suite provides a process repository to manage all process assets (process models, resources, activity templates, forms, adapters, etc.) in a highly scalable, reliable, and secure manner. The process assets are stored as data objects with versioning, metadata values (for searching and
tagging), and ACL-based security. Documentum Process Suite supports a number of XML-based interchange formats for process portability; for example, XPDL and BPEL.

Processes can be versioned with branching and labeling capabilities. The check-in and check-out of business processes and their elements are enforced by all the process design tools as well as the design APIs. In addition, an agile change management model is provided for processes that have in-flight “instances.” Changes to the model can be deployed as a new process version, with existing in-flight instances left running against the previous version(s), or the changes in the new version can be applied to existing in-flight instances. The Process Developer or Administrator decides which policy to apply on a case by case basis.

Another aspect of the process repository is the built-in process lifecycle management for all process objects. Special metadata attributes for all process objects can be used to manage the lifecycle state of a process, and to allow or prohibit behavior and actions to those objects based on their lifecycle state. Typical lifecycle states include “Under Development”, “Approved”, “Installed”, “Archived”, etc. Different ACLs for security can be applied when the lifecycle state of a process object is promoted or demoted.

Finally, users and applications can register for changes to process objects and be notified when the objects are checked out, changed, checked in, deleted, changed ownership, deployed, etc. These events are written to a persistent queue for each object, and users and applications can subscribe to these events by queue or by object type.

9. Monitoring, Measurement, and Management Information

Documentum Business Activity Monitor presents real-time events and business data within a process context. As processes run in Documentum Process Engine, execution information is fed into a BAM database where real-time OLAP analysis is performed. Reports running against this data populate BAM Dashboards, which are implemented through industry-standard portals.
The Dashboards are completely customizable and can be configured by business analysts in a matter of minutes. Different dashboards can be created by combining various gauges, process visualizations, and reports to meet the different needs of executive, operational, and IT constituencies. Dashboard users can view each process instance in real-time as it unfolds, activity by activity, through a process diagram portlet.

Analytical reports show metrics such as process duration, revenues, and costs, with breakdowns by various business dimensions, like geography, product, and customer. BAM reports give the user the ability to measure all aspects of a process, including application management, human performance, queue performance, system behavior, and document management.

Real-time alerts are generated based on pre-defined (and easily configured) business rules. Alert notifications can be distributed to responsible parties by email, SMS, and through BAM dashboards. Alerts can also trigger processes automatically, taking action immediately without human intervention. The alert responsible party will use the dashboard drilldown reports to localize and diagnose the specific problem.
BAM allows users to find and correct problems in real-time and to make long-term process improvements. In addition, BAM reports are quite useful in task execution. A process performer, working in EMC’s Documentum TaskSpace user interface, can view a process instance diagram that shows the current state of the process in flight – how far the process has progressed and by what path – thereby providing business context for the user.

10. Templates and Frameworks

EMC has developed solution templates for a number of vertical and horizontal processes. These include:

- Mortgage Loan Origination
- Credit Card Dispute Management
- Insurance Claims
- New Account Opening
- Trade Confirmation
- Clinical Trials (for New Drug Development)
- Collaborative Case Management
- Correspondence Tracking
- IT Service Management (ITIL)
- Supply Chain Management (SCOR)
- Sarbanes Oxley Compliance

These templates give the customer a fully documented, pre-built solution that can be easily customized to their unique requirements. In addition, Documentum partners have built (and are selling) solutions using the Process Suite, including Invoice Processing, Contracts Management, Loan Origination, and Case Management.
11. Vendor

EMC Corporation is a global technology leader and innovator. Our systems, software, services, and solutions enable customers to store, protect, optimize, and leverage their information assets in new ways – maximizing value while reducing costs. We help customers design, build, and manage intelligent, flexible, and secure information infrastructures that transform information into business advantage.

Established in 1979 and headquartered in Hopkinton, Massachusetts, EMC is represented by more than 100 sales offices and distribution partners in more than 50 countries, and the company employs more than 31,000 people worldwide. The company’s stock is traded on the New York Stock Exchange under the symbol EMC and is a component of the S&P 500 Index.

For Fiscal Year 2006 (ending Dec 31), EMC had total revenues in excess of $11 billion. Approximately 40% of EMC’s revenue comes from software products. The Documentum Process Suite is part of EMC’s Content Management and Archiving division, which had $685 million in software license revenue for FY2006.

The Documentum Process Suite is based on a combination of server and user-based licensing. As part of the Documentum maintenance program, software updates and upgrades, global telephone support and online knowledge/support portal are provided. With EMC's Total Customer Experience program, customers can also have 24/7 and on-site support services.
## Matrix

<table>
<thead>
<tr>
<th>Product</th>
<th>Documentum Process Suite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>Comprehensive BPM solution for analyzing, modeling, orchestrating, and optimizing a wide range of enterprise processes involving people, systems, content, and data.</td>
</tr>
<tr>
<td>BPM Engine</td>
<td>A scalable process execution engine that can orchestrate processes combining human, systems, and SOA-based integration activities for both high-volume transactional and complex, collaborative applications.</td>
</tr>
<tr>
<td>Platforms</td>
<td>Supports all major OS, Application servers, and databases.</td>
</tr>
<tr>
<td>User Interface</td>
<td>Documentum TaskSpace is a highly configurable user interface designed to optimize task processing and information retrieval in BPM applications.</td>
</tr>
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<td>Documentum Process Engine scales both horizontally and vertically, configurable for both failover, redundancy, and clustered, high-availability system architectures. Execution information is securely stored in a persistent repository, ensuring reliability even when systems go down or are offline for maintenance.</td>
</tr>
<tr>
<td>Processing Modeling</td>
<td>Graphical process modeling and analysis environment for both business analysts and process developers.</td>
</tr>
<tr>
<td>Subprocesses</td>
<td>Fully supported, re-useable and executable asynchronously or synchronously from the parent process.</td>
</tr>
<tr>
<td>Shared Data Space</td>
<td>Facilities for managing structured, semi-structured, and unstructured information.</td>
</tr>
<tr>
<td>Forms</td>
<td>Rich forms design environment and runtime e-forms functionality.</td>
</tr>
<tr>
<td>Time</td>
<td>Absolute time clock synchronized to UTC.</td>
</tr>
<tr>
<td>Optimization &amp; Simulation</td>
<td>Tight integration between Documentum’s BAM engine and its analysis-simulation environment for comprehensive analytics on process performance.</td>
</tr>
<tr>
<td>Integration</td>
<td>Ability to integrate with external systems, applications, and data sources through a variety of standards-based integration protocols. Integration can be easily configured through the graphical modeling environment.</td>
</tr>
<tr>
<td>Organizational Structure</td>
<td>Organizations, roles, and skill-set definitions can be modeled within Documentum, or the Process Engine can interact with external directory servers (LDAP, Active Directory).</td>
</tr>
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<td>Process Adaptability</td>
<td>Ability to adapt in-flight processes using timers/deadlines and BAM event alerts.</td>
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<tr>
<td>Lifecycle Management</td>
<td>The Documentum Process Suite provides a process repository to manage all process assets (process models,</td>
</tr>
</tbody>
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resources, activity templates, forms, adapters, etc.) in a highly scalable, reliable, and secure manner. The process assets are stored as data objects with versioning, metadata values (for searching and tagging), and ACL-based security.

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<tr>
<th>Monitoring &amp; Measurement</th>
<th>Documentum Business Activity Monitor presents real-time events and business data within a process context, with performance information available through alerts, operational dashboards and reports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Templates &amp; Frameworks</td>
<td>Horizontal and industry-specific solution templates available, along with a number of solutions available through partners.</td>
</tr>
<tr>
<td>Vendor</td>
<td>Fortune 500, global technology provider.</td>
</tr>
<tr>
<td>Cost</td>
<td>Combination of server and user-based licensing.</td>
</tr>
</tbody>
</table>
Authors

Derek Miers

Derek Miers is a well known independent industry analyst and technology strategist, who has published a great many white papers and product assessments. Over the years, he has reviewed literally hundreds of business process related products (from modeling to BPM Suites). His consulting has encompassed hundreds of training courses (on business and process modeling techniques), detailed technology selection assessments for BPM support, and project risk assessment studies. Other engagements have involved the provision of strategic advice – from facilitating board level conversations around BPM initiatives, to helping clients develop new business models and marketing strategies. Clients have included many of the world’s largest and most well-known financial services companies (banks, building societies and insurers), pharmaceutical companies, telecommunications providers, commercial businesses, product vendors and governmental organizations.

His current research focuses on the effect of the Internet on process innovation and the development of process architectures for adaptable, agile enterprises.

He is the only independent Board Member of BPMI.org.

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Paul Harmon

Paul Harmon is the Executive Editor and Founder of the Business Process Trends website.

Paul is a noted consultant, author, and analyst concerned with applying new technologies to real-world business problems. Paul’s most recent book is Business Process Change: A Manager’s Guide to Improving, Redesigning and Automating Processes (Morgan Kaufmann, 2003). He has written a wide variety of articles that have been published on BPTrends in the past two years.

Paul has worked on major process redesign projects with Bank of America, Wells Fargo, Security Pacific, Prudential, and Citibank, among others. He is a widely respected keynote speaker and has developed and delivered workshops and seminars on a wide variety of topics to conferences and major corporations through out the world.

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