

What is Business Process

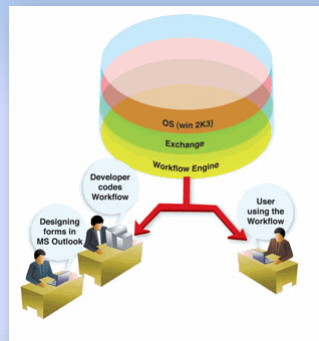
- A business process is simply a set of activities and transactions that an organization conducts on a regular basis in order to achieve its objectives.
- Business Processes can be
 - Simple
 - Example: Expense reimbursement
 - Complex
 - Example: trade approval
 - Short-Running
 - Example: Online sales processing
 - Long-Running
 - Example: Insurance or loan processing
 - Department Specific scope
 - Example: Claims and Billing
 - Organization wide scope
 - Example: Strategic sourcing

What is Business Process

- BPM - a management practice that provides for governance of a business process environment toward the goal of improving agility and operational performance
- Goal
 - The automation of a business process, in whole or part
 - Do the right thing, with the proper information, at the right time, by the right person/application
 - People-to-People
 - Systems-to-People
- Enabling Technology
 - BPMS: software to support the design and execution of business processes, involving human interaction
 - Traditional client-server architecture
- Benefits
 - Connecting people and applications, BPM brings together the advantages of traditional workflow capabilities and Enterprise Application integration into one area of practice called BPM.

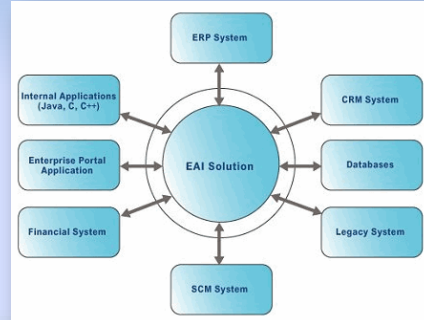
Traditional Workflow

- Traditional workflow management connected people by automating inefficient manual processes within a single application
- This approach had several drawbacks
 - Extensive coding required to implement the business logic in a procedural language.
 - High maintenance costs.
 - Low reusability.
 - Unnecessary code replication
 - No “application to application” interaction



- Enterprise Application Integration (EAI) enables to integrate applications by providing data exchange mechanism so that data can be automatically synchronized throughout the organization
- EAI has several limitations with respect to processes

- Cannot automate interactive processes (which requires someone to take action or make decisions).
- Cannot automate long running processes.
- Failed to connect people.



BPM Yesterday vs. Today

- 1990s workflow systems:
 - Proprietary systems
 - Managing document-based processes
- Today's BPM systems:
 - Manage processes that include person-to-person steps
 - System-to-system communications
 - Include integrated features such as:
 - Process modeling
 - Simulation
 - Code generation
 - Process execution
 - Process monitoring
 - Customizable industry-specific templates and UI components
 - Out-of-the-box integration capabilities with support for web-services-based integration.

Two Types of BPM

■ Front-Office BPM

- human-centric workflow products
- provide capabilities of person-to-person process integration
- Vendors include: Fujitsu, TIBCO, FileNet, IBM, PegaSystems, Global360, Oracle, DST Systems, Computer Associates, Ultimus, Savvion and MetaStorm, among others.

■ Back-Office BPM

- system-to-system integration
- manage aggregation and composition of all services for the enterprise
- Vendors include: Fujitsu, IBM, Oracle, TIBCO, Sun, CapeClear, Software AG, Fiorano Software, Sonic Software, among others.

BPM – Core Functionalities

Design – requirements:

- Simple Business Process Modeling Notation to create graphical Process Models
- Incorporate a Rules Engine to create required business rules
- Include an intuitive designer for Forms and application interfaces

Execute – requirements:

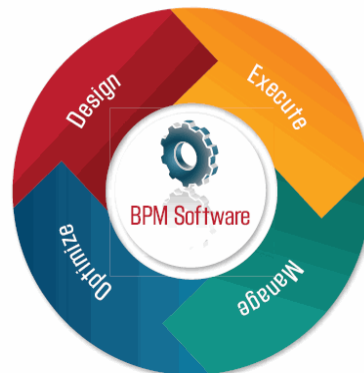
- Enterprise-level scalability
- Comprehensive Web Services orchestration
- Ease of integration with other enterprise systems

Manage – requirements:

- Task and Queue management
- Real-time reporting and status alerts
- In-Flight process modification capabilities

Optimize – requirements:

- Business Activity Monitoring (BAM) capabilities
- Round-trip analytics and process optimization
- Key Performance Indicators and SLA reporting



Design: Process Modeling



- The modeling phase is typically supported by a visual process design tool.
- Process consists of multiple activities.
- Activities are linked to each other to form the flow of a process.
- Conditions define how and when an activity must be executed.
- Visual representation standard: BPMN (Business Process Modeling Notation)
- Outcome of modeling phase is a pseudo-executable process flow model, exported in an executable language format (XPDL or BPEL).
- Some modeling tools produce UML diagrams to go from business design to technical design.
- Advanced simulation tools let you simulate processes by changing activity parameters to test impacts and process efficiency.

Design: Process Implementation



- Common characteristics:
 - Metadata-driven development
 - code-generation
 - APIs and Web Service interfaces.
 - Prebuilt-components to integrate with documents/CMS, security repositories, third-party apps, middleware products, etc.
 - Design forms
 - Define data fields
 - Customize process templates
 - Setup access control lists
 - Configure integration capabilities
 - Manage deadlines
 - Back-end process composition
 - Data/message transformation
 - Automatic creation of service interfaces

- Process engine executes the process model
- Requires low-level services:
 - Security
 - Transaction
 - Concurrency management
- Control of execution:
 - Orchestration
(assumes one owner, in-house)
 - Choreography
(co-owned by participants, exchange message contracts)
- Standards:
 - BPEL (orchestration approach)
 - WS-CDL (choreography approach)

- Report business performance metrics
- BAM (Business Activity Monitoring)
- Two types of BAM:
 - Real-time
 - Tightly integrated to BPM solution
 - Monitor metrics for work-in-progress
 - Record execution pattern, signaling process failure
 - Predicts work loads for better resource utilization
 - Filters and reacts to business events
 - Historical
 - Provide analysis reports: conclusions from historical execution
 - Compare KPIs and SLAs against data
 - Can integrate with existing data stores (BI)

■ There are four important components of a BPM Suite

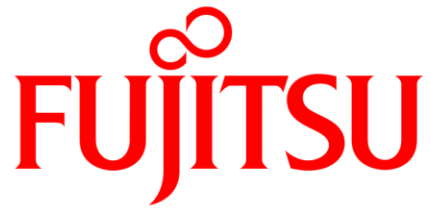
- Process Engine – a robust platform for modeling and executing process-based applications, including business rules
- Business Analytics — enable managers to identify business issues, trends, and opportunities with reports and dashboards and react accordingly
- Content Management — provides a system for storing and securing electronic documents, images, and other files
- Collaboration Tools — remove intra- and interdepartmental communication barriers through discussion forums, dynamic workspaces, and message boards



Why Business Process

■ By decreasing costs, increasing revenue and improving agility, BPM Suites provide a solid return on investment. (ROI)

	REDUCE COSTS AND INCREASE EFFICIENCY	INCREASE CUSTOMER SATISFACTION	COMPLIANCE AND RISK MANAGEMENT
Time	<ul style="list-style-type: none"> ■ Shorter processing cycle times ■ Reduced administration time 	<ul style="list-style-type: none"> ■ Faster processing time ■ More responsive ■ Fewer manual errors 	<ul style="list-style-type: none"> ■ Decreased time to process ■ Faster report generation
Quality	<ul style="list-style-type: none"> ■ Fewer manual errors ■ More efficient data entry 	<ul style="list-style-type: none"> ■ More visibility ■ Consistent business practices ■ Better exception handling 	<ul style="list-style-type: none"> ■ Better policy enforcement ■ Controlled environment ■ Reduced risk
Productivity	<ul style="list-style-type: none"> ■ Fewer manual errors ■ More efficient data entry 	<ul style="list-style-type: none"> ■ More visibility ■ Consistent business practices ■ Better exception handling 	<ul style="list-style-type: none"> ■ Better policy enforcement ■ Controlled environment ■ Reduced risk
Other	<ul style="list-style-type: none"> ■ Reduced support costs ■ Improved ad hoc reporting 	<ul style="list-style-type: none"> ■ Strong customer loyalty ■ Stronger brand 	<ul style="list-style-type: none"> ■ Peace of mind ■ Better risk mitigation ■ Greater trust



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