Study Guide - Preliminaries

- The study guide is not a substitute for reading (absorbing, digesting) the material, but it may help you organize your understanding once you have read the material.
- The study guide is not guaranteed to cover all topics on the test. It is not large enough for that.
Outline

- Business Processes and IT
- Global competition, Information revolution, knowledge worker
- Key business processes
- Functional organizational structure
- Processes using functional systems
- Processes using enterprise systems
- A framework for understanding processes and IT
- Role of ES in organizations
- Functional impact of processes
- Enterprise Systems
- Types of Enterprises Systems
- Types of Data in ES

Global competition

- Design, manufacturing, materials, assembly, service, etc.
  - Examples: Nike, apple, P&G
  - In different parts of the world
  - Why?
- Increased competition
  - Global markets vs. local
  - Pressures to be more efficient and effective
Information revolution

- Increased use of ICT (Information and Communication Technology) to create, deliver and use information
  - data, documents, voice, video
  - Global enterprise needs to share information quickly
    - Design, forecasts, material availability, etc.
    - Monitoring
- Is ICT the cause or result of globalization?

Knowledge worker

- Increasing dependence on information to do their work
- Create, acquire, process, synthesize, disseminate, analyze and use information
- Who are knowledge workers
  - Sales executive, production managers, product manager, financial analyst
- Use structured and unstructured information
Knowledge worker

- Knowledge work is non-routine, non-repetitive
  - Understand data and impact of work on others and impact of others’ work; big picture
- Task workers: routine, structured tasks
  - Customer service representatives, accounting clerks, insurance claims processor
  - Very narrowly focused

Knowledge worker

- Key skills
  - Strategic thinking: big picture, process view
  - Information literacy: find and use needed information
  - Communication and collaboration: project teams
Business processes

- Sequence of tasks or activities that take a set of inputs and convert them into desired inputs
- Key processes
  - Procurement
  - Fulfillment
  - Production

Figure 1: A generic process
Business process - example

- Make skateboards
  - What are some parts of a skateboard
- Buy parts
  - What are some steps in the buying process
  - Who performs these steps
- Sell skateboards
  - What are some steps in the selling process
  - Who performs these steps

Procurement Process

Create Purchase Requisition
Create & Send Purchase Order (PO)
Receive Goods
Receive Invoice From Supplier
Send Payment To Supplier
Fulfillment Process

Receive Customer Order → Prepare Shipment → Send Shipment → Send Invoice To Customer → Receive Payment

Functional structure

- Common functions
- Typical tasks in functional areas
- Review steps in procurement
  - Who does what where?
  - Characterize processes - who is responsible for the process?
- Why functional structure?
Functional organizational

- Purchasing
- Operations
- Warehouse
- Sales & Marketing
- Research & Development
- Finance & Accounting
- Human Resources
- Information Technology

Functions vs. processes

- Supply Chain Management
- Procurement Process
- Purchasing
- Production
- Inventory Management
- Marketing
- Sales
- Fulfillment Process
The Silo effect

- Communication and collaboration between functions
  - What must be communicated?
  - What information must be exchanged?
  - How is this coordinated
- Paper based processes
- Processes supported by functional systems
- Processes supported by enterprise systems

Consequences of delays

- Delays
  - Increased lead times
  - Increased cycle times
- Excess inventory
  - “just in case”
- Lack of visibility across the process
  - Status: “where is my order”
  - How is the process doing
- Why accept these delays?
Delays are no longer acceptable

- Why?
  - Globalization
  - Increased competition
  - Pressure to do better
  - Reliance on technology!

Process using functional systems
Processes using Enterprise Systems

Framework: Key process flows
Role of ES in organizations

- Execute the process
  - Inform, provide data, help complete steps
  - Automation
  - Embedded in the process
  - Examples in procurement and fulfillment

- Capture and store process data
  - Automatic capture
  - Entered from outside the system
  - Examples in procurement and fulfillment
Role of ES in organizations

- Monitor performance
- Instance level information (status)
- Process level information (aggregate)
- Examples in procurement and fulfillment
Enterprise Systems

- Three stages of evolution
  - Stage 1: Stand-alone Mainframe Systems
  - Stage 2: Client-Server Architecture
  - Stage 3: Service-Oriented Architecture (SOA)

The New Stack – Process Is the Next Platform
Types of Enterprise Systems

- The ES Application Suite
  - Enterprise Resource Planning (ERP)
  - Supply Chain Management (SCM)
  - Supplier Relationship Management (SRM)
  - Product Lifecycle Management (PLM)
- Other classifications
  - Best of breed vs. Niche applications
  - Software as a service (SaaS)
The application suite

SAP ERP Solution Map

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<th>Operations Analytics</th>
<th>Workforce Analytics</th>
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<td>Logistics Execution</td>
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<td>Management</td>
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### SAP Supply Chain Management

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<th>Demand &amp; Supply Planning</th>
<th>Demand Planning &amp; Forecasting</th>
<th>Safety Stock Planning</th>
<th>Supply Network Planning</th>
<th>Distribution Planning</th>
<th>Service Parts Planning</th>
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<td>Manufacturing</td>
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<td>Inbound Processing &amp; Receipt Confirmation</td>
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### SAP Supplier Relationship Management

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### SAP Product Lifecycle Management

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### SAP Customer Relationship Management

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<td>Segmentation &amp; List Management</td>
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<td>Time &amp; Travel</td>
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Other classifications of ERP systems

- “Best of Breed”
- Niche
- Software as a Service

Types of Data in ES

- Organizational Data
- Master Data
- Transaction Data
Organizational Data

- Defines the organizational structure of the enterprise
- Includes definitions of:
  - Companies (subsidiaries, etc.)
  - Divisions based on, product or geographical hierarchy
  - Sales organizations
  - Purchasing organizations
  - Physical facilities: plants, warehouses, distribution centers
  - HR organization
    - Functional areas, reporting relationships
  - Data rarely changes

Master Data

- Define key entities in an organization
- Customers
  - Basic information: name, address, contact information
  - Financial information: payment terms, methods
  - Sales information: delivery terms
- Vendors / suppliers
  - Similar information as customer
- Products
  - Basic data: description, weight, color
  - Purchasing data
  - Sales data
  - Manufacturing data
Master Data

- Employees
  - Basic data
  - Personal data: dependents
  - Payroll data
  - Tax data
- Data changes occasionally

Transaction Data

- Data that is the consequence of day-to-day transaction
  - Who, what, when, where, how, how much
- Sales
  - Customer, products, quantities, dates and times, location (shipping, delivery), sales person
- Purchase
  - Vendor, products, quantities, dates and times, location (delivery), sales person, requester
- Production
  - Materials, quantities, facilities, resources (machine, people), dates and times, locations (storage, production)