



Process & Workflow

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ERP

Introduction

- ◆ Tools that can be used to describe business processes
 - Flowcharts, event process chains
 - Not specific to ERP
 - Can help managers identify process elements that can be improved
- ◆ Role of process-modeling tools in ERP implementation projects

Process Modeling

- ◆ Business processes can be quite complex
- ◆ **Process model:** any abstract representation of a process
- ◆ Process-modeling tools provide a way to describe a business process so that all participants can understand the process

Process Modeling (cont'd.)

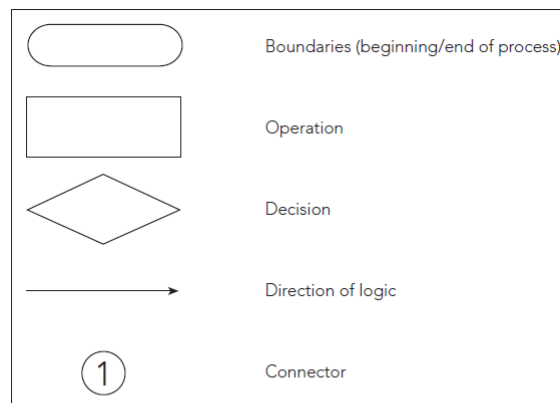
- ◆ Advantages of process models
 - Graphical representations are usually easier to understand than written descriptions
 - Provide a good starting point for analyzing a process
 - Participants can design and implement improvements
 - Document the business process
 - Easier to train employees to support the business process

Flowcharting Process Models

- ◆ any graphical representation of the movement or flow of concrete or abstract items—materials, documents, logic, and so on.
- ◆ the term process mapping is often used interchangeably with flowcharting,
- ◆ Process mapping develops an “as is” representation of a process, with a goal of exposing weaknesses that need to be addressed.
- ◆ Once a company develops a process map, it can perform a gap analysis, which is an assessment of disparities between how the process currently works and how the organization wants it to work.

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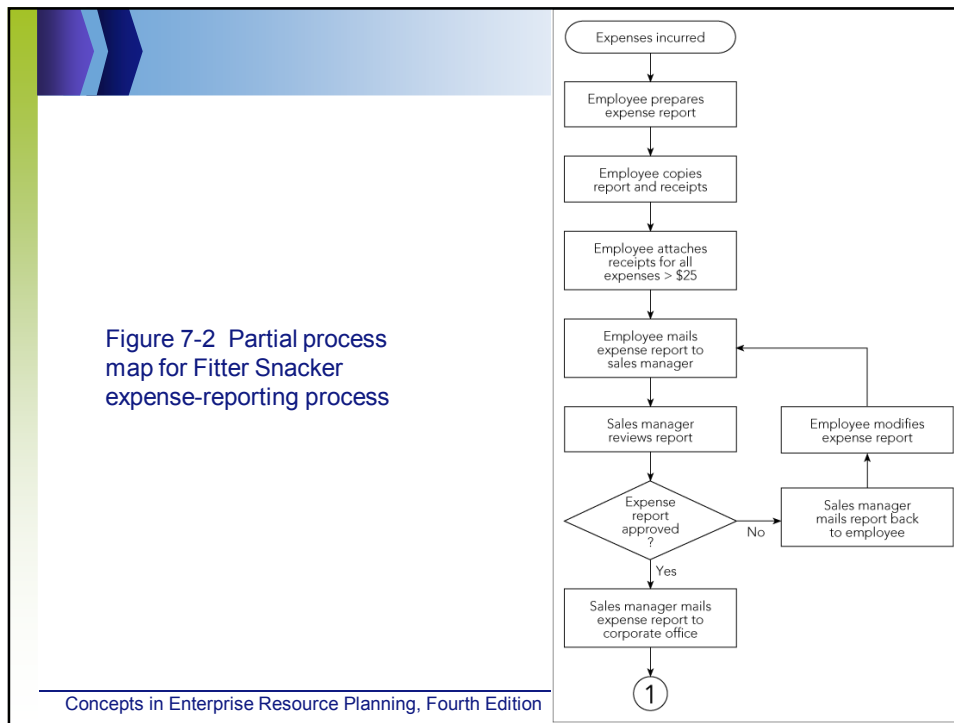


Source Line: Course Technology/Cengage Learning.

FIGURE 7-1 Basic flowcharting symbols

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Fitter Snacker Expense Report Process (cont'd.)

- ◆ Process at corporate office
 - Accounts payable (A/P) clerk
- ◆ **Process boundaries** define:
 - Which activities are to be included in the process
 - Which activities are considered part of environment—external to process
- ◆ All processes should have only one beginning point and one ending point
- ◆ Decision diamond asks a question that can be answered with “yes” or “no”

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Extensions of Process Mapping (cont'd.)

◆ Deployment flowcharting

- **Swimlane flowchart**
- Depicts team members across the top
- Each step is aligned vertically under the appropriate employee or team
- Clearly identifies each person's tasks in the process

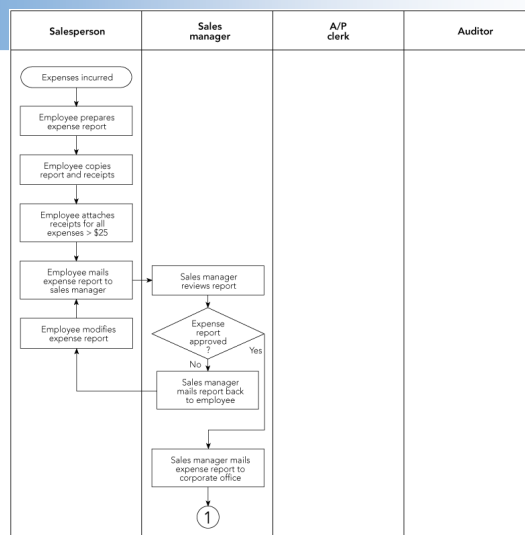


Figure 7-4 Deployment, or swimlane, flowcharting of the Fitter's expense report process

Event Process Chain (EPC) Diagrams

◆ Event process chain (EPC) format

- Uses only two symbols to represent a business process
- Matches the logic and structure of SAP's ERP software design
- Two structures: events and functions
 - Events: a state or status in the process
 - Functions: part of the process where change occurs

Event Process Chain (EPC) Diagrams (cont'd.)

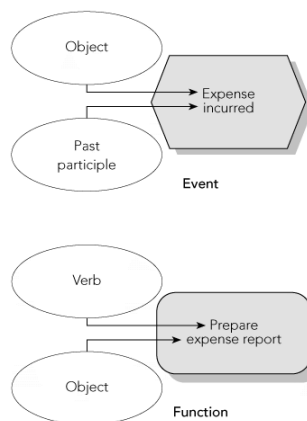


Figure 7-5 EPC components

Event Process Chain (EPC) Diagrams (cont'd.)

- ◆ EPC software
 - Enforces an event-function-event structure
 - Standardized naming convention for functions and events
- ◆ Three types of branching connectors
 - AND
 - OR
 - Exclusive OR (XOR)
- ◆ Basic EPC diagram can be augmented with additional information

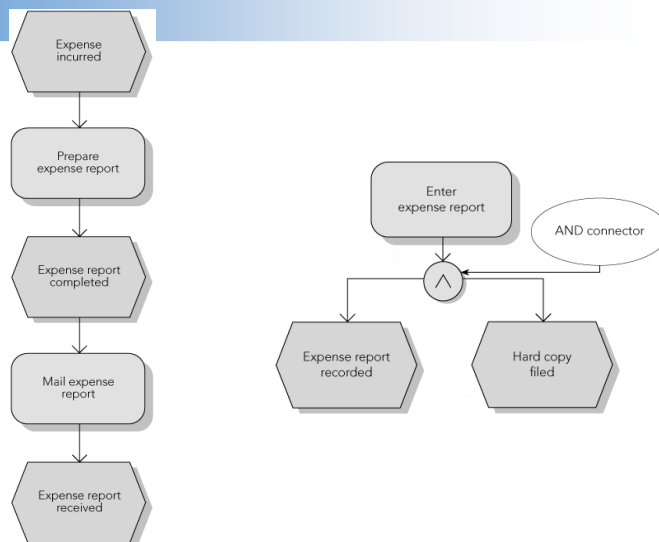


Figure 7-6 Basic EPC layout

Figure 7-7 AND connector

Event Process Chain (EPC) Diagrams (cont'd.)

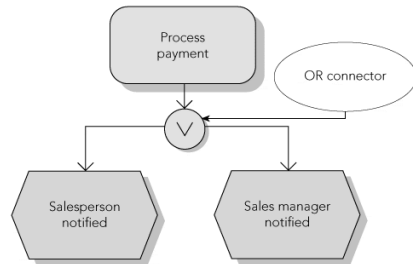


Figure 7-8 OR connector

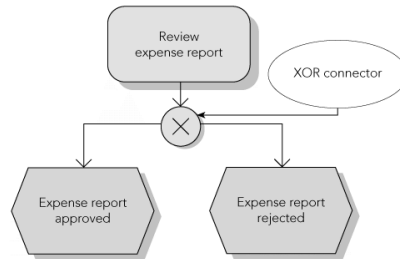


Figure 7-9 XOR connector

	Event trigger		Function trigger	
	Single	Multiple	Single	Multiple
AND				
OR	Not allowed			
XOR	Not allowed			

Figure 7-11 Possible connector and triggering combinations

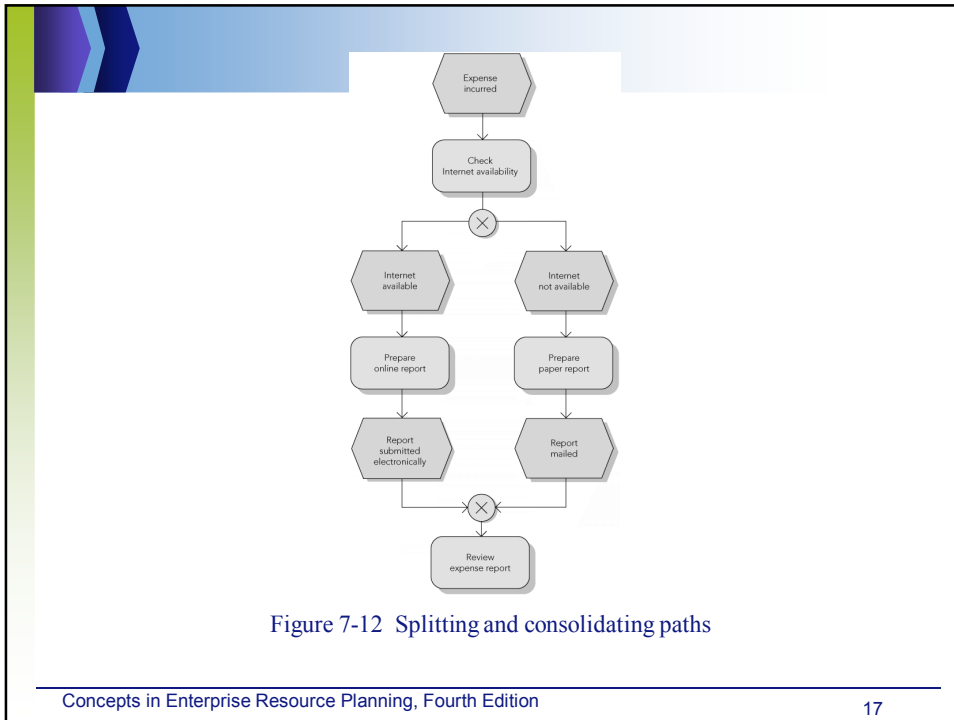


Figure 7-12 Splitting and consolidating paths

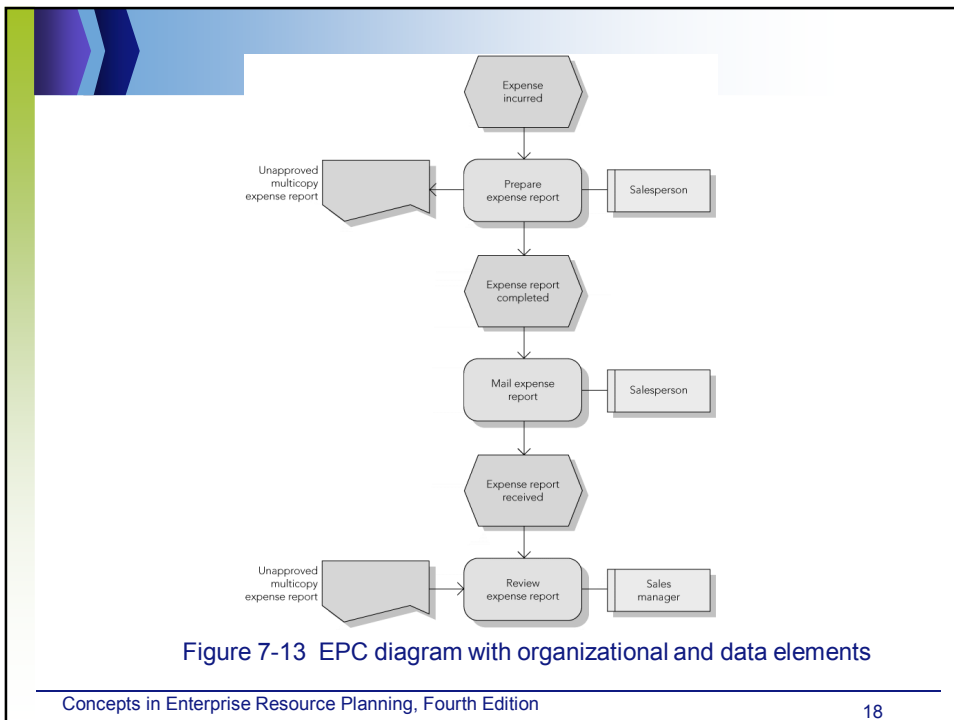


Figure 7-13 EPC diagram with organizational and data elements

Process Improvement

◆ Value analysis

- Each activity in the process is analyzed for the value it adds to the product or service
- **Value added** is determined from the perspective of customer
- *Real value*: value for which the customer is willing to pay
- *Business value*: value that helps the company run its business
- *No value*: an activity that should be eliminated

Evaluating Process Improvement

- ◆ Disrupting the current process to make changes can be costly and time consuming
- ◆ **Dynamic process modeling** takes a basic process flowchart and puts it into motion
 - Uses computer simulation techniques to facilitate the evaluation of proposed process changes
- ◆ Computer simulation
 - Uses repeated generation of random variables that interact with a logical model of the process
 - Predict performance of the actual system

ERP Workflow Tools

- ◆ **Workflow tools**
 - Software programs that automate the execution of business processes and address all aspects of a process, including:
 - Process flow (logical steps in the business process)
 - People involved (the organization)
 - Effects (the process information)
- ◆ ERP software provides a workflow management system
 - Supports and speeds up business processes

ERP Workflow Tools (cont'd.)

- ◆ **Workflow tasks:** links that can include basic information, notes, documents, and direct links to business transactions
- ◆ SAP system can:
 - Monitor workflow tasks
 - Automatically take various actions if the tasks are not completed on time

ERP Workflow Tools (cont'd.)

- ◆ Workflow provides a number of useful features
 - Employees can track progress of workflow tasks
 - System can be programmed to send reminders to employee(s) responsible for a task
 - For sporadic processes, workflow tools are a powerful way to improve process efficiency and effectiveness

Questions?