

# Business Process Modeling Notation (BPMN)

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**BPMN**

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## BPMN History

- Workflow
  - Incompatible proprietary WF languages
  - Vendors happy
- BPML
  - Vendor-neutral WF language
  - Built on Web services
  - UML too “IT-specific”
- BPEL
  - Microsoft/IBM standard (WS-based, XML syntax)
- BPMN
  - OMG standard based on BPML

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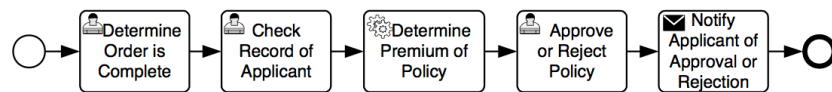
## BPMN Elements

- Activity
  - Discrete (definite start and end)
  - Designated performers
  - Performed repeatedly (instances)
- Process
  - Sequence of activities from definite start to end
  - Gateway: decision logic
  - Event: exception, external event
  - Process logic: all possible paths of activities

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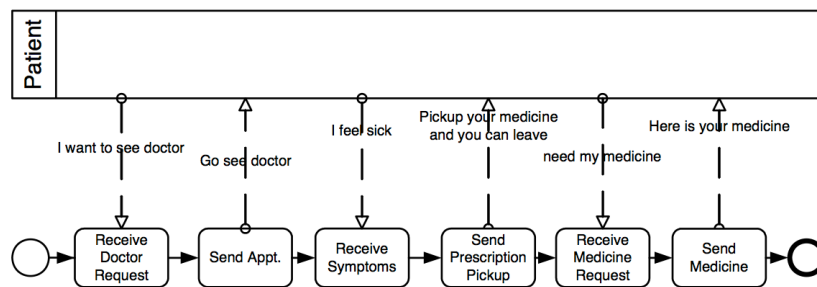
## Private Process



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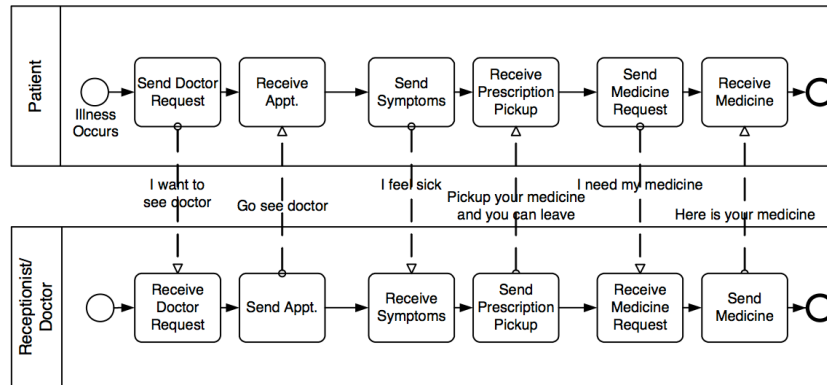
## Public Process



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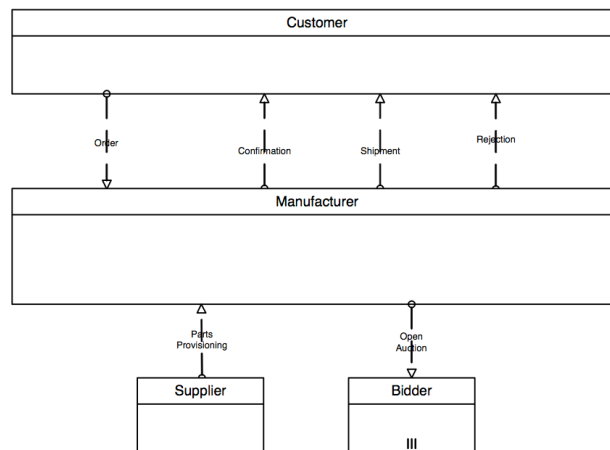
## Collaborative Process



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## Collaboration



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## BPMN vs BPM

- BPM: ongoing business functions
  - Continuously executed
- Example: Process Classification Framework (PCF)
  - Categories, process groups, processes, activities
- 8.6.2 Process expense reimbursements
  - 8.6.2.1 Establish and communicate policies
  - 8.6.2.2 Capture and report relevant tax data
  - 8.6.2.3 Approve reimbursements
  - 8.6.2.3 Process reimbursements
  - 8.6.2.4 Manage personal accounts

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## BPMN vs BPM

- BPMN: sequences of discrete business activities
  - Definite start and end
- Example: Process Classification Framework (PCF)
  - BPMN version of expense reimbursements
- 8.6.2 Process expense reimbursements
  - 8.6.2.1 Review expense report
  - 8.6.2.2 Approve reimbursements
  - 8.6.2.3 Capture tax data
  - 8.6.2.4 Issue payment

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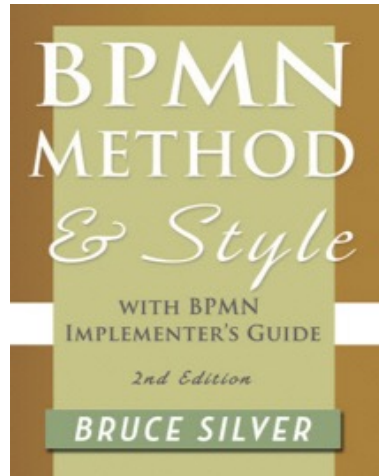
## BPMN Levels

- Descriptive Process Modeling
  - Simple flowcharts
  - Business-friendly
- Analytic Process Modeling
  - Exceptions and events
  - Timer, Message, Error events
- Executable BPMN

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## Recommended



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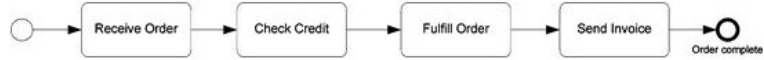
## ELEMENTS OF BPMN

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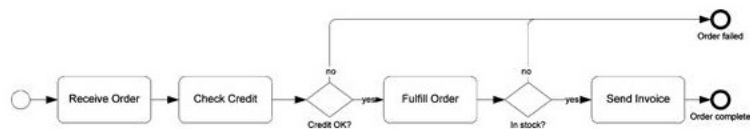
## Basic Order Process



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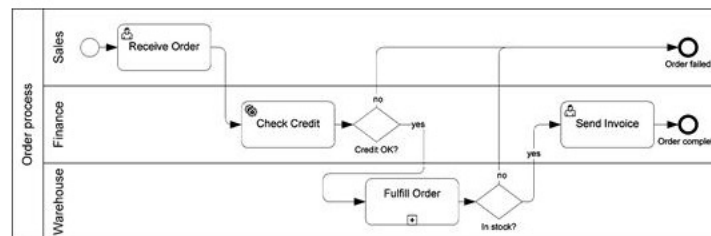
## Exceptions and End States



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## Swimlanes and Activity Types



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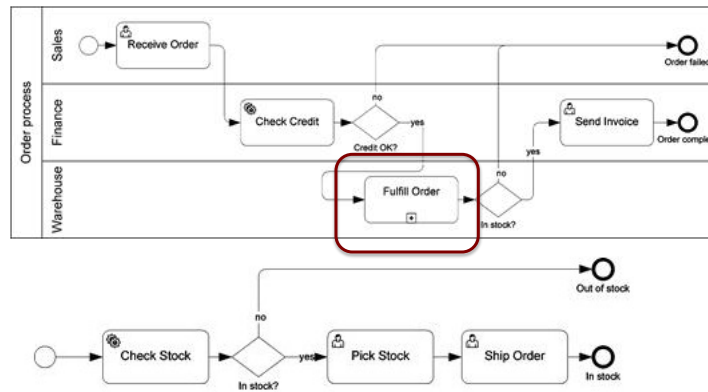
## Method and Style

- Multiple end events to distinguish end states
  - Out of stock
  - In stock
- Match label of subprocess end state with label of following gateway

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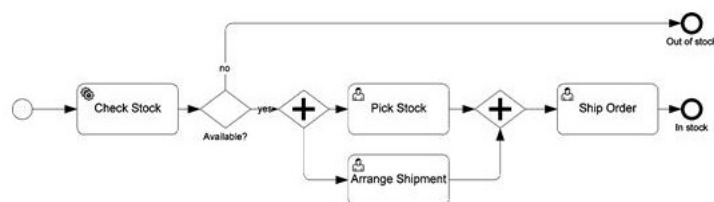
## Subprocesses and Hierarchical Expansion



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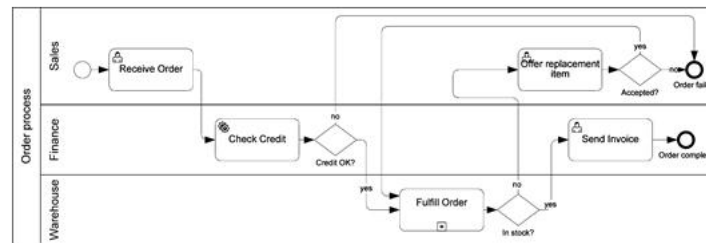
## Parallel Split and Join



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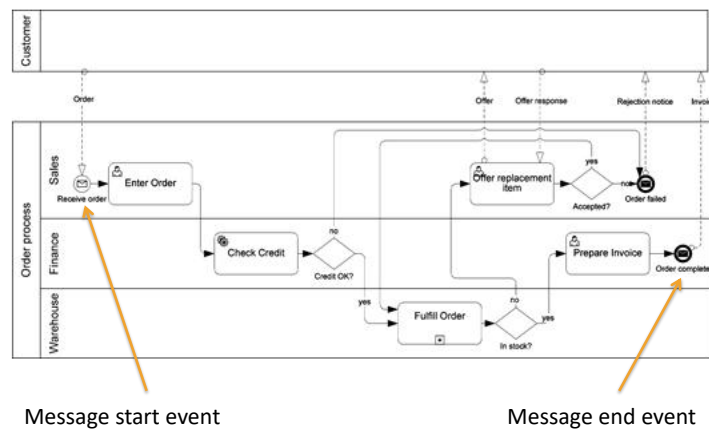
## Loopback to Handle Exceptions



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## Collaboration and Black-Box Pools



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