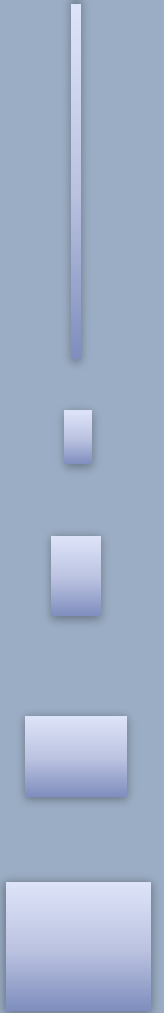


Part 2

{ Modeling Standard and Notation

Ilham Perdana
Lhamdana@gmail.com



[Still Remember?]

What is The Difference of Model, Diagram and Map?

What are the Process Modeling's Purposes?

What are the Benefit of Process Modeling?

& There are a number of modeling and notational standards and techniques in use today

Model






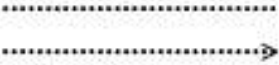
↳ benefits of using a standards are:

- ⌘ A **common symbology, language, and technique**
- ⌘ Standards-based models provide **common and consistently defined processes** definitions
- ⌘ An **ability to leverage modeling tools** based on common standards and notations
- ⌘ An **ability to import and export models** created in various tools for reuse in other tools
- ⌘ Some tool vendors are leveraging standards and notations for developing **the ability to be exported** from a modeling notation to an execution language (for example BPMN to BPEL/ Business Process Execution Language)






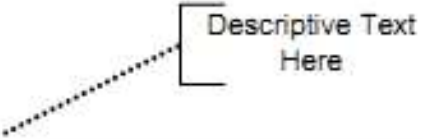
- ⌘ Business Process Model Notation is a relatively new standard created by the *Business Process Management Initiative*
- ⌘ BPMN appears to be **emerging as the largest, most widely accepted** business process modeling notation in the industry.
- ⌘ It provides **a simple, yet robust, symbology for modeling** all aspects of business processes

Business Process Modeling Notation (BPMN)

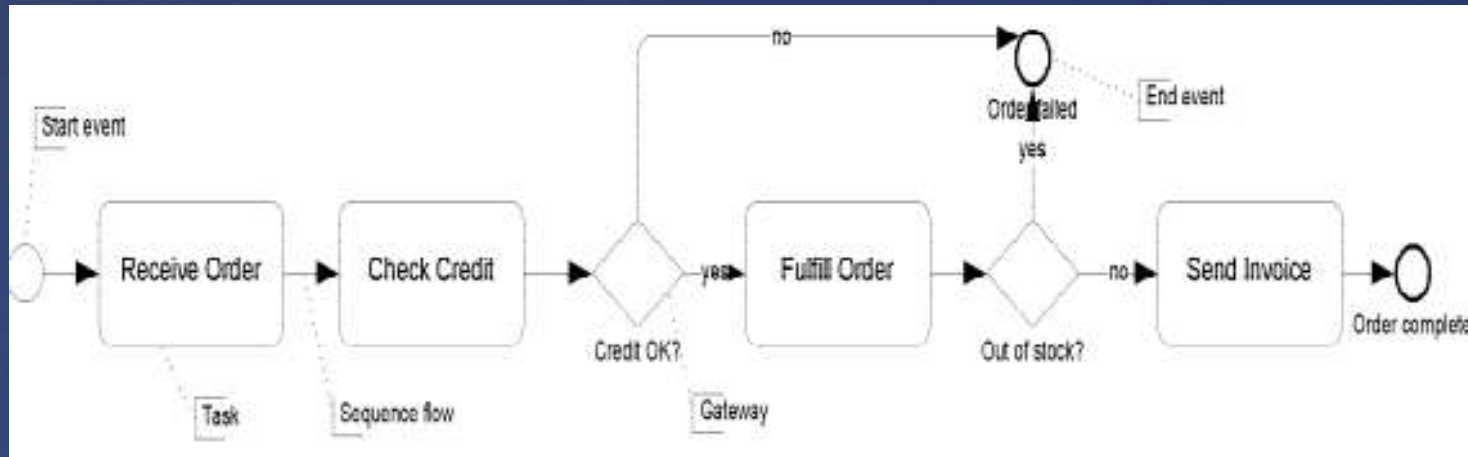
BPMN Basic Modeling Elements

Element	Description	Notation
Event	An Event is something that "happens" during the course of a Process (see page 238) or a Choreography (see page 339). These Events affect the flow of the model and usually have a cause (trigger) or an impact (result). Events are circles with open centers to allow internal markers to differentiate different triggers or results. There are three types of Events, based on when they affect the flow: Start, Intermediate, and End.	
Activity	An Activity is a generic term for work that company performs (see page 151) in a Process. An Activity can be atomic or non-atomic (compound). The types of Activities that are a part of a Process Model are: Sub-Process and Task, which are rounded rectangles. Activities are used in both standard Processes and in Choreographies.	
Gateway	A Gateway is used to control the divergence and convergence of Sequence Flows in a Process (see page 145) and in a Choreography (see page 344). Thus, it will determine branching, forking, merging, and joining of paths. Internal markers will indicate the type of behavior control.	
Sequence Flow	A Sequence Flow is used to show the order that Activities will be performed in a Process (see page 97) and in a Choreography (see page 320).	
Message Flow	A Message Flow is used to show the flow of Messages between two Participants that are prepared to send and receive them (see page 120). In BPMN, two separate Pools in a Collaboration Diagram will represent the two Participants (e.g., PartnerEntities and/or PartnerRoles).	
Association	An Association is used to link information and Artifacts with BPMN graphical elements (see page 67). Text Annotations (see page 71) and other Artifacts (see page 66) can be Associated with the graphical elements. An arrowhead on the Association indicates a direction of flow (e.g., data), when appropriate.	

BPMN Basic Modeling Elements (2)

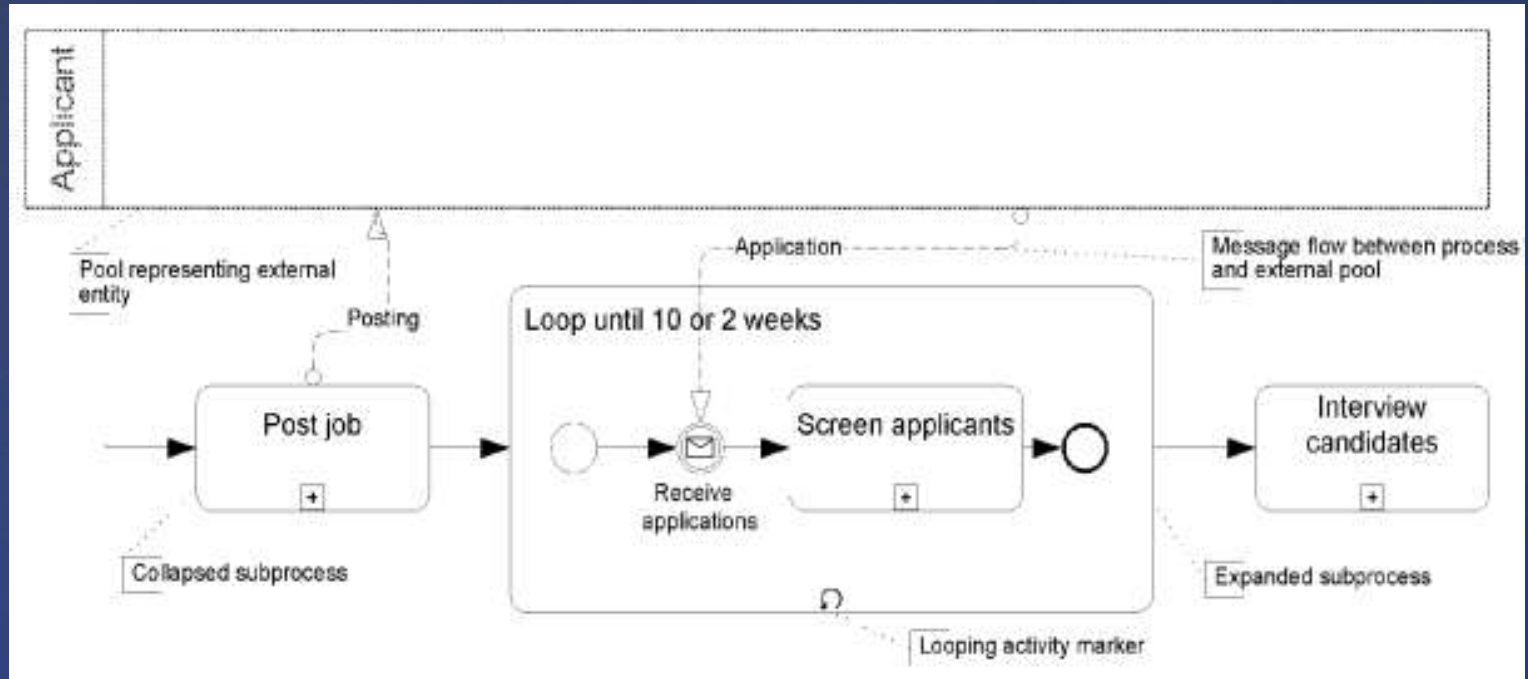
Pool	A Pool is the graphical representation of a <i>Participant</i> in a Collaboration (see page 112). It also acts as a "swimlane" and a graphical container for partitioning a set of <i>Activities</i> from other Pools, usually in the context of B2B situations. A Pool MAY have internal details, in the form of the Process that will be executed. Or a Pool MAY have no internal details, i.e., it can be a "black box."	
Lane	A Lane is a sub-partition within a Process, sometimes within a Pool, and will extend the entire length of the Process, either vertically or horizontally (see on page 305). Lanes are used to organize and categorize <i>Activities</i> .	
Data Object	Data Objects provide information about what <i>Activities</i> require to be performed and/or what they produce (see page 205). Data Objects can represent a singular object or a collection of objects. Data Input and Data Output provide the same information for Processes.	
Message	A Message is used to depict the contents of a communication between two <i>Participants</i> (as defined by a business <i>PartnerRole</i> or a business <i>PartnerEntity</i> —see on page 93).	
Group (a box around a group of objects within the same category)	A Group is a grouping of graphical elements that are within the same <i>Category</i> (see page 70). This type of grouping does not affect the <i>Sequence Flows</i> within the Group. The <i>Category</i> name appears on the diagram as the group label. Categories can be used for documentation or analysis purposes. Groups are one way in which <i>Categories</i> of objects can be visually displayed on the diagram.	
Text Annotation (attached with an Association)	Text Annotations are a mechanism for a modeler to provide additional text information for the reader of a BPMN Diagram (see page 71).	

Simple task flow diagram



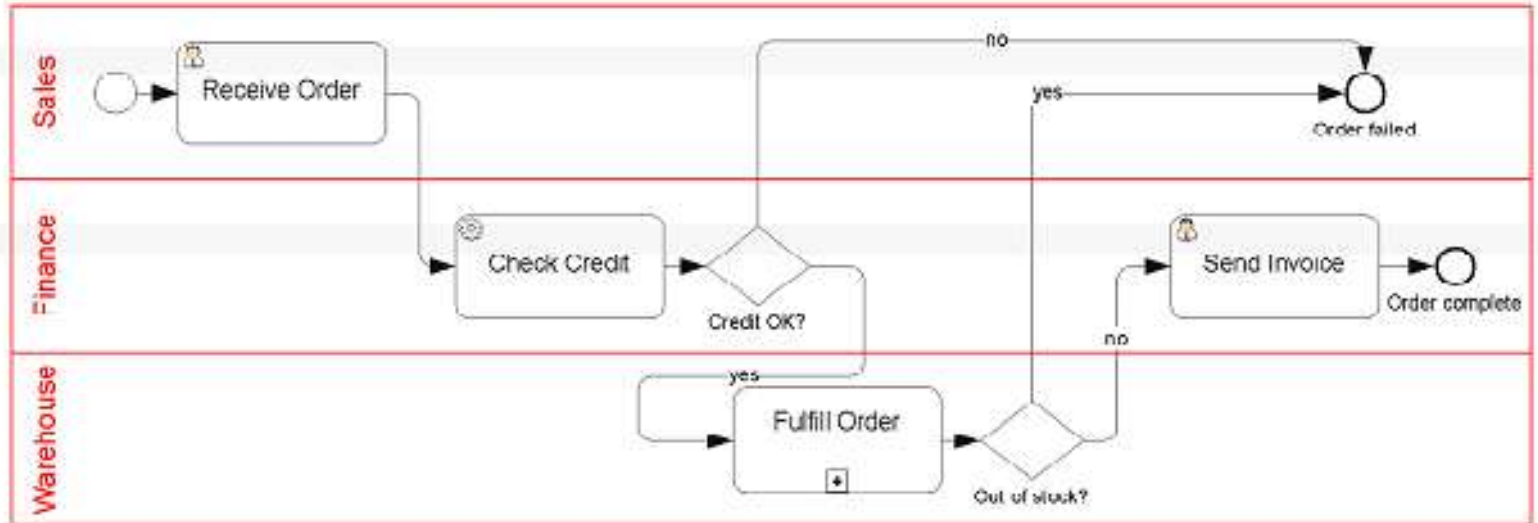
BPMN example (1)

More detailed and complex task flow diagram



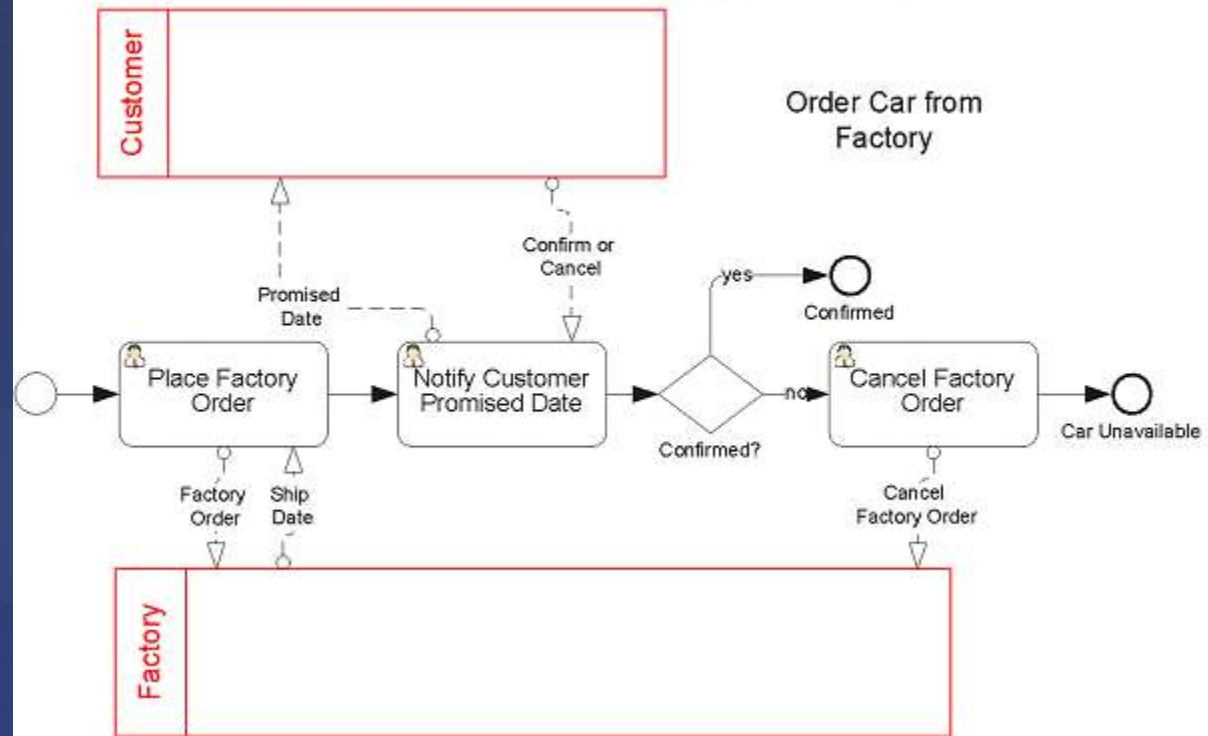
BPMN example (2)

- Traditional swim lane diagram



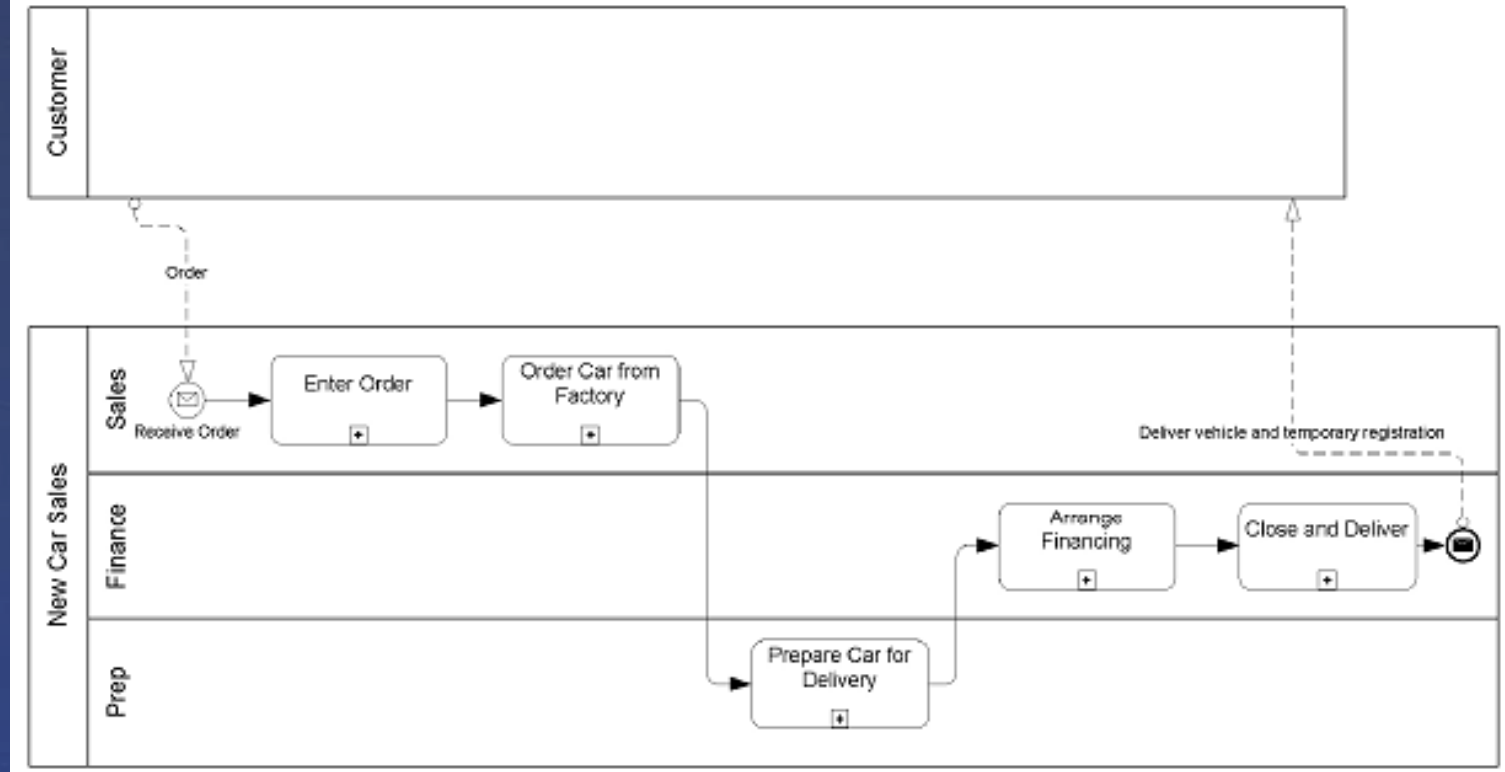
BPMN example (3)

Collaboration diagram (use of pools, artifacts and messaging)



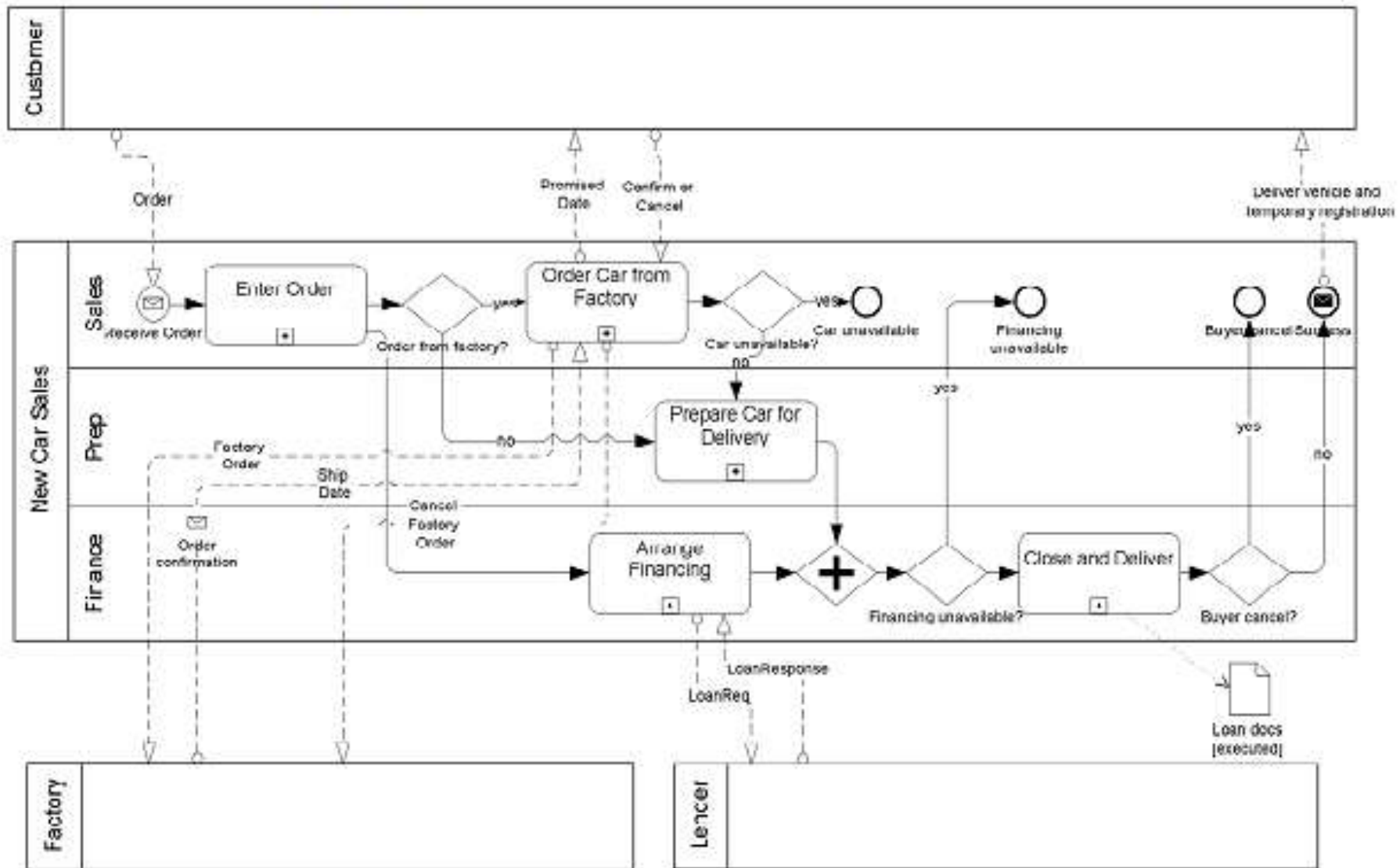
BPMN example (4)

- High level business process diagram



BPMN example (5)

- Lower level business process diagram



- ⌘ Flow charting is **widely used** and is based upon a **simple set of symbology for tasks, decisions, and other primary** process elements.
- ⌘ A typical flow chart may have the following kinds of symbols:
 - ⌘ **Start and end** symbols represented as lozenges, ovals, or rounded rectangles
 - ⌘ **Arrows** coming from one symbol and ending at another
 - ⌘ **Processing steps** are represented as rectangles
 - ⌘ **Input/Output** is represented as a parallelogram.
 - ⌘ **Condition (or decision)** is represented as a diamond (rhombus)
- ⌘ All processes should flow from **top to bottom and left to right.**

Flowchart

- ⌘ Swim lanes are **an addition** to the “boxes and arrows” process flow view of flow-charting **that show how the work flows across organizational units** or is handed-off from one role to another.
- ⌘ This is accomplished by the use of **horizontally or vertically arranged rows (swim lanes)**
- ⌘ It is representing an **organizational unit, role, or in some instances, external organization.**

Swim Lanes

- ⌘ Event Process Chains are very similar to activity diagrams regarding the **addition of events or outcomes of tasks**.
- ⌘ It provides **various connectors** that allow **alternative and parallel execution** of processes.
- ⌘ The **tasks (activities)** are **followed by outcomes (events)** of the task, developing a **very detailed process model**.
- ⌘ Furthermore it is **specified by** the usages of logical operators such as **OR, AND, and XOR**
- ⌘ EPC's **Strength** → simplicity and easy-to-understand notation.

Event Process Chain (EPC)

Value chain notation is used to demonstrate a single continuous flow from left to right of the sub-processes that directly contribute to producing value for the organization's customers (clients/constituents).

Value Chain

- ⌘ UML provides a standard set of nine or more diagramming techniques and notations primarily for describing information systems requirements.

Unified Modeling Language (UML)

- ⌘ IDEF-0
- ⌘ LOVEM-E (Line of Visibility Engineering Method - Enhanced)
- ⌘ SIPOC (Supplier, Input, Process, Output, and Customer)
- ⌘ Systems Dynamics
- ⌘ Value Stream Mapping

Another modeling standard

Group Class Assignment

↳ Buatlah BPMN Model dari flowchart proses bisnis perwalian berikut ini

