

Design Business Process/Workflow



Design Business Process/Workflow



Topics

Understanding business process and workflow

Type of diagrams for workflow

Swimlane, Flowchart

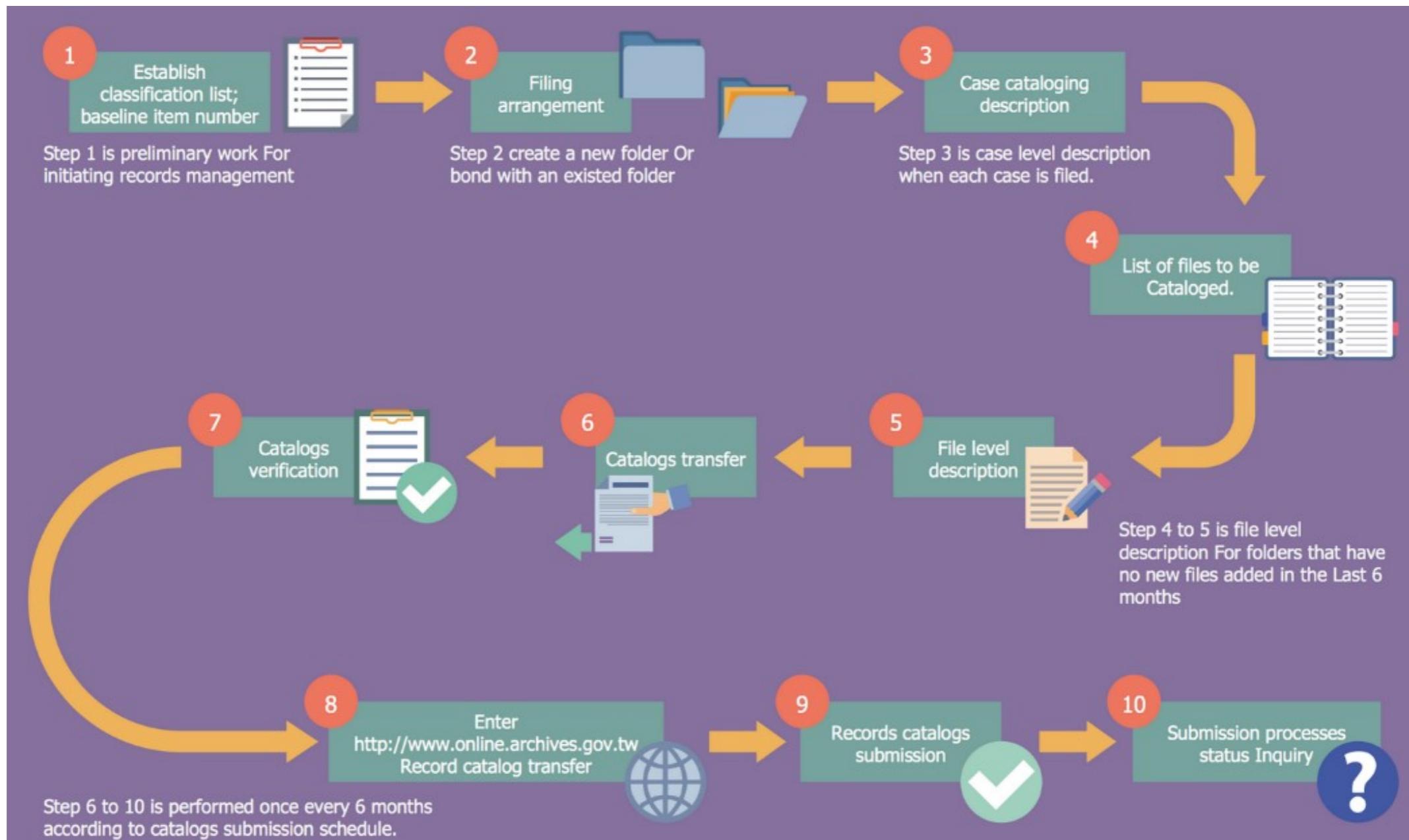
Business Process Model and Notation (BPMN)

Workshop



Business Process/Workflow ?





Easy to understand !!

(by ?)

Create

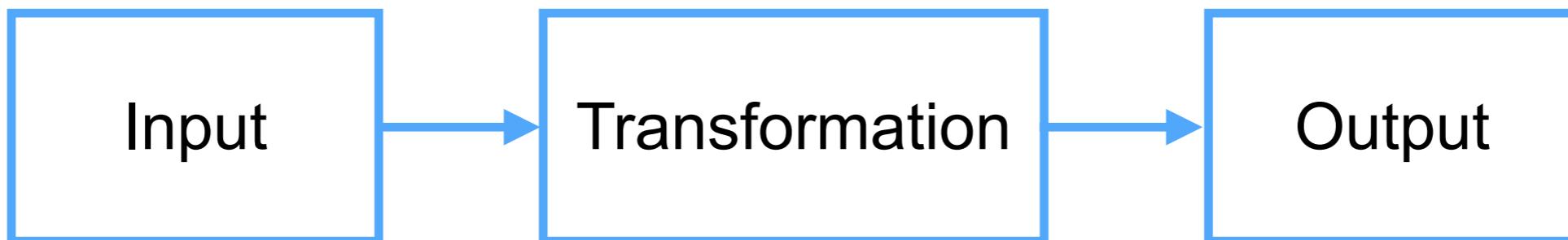
Read

Learn

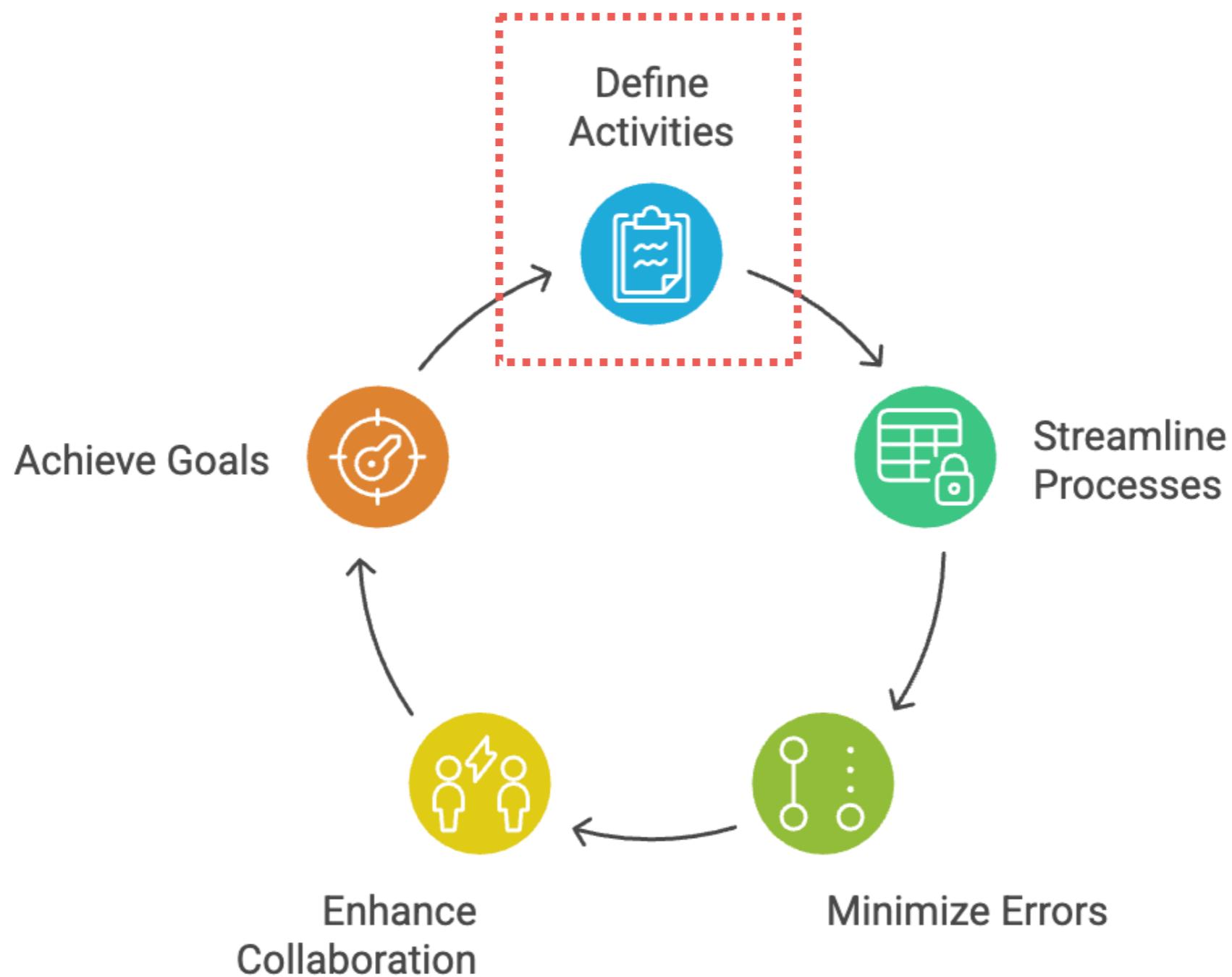


Business Process ?

Set of structured activities or tasks that are performed by people or systems in a specific sequence to achieve a particular **organizational goal or outcome**



Business Process Cycle



Key Characteristics

Goal-oriented

Repeatable

Structured
(steps & rules)

Cross-functional

Measurable



Types of Business Process

Core process

Supporting process

Management process



Core Process

Core activities that deliver value and revenue
Day-to-day activity of business

Manufacturing
service

Customer
service

Sales
service

Order fulfillment



Supporting Process

Enable core operations

HR

IT support

Accounting



Management Process

Supervise and control other processes

Strategic
planning

Budget
management



Process Visualization



Process Visualization ?

Provide an end-to-end overview of a process flow including all the steps taken, sub-processes, activities, data inputs, data outputs and risk objects

Flowchart

Swimlane

BPMN

<https://research.aimultiple.com/process-visualization/>



Benefits of process visualization

Improve understanding of workflow

Enhance communication (common language)

Process optimization

Standardization of process



Types of Workflow Diagrams



Types of Workflow Diagrams

Basic Flowchart

Event-Driven Process

Swimlane

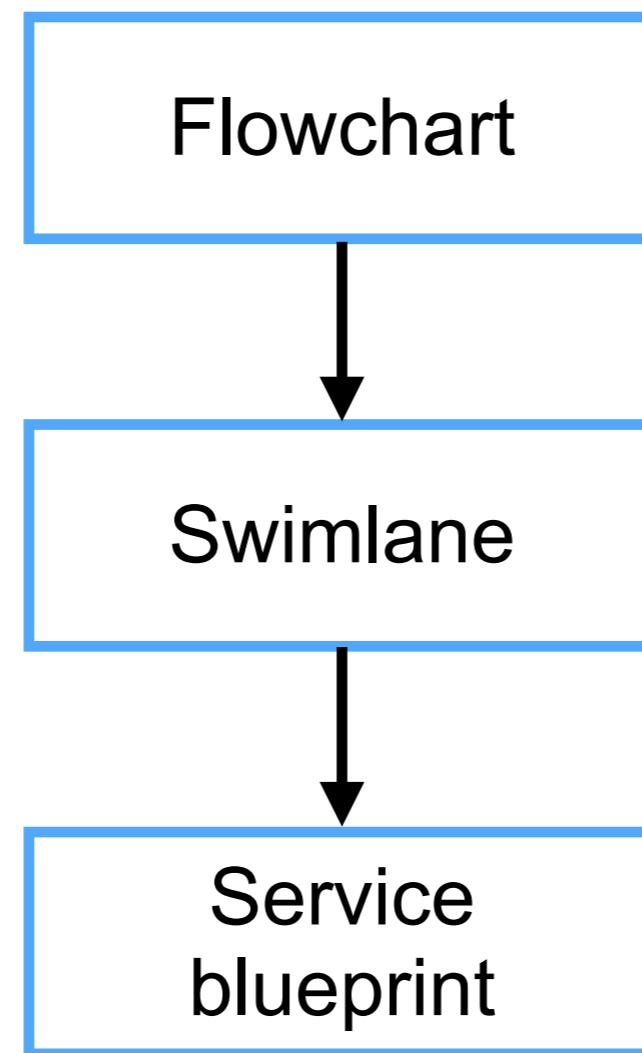
Business Process Modeling Notation (BPMN)

UML (Unified Modeling Language)

SIPOC (Supplier input process output customer)

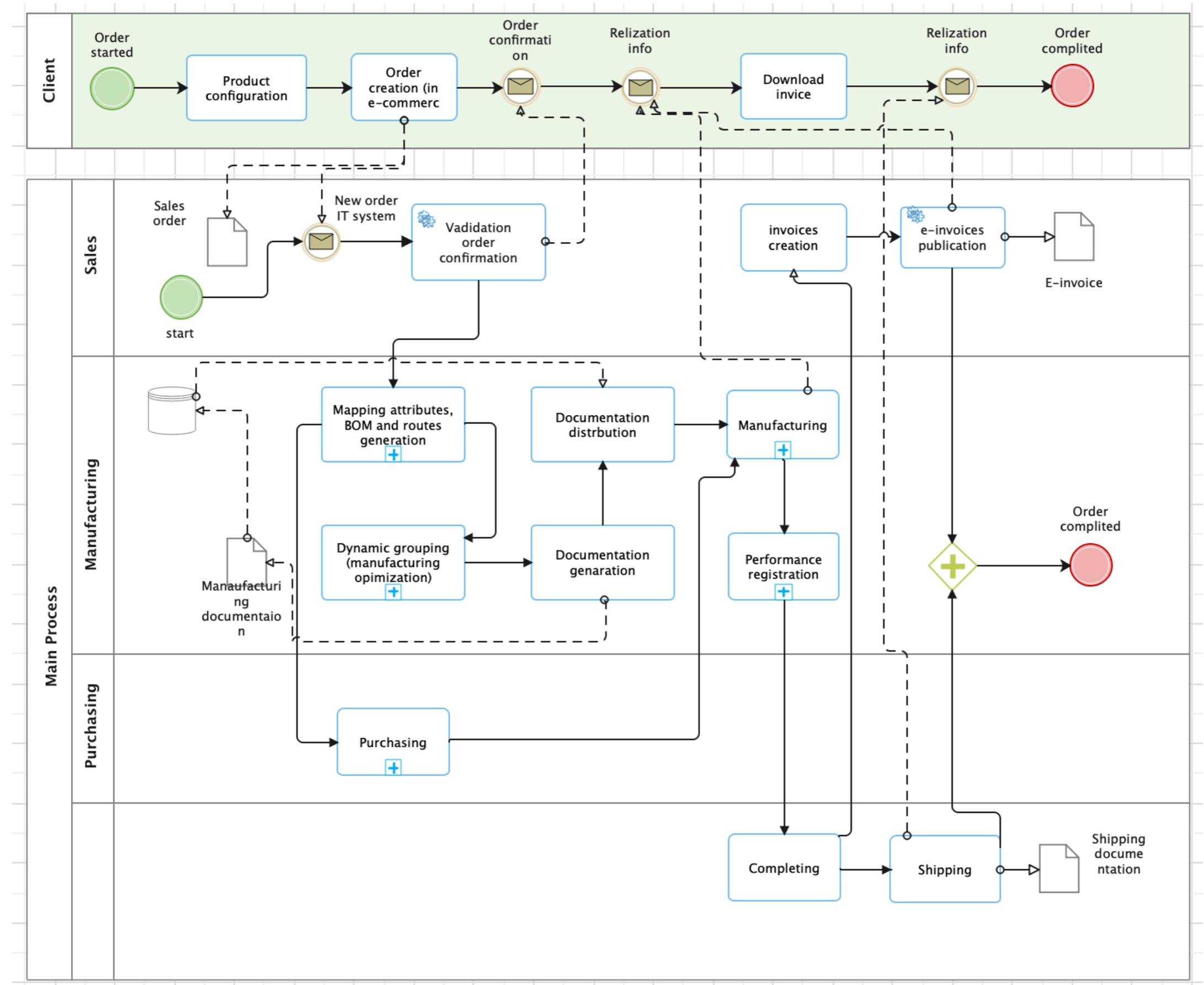


Evolution of Diagrams



Business Process Model and Notation (BPMN)





BPMN

Business Process Model and Notation
Standard for business process modeling

Designed to provide a standard notation readily understandable by all business stakeholders, business analysts and technical

Organizational
structure

Functional
breakdown

Data model

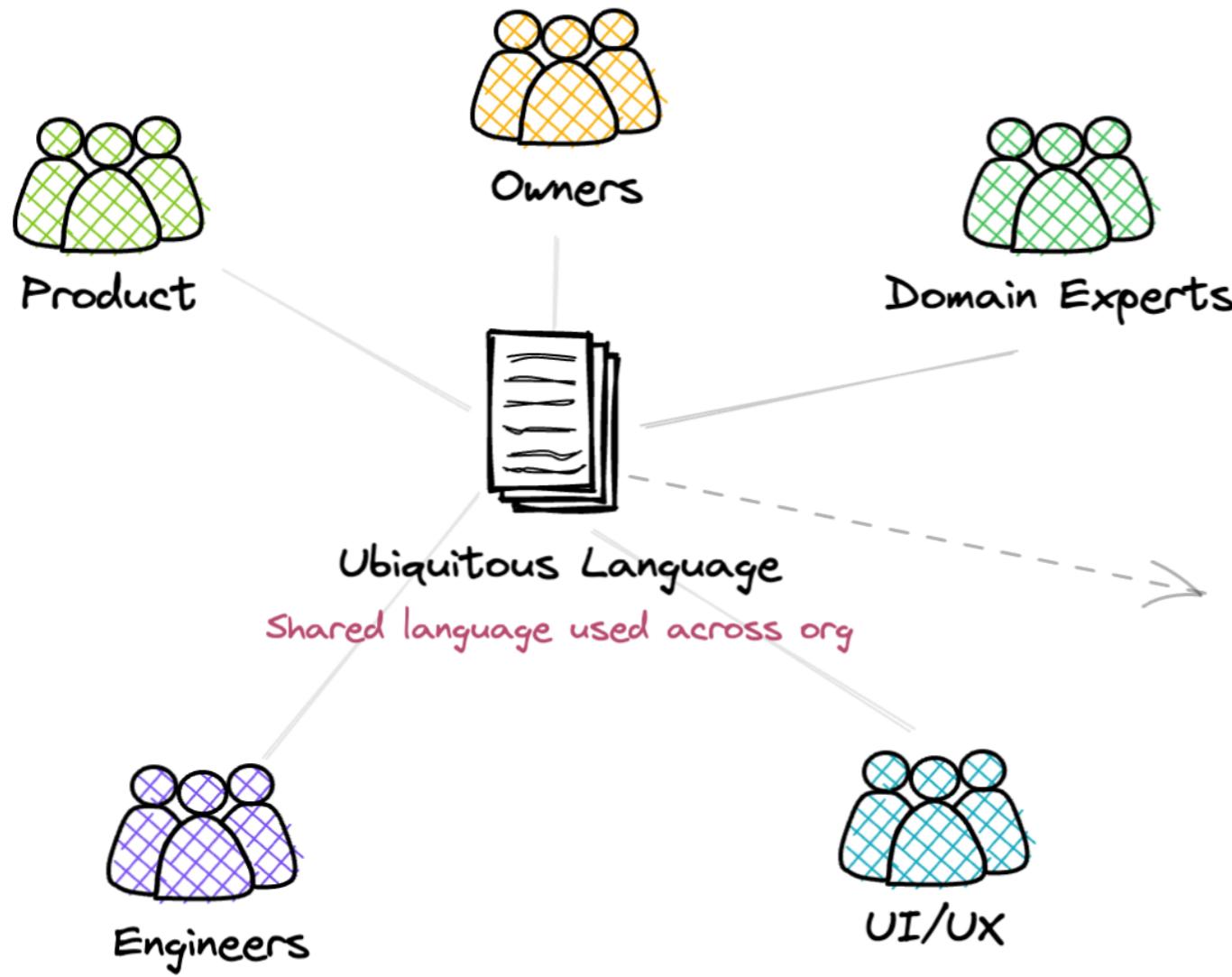
https://en.wikipedia.org/wiki/Business_Process_Model_and_Notation



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Ubiquitous/common Language



What is Ubiquitous Language

1. Language of the business
 2. Reduces domain translations
 3. Improve communication
 4. Single Language
 5. Terms easy to understand
 6. Precise and consistent
 7. Eliminate the need for assumptions
 8. Single meaning for each term
 9. Part of DDD
 10. Use when describing business domain
- @boyney123

<https://eda-visuals.boyney.io/visuals/ubiquitous-language>



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BPMN Elements

<https://www.signavio.com/wiki/process-design/bpmn/>



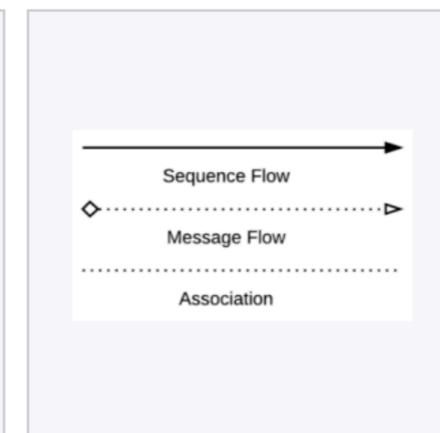
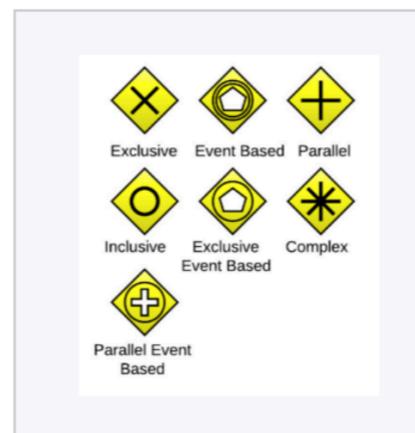
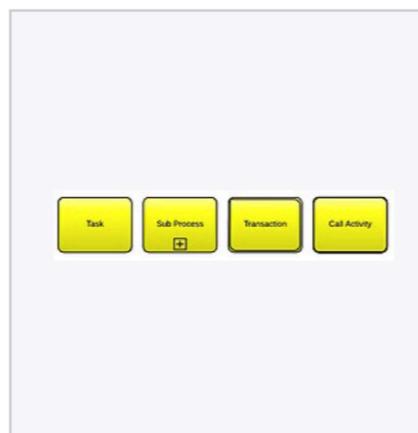
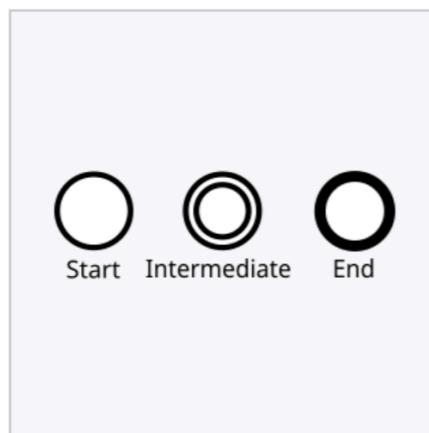
BPMN Elements

BPMN uses a small set of symbols to represent the different parts of a business process



BPMN (Notation)

Flow objects and connecting object

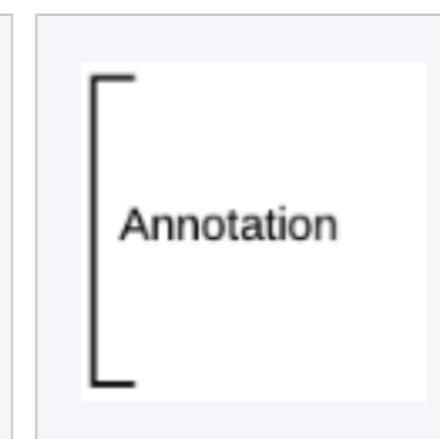
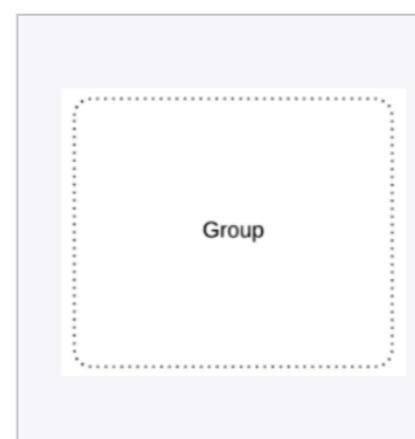
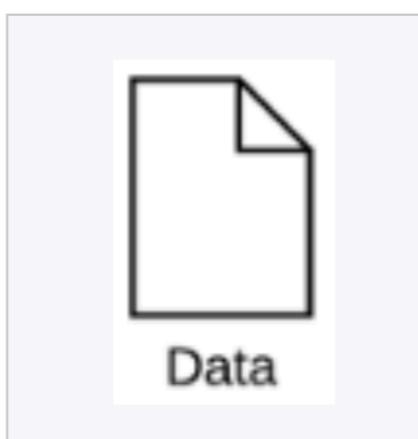
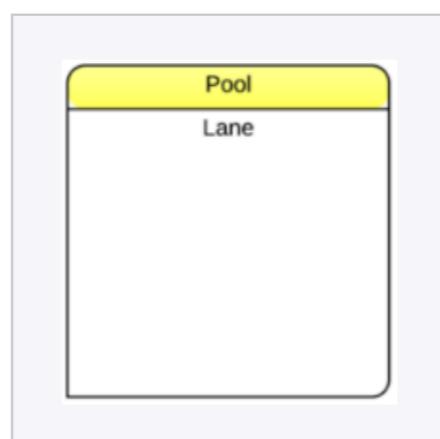


Event

Activity

Gateway

Connections



Swimlanes

Data objects

Groups

Annotation

https://en.wikipedia.org/wiki/Business_Process_Model_and_Notation



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BPMN (Notation)

Dividers, pool group objects into separate lane

They can combine actions by categories or share the responsibility of the participants in the process, as in our case



https://en.wikipedia.org/wiki/Business_Process_Model_and_Notation

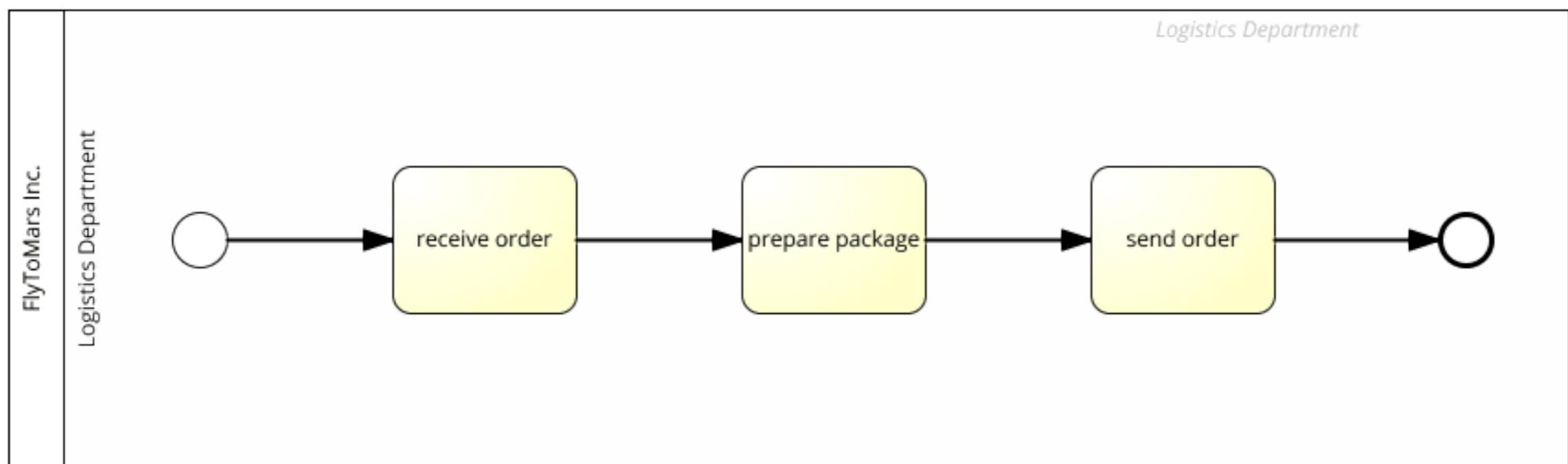


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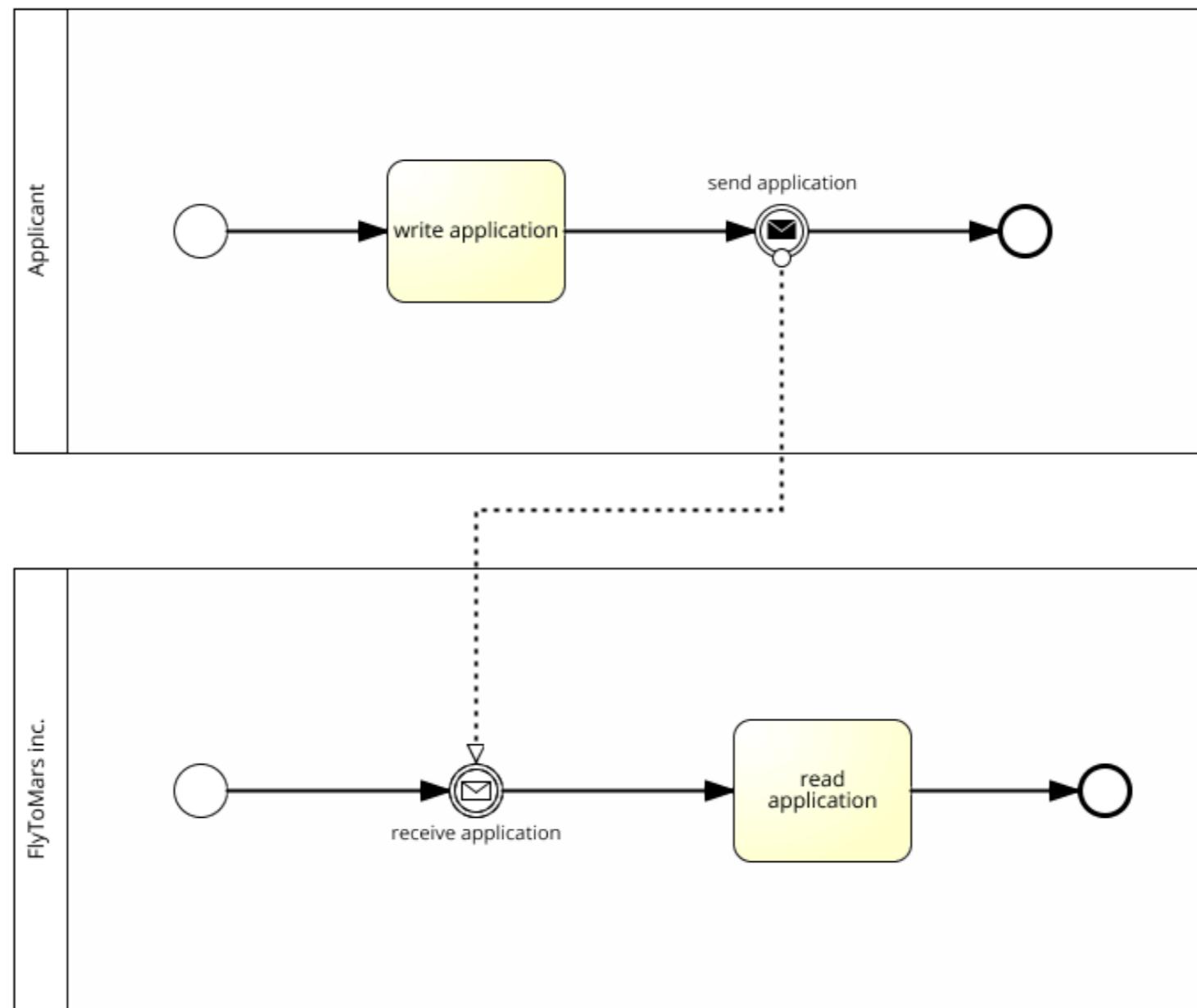
1. Events

Events are circles that mark things **happening** in a process. They show where a process begins, what interruptions or triggers occur along the way, and how it ends



Intermediate Events

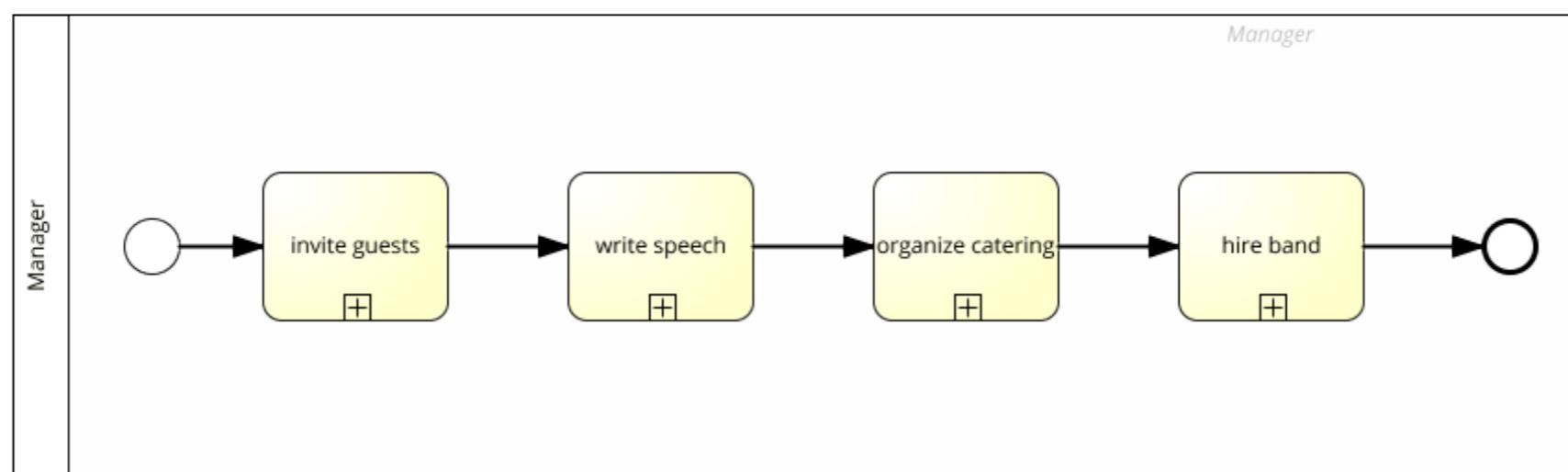
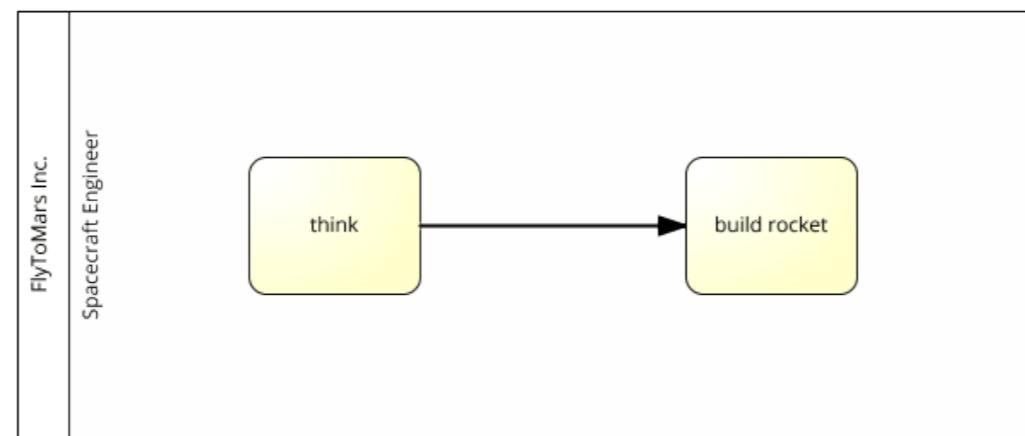
How does my process interact with its environment ?



2. Activities

Tasks and sub-processes

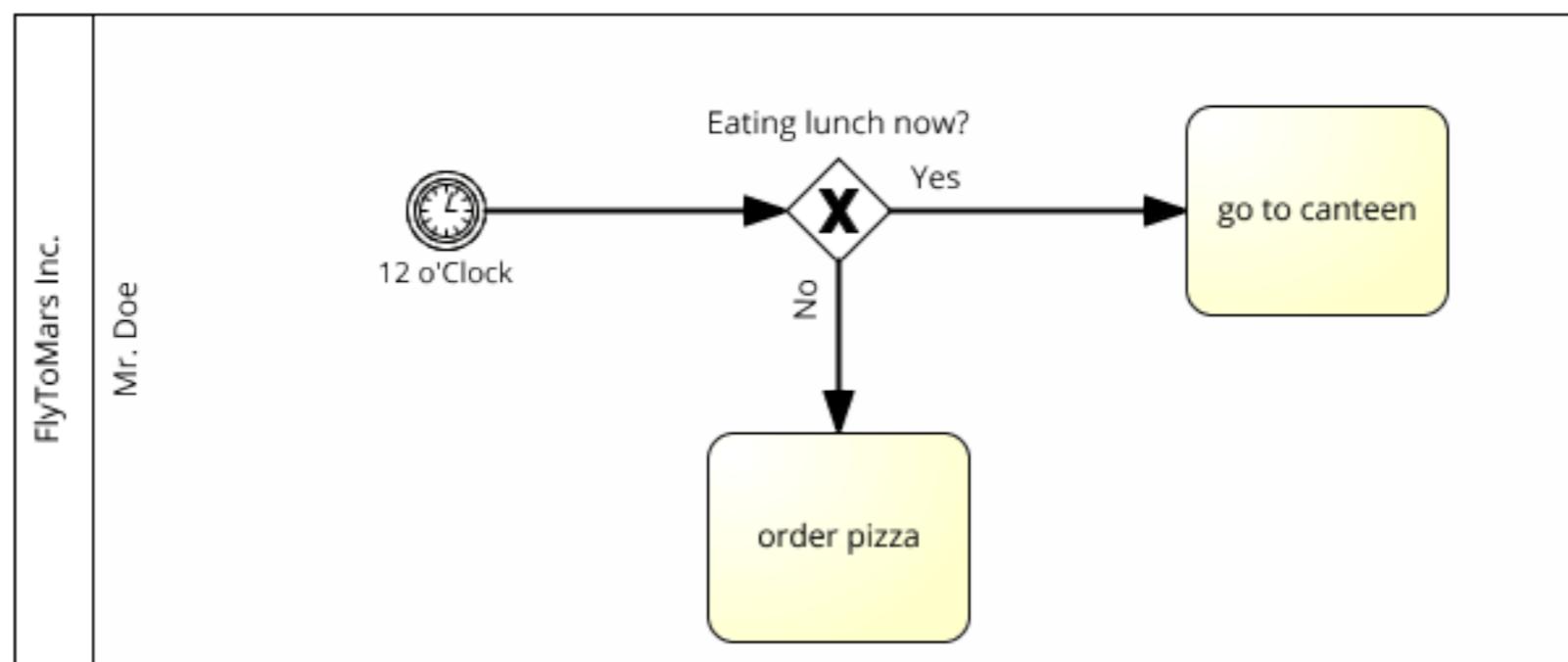
A **task** is a single unit of work, while a **sub-process** bundles multiple related tasks together



3. Gateways

Gateways, shown as diamonds, represent decision points or parallel paths in a process

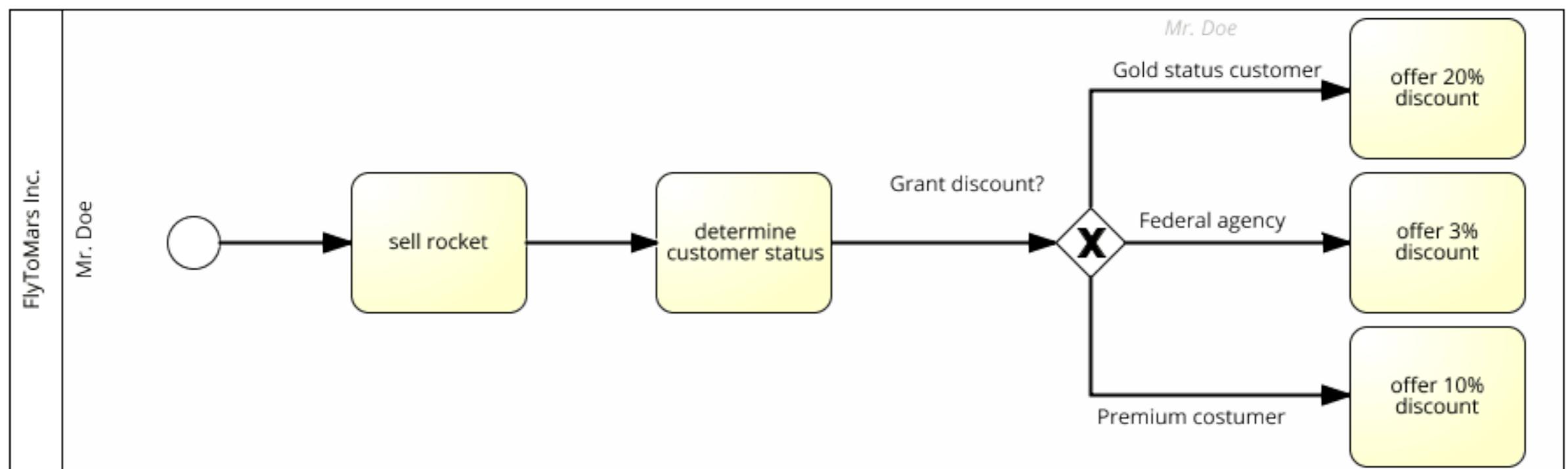
Exclusive gateway



3. Gateways

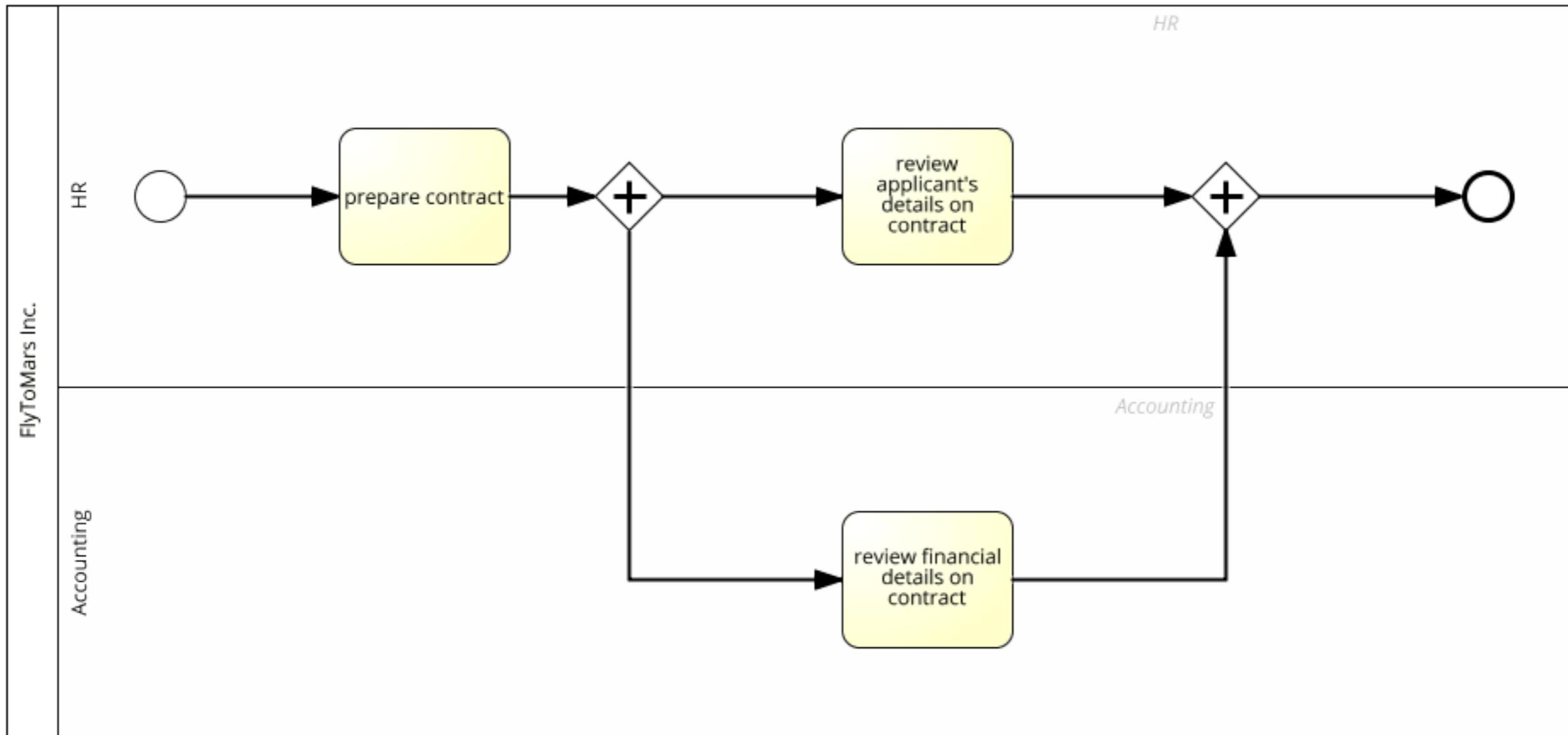
Gateways, shown as diamonds, represent decision points or parallel paths in a process

Exclusive gateway



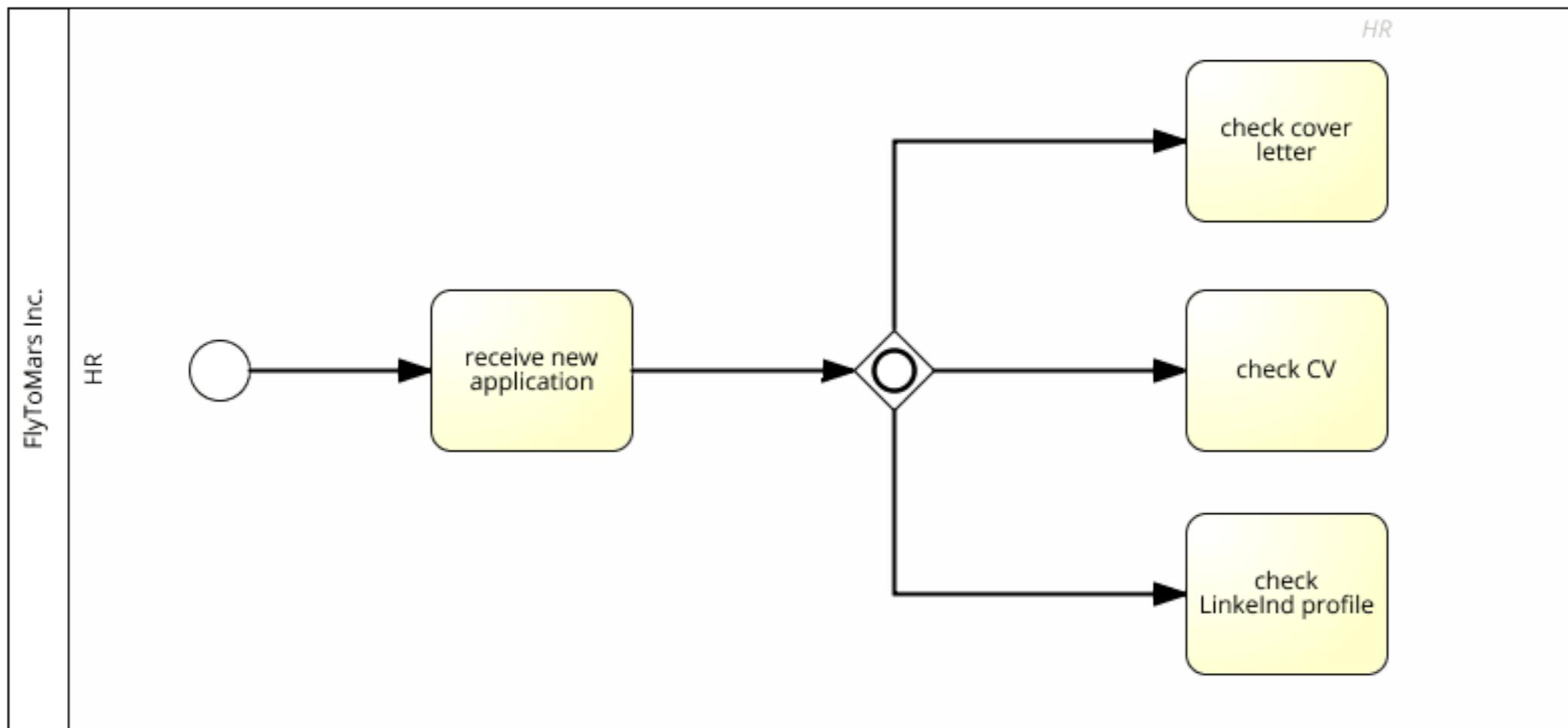
3. Gateways

Parallel gateway (AND)



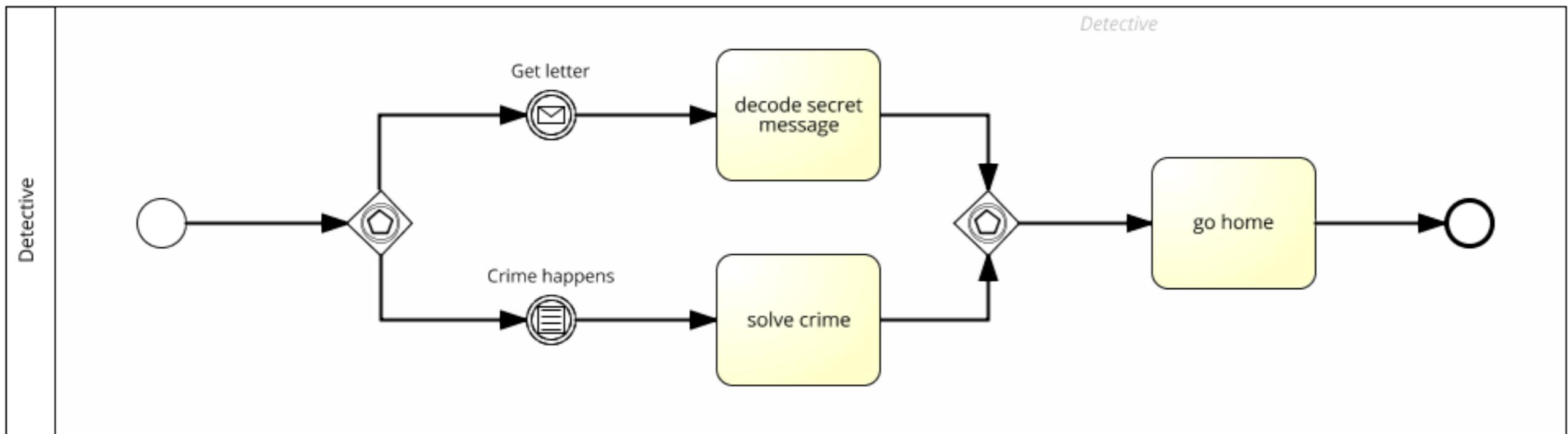
3. Gateways

Inclusive gateway (OR), one or more outcomes



3. Gateways

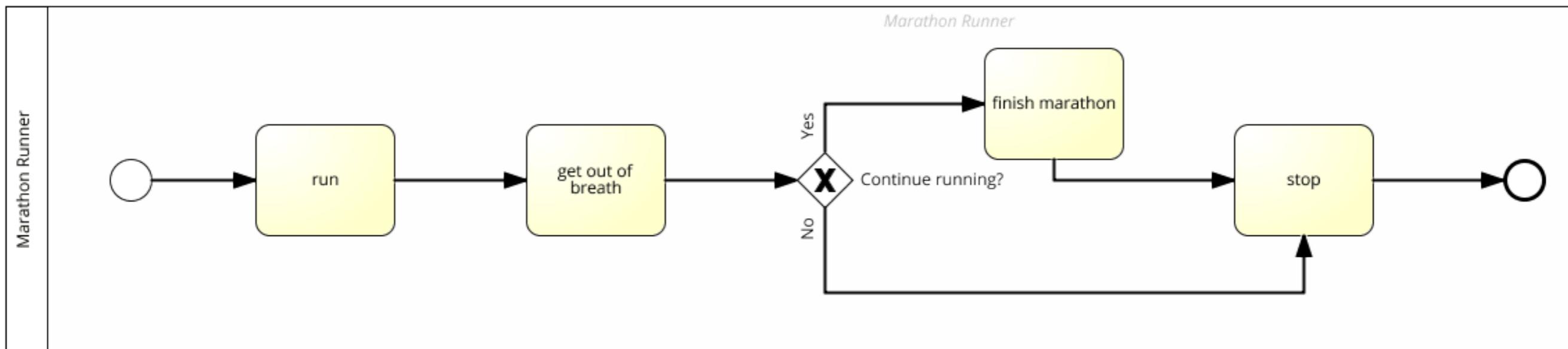
Event-based gateway



4. Flows and connectors

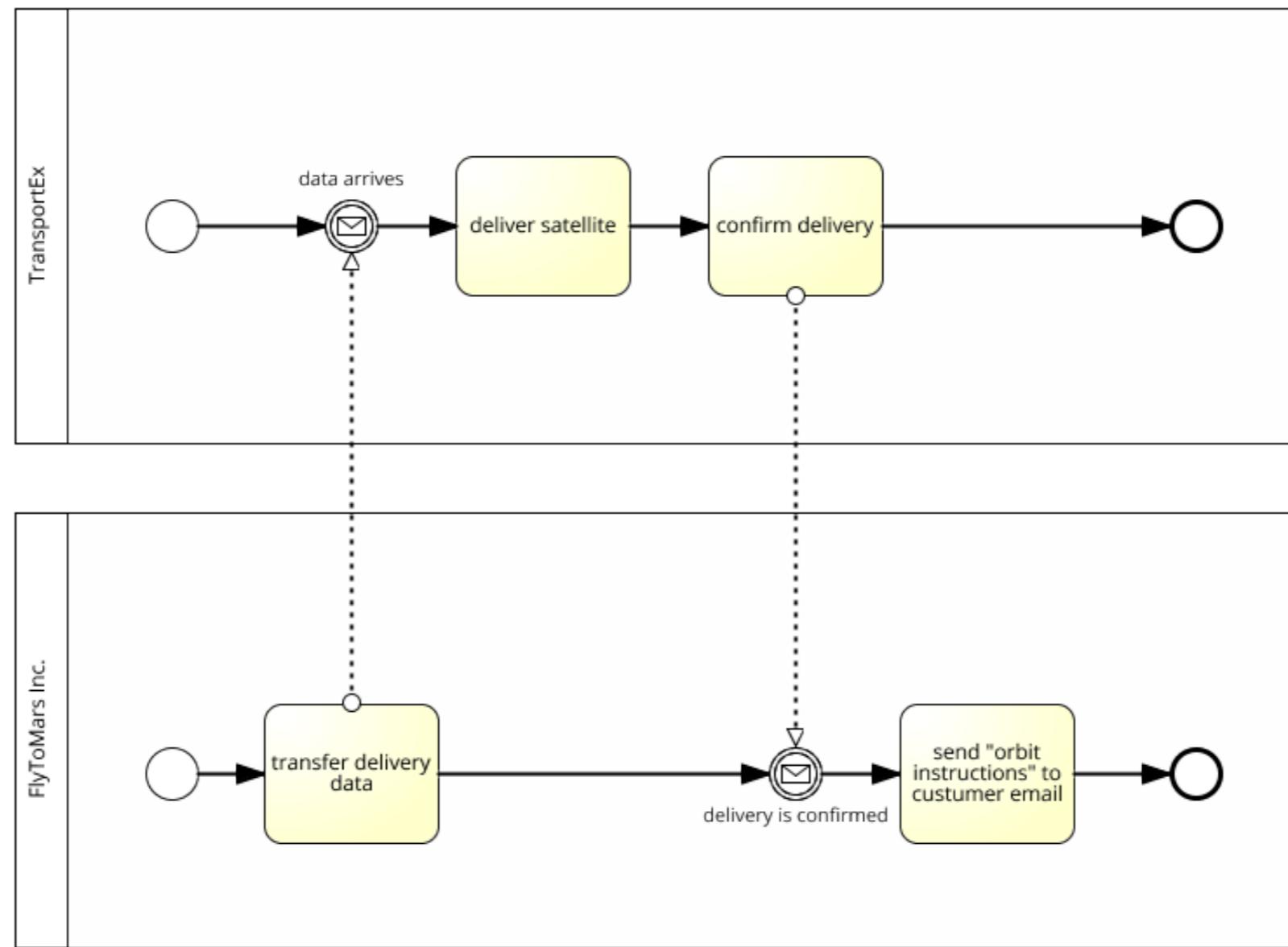
Flows are arrows that connect elements together and show the order of activities

Sequence flow (→)



Message flows

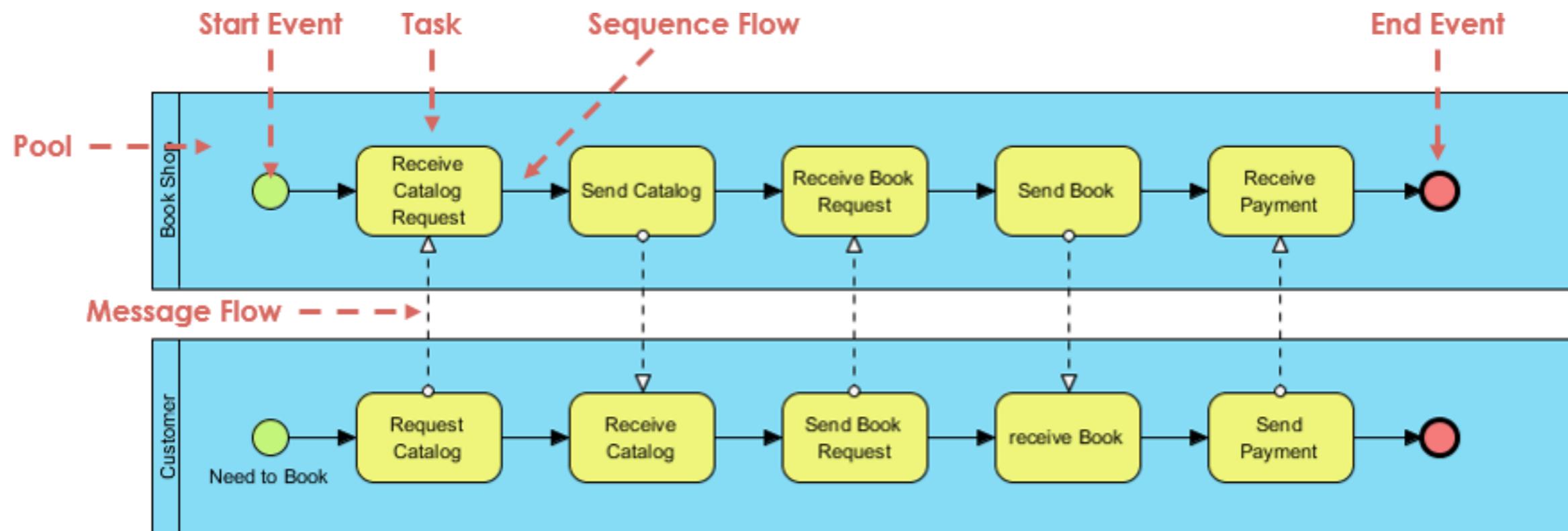
For communication that crosses the boundaries of your process' pool



Example



Book Shop



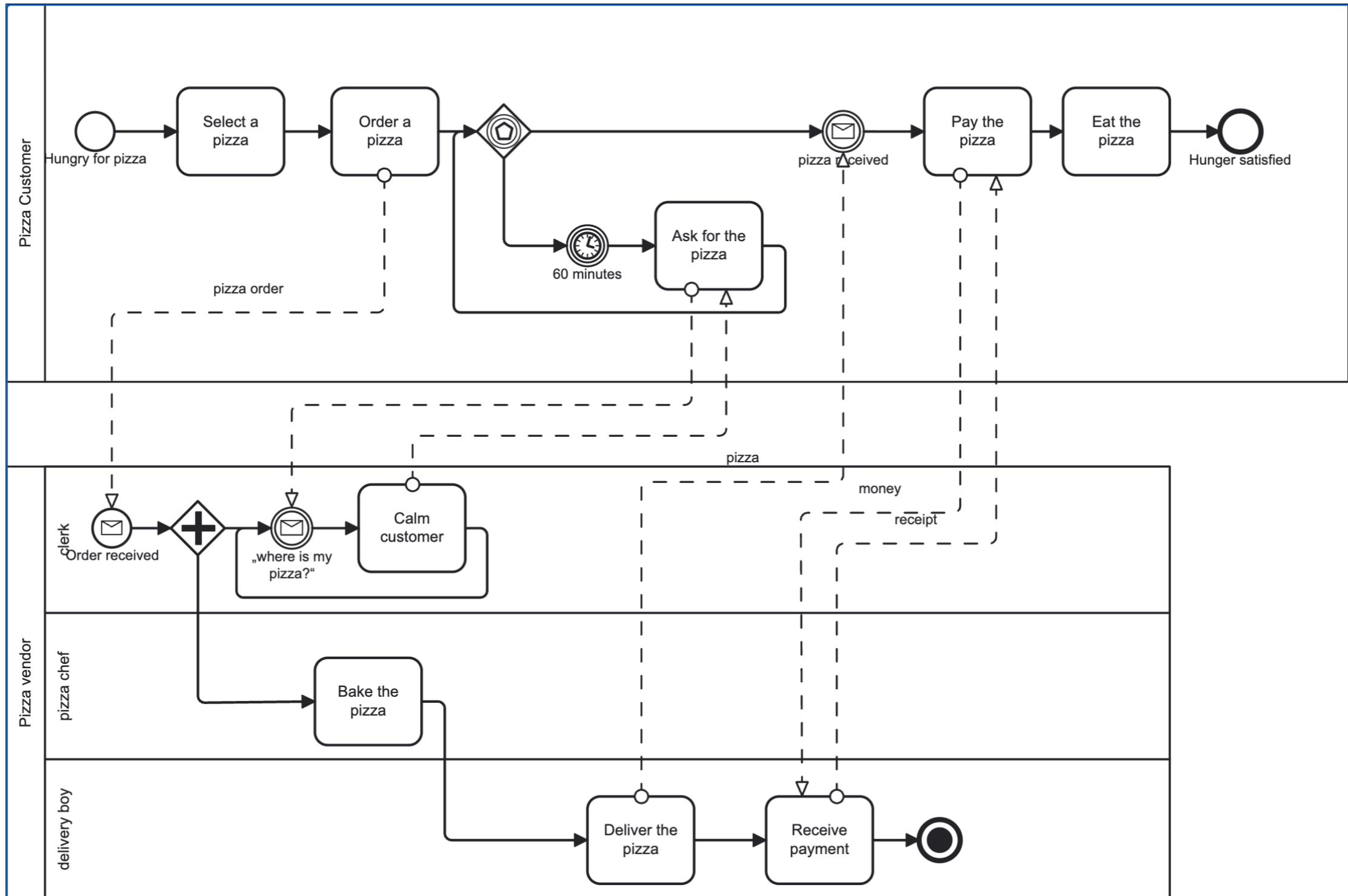
<https://circle.visual-paradigm.com/pools-and-swimlanes/>



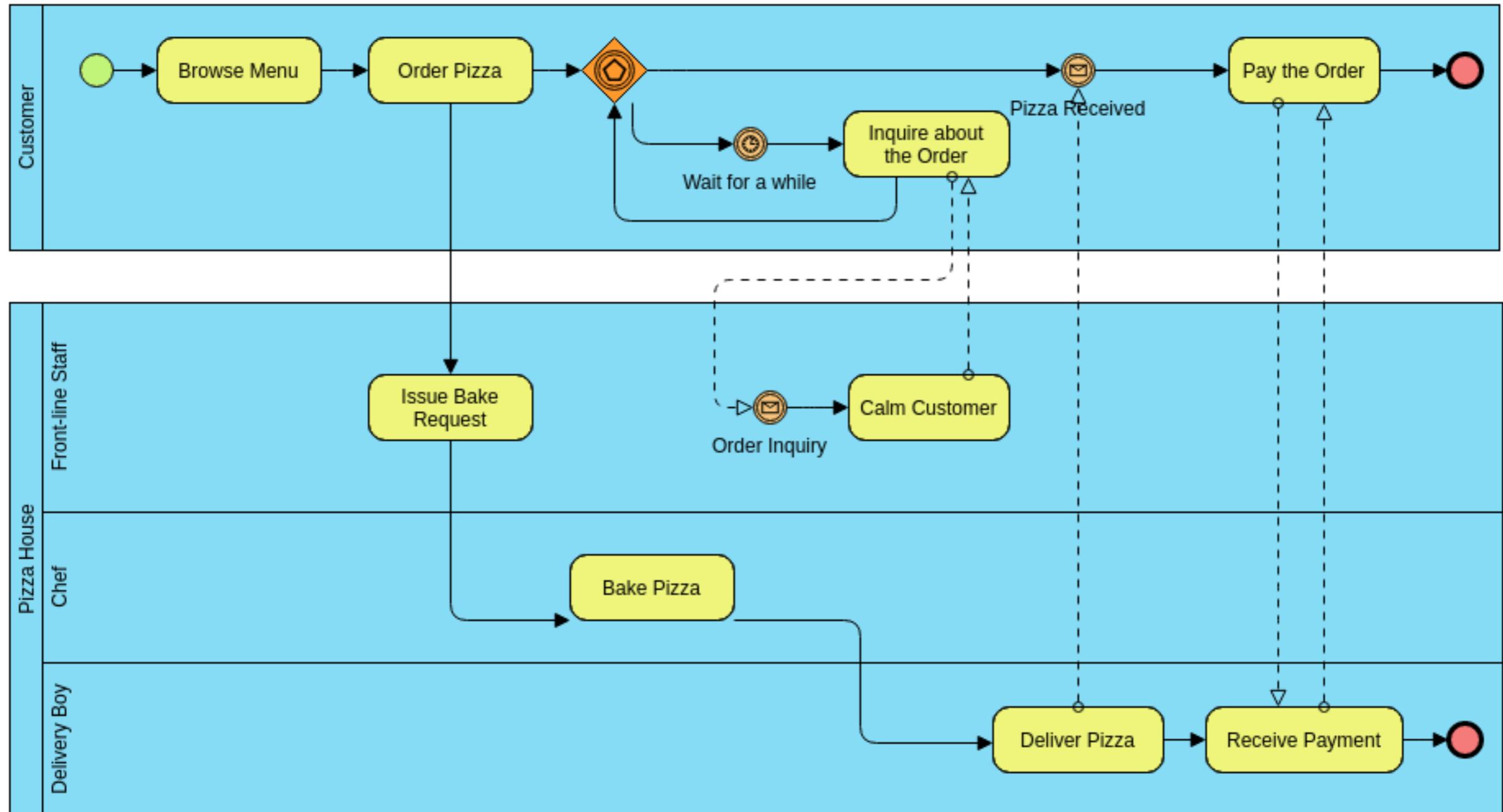
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Pizza Order Process (1)



Pizza Order Process (2)



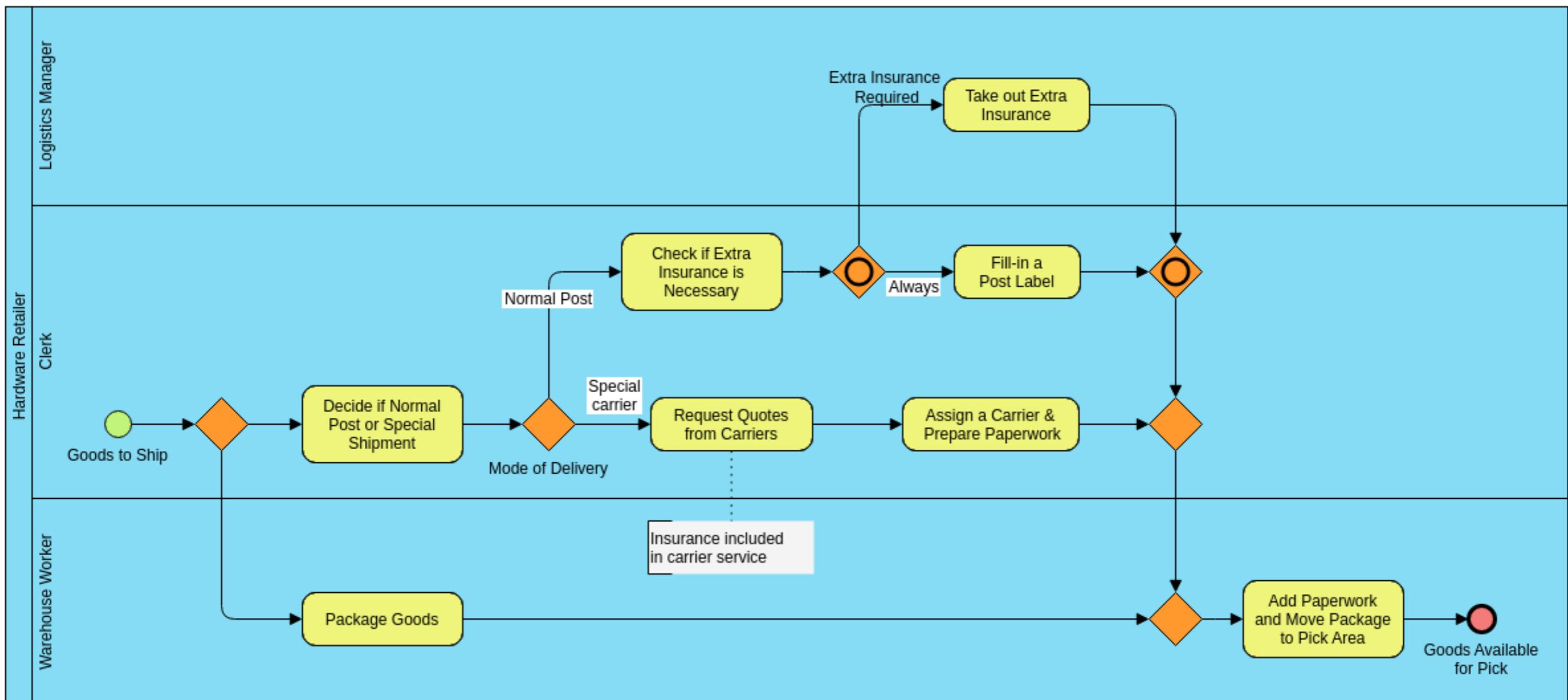
<https://online.visual-paradigm.com/diagrams/templates/business-process-diagram/pizza-order-process/>



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Shipment Process



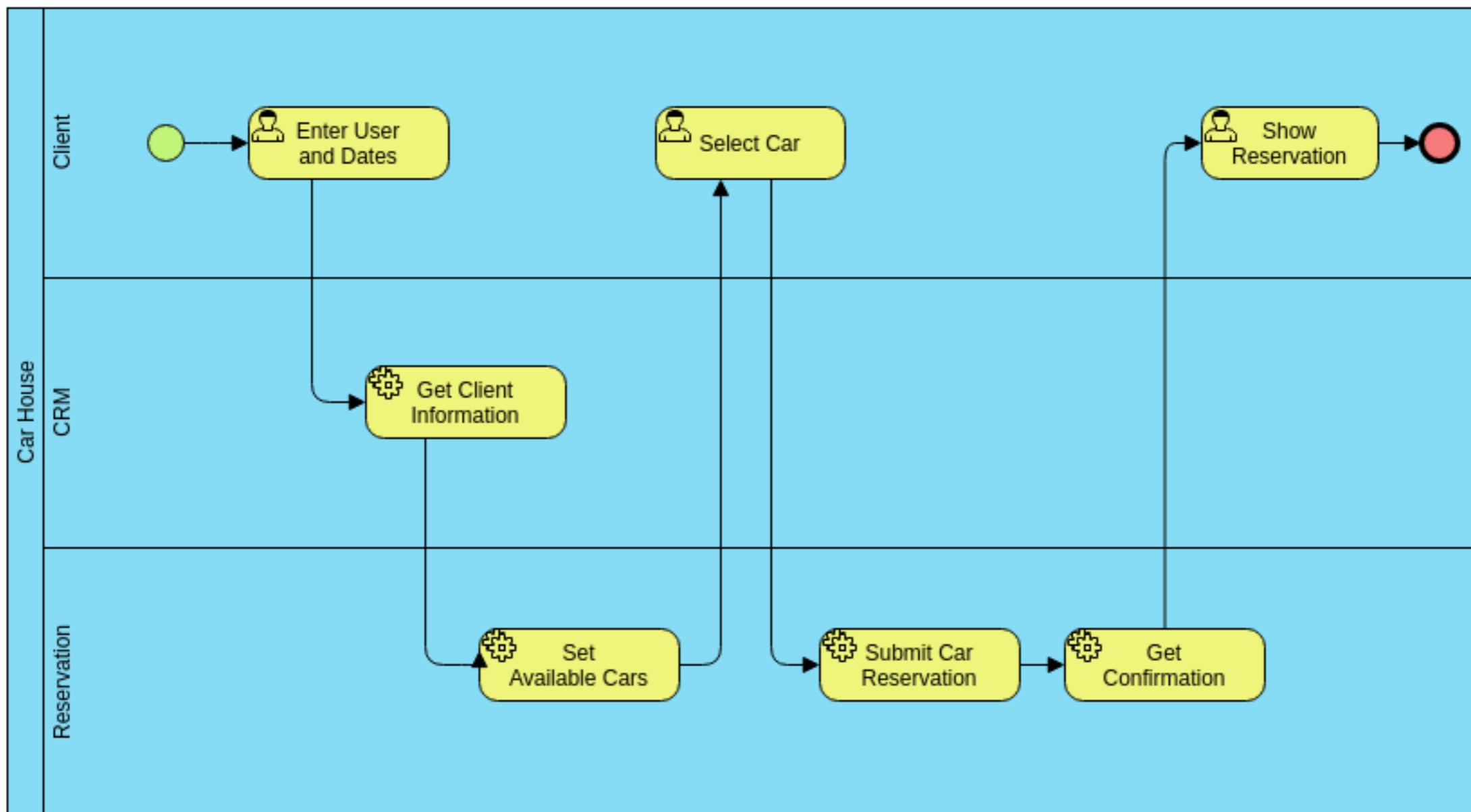
<https://online.visual-paradigm.com/diagrams/templates/business-process-diagram/shipment-process-of-a-hardware-retailer/>



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Car Rental Process



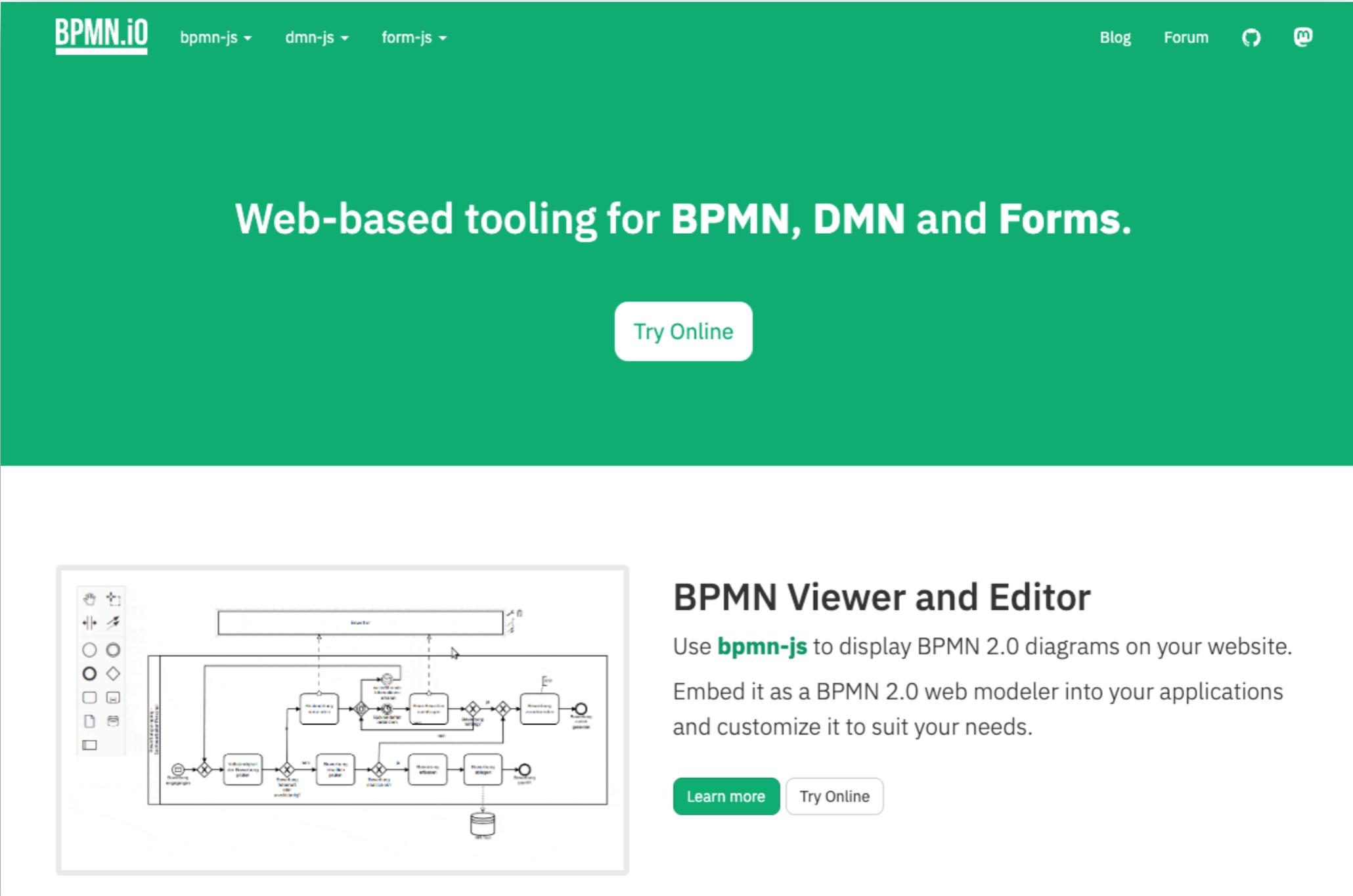
<https://online.visual-paradigm.com/diagrams/templates/business-process-diagram/shipment-process-of-a-hardware-retailer/>



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Tools :: BPMN Web



The screenshot shows the homepage of BPMN.io. At the top, there's a navigation bar with the logo "BPMN.io" and dropdown menus for "bpmn-js", "dmn-js", and "form-js". On the right side of the header are links for "Blog", "Forum", and social media icons. Below the header, a large green banner contains the text "Web-based tooling for BPMN, DMN and Forms." and a "Try Online" button. The main content area features a BPMN diagram editor interface. On the left is a toolbar with various icons for shapes and tools. The central workspace displays a complex BPMN 2.0 diagram with multiple lanes, pools, and various BPMN elements like events, gateways, and activities. A "Try Online" button is also located in the bottom right corner of the editor area.

Web-based tooling for BPMN, DMN and Forms.

Try Online

BPMN Viewer and Editor

Use **bpmn-js** to display BPMN 2.0 diagrams on your website.
Embed it as a BPMN 2.0 web modeler into your applications
and customize it to suit your needs.

Learn more Try Online

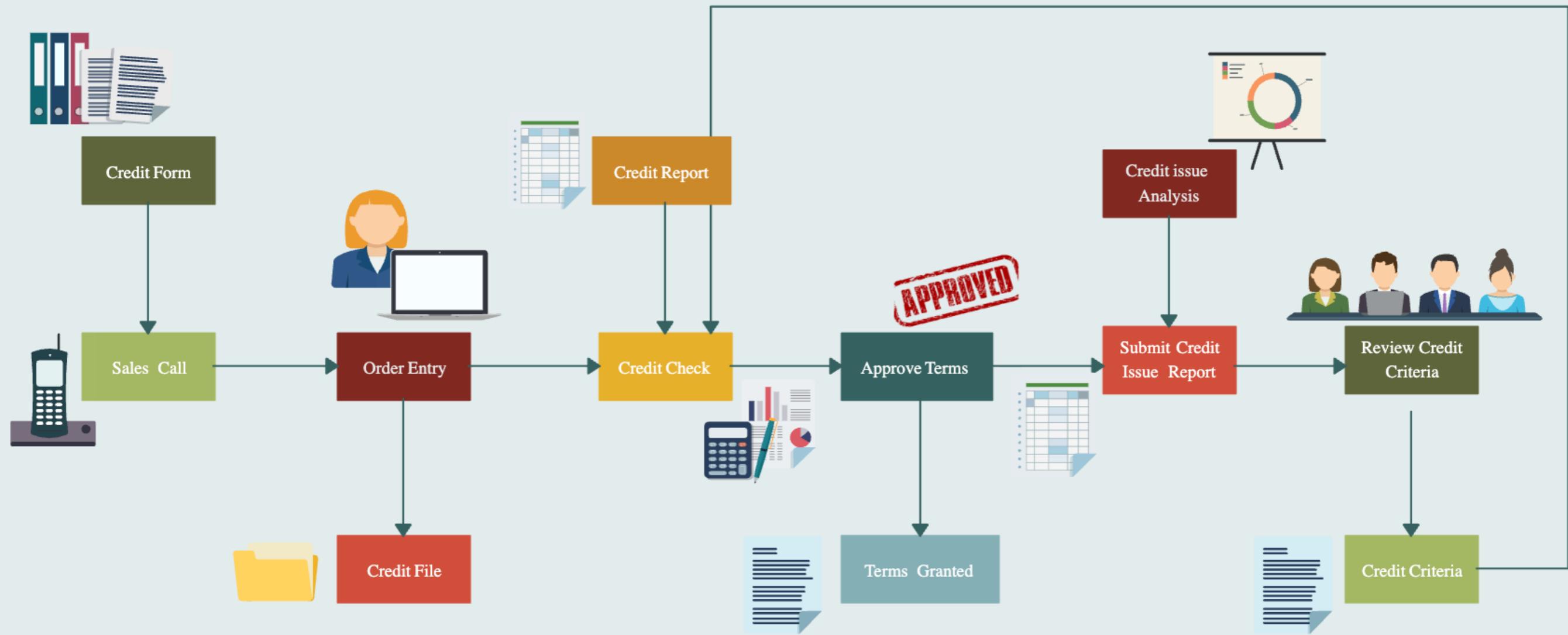
<https://bpmn.io/>



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Workflow Diagram



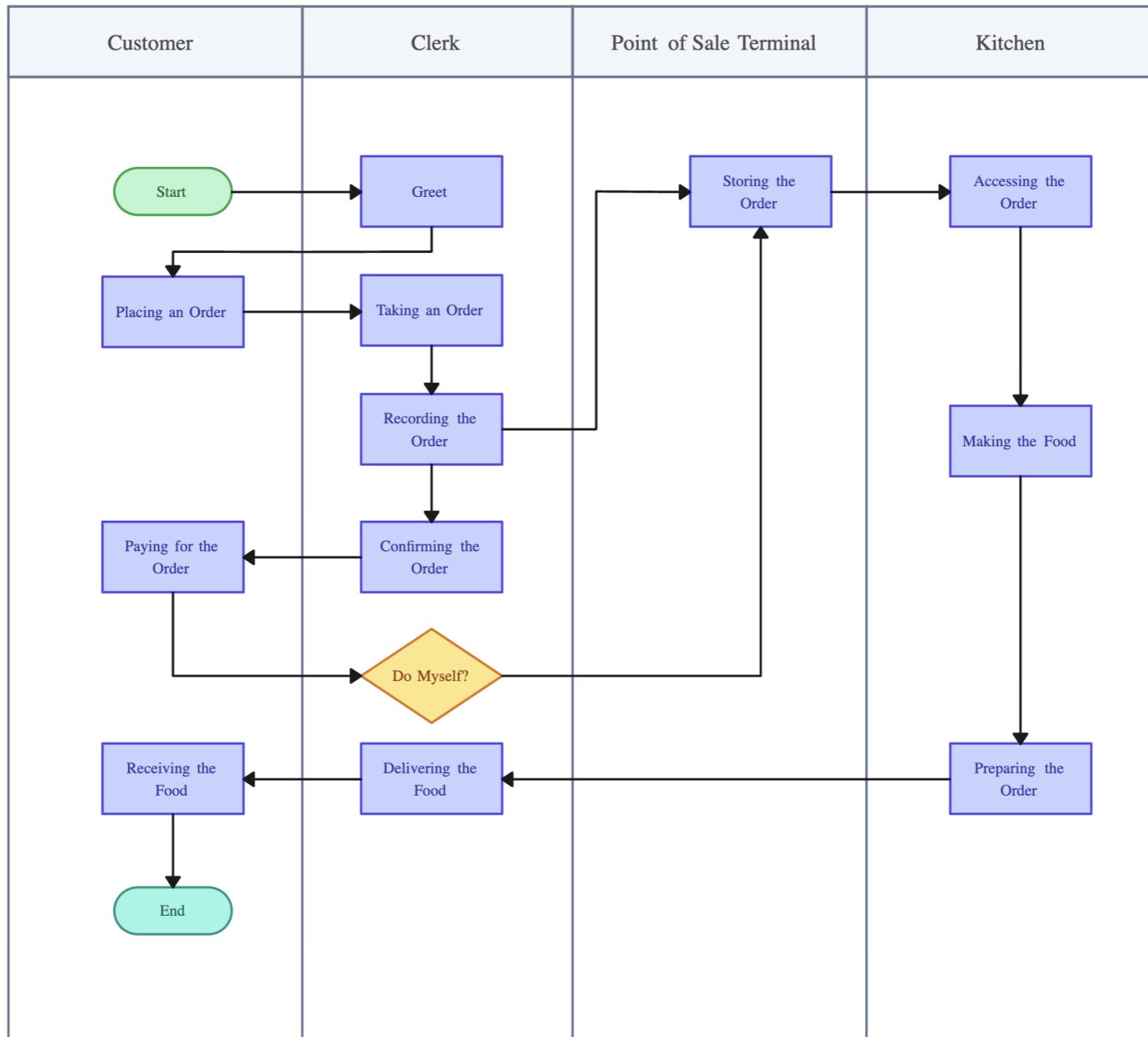
<https://creately.com/guides/workflow-visualization/>



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Swimlane Diagram



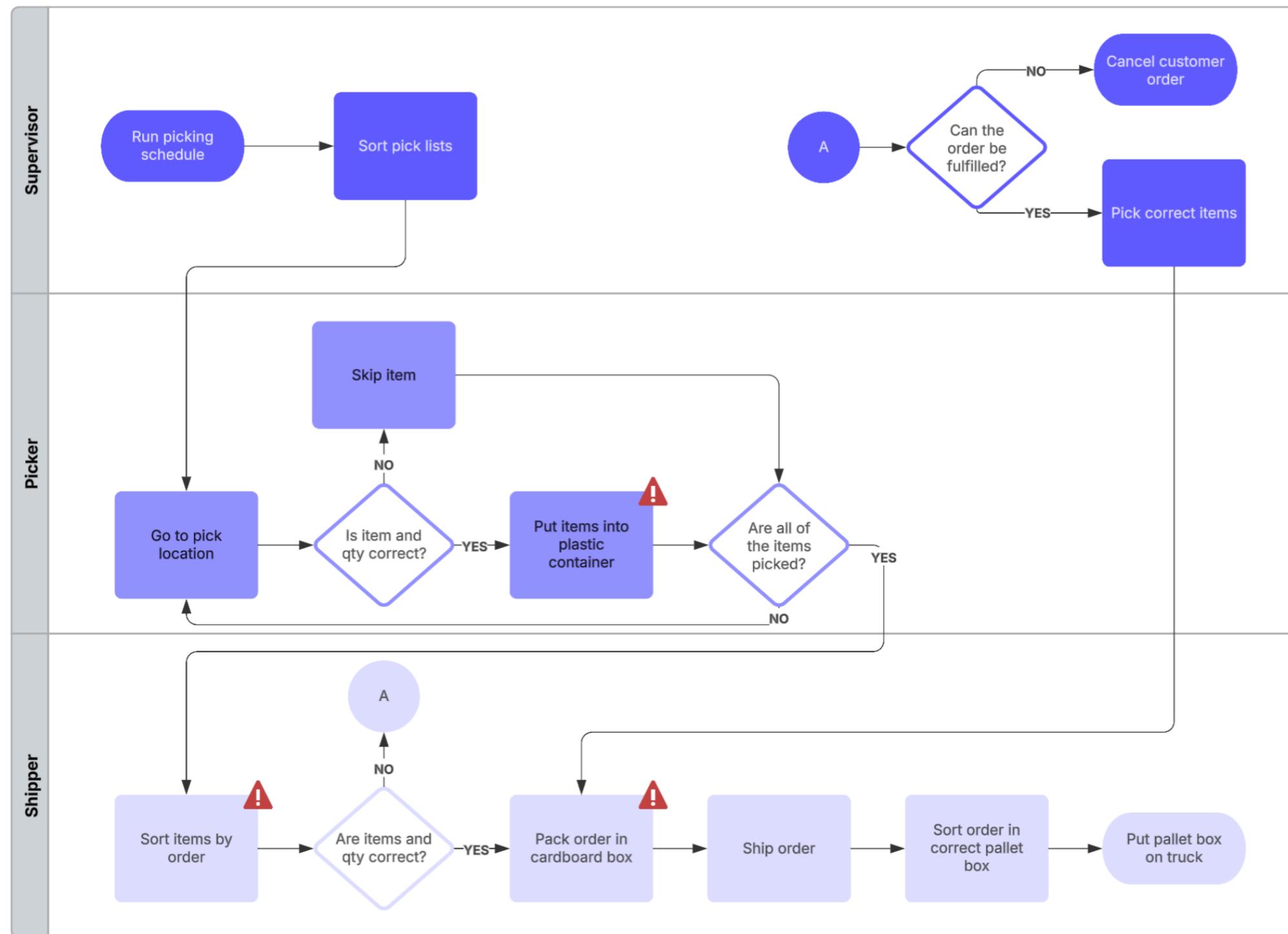
<https://creately.com/guides/workflow-visualization/>



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Flowchart and Swimlane



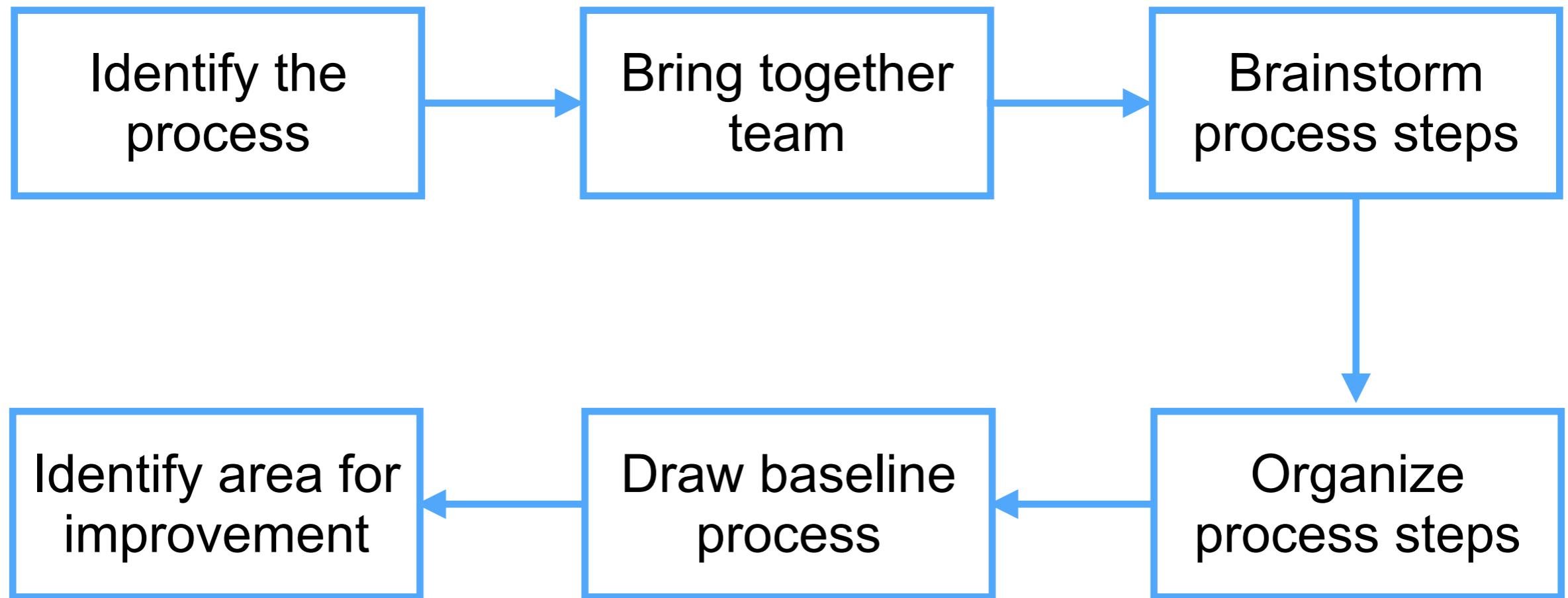
<https://www.lucidchart.com/blog/3-diagrams-to-make-your-processes-more-visual>



Steps of workshop



Steps of Process map



<https://creately.com/guides/process-mapping-guide/>



1. Define strategy and scope

This initial phase sets the foundation for the entire project by defining its purpose, goals, and boundaries.

Identify
objective

Establish
scope

Secure
Buy-in



2. Discovery gather information

Collect data and gather insights to understand how the process currently works (as-is state)

Collect data

Observe
process

Identify pain
point



3. Mapping visualize workflow

Mapping translates the gathered information into a **clear visual representation**.

This step helps everyone involved see the bigger picture and identify issues

Create the map

Identify key components

Highlight handoffs



4. Visualization communicate

The final stage is about presenting the analysis and new workflow in a compelling and easy-to-understand format

Present change

Highlight impact

Monitor and refine



Start of workshop



Event Storming

Collaborative, hands-on session used to quickly explore and map complex business domains

The screenshot shows the 'Styles' section of the Event Storming website. At the top, there's a navigation bar with links for STYLES, SERVICES, RESOURCES, WORKSHOPS, BOOK, and CONTACT US. The 'STYLES' link is underlined. Below the navigation, the word 'Styles' is centered above a horizontal line.

Underneath, a sub-headline reads: "What will you use EventStorming for? Pick the most suitable style for your own purpose".

The page is divided into four main sections, each featuring a title, an icon, and a brief description:

- Improve YOUR ORGANIZATION**: Features an icon of a central node connected by orange lines to several smaller nodes. Description: "Dig into the business flow of an entire line of business. Uncover inconsistencies between different perspectives and competing goals. Highlight key impediments to meaningful value delivery. Gather collective understanding and consensus around the next actions."
- Envision YOUR STARTUP ECOSYSTEM**: Features an icon of a cluster of nodes connected by white lines. Description: "Explore the landscape of an entire new business ecosystem. Enforce consistent storytelling between stakeholders and partners. Highlight architectural boundaries to allow robust and flexible evolution."
- Explore NEW SERVICES' DYNAMICS**: Features an icon of a grid of colored squares (blue, green, yellow, red). Description: "Design services collaboratively, involving key stakeholders. Support cross-discipline conversations between business, service designers and IT representatives. Manage multiple perspectives on the same model, from value delivery to emotions and risks."
- Design CRITICAL SOFTWARE**: Features an icon of a more complex network of colored squares. Description: "Design key software behaviour for your most critical processes. Unfold the needs of multiple stakeholders on a sophisticated event-driven model. Be ready to embrace the full power of Microservices and Domain-Driven Design."

<https://www.eventstorming.com/>



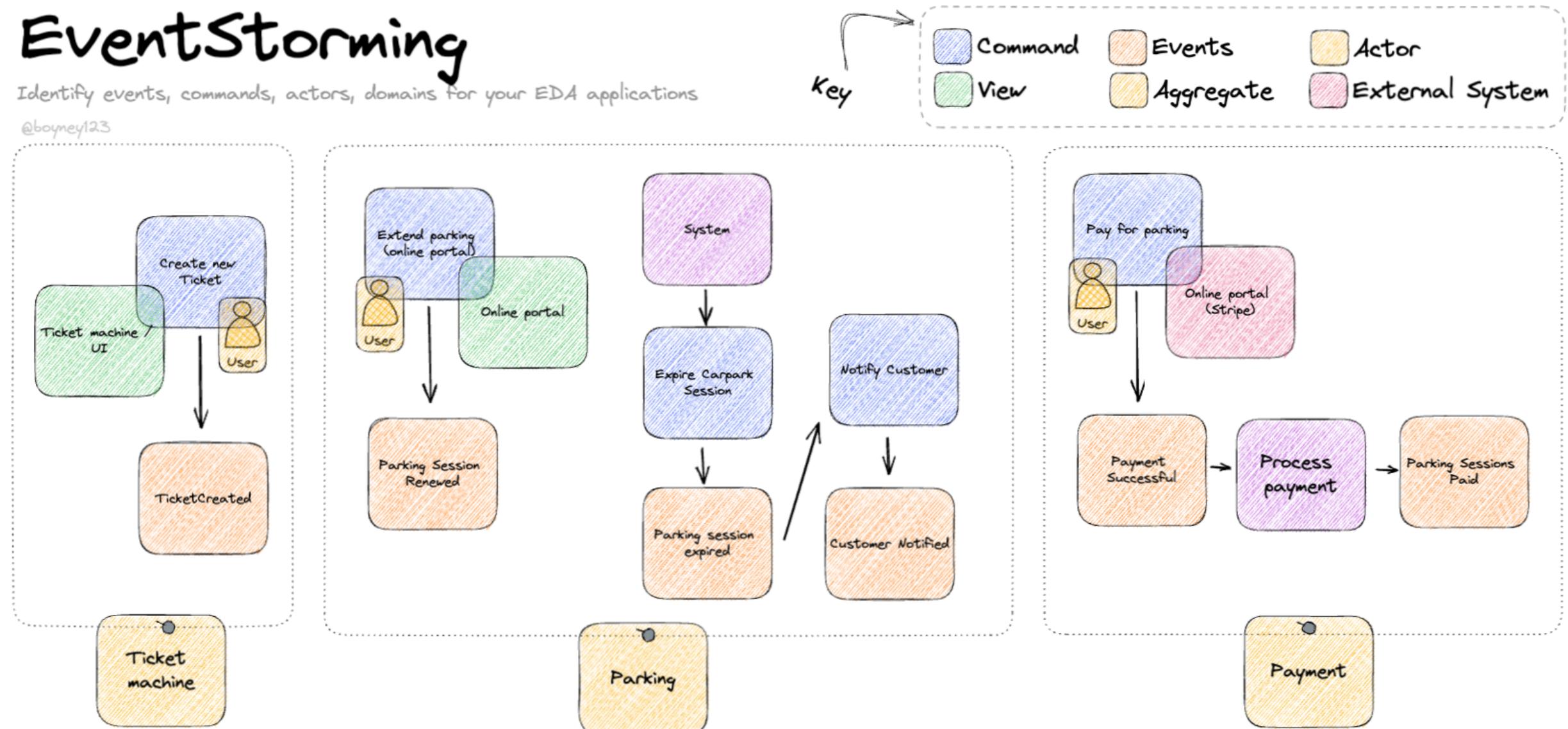
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Event Storming

EventStorming

Identify events, commands, actors, domains for your EDA applications
@boyney123



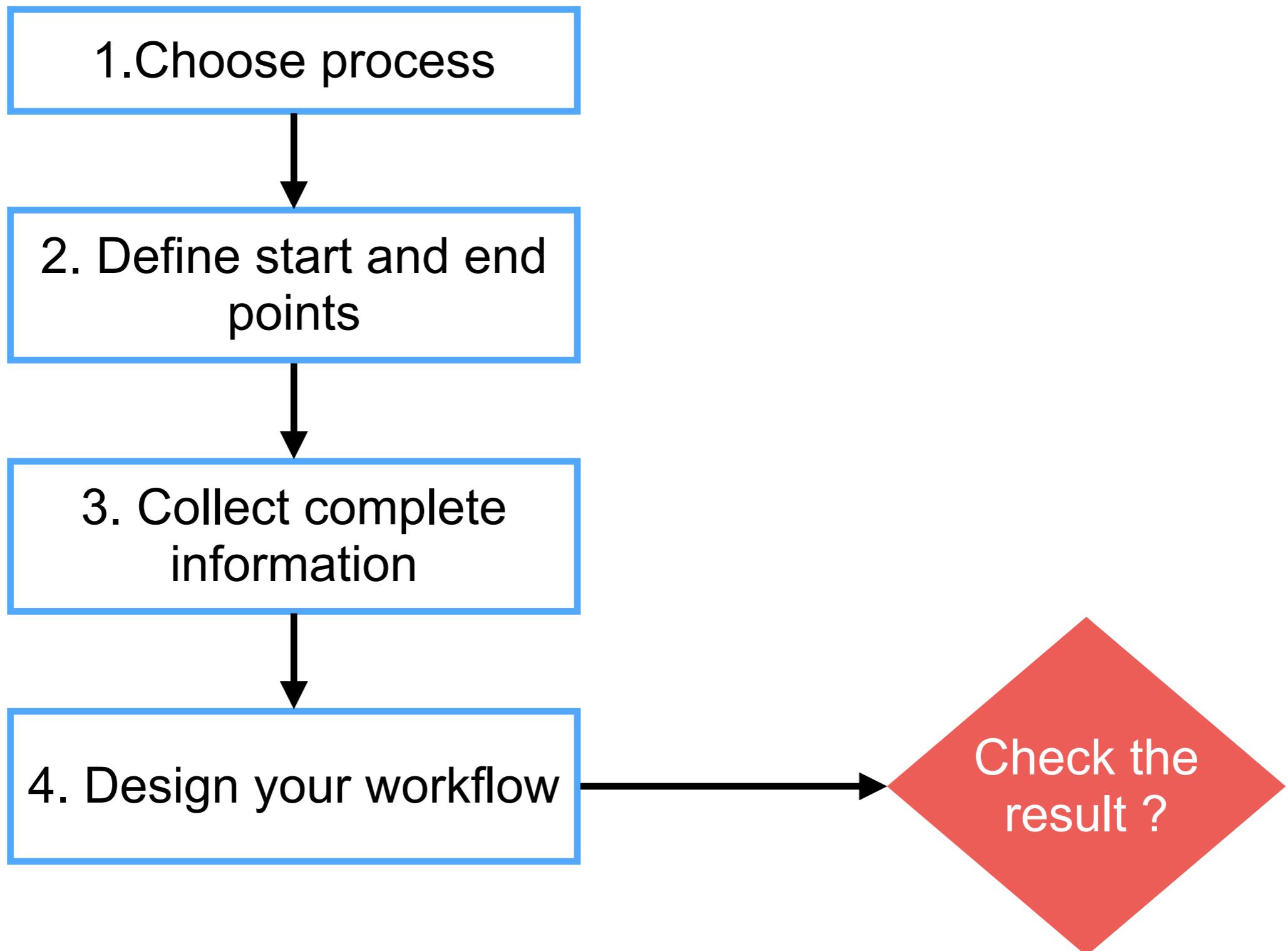
<https://eda-visuals.boyney.io/visuals/event-storming>



How to create a workflow diagram ?



Steps



Q/A



BPMN

(Business Process Model and Notation)



BPMN

Business Process Model and Notation
Standard for business process modeling

Designed to provide a standard notation readily understandable by all business stakeholders, business analysts and technical

Organizational
structure

Functional
breakdown

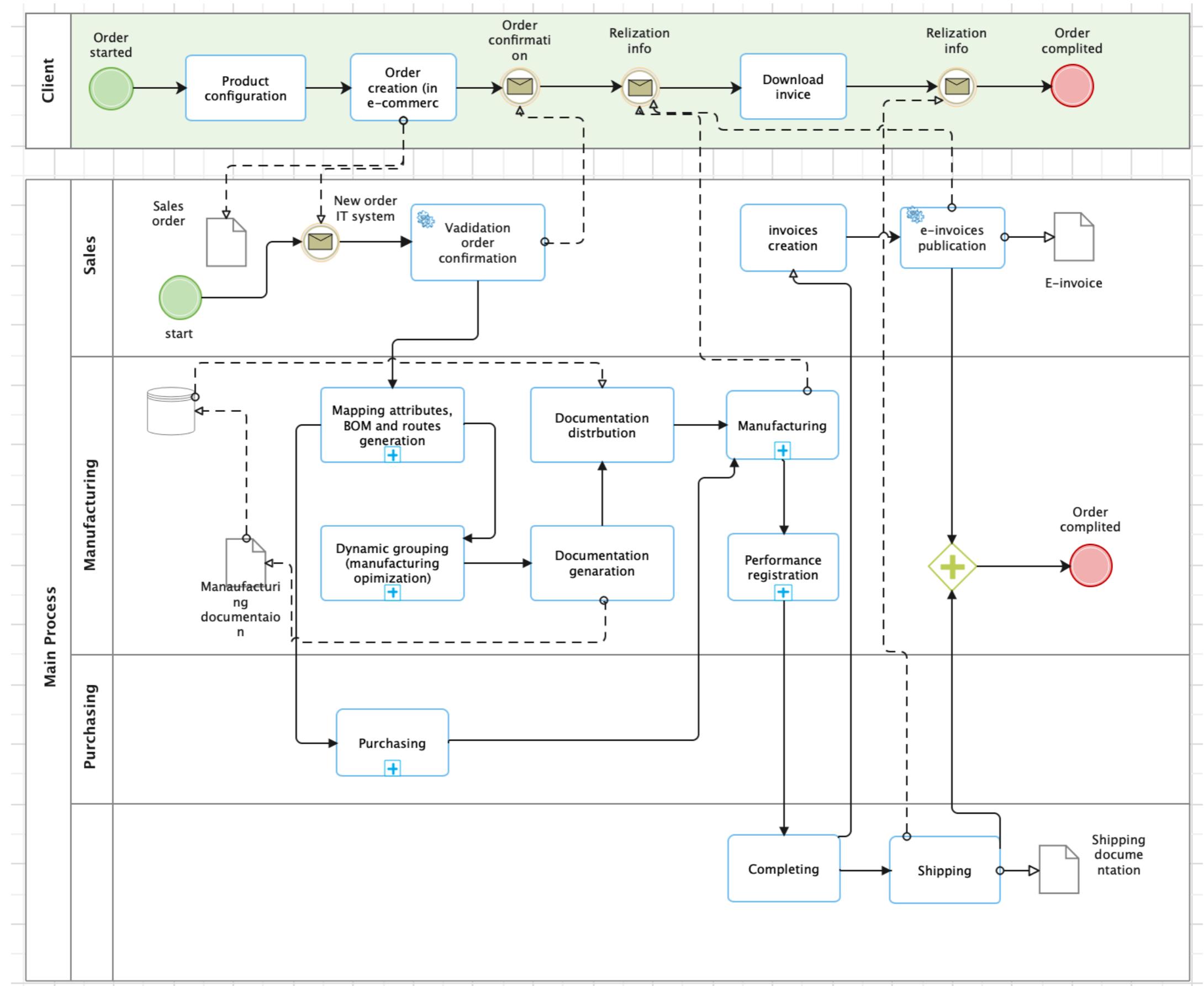
Data model

https://en.wikipedia.org/wiki/Business_Process_Model_and_Notation



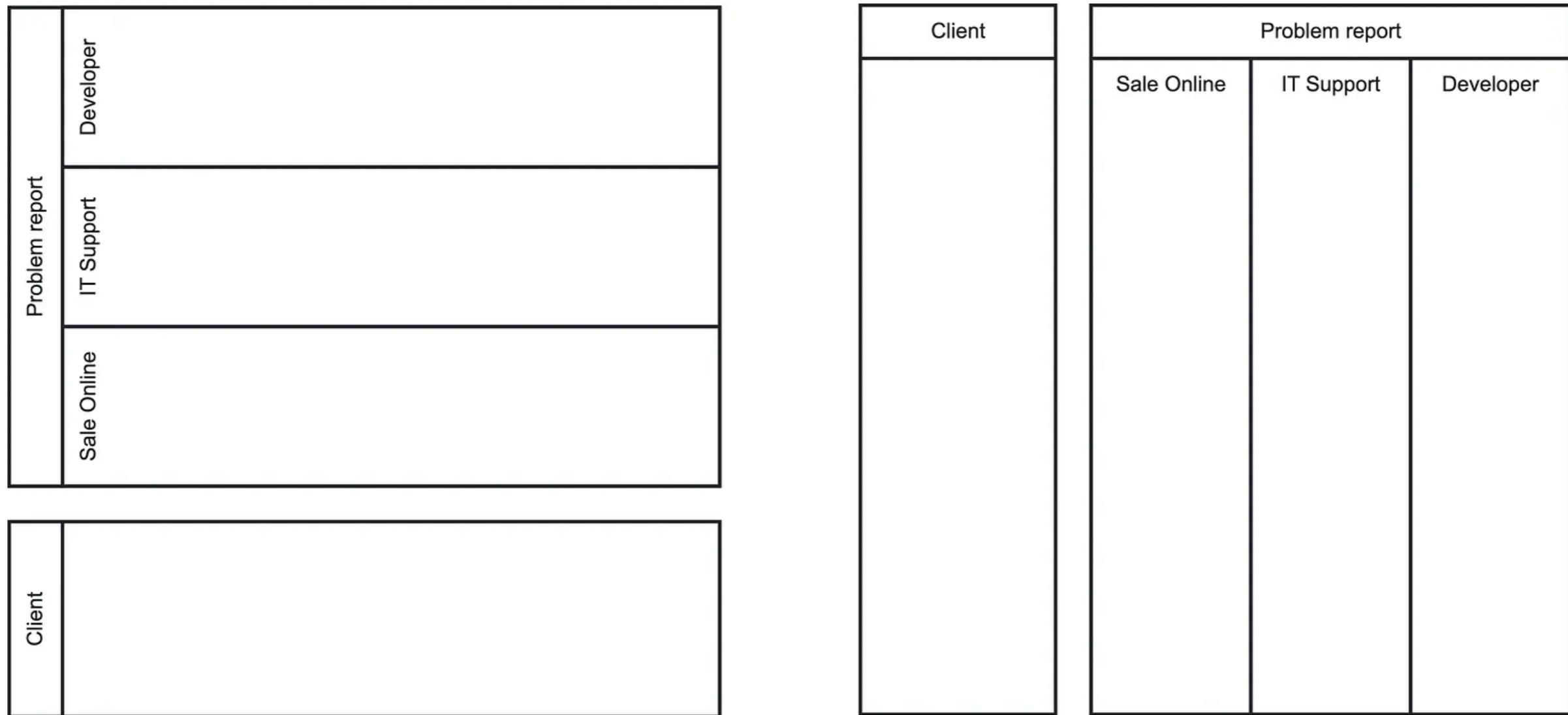
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Pool and Lane

Pool ใช้ในการแสดง process/company/department
Lane หรือ swim lane สำหรับ sub-entity ใน pool นั้น ๆ



Activity (1)

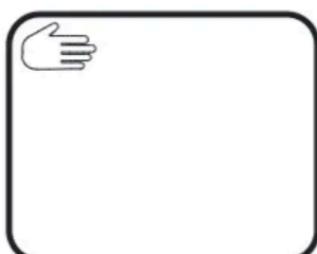
แสดงขั้นตอนการทำงานต่าง ๆ ในแต่ละ lane



Task หรือ งานทั่ว ๆ ไป



งานที่เกิดขึ้นระหว่างผู้ใช้งานกับระบบหรือซอฟต์แวร์



งานที่ทำแบบ manual ที่ไม่ใช้โปรแกรมหรือซอฟต์แวร์ใด ๆ เข้ามาช่วย



เป็นงานที่เกิดขึ้นแบบอัตโนมัติ เช่น เกิดจากการประมวลผลจากระบบ



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Activity (2)

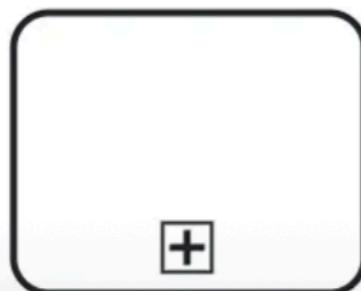
แสดงขั้นตอนการทำงานต่าง ๆ ในแต่ละ lane



เป็นการที่เกิดขึ้นโดยใช้ script เข้ามาช่วยในการประมวลผล



เป็นงานที่เกิดขึ้นเชิง Business เช่น การคำนวณส่วนลด, การอนุมัติจากผู้บริหาร, กระบวนการกำหนด rule ต่าง ๆ เป็นต้น



เป็น sub process เพื่อซ้อนการทำงานส่วนย่อย ๆ เข้าไว้ภายใน



Activity (3)

แสดงขั้นตอนการทำงานต่าง ๆ ในแต่ละ lane



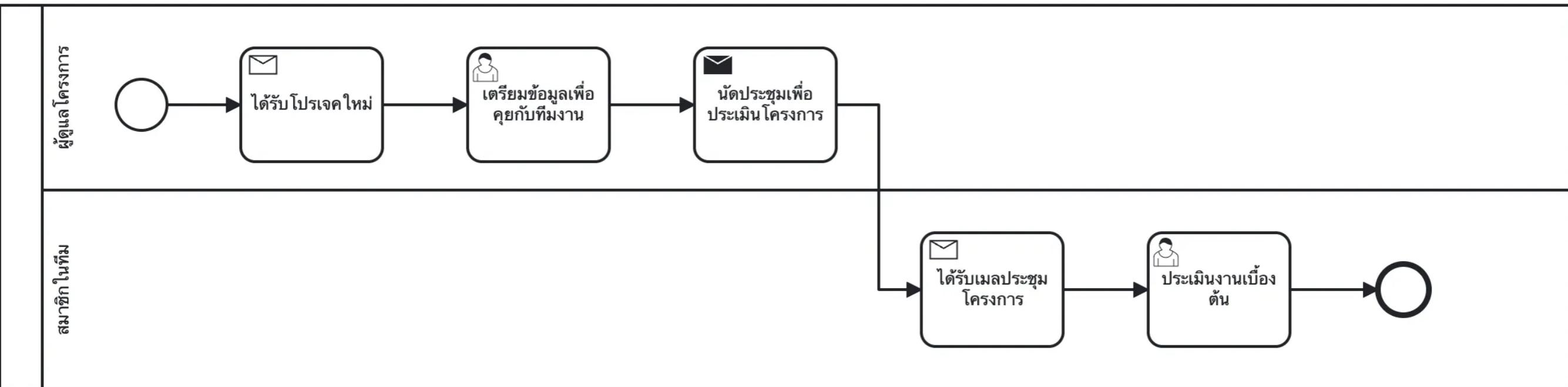
เป็น activity ประเภท Send task ที่ใช้ในการส่ง message ไปยัง process อื่น ๆ เช่น ใช้ส่ง email ไปยังผู้ใช้เป็นต้น



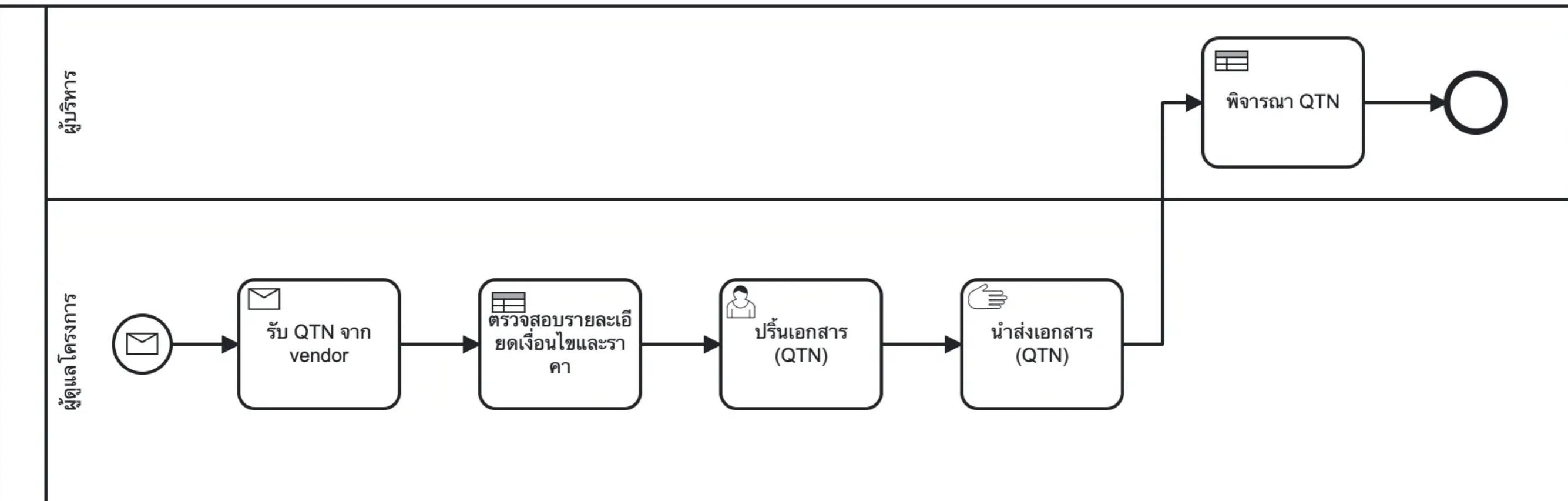
เป็น activity ที่ใช้ในการรับ message จาก process อื่น ๆ เช่น รับจาก Send task เป็นต้น



Example (1)



Example (2)



Data

แสดงรูปแบบของข้อมูลชนิดต่าง ๆ ที่ใช้ในแต่ละ process



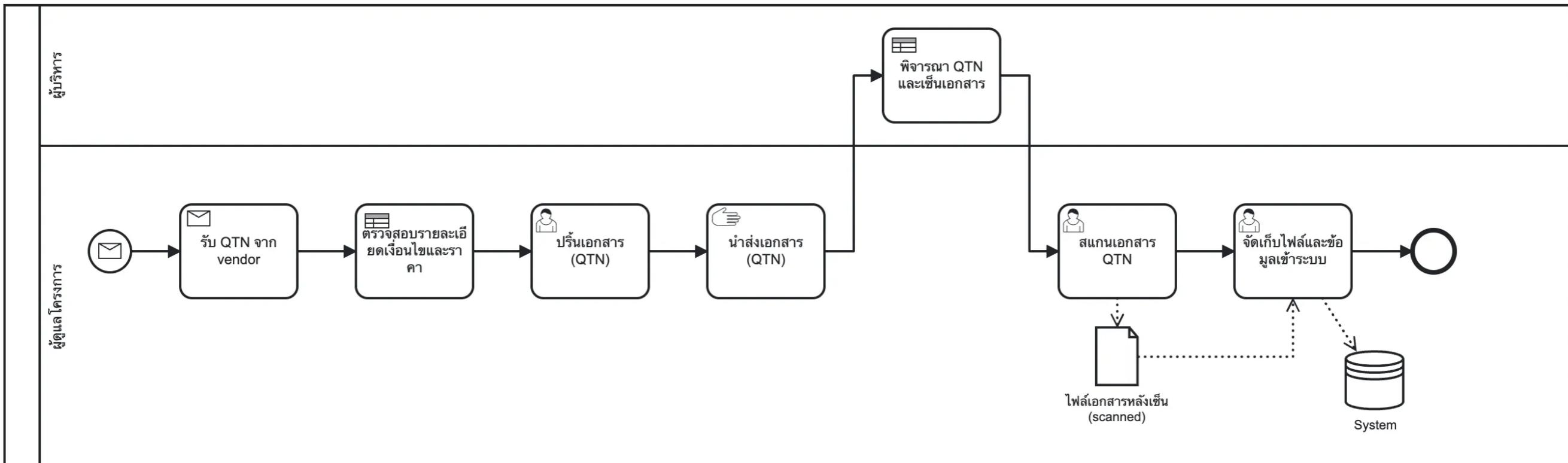
Data Object เป็นข้อมูลเอกสารที่ใช้ในการ process ไม่ว่าจะเป็นรูปแบบเอกสารที่เป็นแบบ physical หรือเป็นในรูปแบบ digital file ก็ได้



Data Store พูดได้ว่าเป็น “ฐานข้อมูล” ก็ได้ หรือจะใช้ในนัยของระบบของฝ่าย IT หรือ application ที่ใช้ร่วมกับ process ก็ได้เช่นกัน



Example



Gateway

แสดงเงื่อนไขของการทำงานในรูปแบบต่าง ๆ



ใช้ในการตัดสินใจเพื่อเลือกไป 1 ทางเท่านั้น



ใช้ในการตัดสินใจเพื่อเลือกไป 1 ทางเท่านั้น (แต่จะไม่ทำงานทันทีต้องรอ events ต่าง ๆ ที่จะเข้ามา เช่น Message event, Timer event เป็นต้น)



ใช้ในการเลือกเส้นทางเหมือน Choice สามารถเข้าได้มากกว่า 1 เส้นทาง



ใช้สำหรับการทำงานที่ต้องทำงานพร้อม ๆ กัน



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Example

