BNPMN An example...

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Pizzeria Pronto

The customers of Pizzeria Pronto place their pizza orders by telephone. The pizza order is received by the clerk who forwards the order to the pizza baker. The pizza baker bakes the pizza and then handles the pizza to a delivery boy who delivers the pizza to the waiting customer. The customer pays the pizza to the delivery boy who then handles a receipt to the customer. When the delivery boy returns to the Pizzeria, he hands over the money to the clerk.



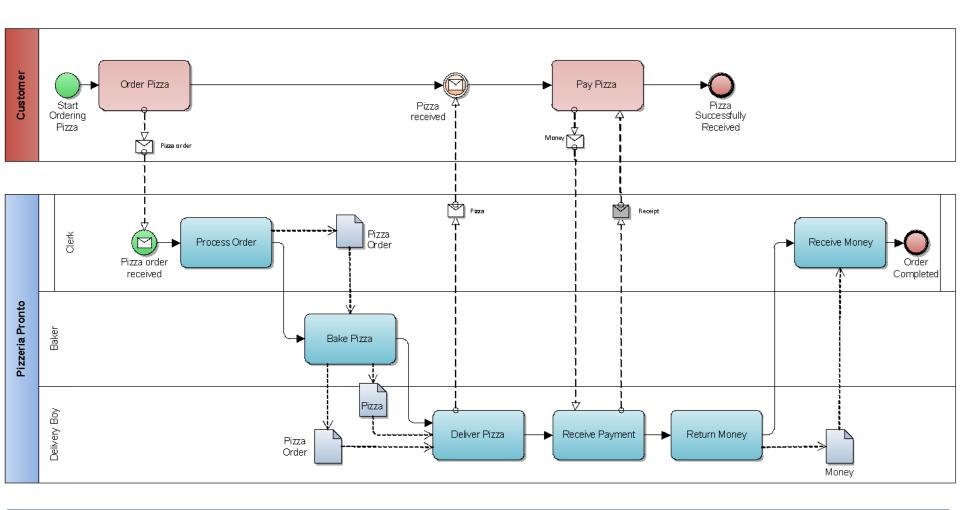
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candidates: process/activity/task org/participant/role object/message

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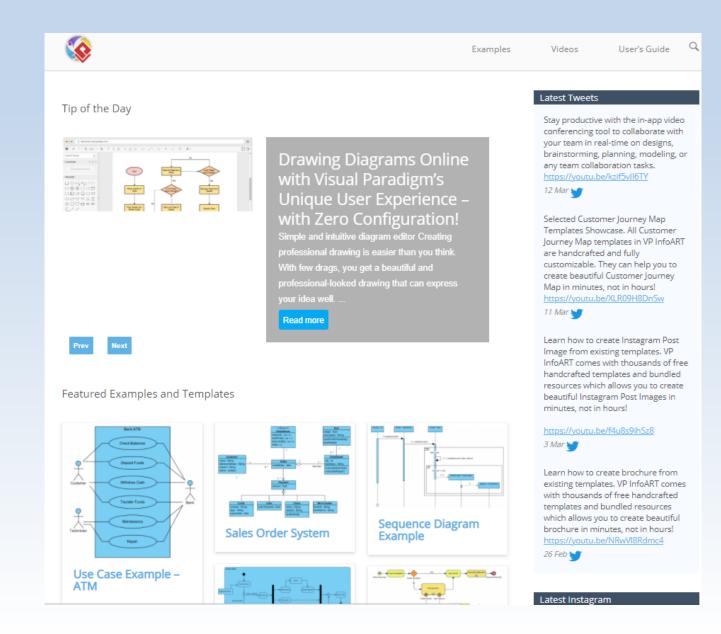
Pizzeria Process Collaboration Diagram



This simple collaboration shows the *sequence flows* (between the *lanes* of a *participant*), *message flows* (between *participants*) and the *data objects* and their *associations* to *activities* (i.e. the data flow). *Events* are used to synchronize the two *participants*. Each *message flow* shows what *message* is being sent or received.

Nice looking examples from: https://circle.visual-paradigm.com

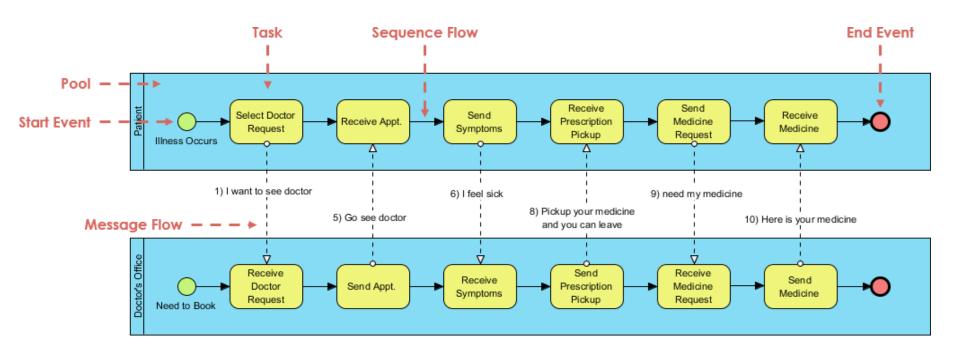






Patient Business Process

This BPM example shows swimlanes for the Doctor's Office and a Patient. The flow starts from when the patient's illness occurs, goes through setting up an appointment, getting prescription and receiving medicine. Both lanes have start and end events. Message flows are also shown along with Sequence flows. Several tasks are shown and annotation are shown as the message flows.



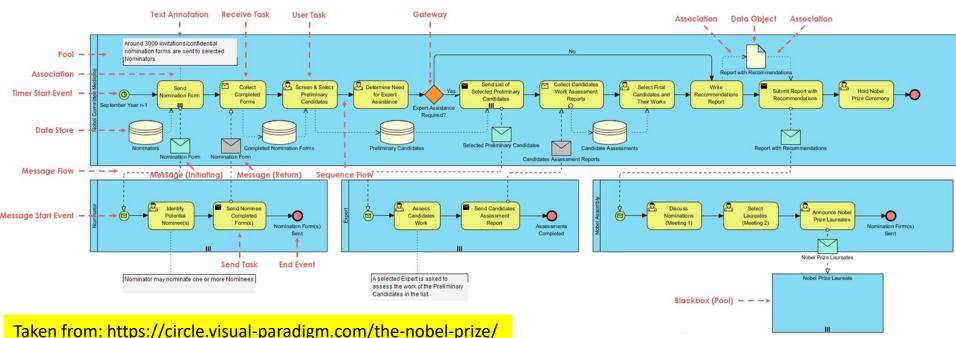


The Nobel Prize

This is a BPMN process diagram example that visualizes the flow of Nobel Prize nomination. The selection of a Nobel Prize Laureate is a lengthy and carefully executed process. The processes slightly differ for each of the six prizes; the results are the same for each of the six categories. Following is the description for the Nobel Prize in Medicine. The main actors in the processes for Nomination, Selection and Accepting and Receiving the award are the:

- Nobel Committee for Medicine
- Nominators
- Specially appointed experts
- Nobel Assembly and
- Nobel Laureates

Each year in September, in the year preceding the year the Prize is awarded, around 3000 invitations or confidential nomination forms are sent out by the Nobel Committee for Medicine to selected Nominators. *Extracted from OMG BPMN 2.0 by Example

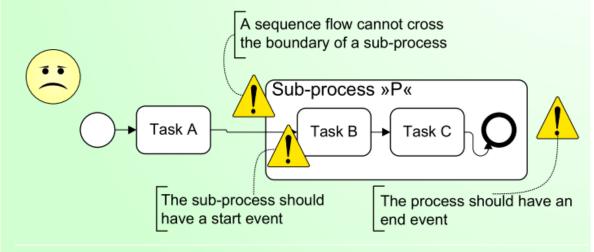


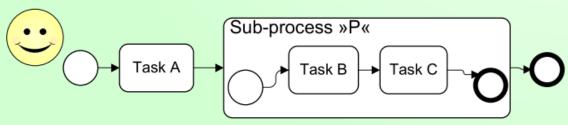
BPMN Patterns and Anti-Patterns

Use of the sequence flow mechanism



When using expanded sub-processes, sequence flows should be connected to the boundaries of sub-processes. Processes and sub-processes should start and end properly!





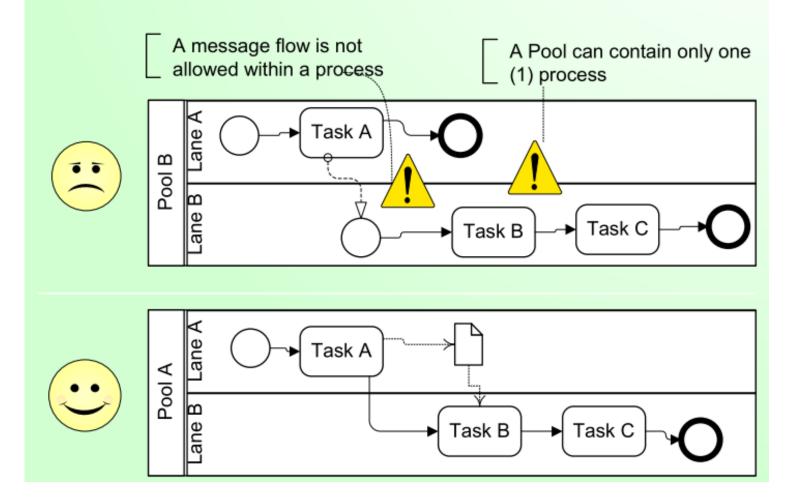


Although it is recommended that a process has an explicit start and end event, this is not a rule. In fact start and end events can be hidden in a sub process, if needed, or attached to the boundary of the task so as not to interrupt the normal sequence flow between the sub-process and the rest of the process.

Use of flows within lanes



Lanes are often wrongly used in similar ways as Pools. They wrongly contain more business processes or contain message flows between different lanes.



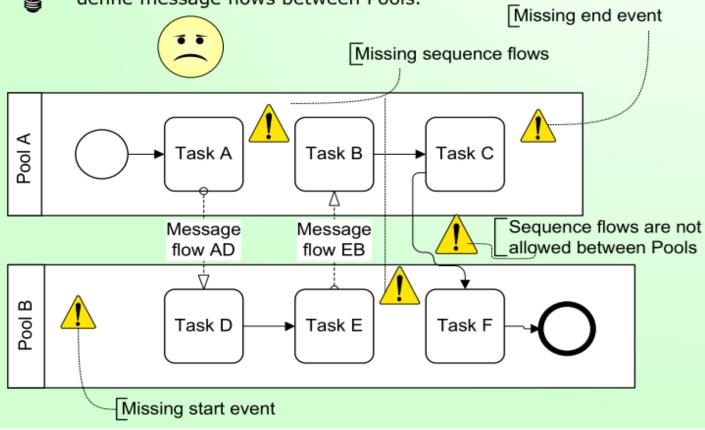
Wrong use of flows in/between pools



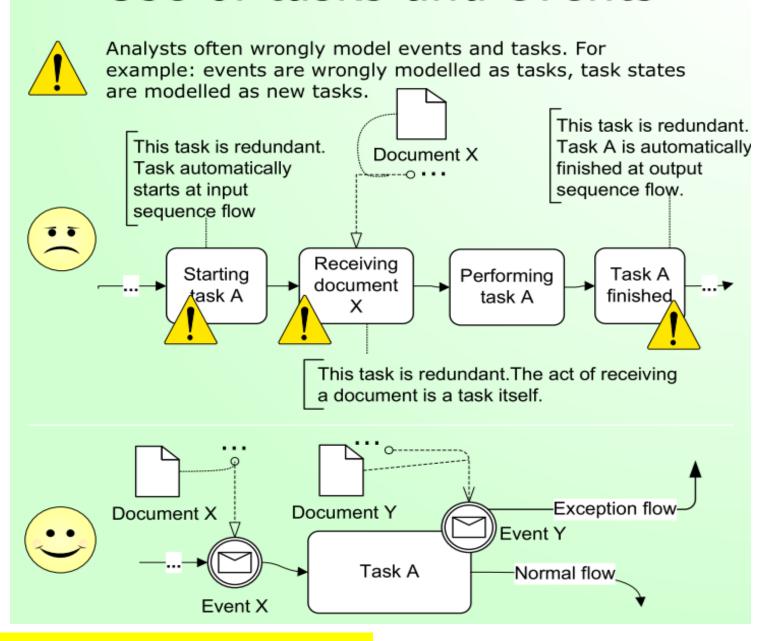
When modelling Pools, sequence flows and start/end events are often missing, because it is wrongly presumed that message flows substitute sequence flows. Additionally, sequence flows are incorrectly used to connect pools.

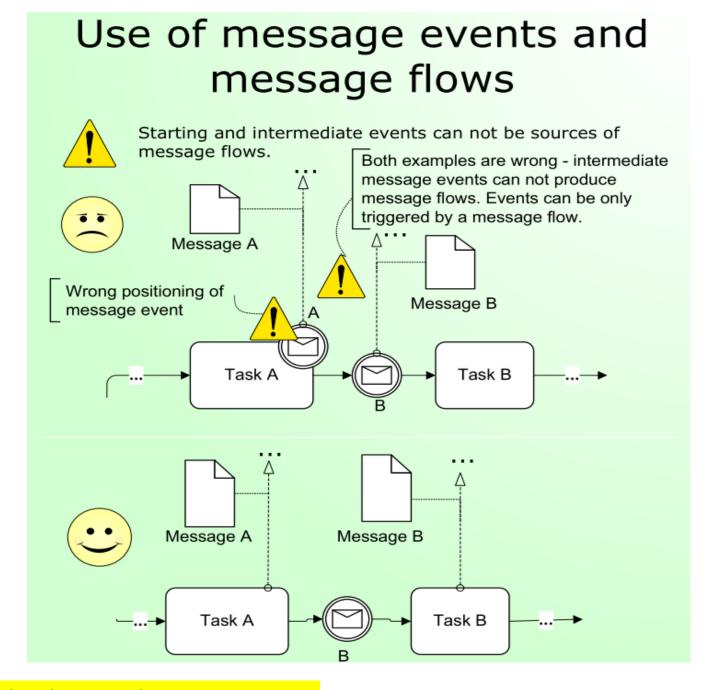


Model the process in each Pool independently and afterwards define message flows between Pools.



Use of tasks and events

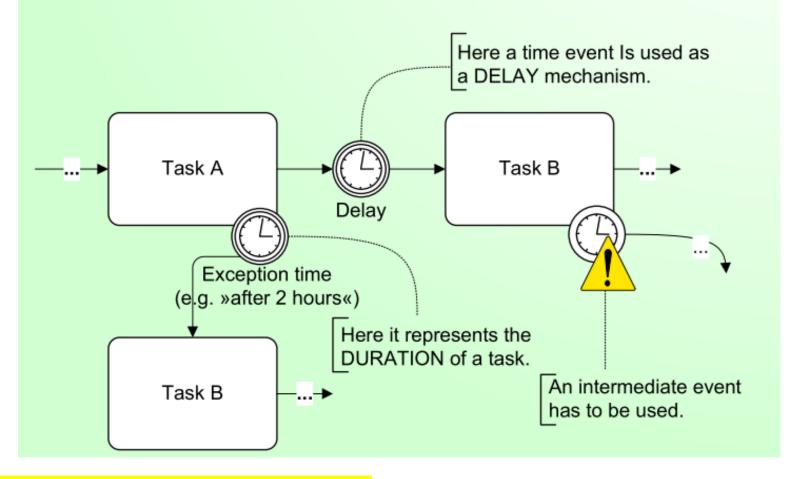




(Wrong) Use of time events



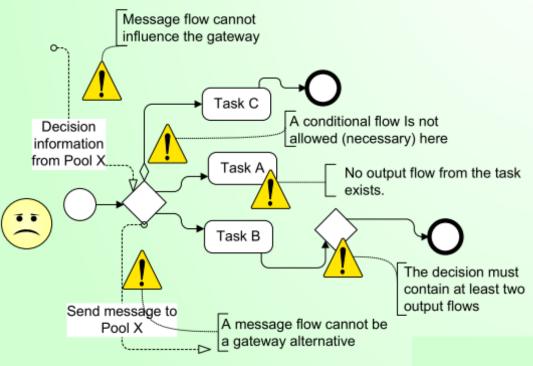
There are two common mistakes when using time events. First, starting events are often used instead of intermediate events. Second, intermediate events are often used as a delay mechanism but modelled as an exception mechanism (representing the duration of a task) and vice-versa (see the right use below).

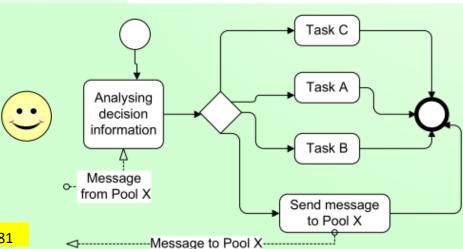


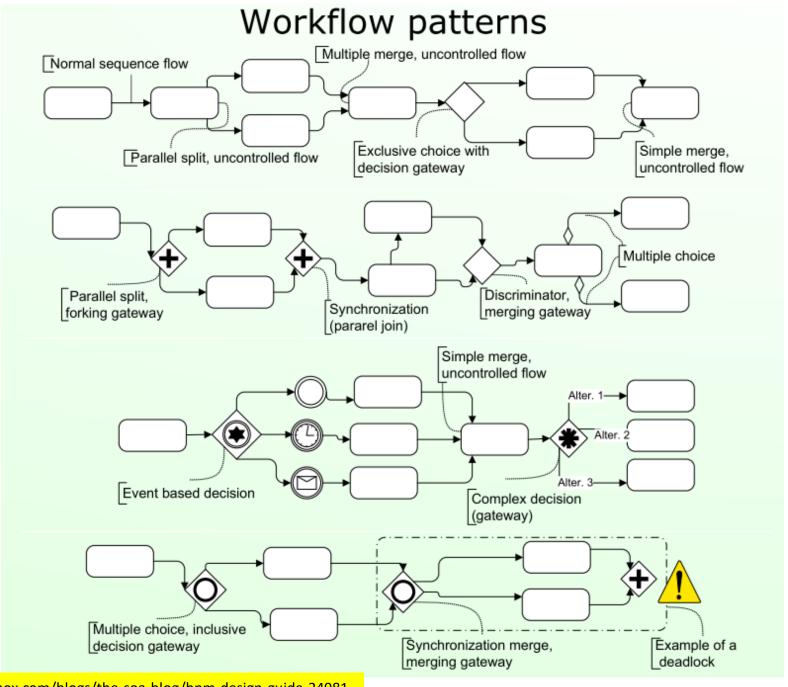
Use of gateways



Gateways are connected only with sequence flows. Also Avoid potential deadlocks when using gateways.

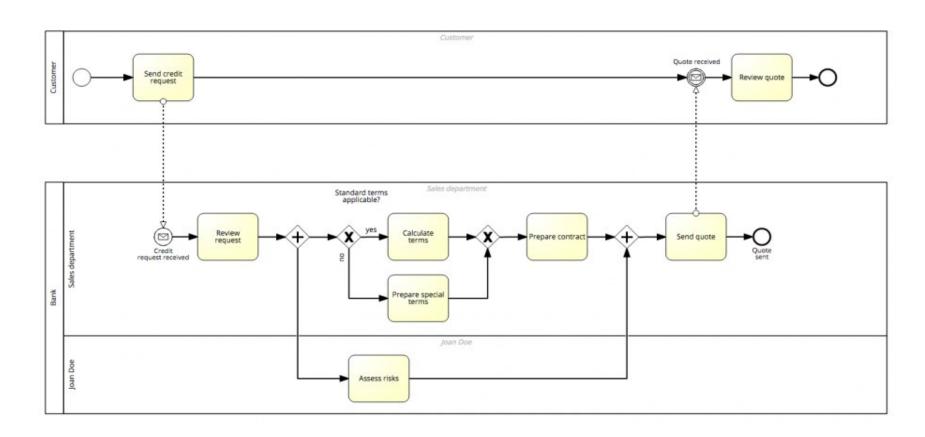






What is "less good" in this diagram?

(also review the pizzaria exemple under this discussion that is going to follow now...)



What is "less good" in this diagram?

Only things that concern as REQUIREMENTS should be modeled within an expanded pool as private behaviour.

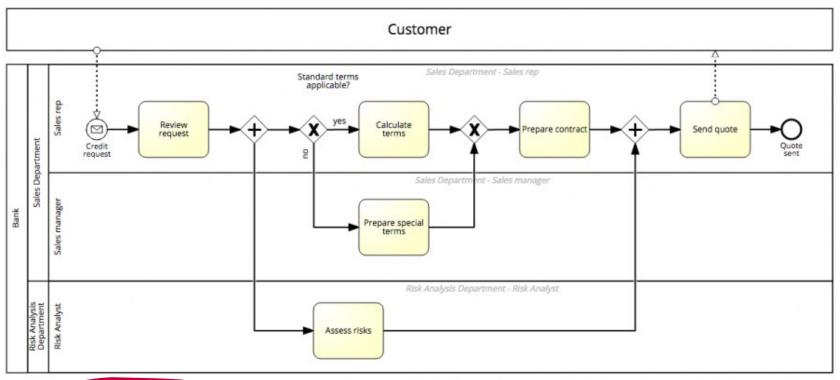
Thus, here 'Customer' should be a collapsed pool: we don't control what the customers are doing, we just know we receive credit requests from them. They might send the quote to their financial advisor asking them for feedback for example. Modeling the customer part of the process dilutes our modeling scope. As a rule of thumb, we can say that a process diagram should contain exactly one expanded pool, which contains the process in scope — and if necessary one or multiple collapsed ones.

Duote received BPMN Lanes should represent specific roles. The lane 'Sales Department' is not sufficiently specific. We need to define Standard terms what roles are exactly in charge of the different tasks. For example, the task 'Prepare special terms' might need to be executed by a senior or specialist role. Assess risks

BPMN Lanes should not represent individuals.

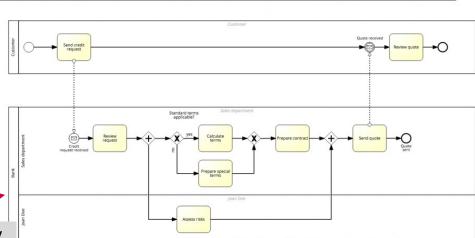
The Lane 'Joan Doe' is too specific. If in your real-world process, the task is always executed by one specific person, you most likely have a problem. The process can't be properly executed when this person is on sick leave or vacation. Moreover, when the person leaves the company, she might take a lot of implicit knowledge with her. In our example, you probably want to introduce a 'Risk Analyst' role (and possibly a 'Risk Analysis' department).

What is (was) "less good" in this diagram?



OK, if the system of concern is "the business of the bank"

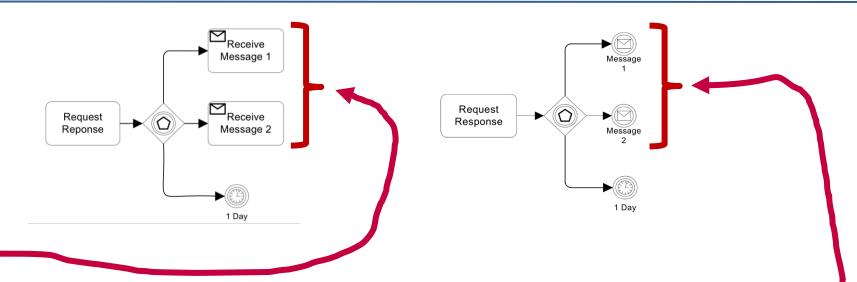
OK if the system of concern IS NOT "the business of the bank" but "how a bank and a costumer must relate"



https://www.signavio.com/post/bpmn-pools-and-lanes/



On events and (send or receive) tasks



Warning: These two examples ARE NOT THE SAME!!!:

- In the example at the left we see represented receive tasks, which mean an "active waiting for the message", meaning the resource that is allocated to that is in a active waiting for that (what might imply, for example, the spending of time, money, space, ..., but on the other time the reaction to the reception of a message might be fast, with no "set-up time" to react to that, as work can also be done within the task in reaction to the catch)
- In the example at the right, we see represented catch events, which mean a "passive waiting for the message", meaning the resource that is allocated to that is in a passive waiting (what might result, for example, that time, money, space, ... might be made free for other uses..., but on the other time the reaction to the reception of a message might be slower, with a need of "set-up time" to react to that...)

https://camunda.com/bpmn/examples/

<u>Camunda</u>

Monthly Invoicing

Additional Information

Required

Processing a Batch of Orders

Reassigning User Tasks

Two Step Escalation

BPMN Modeling Styles

Avoid Crossing Flows

Naming Conventions

Symmetric Modeling

Use Equal Task Sizes

Overview

We have taught BPMN to thousands of people and we apply the notation in our daily project work since 2007. Below you can find lots of BPMN examples of common modeling problems. Regardless of your specific project or your industry, there are a lot of common questions about using BPMN. In our experience, most of the BPMN examples below are useful to any BPMN user.

We joined the OMG in 2009 as an influencing member. Since then, we have been participating in the development of BPMN 2.0.

BPMN Examples

Business Rules and BPMN

Modeling Scenario

Let's say we want to model a process in BPMN and the process induces some business rules. We will use the example of creating a bill. In order to create the bill, a discount needs to be computed. The sum of the order and the customer type are the relevant criteria to compute the discount.

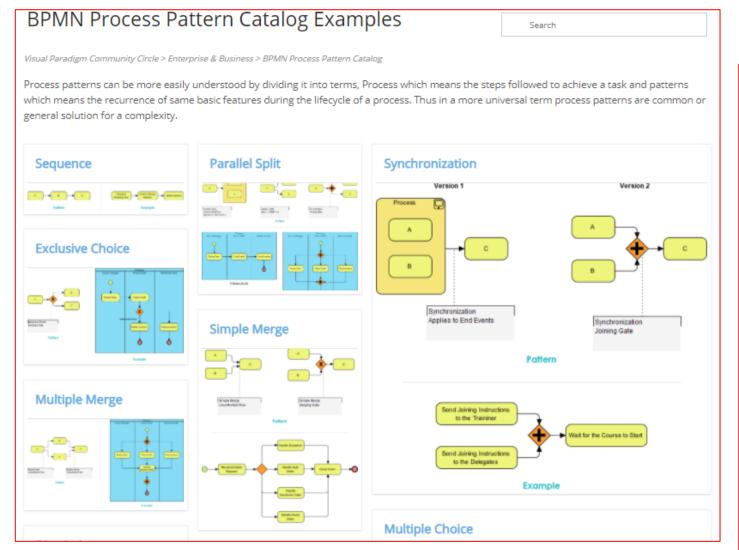
This is a very simple example which will show us where to apply BPMN and where not to.

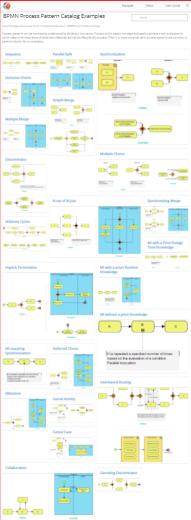
The Solution as BPMN 2.0 Diagram

BPMN Examples Rusiness Rules and RPMI Dependent Instances



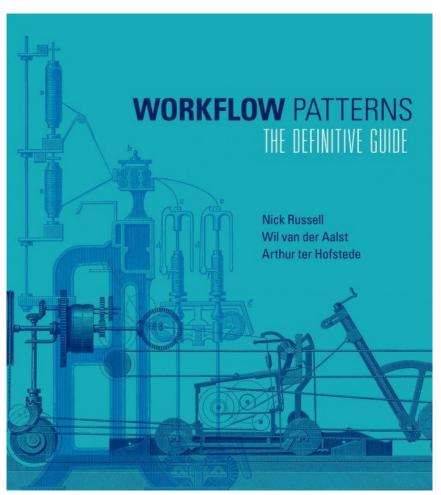
https://circle.visual-paradigm.com/category/enterprise-business/bpmn-process-pattern-catalog/







More Patterns http://www.workflowpatterns.com/



The Workflow Patterns initiative is a joint effort of Eindhoven University of Technology (led by <u>Professor Wil van der Aalst</u>) and Queensland University of Technology (led by Professor Arthur ter Hofstede) which started in 1999. The aim of this initiative is to provide a conceptual basis for process technology. In particular, the research provides a thorough examination of the various perspectives (control flow, data, resource, and exception handling) that need to be supported by a workflow language or a business process modelling language. The results can be used for examining the suitability of a particular process language or workflow system for a particular project, assessing relative strengths and weaknesses of various approaches to process specification, implementing certain business requirements in a particular process-aware information system, and as a basis for language and tool development.

On this web site you will find detailed descriptions of <u>patterns</u> for the various perspectives relevant for process-aware information systems: control-flow, data, resource, exception handling and event log imperfections. In addition you will find detailed <u>evaluations</u> of various process languages, (proposed) standards for web service compositions, and workflow systems in terms of this patterns.