Validation Rules

Validation Rules in Scheer PAS *Business Modeler*

This section contains lists of implemented validation rules for **EPC**, **Value Chain** and **BPMN** diagrams in **Scheer PAS** *Business Modeler* .

EPC Validation Rules

- A model must have at least one starting and one ending **Event** or **Process Interface** (as determined by the relations leading to/from them).
- **Functions** and **Events** must alternate in the **EPC flow**.
  - An Event **never** leads to an Event, and a Function **never** leads to a Function.
  - This also applies if an operator is between them.
- Both **Functions** and **Events** can at most have one **incoming** and one **outgoing relation**.
- **EPC flows** are always branched and merged using operators (**AND, OR, XOR**).
- **Functions** can lead to **AND**, **OR**, **XOR** operators.
- **Events** can only lead to **AND** operators.
- Any operator can lead to **Functions**/**Events**.
- **Auxiliary objects** can only be connected to an **Event** or **Function**. They cannot be connected to another auxiliary object or relation.
- A **Function** must be connected to at least one **execution agent** (must have a person /organization/system that performs the execution).
- An **operator** can have multiple **incoming** relations or multiple **outgoing** relations, but not both. It has to have **multiple** relations on one side, and **one** relation on the other.

Value Chain Diagram Validation Rules

Permitted relations are as follows:

- Risk Value Added Chain
- Product/Service Value Added Chain
- Objective Value Added Chain
- Application system type Value Added Chain
- KPI Value Added Chain
- Organizational unit Value Added Chain and Cluster
- Cluster Value Added Chain and Organizational unit

BPMN Validation Rules

Start and End events:

- A '**Start event**' must have at least one **outgoing** connection to a sequence flow.
- An '**End event**' must have at let one **incoming** connection with a sequence flow.
- If a process uses '**Start event**' symbols, all other flow objects must have at least one **incoming** connection with a sequence flow.
- If a process uses '**End event**' symbols, all other flow objects must have at least one outgoing connection to a sequence flow.
- If a process uses '**End event**' symbols, at least one '**Start event**' symbol is required.
- If a process uses '**Start event**' symbols, at least one '**End event**' symbol is required.

General:

- An '**Event-based gateway'** symbol must have at least **two outgoing connections** to sequence flows.
- A **flow object** must have only one (at most) **outgoing** default sequence flow.
- Every **event object** with symbol 'Link intermediate event (throw)' must have one **copy** with symbol 'Link intermediate event (catch)' in the model.
- A **function** that has an outgoing connection to a conditional sequence flow must have at least one other **outgoing connection** to a sequence flow.

Subprocess:

- If an '**Event subprocess'** has a start event, it must have an end event, and vice versa.

General events:

- An **intermediate event** that is used in a regular flow must have at least one **incoming** connection with a sequence flow.

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Related Pages:

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- Compare Model

Related Documentation:

- Business Process Model and Notation
- Business Process Model and Notation Specification Version 2.0
- Validation and Improvement of BPMN Diagrams
- BPMN and BPMN 2.0 Tutorial
- BPMN 2.0 Symbol Reference
- BPMN 2.0 Implementation Reference
- BPMN Quick Guide
- The Event-Driven Process Chain
- How to Draw EPC Diagram

- An **intermediate event** that is used in a regular flow must have at least one **outgoing** connection to a sequence flow.

Lanes/Pools:

- A **sequence flow** must not have connections extending beyond pool boundaries. This means that a process must be **fully embedded** in a pool.

Extra rules:

- The **target objects** of an event-based gateway must not have any other incoming connection with a sequence flow.