



System Process Viewpoint

Domain	Aspect	Maturity
Functional	Process & Behavior	 released

Example



Purpose

The System Process Viewpoint provides the functional representation of the system using a black-box approach

- the representation of the SOI and all Context Elements
- the System Functions the SOI shall be able to perform
- the Context Functions the Context Elements are expected to perform
- the exchange between SOI System Functions and Context Functions of Context Elements

- the functional flows crossing the boundary between SOI and Context Elements

Applicability

The System Process Viewpoint supports the "System Requirements Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§4.3] and contributes to the System Function Definition and the System Functional Interface Identification.

Stakeholder

- [Acquirer](#)
- [Customer](#)
- [Hardware Developer](#)
- [IV&V Engineer](#)
- [Operator](#)
- [Project Manager](#)
- [Safety Expert](#)
- [Security Expert](#)
- [Software Developer](#)
- [Supplier](#)
- [System Architect](#)
- [User](#)

Concern

- How does a system function interact with its environment?
- How is the system interacting with the identified external entities?
- What are necessary inputs for operating the system expected to be provided by other external entities?
- What are the functional interfaces of the system?
- What are the scenarios a system function is utilized in?
- What is the functional scope of the system?
- What services are expected from external entities?
- Which functions are out of scope of the system?
- Which functions will the system provide?

Presentation

The Functional Scenario Activities and their sequence related to a System UseCase are represented in activity diagrams featuring swim lanes. The swim lanes are typed with Context Elements and SOI usage from the System Contexts. Note: It is recommended to compile separate activity diagrams refining Use Case and System Context.

Profile Model Reference

- [Allocate \[SysML Profile\]](#)
- [Allocate \[SysML Profile\]](#)
- [ControlFlow \[UML_Standard_Profile\]](#)
- [InputPin \[UML_Standard_Profile\]](#)
- [ObjectFlow \[UML_Standard_Profile\]](#)
- [OutputPin \[UML_Standard_Profile\]](#)
- [Parameter \[UML_Standard_Profile\]](#)
- [SAF_ContextAction](#)
- [SAF_ContextFunction](#)
- [SAF_FunctionAction](#)
- [SAF_LogicalRole](#)
- [SAF_LogicalRole](#)
- [SAF_SFV03a_View](#)
- [SAF_SystemFunction](#)
- [SAF_SystemProcess](#)

Input from other Viewpoints

Required Viewpoints

none

Recommended Viewpoints

- [Operational Context Definition Viewpoint](#)
- [Operational Domain Item Kind Viewpoint](#)
- [System Context Definition Viewpoint](#)
- [System Domain Item Kind Viewpoint](#)