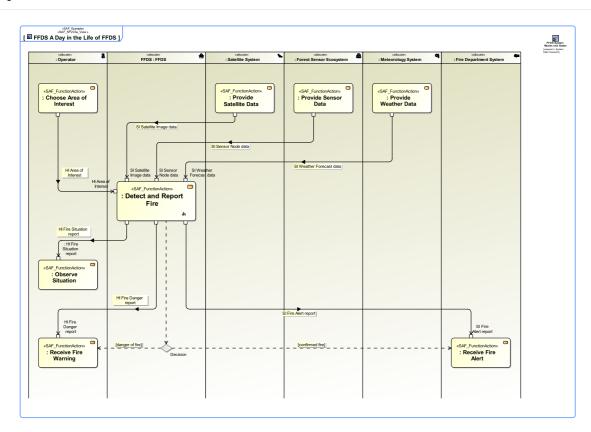


# **System Process Viewpoint**

Domain: Functional Aspect: Process & Behavior

### **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 Element(s)
- 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 entitys?
- 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 Activity(s) and their sequence related to a System UseCase are represented in activity diagram(s) featuring swim lanes. The swim lanes are typed with Context Element(s) and SOI usage from the System Context(s). 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 ContextFunction
- SAF FunctionAction
- 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