



# SAF User Documentation : Logical Functional Mapping Viewpoint

Domain	Aspect	Maturity
Logical	Traceability & Mapping	 released

## Example

Legend		FFDS Context					
Allocate		: Operator ..... : Satellite System [1..*] ..... : Forest Sensor Ecosystem [1..*] ..... : Meteorology System [1..*] ..... : Fire Department System [1..*] ..... FFDS : FFDS [1] .....					
<b>FFDS A Day in the Life of FFDS(context FFDS Context)</b>		3	1	1	1	1	
:Choose Area of Interest		1					
:Provide Satellite Data		1					
:Provide Sensor Data		1					
:Provide Weather Data		1					
:Observe Situation		1					
:Receive Fire Warning		1					
:Receive Fire Alert		1					
:Detect and Report Fire		1					1
:Request image data		1					1
:Request sensor data		1					1
:Request weather data		1					1
:Retrieve image data		1					1
:Retrieve sensor data		1					1
:Retrieve weather data		1					1
:Acquire metadata		1					1
:Analyze FF data		1					1
:Visualize FF data		1					1
:Manage Operator warning		1					1
:Display Operator warning		1					1
:Alert fire		1					1
:Report fire		1					1

## Purpose

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The Logical Functional Mapping Viewpoint specifies the assignment of the System Functions and the System Partial Functions to the Logical SOI and the Logical SOI Elements.

## Applicability

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The Logical Function Allocation Viewpoint supports the "System Architecture Definition process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 .

## Stakeholder

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- [Hardware Developer](#)
- [Software Developer](#)
- [System Architect](#)

## Concern

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- Which (system and system partial) functions are assigned to a logical item and logical item components?  
Note: if allocation of usage is used, then allocation of definition is a derived relationship XOR.

## Presentation

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A Logical Functional Mapping Matrix featuring

- the call behavior action representing usage of System Functions and or System Partial Functions
- the part properties representing usage of Logical SOI Elements
- the allocation relationship between abovementioned elements

## Profile Model Reference

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- Allocate [SysML Profile]
- [SAF\\_FunctionAction](#)
- [SAF\\_LogicalContextRole](#)
- [SAF\\_LogicalElement](#)
- [SAF\\_LogicalSOI](#)
- [SAF\\_SLV08a\\_View](#)
- [SAF\\_SystemFunction](#)
- [SAF\\_SystemPartialFunction](#)

## Input from other Viewpoints

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### Required Viewpoints

- [Logical Structure Viewpoint](#)
- [System Process Viewpoint](#)
- [System Functional Refinement Viewpoint](#)

## **Recommended Viewpoints**

- [System Domain Item Kind Viewpoint](#)