





## SAF User Documentation : System Requirement Traceability Viewpoint

| Domain     | Aspect                 | Maturity  |
|------------|------------------------|---|
| Functional | Traceability & Mapping | <br>released |

### Example

| Legend  |  |                                       |   |   |                                   |   |   |                                 |                              |   |                           |                                  |   |  |  |
|---|--|---------------------------------------|---|---|-----------------------------------|---|---|---------------------------------|------------------------------|---|---------------------------|----------------------------------|---|--|--|
|  SAF_SystemFunctionalRequirementRefinement |  |                                       |   |   |                                   |   |   |                                 |                              |   |                           |                                  |   |  |  |
|  SAF_SystemRequirementDerivation           |  |                                       |   |   |                                   |   |   |                                 |                              |   |                           |                                  |   |  |  |
|   |  | Detect and Report Fire (context FFDS) | Request sensor data (context FFDS)  | Analyze FF data (context FFDS Context)  | Alert fire (context FFDS Context) | Retrieve sensor data (context FFDS)   | Provide Sensor Data (context FFDS)  | StakeholderRequirement [CONOPS_ | Capability [CEO FFDS Vendor] | CPBLTY-11 Fire Detection  | CPBLTY-12 Fire Monitoring | Capability [Fire Operations Expe | CPBLTY-25 Propagation Estimati  |  |  |
|    | FFDS_Requirement   |                                       | 1   | 2   | 1                                 | 1   | 2   |                                 |                              | 1   | 1                         |                                  | 1   |  |  |
|    | Fire Detection   |                                       | 1   |   | 1                                 | 1   | 2   |                                 |                              | 1   |                           |                                  |   |  |  |
|    |  SYS-REQ-002 Forest Fire Detection            | 3                                     |  |   |                                   |  |  | 1                               | 1                            |  |                           |                                  |   |  |  |
|   |  SYS-REQ-002.1 Smoke and Fire Detection       | 1                                     |   |   |                                   |  |   |                                 |                              |   |                           |                                  |   |  |  |
|   |  SYS-REQ-002.2 Smoke and Fire Alert           | 1                                     |   |  |                                   |   |   |                                 |                              |   |                           |                                  |   |  |  |
|    | Fire Monitoring  |                                       |   | 1   |                                   |   |   |                                 |                              |   | 1                         |                                  |   |  |  |
|   |  SYS-REQ-003 Forest Fire Evolution Monitoring | 1                                     |  |   |                                   |   |   | 1                               | 1                            |  |                           |                                  |   |  |  |
|    | Fire Prediction  |                                       |   | 1   |                                   |   |   |                                 |                              |   |                           |                                  | 1   |  |  |
|   |  SYS-REQ-004 Forest Fire Spread Prediction    | 1                                     |  |   |                                   |   |   | 1                               |                              |   |                           | 1                                |  |  |  |

### Purpose

The System Requirement Traceability Viewpoint specifies for every System Requirement the traceability to the functional domain level

- System Use Case
- System Capability
- System Context Definition
- System Context Exchange
- System Context Interaction
- System Process
- System State

## Applicability

---

The System Requirement Traceability Viewpoint supports the "System Requirements Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§4.3] and contributes to the System Requirements Traceability. The System Requirement Traceability Viewpoint also contributes to the System Requirements Verification and Traceability Matrix (RVTM).

## Stakeholder

---

- [Project Manager](#)

## Concern

---

- What is the rationale for this system requirement?
- Which Stakeholder Requirements are addressed by System Requirements?
- Which system interface is addressed by a system requirement?

## Presentation

---

A dependency matrix featuring relationships for every System Requirement to the functional domain level

- System Use Case
- System Capability
- System Context Definition
- System Context Exchange
- System Context Interaction
- System Process
- System State

## Profile Model Reference

---

The following Stereotypes / Model Elements are used in the Viewpoint:

- [SAF\\_SFV08b\\_View](#)
- [SAF\\_SystemFunctionalRequirement](#)
- [SAF\\_SystemFunctionalRequirementConstraint](#)
- [SAF\\_SystemFunctionalRequirementRefinement](#)
- [SAF\\_SystemNonFunctionalRequirement](#)
- [SAF\\_SystemRequirement](#)
- [SAF\\_SystemRequirementDerivation](#)
- [SAF\\_SystemRequirementDerivation](#)
- [SAF\\_SystemRequirementRefinement](#)
- [SAF\\_SystemRequirementRefinement](#)

- [SAF\\_SystemRequirementRefinement](#)

## Input from other Viewpoints

---

### Required Viewpoints

- [Stakeholder Requirement Viewpoint](#)
- [System Requirement Viewpoint](#)

### Recommended Viewpoints

- [System Use Case Viewpoint](#)
- [System Capability Viewpoint](#)
- [System Context Exchange Viewpoint](#)
- [System Context Interaction Viewpoint](#)
- [System Process Viewpoint](#)
- [System Functional Refinement Viewpoint](#)
- [System State Viewpoint](#)