



# SAF User Documentation : System Requirement Viewpoint

| Domain     | Aspect      | Maturity     |
|------------|-------------|--------------|
| Functional | Requirement | <br>released |

## Example

| #  | Id            | Name                       | Applied Stereotype                      | Text   | Requirement Derived FROM | Source |
|----|---------------|----------------------------|---|--|--------------------------|--------|
| 1  |               | Fire Detection             |   |  |                          |        |
| 2  | SYS-REQ-001   | 24/7 Forest Fire Detection | SAF_SystemFunctionalRequirement [Class] | The FFDS system shall allow a forest fire detection day & night.   |                          | SDS    |
| 3  | SYS-REQ-002   | Forest Fire Detection      | SAF_SystemFunctionalRequirement [Class] | The FFDS system shall allow a forest fire detection acquiring data collected by terrestrial-based and aerial-based systems.                            | CPBLTY-11 Fire Detection | SDS    |
| 4  | SYS-REQ-002.1 | Smoke and Fire Detection   | SAF_SystemFunctionalRequirement [Class] | The FFDS system shall allow to detect smoke and fire.  |                          | SDS    |
| 5  | SYS-REQ-002.2 | Smoke and Fire Alert       | SAF_SystemFunctionalRequirement [Class] | When a forest fire is detected, the FFDS system shall allow to warn FFDS operator, the Fire Department, and other interacting agents about the danger. |                          | SDS    |
| 6  |               | Fire Prediction            |   |  |                          |        |
| 8  |               | Fire Assessment            |   |  |                          |        |
| 10 |               | Fire Monitoring            |   |  |                          |        |

## Purpose

The System Requirement Viewpoint specifies functions, non-functional properties, or constraints of the System. System Requirements are captured, the interrelationships between Functional and Non-Functional Requirements on the same level of abstraction and the traceability to Stakeholder Requirements are depicted.

## Applicability

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

## Stakeholder

- Hardware Developer
- IV&V Engineer

- [Project Manager](#)
- [Software Developer](#)
- [System Architect](#)

## Concern

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- What are the Interface Requirements imposed on the system?
- What are the exchange requirements imposed on the system?
- What are the functional requirements imposed on the system?
- What are the non-functional requirements imposed on the system?
- What are the requirements of environmental conditions imposed on the system?
- What is the range of acceptable system performance, i.e. the critical, top-level performance requirements derived from the operational needs?
- Which Stakeholder Requirements are addressed by System Requirements?

## Presentation

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A tabular format listing

- unique requirement ID, text, and attributes,
- traceability reference to Stakeholder Requirements,
- traceability reference to depended Requirements on the same level of abstraction.

## Profile Model Reference

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

- [SAF\\_SFV06a\\_View](#)
- [SAF\\_StakeholderRequirement](#)
- [SAF\\_SystemFunctionalRequirement](#)
- [SAF\\_SystemFunctionalRequirementConstraint](#)
- [SAF\\_SystemNonFunctionalRequirement](#)
- [SAF\\_SystemRequirement](#)
- [SAF\\_SystemRequirementDerivation](#)
- [SAF\\_SystemRequirementDerivation](#)

## Input from other Viewpoints

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### Required Viewpoints

- [Stakeholder Requirement Viewpoint](#)

### Recommended Viewpoints

- Operational Story Viewpoint
- Operational Context Exchange Viewpoint
- Operational Capability Viewpoint
- Operational Process Viewpoint
- Operational Interaction Viewpoint
- Operational Capability Mapping Viewpoint
- Operational Process Mapping Viewpoint