



# System Requirement Viewpoint

Domain	Aspect	Maturity
Functional	Requirement	 released

## Example

#	△ Id	Name	Applied Stereotype	Text	Derived from Stakeholder Requirement	Source
1		Fire Detection				
2	SYS-REQ-001	24/7 Forest Fire Recognition	SAF_SystemFunctionalRequirement [Class, Element]	The FFDS system shall allow a forest fire recognition day & night.		SDS
3	SYS-REQ-002	Forest Fire Detection	SAF_SystemFunctionalRequirement [Class, Element]	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, Element]	The FFDS system shall allow querying and analysis of the provided sensor data using a smoke and fire detection algorithm.		SDS
5	SYS-REQ-002.2	Smoke and Fire Alert	SAF_SystemFunctionalRequirement [Class, Element]	When a forest fire is detected the FFDS system shall be able to warn interacting agents, FFDS operator and Fire Department, about the danger.		SDS
6		Fire Monitoring				
7	SYS-REQ-003	Forest Fire Evolution Monitoring	SAF_SystemFunctionalRequirement [Class, Element]	In the event of a forest fire the FFDS system shall allow a specific area of interest observation interacting with aerial-based systems.	CPBLTY-12 Fire Monitoring	SDS
8		Fire Prediction				
9	SYS-REQ-004	Forest Fire Spread Prediction	SAF_SystemFunctionalRequirement [Class, Element]	In the event of a forest fire the FFDS system shall allow a fire spread prediction using empirical and physical fire spread models.	CPBLTY-17 Propagation Estimation Capability	SDS
10		Fire Assessment				
11	SYS-REQ-005	Forest Fire Damage Assessment	SAF_SystemFunctionalRequirement [Class, Element]	For evaluating the impacts of forest fire in landscape and biodiversity the FFDS system shall allow the determination of burned and fire affected areas using digital image processing of pre- and post-fire images.		SDS

## 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 System Requirement Table (RVTM) featuring

- unique requirement ID, text and attributes
- traceability reference to upstream model elements and requirements
- traceability reference to depended requirements on the same abstraction level

## Profile Model Reference

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- [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 Traceability Viewpoint
- Operational Process Traceability Viewpoint