



SAF User Documentation : Stakeholder Requirement Viewpoint

| Domain | Aspect | Maturity |
|-------------|-------------|--------------|
| Operational | Requirement | released |

Example

| # | Id | Name | Applied Stereotype | Text | Documentation | Requirement Refining | Requirement Imposed BY |
|----|----------------|---------------------------------------|------------------------------------|--|--|------------------------------|------------------------|
| 1 | | CEO FFDS Vendor | | | | | |
| 2 | | Capability | NumberOwner [Element] | | | | |
| 3 | CPBLTY-12 | Fire Monitoring | SAF_StakeholderRequirement [Class] | Screen 100% of the terrain to have the ability to monitor fire areas. | | Fire Sources early Detection | CEO FFDS Vendor |
| 4 | CPBLTY-12.1 | Area of Interest | SAF_StakeholderRequirement [Class] | In the event of a forest fire, achieve a measurable increase in the monitoring ability in a specific area of interest. | | | |
| 5 | CPBLTY-11 | Fire Detection | SAF_StakeholderRequirement [Class] | Screen 100% of the terrain to have the ability to detect fire areas. | | Fire Sources early Detection | CEO FFDS Vendor |
| 6 | CPBLTY-15 | Data Storage | SAF_StakeholderRequirement [Class] | Ensure the ability to store the collected data. | | | |
| 7 | CPBLTY-14 | Data Collection | SAF_StakeholderRequirement [Class] | Ensure the ability to provide collected data for further analysis. | | | |
| 8 | | Nepalese Official | | | | | |
| 9 | | Capability | NumberOwner [Element] | | | | |
| 10 | CPBLTY-16 | Forest Fire Detecting and Monitoring | SAF_StakeholderRequirement [Class] | Achieve a measurable increase in the detection and monitoring abilities of forest fires. | | Fire Sources early Detection | Nepalese Official |
| 11 | CPBLTY-17 | Forest Fire Pattern Research | SAF_StakeholderRequirement [Class] | Achieve a measurable increase in the ability to research forest fire patterns in order to trace the origin and development of a fire. | | | |
| 12 | CPBLTY-18 | Burnt Forest Area Damage Assessment | SAF_StakeholderRequirement [Class] | Achieve a measurable increase in the ability to assess damage in burnt areas in order to base post-fire assessment and management decisions on this information. | Rational: Plant mortality, regeneration and reproduction are closely tied to how hot and how long a wildfire burns and will determine the make-up of post-fire plant communities. Burn severity also effects wildlife habitat, changes in the soil, erosion potential and many components of aquatic environments. | | |
| 13 | CPBLTY-19 | Critical Infrastructure Vulnerability | SAF_StakeholderRequirement [Class] | Achieve a measurable decrease in the long-term vulnerability of critical infrastructure. | | | |
| 14 | | Fire Operations Expert | | | | | |
| 15 | | Capability | NumberOwner [Element] | | | | |
| 16 | CPBLTY-25 | Propagation Estimation | SAF_StakeholderRequirement [Class] | Screen 100% of the terrain to have the ability to predict the fire spread. | | Fire Propagation Modeling | Fire Operations Expert |
| 17 | | Performance | NumberOwner [Element] | | | | |
| 18 | STK-REQ-QLT-27 | Notification Time | SAF_StakeholderRequirement [Class] | Ensure the ability to report a verified fire within 5 seconds. | Rational: Every second counts when fighting a forest fire. | | |
| 19 | STK-REQ-QLT-26 | Geolocation | SAF_StakeholderRequirement [Class] | Ensure the ability to locate fires with an accuracy of 100 meter. | | | |
| 20 | | Forest Authority Expert | | | | | |
| 21 | | Capability | NumberOwner [Element] | | | | |
| 22 | CPBLTY-21 | 24/7 Availability | SAF_StakeholderRequirement [Class] | Ensure 24/7 detection and monitoring availability. | Rational: A forest fire could occur anytime. | | |
| 23 | | Performance | NumberOwner [Element] | | | | |
| 24 | STK-REQ-QLT-24 | False Alarm | SAF_StakeholderRequirement [Class] | The probability of false alarms must be lower than 5 %. | | | |
| 25 | STK-REQ-QLT-22 | Forest Size | SAF_StakeholderRequirement [Class] | Ensure the detection and monitoring scalability for forest up to the size of 500 million hectare. | | | |
| 26 | STK-REQ-QLT-23 | Size of Fire | SAF_StakeholderRequirement [Class] | Ensure the ability to detect fire areas of at least 50 square meter initiating reactive actions to cope the fire. | | | |
| | | | TODO_Owner [Element] | | | | |

Purpose

The Stakeholder Requirement Viewpoint specifies all properties that the intended solution shall possess or expose from the perspective of the Stakeholders. The Stakeholder Requirement Viewpoint determines capabilities, functions, non-functional properties, and constraints.

Applicability

The Stakeholder Requirement Viewpoint supports the "Stakeholder Needs and Requirements Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§ 4.2] and contributes to the identification of solution constraints.

Stakeholder

- [Acquirer](#)
- [Customer](#)
- [Hardware Developer](#)
- [Supplier](#)
- [System Architect](#)

Concern

- What are the normal and extreme environmental conditions for normal operation, for not operational, for storage and for transport?
- What are the requirements of environmental conditions imposed on the system?
- What are the requirements that a Stakeholder imposes on the system?
- What defines a valid solution towards the customer?
- What is the range of acceptable system performance, i.e. the critical, top-level performance requirements derived from the operational needs?

Presentation

A Stakeholder Requirement Table (RVTM), a tabular format, featuring

- unique requirement ID, text, and attributes,
- traceability reference to justifying model artefacts. Note: Stakeholder Requirements are to be structured in a way that the Stakeholder behind the Requirement is identifiable. When appropriate, the relationships between identified Stakeholder Requirements and the justifying model artefacts, Operational Story, Operational Capability, Operational Performer, Operational Process, and Operational Exchange are presented.
- "One Requirement Package for each Stakeholder" is a best-practice modeling rule. A package contains the Requirements specific for one Stakeholder.
- Even if different Stakeholders may have intersecting interests and / or concerns resulting in a similar set of Requirements, each Stakeholder shall have its own set managed in a dedicated Requirement Package. Requirements must not be shared due to their different life cycles. Resolving duplications and conflicts is subject of the requirement analysis resulting in an agreed and consolidated set of System Requirements.

Profile Model Reference

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

- Package [UML_Standard_Profile]
- [SAF_OperationalCapability](#)
- [SAF_SOV06a_View](#)
- [SAF_Stakeholder](#)
- [SAF_StakeholderRequirement](#)
- [SAF_StakeholderRequirementImposition](#)
- [SAF_StakeholderRequirementRefinement](#)
- [SAF_StakeholderRequirementRefinement](#)
- [SAF_StakeholderRequirementRefinement](#)
- [SAF_SystemOfInterestConcern](#)

Input from other Viewpoints

Required Viewpoints

- [Stakeholder Identification Viewpoint](#)

Recommended Viewpoints

- [Operational Story Viewpoint](#)
- [Operational Performer Viewpoint](#)