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	NumberOwner [Element]				
9		Capability					
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] TODO_Owner [Element]	Ensure the ability to detect fire areas of at least 50 square meter initiating reactive actions to cope the fire.			

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 tabular format lisiting

- 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 are 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