

Service Level (Non-Functional) Requirements Template

The following is a suggested template for documenting Service Level (Non-Functional) Requirements (SLR).

Service Level Type

(This section of the Service Level Requirements specifies whether the Service Level Requirements relate to business or IT services.)

Overview

Objective

(This section of the Service Level Requirements describes the purpose of the document. Your description may resemble the text provided below.)

The purpose of the SLR is to document system-wide non-functional IT Service Level Requirements. Non-functional requirements are those not directly related to what the system can do; they correspond to the URPS+ categories (Usability, Reliability, Performance, Supportability, plus other constraints) of FURPS+. This document supplements the functional requirements (system use cases). Service Level Requirements specific to a user task (system use case) are documented in the user requirements (system use-case descriptions); across-the-board requirements are documented here to avoid duplication. Requirements listed in this document form the basis of Service Level Agreements (SLAs) with customers and must be supported, where applicable, by Underpinning Contracts (UCs) with vendors.

Scope

(In this section of the Service Level Requirements, describe the scope of this document: the business area, dependencies of this document on other documentation, and items that are explicitly in and out of scope.)

Glossary

(In this section of the Service Level Requirements, list all terms, acronyms, and abbreviations used in this document, with explicit definitions or links to entries in the project glossary.)

System-Wide Capabilities

(This section of the Service Level Requirements describes system-wide capabilities, such as auditing and logging requirements that apply across system use cases.¹⁵)

Auditing and Reporting Requirements

(This subsection of System-Wide Capabilities describes the types of records, reports, and so on required by auditors. Your requirements might resemble the following example.)

A record of each change to an account must be created and retained for five years.

Activity Logging Requirements

(This subsection of System-Wide Capabilities describes the activity records required to support IT or business services and the length of time that the records must be kept. Your requirements might resemble the following example.)

The system must keep an activity log of all site visits for a period of five years.

¹⁵These are classified as functional requirements in the FURPS+ system. They are included here because they apply across user tasks (system use cases).

Licensing Requirements

(This subsection of System-Wide Capabilities describes requirements related to the installing, tracking, and monitoring of licenses.)

Security Requirements

(This subsection of System-Wide Capabilities describes security requirements related to access to data, privacy restrictions, homeland security, and so on.)

Dependencies and Rules of Precedence

(This subsection of System-Wide Capabilities describes dependencies and precedence rules regarding the performing of services and processes, the movement of work items, approvals, and so on. Include any timing dependencies between internal processes and those performed by external systems.)

Concurrency Requirements

(This subsection of System-Wide Capabilities describes the number of users that must be able to be engaged in the same operation at the same time.)

Usability Requirements

(This section of the Service Level Requirements describes the requirements that relate to the user interface.)

User-Friendliness

(This subsection of Usability Requirements documents requirements related to the ease with which users are able to access and use the service. Your requirements might resemble the following example.)

An end-user, given a goal but no precise directions, must be able to achieve a 90% success rate completing transactions.

User Interface Standards and Guidelines

(This subsection of Usability Requirements lists standards and guidelines that constrain the design of the user interface.)

Accessibility Requirements

(This subsection of Usability Requirements documents accessibility requirements for users with special needs, such as those with disabilities.)

Reliability Requirements

(This section of the Service Level Requirements describes the level of fault-tolerance required by the system.)

Accuracy Requirements

(This subsection of Reliability Requirements describes the degree of correctness required for metrics generated by the services covered in this project. Your requirements might resemble the following example.)

The system must be able to automatically detect 90% of faults.

Precision Requirements

(This subsection of Reliability Requirements describes the level of exactitude required. Your requirements might resemble the following example.)

All taxes must be calculated and recorded to the nearest cent.

Availability Requirements

(This subsection of Reliability Requirements describes the system's ability to perform its required function at a stated instant or over a stated period of time.¹⁶ Your requirements might include the following metrics.)

- **MTBF (Mean Time Between Failures):** Mean time between an occurrence of a service failure and a failure of the same service.
- **MTBSI (Mean Time Between System/Service Incidents):** Mean time between the occurrence of a system or service failure and the occurrence of the next failure.
- **MTRS (Mean Time to Restore Service):** Mean elapsed time to fix and restore a service, from the time an incident occurs until it is available to the customer.
- **MTTR (Mean Time to Repair):** Mean time to repair a Configuration Item or IT service after a failure, measured from when the CI or IT service fails until it is repaired (not including the time required to recover or restore.)
- **Detection/recording:** Time between occurrence of an incident and its detection.

Redundancy

(This subsection of Reliability Requirements describes extra assets required to support reliability and sustainability requirements. It includes the following subtypes.¹⁷)

¹⁶Evans and Macfarlane, "A Dictionary of IT Service Management Terms, Acronyms, and Abbreviations," itSMF®, p. 9.

¹⁷These subtypes are defined by ITIL.

- **Active redundancy:** *This type of redundancy supports continuous operation of non-interruptible services. List redundant assets that must operate simultaneously and always be ready to replace their counterparts. Specify whether each redundancy is diverse (requires different types of assets to provide the same service in order spread the risk) or homogenous (redundant assets of the same type).*
- **Passive redundancy:** *This type of redundancy supports reliability requirements for services that may be interrupted. List redundant assets that will be kept offline (on standby) until required. Specify whether each redundancy is diverse or homogenous (as defined under the preceding bullet).*

Error-Handling

(This subsection of Reliability Requirements describes the types of errors the system should be able to handle and the ways the system should respond to these errors. Your requirements might resemble the following examples.)

System Faults:

When a component of any IT service in this project is temporarily unavailable, the user must be able to continue to use the service using a workaround solution until the problem is corrected.

Undesirable Actions:

The system must allow the customer to roll back transactions before they have been committed.

Error Avoidance:

The system must prevent incorrect data from being entered by the user (for example, by using drop-down selection boxes containing only valid options and locking up invalid areas of the keyboard).

Performance Requirements

(This section of the Service Level Requirements describes requirements related to speed.)

Stress Requirements

(This subsection of Performance Requirements describes the degree of simultaneous activity that the system must be able to support. For example, "The system must be able to support 2,000 users accessing financial records simultaneously.")

Turnaround-Time Requirements

(This subsection of Performance Requirements describes the maximum allowable wait time from service request until delivery.)

Response-Time Requirements

(This subsection of Performance Requirements describes the maximum allowable time that a user must wait for a response after submitting input.)

Throughput Requirements

(This subsection of Performance Requirements describes the volume of transactions or information per unit of time that the system must be able to process. The required volume of data transfer per unit time is referred to as bandwidth.)

Startup and Shutdown Requirements

(This subsection of Performance Requirements describes constraints on startup and shutdown procedures.)

Supportability Requirements

(This section of the Service Level Requirements describes requirements related to the ability to monitor and maintain the system.)

Scalability

(This subsection of Supportability Requirements describes the system's ability to be enlarged, for example, by increasing throughput or maximum number of simultaneous users.)

Expected Changes

(This subsection of Supportability Requirements describes expected changes in services, such as those due to regulations or changing market conditions, and how these changes are to be accommodated.)

Maintainability Requirements

(This subsection of Supportability Requirements describes the acceptable degree of effort required to change a process, for example, in order to clear bottlenecks, maximize efficiencies, or correct deficiencies.)

Configurability

(This subsection of Supportability Requirements describes the required ability to adjust the assembly of the product or solution, such as by adding or removing components.)

Localizability

(This subsection of Supportability Requirements describes the ability of the product or solution to be geared toward local conditions and requirements, such as the requirement to support different languages and tax systems.)

Installability

(This subsection of Supportability Requirements describes requirements related to system installation and the ease with which it can be done.)

Compatibility Requirements

(This subsection of Supportability Requirements describes components that the system under design must be compatible with, such as drivers, operating systems, and so on.)

Testing Requirements

(This section of the Service Level Requirements describes the level of testing required for services and components and the requirements for setting up and conducting these tests.)

Training Requirements

(In this section of the Service Level Requirements, describe the level of training required and state which organizations will be required to develop and deliver training programs.)

Capacity Requirements

(This section of the Service Level Requirements describes maximum amounts that the product or solution must be able to support, for example, maximum number of accounts, customers, etc.)

Backup/Recovery Requirements

(This section of the Service Level Requirements describes the backup and recovery facilities required, including the components to be restored in case of failure. Include Service Continuity requirements describing contingency plans and Vital Business Functions [VBFs] that must be kept on life support in case of full or partial service failure.)

Other Constraints

(This section of the Service Level Requirements describes other constraints on the product or solution, such as design constraints.)

Design Constraints

(This subsection of Other Constraints describes constraints on the design of the product or solution.)

Implementation Constraints

(This subsection of Other Constraints describes constraints on the construction of a product or solution, such as the constraint that a specific programming language must be used.)

Interface Constraints

(This subsection of Other Constraints describes protocols, formats, and so on that must be followed when interfacing with external organizations or systems.)

Physical Constraints

(This subsection of Other Constraints describes physical constraints on the product or solution, such as hardware restrictions related to size, temperature control, and materials.)

Legal and Regulatory Requirements

(This section of the Service Level Requirements describes legal and regulatory requirements, existing or pending legislation, governing bodies, and standards that constrain the system.)