DRAFT - ICT Project Guidance

Definition:  
Default System   
Custom Development  
Supplemental Quality Requirements

Version:

0.1

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## Purpose

The purpose of this document is to provide quality requirements specific to the condition of **custom developed** **systems**, that **supplement** baseline quality requirements.

## Synopsis

Custom developed solutions are a specific case of **Software as a Product (SaaP)** procurement, with the added requirements that after delivery the **system** may require being maintained and further developed by the **sponsor organisation**.

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## Background

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# Supplemental Quality Requirements

The following Qualitative requirements are organised per the guidance provided within ISO-25010 System Requirements, with Statements referring to target values defined within the Quantitative Values listed below.

### Functional Suitability[[1]](#footnote-2)

“The degree to which a product or system provides functions that meet stated and implied needs when used under specified conditions. This characteristic is composed of the qualities listed below.”

#### Functional Completeness

“The degree to which the set of functions covers all the specified tasks and user objectives.”

#### Functional Correctness

“The degree to which a product or system provides the correct results with the needed degree of precision.”

*No requirements defined.*

#### Functional Appropriateness

“The degree to which the functions facilitate the accomplishment of specified tasks and objectives.”

*No requirements defined.*

### Performance Efficiency

“The degree of performance relative to the amount of resources used under stated conditions. This characteristic is composed of the sub-qualities listed below.”

#### Time Behaviour

“The degree to which the response and processing times and throughput rates of a solution, when performing its functions, meets requirements.”

*No requirements defined.*

#### Resource Utilisation

“The degree to which the amounts and types of resources used by a product or system, when performing its functions, meets requirements.”

*No requirements defined.*

#### Capacity

“The degree to which the maximum limits of the solution meet or exceed requirements.”

*No requirements defined.*

### Compatibility

“The degree to which a product, system or component can exchange information with other products, systems, or components, and/or perform its required functions while sharing the same hardware or software environment. This characteristic is composed of the sub-qualities listed below.”

#### Co-Existence

“The degree to which a product can perform its required functions efficiently while sharing a common environment and resources with other products, without detrimental impact on any other product.”

*No requirements defined.*

#### Interoperability

“The degree to which two or more systems, products or components can exchange information and use the information that has been exchanged.”

Note:   
Interoperability is what a service provides to other services, *not* Integrations, which is what it relies on.

*No requirements defined.*

### Usability

“TODO”

#### Appropriateness Recognisability

“The degree to which users can recognize whether a solution is appropriate for their needs.”

*No requirements defined.*

#### Discoverability

“Discoverability is not an ISO-25010 quality. We believe this to be in error.”

*No requirements defined.*

#### Learnability

“The degree to which a solution enables the user to learn how to use it with effectiveness, efficiency and in the case of an emergency.”

*No requirements defined.*

#### Operability

“The degree to which a product is easy to operate, control and appropriate to use.”

#### Accessibility

“The degree to which a solution can be used by people with the widest range of characteristics and capabilities to achieve a specific goal in a specified context of use.”

*No requirements defined.*

### Reliability

“The degree to which a system, product or component performs specified functions under specified conditions for a specified period of time. This characteristic is composed of the sub-qualities listed below.”

#### Maturity

“The degree to which a system, product or component meets needs for reliability, under normal and peak demand.”

#### 

*No requirements defined.*

#### Availability

“The degree to which a service is available and operable to service consumers when required for use.”

*No requirements defined.*

#### Fault Tolerance

“The degree to which a solution operates as intended despite the presence of hardware, software, or user faults.”

*No requirements defined.*

#### Recoverability

“The degree to which, in the event of an interruption or failure, a solution can recover the data directly affected and re-establish the desired system state.”

*No requirements defined.*

### Security

“Degree to which a product or system protects information and data so that persons or other products or systems have the degree of data access appropriate to their types and levels of authorization. This characteristic is composed of the sub-qualities listed below.”

Note:  
The distinctions between the following sub-qualities are subtle. For example, Confidentiality is primarily about protecting systems from the disclosure (i.e., viewing) of information – preliminarily by physical controls (e.g. HTTPS), Integrity is about the protection of the data from change using logical controls (e.g., [**permission**](#Term_Permission) and **system** [**role**](#Term_Role) control). Non-Repudiation is about auditing actions, and Accountability is about tying the non-repudiable record to an Authenticated person’s digital identity.

#### General

*No requirements defined.*

#### Confidentiality

“The degree to which the solution ensures data is accessible only by those authorised to do so.”

*No requirements defined.*

#### Integrity

“ISO-25010 Definition: the degree to which the solution prevents unauthorised access, modification of systems and the information they manage.”

*No requirements defined.*

#### Non-Repudiation

“The degree to which actions or events can be proven to have taken place so that the events or actions cannot be repudiated later.”

*No requirements defined.*

#### Authenticity

“The degree to which the identity of a subject or resource can be proved to be the one claimed.”

*No requirements defined.*

#### Accountability

“The degree to which the actions of an entity can be traced uniquely to the entity.”

*No requirements defined.*

### Maintainability

“The degree of overall maintainability of a system.”

#### General

Non [**ISO-25010**](#Term_ISO_25010) categorised [**requirements**](#Term_Requirement).

*No requirements defined.*

#### Modularity

“The degree to which a solution is composed of discrete components such that a change to one has minimal impact on others.”

*No requirements defined.*

#### Reusability

“The degree to which an asset can be used in more than one system or reused to build other assets.”

*No requirements defined.*

#### Analysability

“The degree of effectiveness and efficiency with which it is possible to assess the impact of a solution, a change, a failure, or determine what requires change.”

*No requirements defined.*

#### Modifiability

“The degree to which a solution can be effectively and efficiently modified without introducing defects or degrading operational quality.”

*No requirements defined.*

#### Testability

“The degree to which test criteria can be established, and determination of whether the solution meets them.”

*No requirements defined.*

### Portability

“The degree of effectiveness and efficiency with which a system, product or component can be transferred from one hardware, software or other operational or usage environment to another. This characteristic is composed of the sub-qualities listed below.”

#### Adaptability

“The degree to which a solution can effectively and efficiently be adapted for different and evolving hardware, software, or environments.”

*No requirements defined.*

#### Installability

“The degree of effectiveness and efficiency in which a solution can be successfully installed/uninstalled in a specified environment.”

*No requirements defined.*

#### Replaceability

“Unable to define default requirements for Replaceability without mention of specific previous systems and available services. Refer to Compatibility/Interoperability.”

*No requirements defined.*

### Common

Requirements that are applicable to multiple ISO defined categories are placed in this section.

*No requirements defined.*

### Regulations and Agreements

*No requirements defined.*

Appendices

Appendix A - Document Information

### Versions

* 1. Initial Draft

### Images

[Figure 1: TODO Image 3](#_Toc159496633)

### Tables

### References

**There are no sources in the current document.**

### Review Distribution

The document was distributed for review as below:

|  |  |
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| Identity | Notes |
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### Audience

The document is technical in nature, but parts are expected to be read and/or validated by a non-technical audience.

### Structure

Where possible, the document structure is guided by either ISO-\* standards or best practice.

### Diagrams

Diagrams are developed for a wide audience. Unless specifically for a technical audience, where the use of industry standard diagram types (ArchiMate, UML, C4), is appropriate, diagrams are developed as simple “box & line” monochrome diagrams.

### Terms

Refer to the Terms within the supplemented *Default System Quality Requirements*.

1. Functional Suitability Requirements are NOT to be confused with Functional Requirements, developed in separate documents. They instead describe the qualities *of* the Functional Requirements – an important difference. [↑](#footnote-ref-2)