IT Project Guidance

Glossary of IT Specific Terms:   
Options Evaluation

Version:

0.1

## Description

A Glossary of common ICT Terms related to evaluating solution options, to establish a common understanding, while reducing duplication of effort in downstream documents.

## Synopsis

Included are the meanings of acronyms and industry terms used to describe aspects of options development and analysis.

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## Objective

To develop a common understanding of terms used in artefacts used to deliver services with an ICT component.

# Terms & Acronyms

## Options Analysis Acronyms

#### RICE

: acronym for Reach, Impact, Confidence, Effort.

#### SQuaRE

: System and Software Quality Requirements and Evaluation.

## Options Analysis Terms

ISO-25010

: Qualities of a System. Part of the ISO-25000 System and Software Quality Requirements and Evaluation standards.

ISO-25012

: Qualities of Data within Systems. Part of the ISO-25000 System and Software Quality Requirements and Evaluation standards.

ISO-25022: Qualities of User Experience of a System. Part of the ISO-25000 System and Software Quality Requirements and Evaluation standards.

Functional Suitability

: This characteristic represents 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 following sub-characteristics:

Functional Suitability/Functional Completeness

: Degree to which the set of functions covers all the specified tasks and intended users' objectives.

Functional Suitability/Functional Correctness

:  Degree to which a product or system provides accurate results when used by intended users.

Functional Suitability/Functional Appropriateness

: Degree to which the functions facilitate the accomplishment of specified tasks and objectives.

Performance Efficiency

: This characteristic represents the degree to which a product performs its functions within specified time and throughput parameters and is efficient in the use of resources (such as CPU, memory, storage, network devices, energy, materials...) under specified conditions. This characteristic is composed of the following sub-characteristics:

Performance Efficiency/Time Behaviour

: Degree to which the response time and throughput rates of a product or system, when performing its functions, meet requirements.

Performance Efficiency/Resource utilization

**:** Degree to which the amounts and types of resources used by a product or system, when performing its functions, meet requirements.

Performance Efficiency/Capacity

**:** Degree to which the maximum limits of a product or system parameter meet requirements.

Compatibility

: 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 common environment and resources. This characteristic is composed of the following sub-characteristics:

Compatibility/Co-existence

: 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.

Compatibility/Interoperability

: Degree to which a system, product or component can exchange information with other products and mutually use the information that has been exchanged.

Interaction Capability

: Degree to which a product or system can be interacted with by specified users to exchange information via the user interface to complete specific tasks in a variety of contexts of use. This characteristic is composed of the following sub-characteristics:

Interaction Capability/Appropriateness recognizability

: Degree to which users can recognize whether a product or system is appropriate for their needs.

Interaction Capability/Learnability

: Degree to which the functions of a product or system can be learnt to be used by specified users within a specified amount of time.

Interaction Capability/Operability

: Degree to which a product or system has attributes that make it easy to operate and control.

Interaction Capability/User error protection

: Degree to which a system prevents users against operation errors.

Interaction Capability/User engagement

: Degree to which a user interface presents functions and information in an inviting and motivating manner encouraging continued interaction.

Interaction Capability/Inclusivity

: Degree to which a product or system can be used by people of various backgrounds (such as people of various ages, abilities, cultures, ethnicities, languages, genders, economic situations, etc.).

Interaction Capability/User assistance

: Degree to which a product can be used by people with the widest range of characteristics and capabilities to achieve specified goals in a specified context of use.

Interaction Capability/Self-descriptiveness

: Degree to which a product presents appropriate information, where needed by the user, to make its capabilities and use immediately obvious to the user without excessive interactions with a product or other resources (such as user documentation, help desks or other users).

Reliability

: 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 following sub-characteristics:

Reliability/Faultlessness

: Degree to which a system, product or component performs specified functions without fault under normal operation.

Reliability/Availability

: Degree to which a system, product or component is operational and accessible when required for use.

Reliability/Fault tolerance

: Degree to which a system, product or component operates as intended despite the presence of hardware or software faults.

Reliability/Recoverability

: Degree to which, in the event of an interruption or a failure, a product or system can recover the data directly affected and re-establish the desired state of the system.

Security

: Degree to which a product or system defends against attack patterns by malicious actors and 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 following sub-characteristics:

Security/Confidentiality

: Degree to which a product or system ensures that data are accessible only to those authorized to have access.

Security/Integrity

: Degree to which a system, product or component ensures that the state of its system and data are protected from unauthorized modification or deletion either by malicious action or computer error.

Security/Non-repudiation

: Degree to which actions or events can be proven to have taken place so that the events or actions cannot be repudiated later.

Security/Accountability

: Degree to which the actions of an entity can be traced uniquely to the entity.

Security/Authenticity

: Degree to which the identity of a subject or resource can be proved to be the one claimed.

Security/Resistance

: Degree to which the product or system sustains operations while under attack from a malicious actor.

Maintainability

: This characteristic represents the degree of effectiveness and efficiency with which a product or system can be modified to improve it, correct it or adapt it to changes in environment, and in requirements. This characteristic is composed of the following sub-characteristics:

Maintainability/Modularity

: Degree to which a system or computer program is composed of discrete components such that a change to one component has minimal impact on other components.

Maintainability/Reusability

: Degree to which a product can be used as an asset in more than one system, or in building other assets.

Maintainability/Analysability

: Degree of effectiveness and efficiency with which it is possible to assess the impact on a product or system of an intended change to one or more of its parts, to diagnose a product for deficiencies or causes of failures, or to identify parts to be modified.

Maintainability/Modifiability

: Degree to which a product or system can be effectively and efficiently modified without introducing defects or degrading existing product quality.

Maintainability/Testability

: Degree of effectiveness and efficiency with which test criteria can be established for a system, product or component and tests can be performed to determine whether those criteria have been met.

Flexibility

: Degree to which a product can be adapted to changes in its requirements, contexts of use or sys tem environment. This characteristic is composed of the following sub-characteristics:

Flexibility/Adaptability

: Degree to which a product or system can effectively and efficiently be adapted for or transferred to different hardware, software or other operational or usage environments.

Flexibility/Scalability

: Degree to which a product can handle growing or shrinking workloads or to adapt its capacity to handle variability.

Flexibility/Installability

: Degree of effectiveness and efficiency with which a product or system can be successfully installed and/or uninstalled in a specified environment.

Flexibility/Replaceability

: Degree to which a product can replace another specified software product for the same purpose in the same environment.

Safety

: This characteristic represents the degree to which a product under defined conditions to avoid a state in which human life, health, property, or the environment is endangered. This characteristic is composed of the following sub-characteristics:

Safety/Operational constraint

: Degree to which a product or system constrains its operation to within safe parameters or states when encountering operational hazard.

Safety/Risk identification

: Degree to which a product can identify a course of events or operations that can expose life, property or environment to unacceptable risk.

Safety/Fail safe

: Degree to which a product can automatically place itself in a safe operating mode, or to revert to a safe condition in the event of a failure.

Safety/Hazard warning

: Degree to which a product or system provides warnings of unacceptable risks to operations or internal controls so that they can react in sufficient time to sustain safe operations.

Safety/Safe integration

: Degree to which a product can maintain safety during and after integration with one or more components.

Appendices

Appendix A - Document Information

### Authors & Contributors

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### Versions

* 1. Initial Draft
  2. Minor changes
  3. Minor changes

### Images

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### Tables

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### References

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

### Review Distribution

The document was distributed for review as below:

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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.

### 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.

Appendix B – RICE Scoring

Reach is scored as follows:

* by number of people who will continue to stay use the system.

Impact is scored as follows:

* 3 = massive impact
* 2 = high impact
* 1 = medium impact
* .5 = low impact
* .25 = minimal impact

Confidence is measured as follows:

* 100% = high confidence
* 80% = medium confidence
* 50% = low confidence

Effort is measured in person-months.