

2.2.1.5 Quality

[return to Fundamental Views](#)

The ISO/IEC 25010 standard provides consistent terminology for “specifying, measuring and evaluating system and software product quality”.¹⁾ The Consortium for Information & Software Quality (CISQ)²⁾ provides the following diagram, highlighting eight ISO defined software quality characteristics and their associated sub-characteristics.³⁾ These ISO defined characteristics must be applied to both DIDO software and coinage organizations (e.g., [Bitcoin](#), [Ethereum](#), [IOTA](#)), especially [Reliability](#), [Performance Efficiency](#), [Security](#), and [Maintainability](#), since these are candidates for automation.

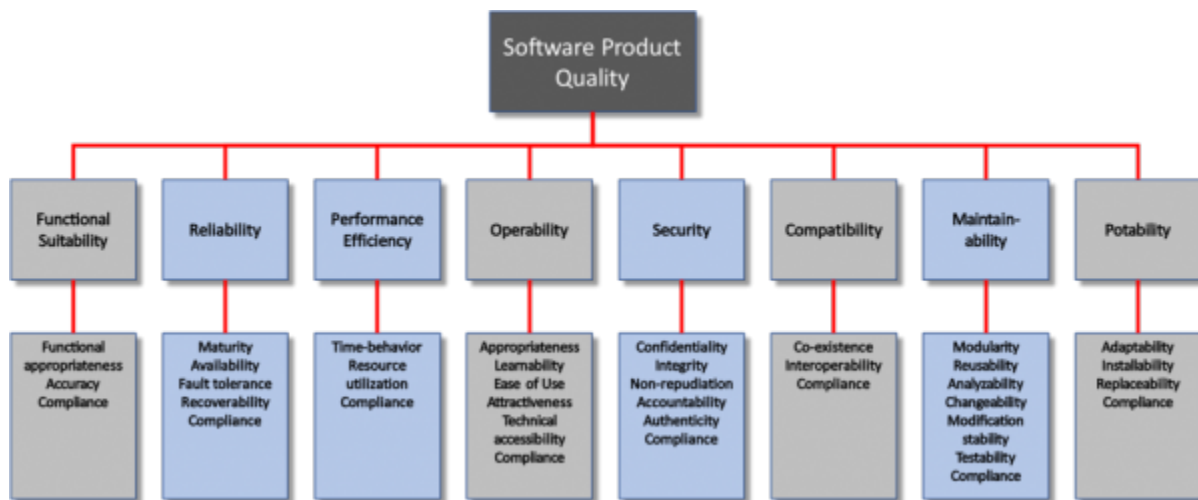


Figure 1: Quality Characteristics and Measures Specifications

Management

Management is part of SQuaRE and defines all common models, terms, and definitions referenced by all other standards from the SQuaRE series.

- [ISO/IEC/IEEE 25000:2014 SQuaRE -- Guide to SQuaRE](#)
- [ISO/IEC 25001:2014 SQuaRE -- Planning and Management](#)
- [ISO/IEC/IEEE 90003:2018 Software engineering – Guidelines for the application of ISO 9001:2015 to computer software](#)
- [ISO 9001:2015 Quality management](#)

Modeling

Modeling is part of SQuaRE and provides detailed quality models for computer systems and software products, quality in use, and data.

- [ISO/IEC 25010:2011 SQuaRE -- System and Software Quality Models](#)
- [ISO/IEC 25012:2008 SQuaRE -- Data Quality Model](#)

Measurement

Measurement is part of SQuaRE and includes a software product quality measurement reference model, mathematical definitions of quality measures, and practical guidance for their [application](#).

- [ISO/IEC 25020:2007 SQuaRE -- Measurement Reference Model and Guide](#)
- [ISO/IEC 25021:2012 SQuaRE -- Quality Measure Elements](#)
- [ISO/IEC 25022:2016 SQuaRE -- Measurement of Quality in Use](#)
- [ISO/IEC 25023:2016 SQuaRE -- Measurement of System and Software Product Quality](#)
- [ISO/IEC 25024:2015 SQuaRE -- Measurement of Data Quality](#)

Requirements

Requirements are part of SQuaRE and help specify quality requirements. These quality requirements can be used in the process of quality requirements elicitation for a software product to be developed, or as input for an evaluation process.

- [ISO/IEC 25030:2007 SQuaRE -- Quality Requirements](#)

Evaluation

Evaluation is part of SQuaRE and provides requirements, recommendations, and guidelines for software product evaluation.

- [ISO/IEC 25040:2011 SQuaRE -- Evaluation Process](#)
- [ISO/IEC 25041:2012 SQuaRE -- Evaluation Guide for Developers, Acquirers and Independent Evaluators](#)
- [ISO/IEC 25045:2010 SQuaRE -- Evaluation Module for Recoverability](#)
- [OMG: Test Information Interchange Format \(TestIF\)](#)

1)

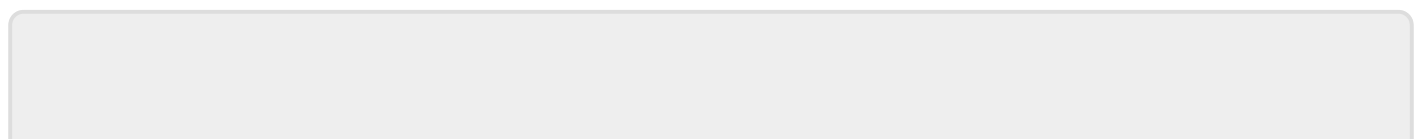
International Association of Risk and Compliance Professionals (IARCP), "Dodd Frank Act Text Section 1034," 2010. http://www.dodd-frank-act.us/Dodd_Frank_Act_Text_Section_1034.html.

2)

International Standards Organization (ISO), "The ISO/IEC 25000 series of standards," <http://iso25000.com/index.php/en/iso-25000-standards?limit=4&start=4>.

3)

Consortium for Information & Software Quality (CISQ) <http://it-cisq.org/>.



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