Impact Areas

KPIs And Basic Terms · https://community-staging.qualityclouds.com/qcdocs/qc/kpis-and-basic-terms/impact-areas/

Quality Clouds helps you monitor the following areas where software quality can be impacted:

Security

The term 'Security' defines the degree to which a product or system protects information and data so that persons, products or systems have the necessary amount of data access apt to their types and levels of authorization. This characteristic is composed of the following sub-characteristics:

- **Confidentiality:** The degree to which a product or system ensures that data are accessible only to those authorized to have access.
- **Integrity:** The degree to which a system, product or component prevents unauthorized access to, or modification of, computer programs or data.
- **Non-repudiation:** The degree to which actions or events can be proven to have taken place so that the events or actions cannot be discredited later.
- **Accountability:** The degree to which the actions of an entity can be traced particularly to the entity.
- **Authenticity:** The degree to which the identity of a subject or resource is verified to be the one claimed.

Scalability

The term 'Scalability' defines the effectiveness and efficiency with which a product or system can be used or produced in a wide range of capabilities; in this case impacting the way in which a product is modified to improve, correct or adapt it to changes in an environment, and its requirements. This characteristic is composed of the following sub-characteristics:

- **Modularity:** The 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.

- **Reusability:** The degree to which an asset can be used in more than one system, or in building other assets.
- **Analysability:** The 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, or to diagnose a product for deficiencies or causes of failures, or to identify parts to be modified.
- **Modifiability:** The degree to which a product or system can be effectively and efficiently modified without introducing defects or degrading existing product quality.
- **Testability:** The 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.

Manageability

The term 'Manageability' defines the effectiveness and capability of persons, products or systems able to be managed or controlled. This can be accomplished in the form of tactical, operational and/or strategic mechanisms. This characteristic is composed of the following sub-characteristics:

- **Availability:** The degree to which a system, product or component is operational and accessible when required for use.
- **Conformity:** Continuous security, compliance and cost management.
- **Fault tolerance:** The degree to which a system, product or component operates as intended despite the presence of hardware or software faults.
- **Adaptability:** The degree to which a product or system can effectively and efficiently be adapted for different or evolving hardware, software or other operational or usage environments.
- **Replaceability:** The degree to which a product can replace another specified software product for the same purpose in the same environment.

Performance

The term 'Performance' represents the action or process of performing a task or function. This characteristic is composed of the following sub-characteristics:

- **Time behavior:** The degree to which the responsive / processing times and throughput rates of a product or system, related to the performance of functions when meeting the requirements.
- **Resource utilization:** The degree to which the amounts and types of resources used by a product or system, when performing its functions meet the requirements.
- **Capacity:** The degree to which the maximum limits of a product or system parameter fulfills the requirements.