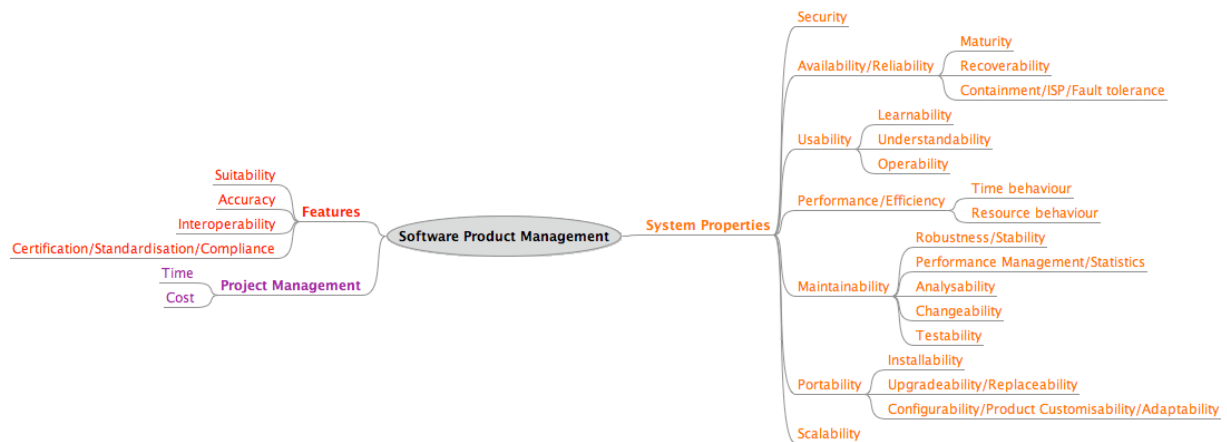


# Software Product Value Management

## Definitions



Each concept needs to be considered in the context of its parent in the hierarchy.

## Features

Related to the existence of a set of functions and their specified properties; both stated and implied needs:

- Suitability: The functionality is appropriate for its purpose and situation.
- Accuracy: The functionality is correctly understood and implemented.
- Interoperability: The system works with the other systems required.
- Certification/Standardisation/Compliance: The system conforms to both standards and legislation.

## System properties

**Security:** The system software is safe from danger or threat.

**Scalability:** Ability for the system to expand the computing solution to support a larger system load without impacting performance.

**Availability/Reliability:** Related to the capacity of software to maintain its level of performance under stated conditions for a stated period of time:

- Maturity: The system has achieved an appropriate level of sophistication.
- Recoverability: Able to regain operation after a fault or failure.
- Containment/ISP/Fault tolerance: Capacity to endure adverse conditions and remain in operation.

**Usability:** Related to the effort needed for use, and on the individual evaluation of such use, by stated or implied set of users. This includes GUIs, CPI, training and alarm handling, for example.

- Learnability: The ease with which a user can gain or acquire knowledge about the system.
- Understandability: Degree to which the system is as one expects.
- Operability: Degree to which the system can be used.

**Performance/Efficiency:** Related to the relationship between the level of performance of the software and the amount of resources used, under states conditions. This is both at the system and node levels.

- Time behaviour: The time taken to complete given activities.
- Resource behaviour: The computing resources required to complete given activities.

**Maintainability:** Related to the effort needed to make specified modifications to both the generic system and customer specific versions. This includes corrective maintenance (diagnosis and correction of errors), adaptive maintenance (modifications to interfaces to adapt to a changing environment), perfective maintenance (enhancements to create new or modify existing functionality) and preventative maintenance (changes to improve future maintainability).

- **Robustness/Stability:** Ability to operate without failure when there has been an unintended change as part of a maintenance activity.
- **Performance Management/Statistics:** Ability of the system to provide statistics, logs and information to the user in order to implement a performance management process for continuous monitoring of capacity utilisation and success rates for applications, platforms and interfaces.
- **Analysability:** Ability for the system to be examined methodically and in detail in order to understand the impact of and make changes to the system. For example, artefacts that may help with this process are system architecture diagrams, system documentation and comments in code.
- **Changeability:** Ability for the system to be modified. This can be to complete any maintenance activity – corrective, adaptive, perfective and preventative.
- **Testability:** Ability to confirm if an action, item, situation, etc ... is operating as desired.

**Portability:** Related to the ability of software to be transferred from one environment to another:

- **Installability:** Capacity to place or fix into a new environment.
- **Upgradability/Replaceability:** Ease with which the system can replace or be replaced by a new version of the system or a different system that performs the same task.
- **Configurability/Product Customisability/Adaptability:** Degree to which the system can adjust to new conditions.

## Project Management

- **Time:** Development time for a project and in particular release date.
- **Cost:** Total cost for development, primarily in terms of person-hours, but also other costs.