Capability (glossary)

capability

(1) *The ability to achieve a desired effect under specified (performance) standards and conditions through combinations of ways and means (activities and resources) to perform a set of activities.* (DoD 2009)

(2) *The ability to execute a specified course of action. It is defined by a user and expressed in non-equipment based operational terms.* (MOD 2004)

(3) *The ability to execute a specified course of action. A capability may or may not be accompanied by an intention.* (DoD 2009)

(4) *An outcome or effect which can be achieved through use of features of a system of interest and which contributes to a desired benefit or goal* (Created for SEBoK)

Source

(1) DoD. 2009. *DoD Architecture Framework (DoDAF)*, version 2.0. Washington, DC, USA: U.S. Department of Defense (DoD).

(2) MOD. 2004. *Ministry of Defence Architecture Framework (MODAF),* version 2. London, UK: U.K. Ministry of Defence.

(3) DoD. 2009. *Department of Defense Dictionary of Military and Associated Terms.* Washington, DC, USA:

U.S. Department of Defense (DoD), Joint Publication 1-02, 17 March 2009.

(4) This definition was developed for the SEBoK.

Discussion

Capability provides an umbrella term for the ability to achieve many objectives and effects that may be specified during the SE lifecycle: missions, mission objectives, user needs, user requirements, system

In the defense context capability refers to an operational outcome available to the end user when engineered systems are deployed and fully supported (including trained people, logistics, doctrine, infrastructure, etc.) in an operational environment. It is used either to specify a required capability need (i.e., what is sought) or to describe the currently fielded capability (i.e., the currently available effect) to help identify gaps. The term capability has been defined to encourage military user to describe current and future needs independent of current solution technology

The term capability is less common outside of defense but is sometimes used to describe outcomes a user needs to achieve which connect the systems feature to the business or enterprise benefit. You can say that they lead your customer into understanding how the features you have deliver the benefit.

For example, a fingerprint scanner on a desktop computer can store passwords. This saves five minutes every time the user forgets a password and has to look it up or reset it, it also makes the computer more secure. The fingerprint scanner is the Feature, storing passwords is the Capability and saving time and increasing security the Benefit. This is likely to become a more common terminology as Systems Engineering looks to relate stakeholder needs more explicitly with business benefits, see Stakeholder Needs Definition

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