

Effectiveness (glossary)

From SEBoK
effectiveness

(1) A systems effectiveness is a measure of its ability to perform the functions necessary to achieve goals or objectives, defined as the product of the number of combinations of behavior to reach a function and the efficiency of each combination. (Ackoff 1971)

(2) A combination of performance (how well a function is done in ideal conditions), availability (how often the function is there when needed) and survivability (how likely is it that the system will be able to use the function fully). (Hitchins 2007)

Sources

Ackoff, R.L. 1971. *Towards a System of Systems Concepts.* Management Science. 17(11).

Hitchins, D. 2007. *Systems Engineering: A 21st Century Systems Methodology.* New York, NY, USA: Wiley

Discussion

(1) is a system science definition associated with the difference between behavior as system actions and function as combinations of behavior to provide external outcomes. Effectiveness is a measure of how well the system achieves its outcomes.

(2) is the systems engineering definition, relating effectiveness to achieving stakeholder needs.

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