

Enterprise Systems Engineering (ESE) (glossary)

From SEBoK

enterprise systems engineering (ese)

The application of systems engineering principles, concepts, and methods to the planning, design, improvement, and operation of an enterprise. (Created for SEBoK)

Sources

This definition was developed for the SEBoK.

Discussion

(1) To enable more efficient and effective enterprise transformation, the enterprise needs to be looked at "as a system," rather than as a collection of functions connected solely by information systems and shared facilities (Rouse 2009).

(2) "The body of knowledge for enterprise systems engineering is evolving under such titles as enterprise engineering, business engineering, and enterprise architecture . Many systems and software engineering principles are applicable to enterprise engineering, but enterprise engineering's unique complexities require additional principles. Enterprise engineering's intent is to deliver a targeted level of enterprise performance in terms of shareholder value or customer satisfaction. Enterprise systems engineering methods include modeling; simulation; total quality management; change management; and bottleneck, cost, workflow, and value-added analysis." (Joannou 2007)

(3) A useful distinction between product system design and enterprise system design is that "enterprise design does not occur at a single point in time like the design of most systems. Instead, enterprises evolve over time and are constantly changing, or are constantly being designed." (Giachetti 2010)

Works Cited

Giachetti, R. E. 2010. *Design of Enterprise Systems: Theory, Architecture, and Methods.* Boca Raton, FL, USA: CRC Press, Taylor & Francis Group.

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Rouse, W. B. 2009. "Engineering the Enterprise as a System." In *Handbook of Systems Engineering and Management.*, eds. A. P. Sage, W. B. Rouse. 2nd ed. New York, NY, USA: Wiley and Sons, Inc.

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