

System of Systems (SoS) (glossary)

system of systems (sos)

The printable version is no longer supported and may have rendering errors. Please update your browser bookmarks and please use the default browser print function instead.

(1) Two or more systems that are separately defined but operate together to perform a common goal. (Checkland 1999)

(2) an assemblage of components which individually may be regarded as systems, and which possess two additional properties:

(a) Operational Independence of the Components: If the system-of-systems is disassembled into its component systems the component systems must be able to usefully operate independently. That is, the components fulfill customer-operator purposes on their own.

(b) Managerial Independence of the Components: The component systems not only can operate independently, they do operate independently. The component systems are separately acquired and integrated but maintain a continuing operational existence independent of the system-of-systems. (Maier 1998, 267-284)

(3) *System-of-systems applies to a system-of-interest whose system elements are themselves systems; typically these entail large scale inter-disciplinary problems with multiple, heterogeneous, distributed systems.* (INCOSE 2012)

Source

(1) Checkland, P. B. 1999. *Systems Thinking, Systems Practice*. Chichester, UK: John Wiley & Sons Ltd.

(2) Maier, M. W. 1998. "Architecting principles for systems-of-systems." *Systems Engineering, the Journal of the International Council on Systems Engineering (INCOSE)* 1 (4).

(3) INCOSE. 2012. *Systems Engineering Handbook: A Guide for System Life Cycle Processes and Activities*, version 3.2.2. San Diego, CA, USA: International Council on Systems Engineering (INCOSE), INCOSE-TP-2003-002-03.2.2

Discussion

e the Systems of Systems Knowledge Area in Part 4: Applications of Systems Engineering.e

SEBoK v. 2.11, released 25 November 2024

Retrieved from
"https://sebokwiki.org/w/index.php?title=System_of_Systems_(SoS)_(
glossary)&oldid=72691"

This page was last edited on 24 November 2024, at 18:47.