

Call for Papers

IEEE Open Journal of Systems Engineering

Special Issue on *Front-end Need Analysis*

The front-end analysis of stakeholder needs is a frequently misunderstood activity in system development. This is the case even for skilled systems engineering practitioners, who often confuse it with requirements derivation and the design of operational solutions. Yet capturing and understanding the needs of the stakeholders are critical for development and mission success. Ultimately, the functionalities that systems provide or the capabilities that they enable are just but means to an end: the satisfaction of a set of stakeholders. Therefore, it is important to establish references that formalize the activities, concepts, techniques, measurements, and assessment around front-end need analysis, share successful examples of how they are used and performed, identify the deficiency and opportunities of existing methodologies, and provide a vision for how Need analysis may evolve in the context of model-based and digital environments.

This special issue seeks papers that contribute to establishing references that formalize the activities, concepts, and techniques around front-end need analysis, sharing good examples of their use, addressing the gaps in need analysis approaches, and providing a vision for their evolution in the context of model-based and digital environments. Both theoretical and applied papers are welcome. Note that applied papers must be constructed based on argumentation, ideally underpinned by established theoretical frameworks (those in peer-reviewed publications or validated otherwise). Papers that only report practices without such support are discouraged. Furthermore, 'needs' refer in this special issue to the outcomes that stakeholders want to achieve by interacting with the system of interest. Topics related to formulation, derivation, decomposition, and/or management of requirements are outside of the scope of this issue.

Key Topic Areas

- Stakeholder identification and management
- Need elicitation, formulation, identification, and resolution of conflicts
- Formal methodologies of transitioning from need analysis to requirement derivation
- Metrics and measurements for assessment of elicited needs
- Results of empirical studies

For information on paper submission, prospective authors should visit <http://ieeaeess.org/OJSE>. Manuscripts should be submitted using the manuscript submission web site for IEEE Open Journal of Systems Engineering at <https://ieeaeess.com/journal/ojse> for peer review.

Important Dates

- Manuscript submission deadline: 15 July 2022
- First review completed: 15 September 2022
- Revised manuscript due: 1 November 2022
- Second review completed: 1 December 2022
- Final manuscript due: 1 January 2023

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