
Editorial

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Engineering asset management is a broad discipline, encompassing hard engineering methods and tools as well as management approaches and human factors. Fuelled by the industry's need to connect various disciplines from within the company with the developments outside of the company, contemporary asset management science has developed from a monodisciplinary scientific area of operations research and maintenance science, into a multidisciplinary field to which many scholars contribute. This development of a true multidisciplinary field has been very pronounced in infrastructure asset management. In June of 2012, at the Council of Engineering Systems Universities conference (CESUN2012), held in Delft, The Netherlands, this broad spectrum of researchers was brought together. Among many other topics, asset management was one of the focal points of discussion. Recognising the various socio-technological challenges in the management and operation of all infrastructure sectors, the researchers discussed what approaches are available, exchanged knowledge on the state-of-the-art in asset management methods and tools, and found common ground in a risk-based approach as an overarching perspective to asset management.

The various contributions to the sessions, and its ensuing discussions can be found in this issue. In each asset management process, the design of the assets determines its operation, maintenance and operation. Therefore, two contributions focus on the design of assets, rooted in two different approaches. The paper of Mordecai and Dori introduces an object process modelling approach to design a system. The elegant approach supports designers to design systems from a risk oriented perspective. Kliatsko and Lundqvist discuss an approach for the design of energy systems, based in a human activity system modelling approach.

Another important aspect for any asset manager is the estimation of the value of the assets. Two contributions discuss two different angles on estimating such value. Talabi and Fischbeck explore the role of expert confidence in the cost estimation process in design processes for new assets. Another approach is taken by Hanski et al., in a contribution that discusses value estimation for water and sewer pipelines.

Finally, three contributions focus on the role of the asset manager. The contribution of Cunningham and Slinger discusses the design of organisations for project management, which is an important resource challenge in any asset management organisation. The paper by Hodkiewicz describes an attractive example of visualising the health of assets to support asset managers in making risk-based decisions. The asset management maturity of the Dutch road asset manager is discussed in the paper by Volker et al. By assessing various topics that make up the entire asset management discipline, such as internal and external orientation, IT provision, risk management,

processes and roles, and stakeholder involvement, an asset manager obtains an insightful overview of the current state of its performance in asset management.

This issue marks the start of a new focus area in the engineering systems community and shows the breadth of the discipline. The challenge for the coming years is to bring the various disciplines even closer together. Bridging this gap between the hard engineering sciences and the social sciences requires hard work, but will be highly rewarding.