
Editorial

Tugrul U. Daim

Department of Engineering and Technology Management,
Portland State University,
P.O. Box 751, Portland OR, 97207, USA
Email: ji2td@pdx.edu

Biographical notes: Tugrul U. Daim is a Professor and PhD Program Director in the Department of Engineering and Technology Management at Portland State University. His papers appeared in *Technological Forecasting and Social Change*, *Technovation*, *Technology Analysis and Strategic Management*, *Computers and Industrial Engineering*, *Journal of Medical Systems*, *Energy*, *Energy Policy* and many others. He received his BS in Mechanical Engineering from the Bogazici University in Turkey, MS in Mechanical Engineering from the Lehigh University in Pennsylvania, MS in Engineering Management from the Portland State University, and PhD in Systems Science: Engineering Management from the Portland State University in Portland, Oregon.

“Give me a lever long enough and I shall move the world.”

Archimedes

Technology management has become extremely critical at a time when technology is being incorporated into every part of our lives. It is important that we explore technology management through multiple perspectives which are studied through the papers in this issue. This special issue presents papers invited from those presented at prior Portland International Center for Management of Engineering and Technology (PICMET) conferences.

The first paper ‘Personal style, culture and performance outcomes in projects: what is the role of project leader individual differences?’ by Aronson explores the role of the project leader in project teams. This paper addresses the human side of managing technology as well as cultural relationships. In particular, while it is well-known that leadership style has a wide effect on people, it is not well studied in a project as a unit of analysis. Based on 121 project teams, this paper delves into the role of personal style of leadership in influencing the culture of a project team. Moreover, the paper highlights how effective use of leadership could result in better overall team performance.

In the second paper, ‘Complementarity vs. compatibility: what really matters for partner selection in open innovation?’ Manotungvorapun and Gedsri focus on open innovation which has become a critical approach to innovation. They stress the relation between compatibility and complementarity in partners’ selection. In particular, the paper explores the effectiveness of resource allocation when a firm has to select a partner for an open innovation project analysing if it is better to choose a companion on the base of compatibility or complementarity and the implication of that choice. In particular, given multiple choices of alliances in a technology market, managers are however vulnerable to a risk of selecting inappropriate partners. Thus, the paper discusses the roles of managers

in determining the appropriateness of external partners and investigates the dimension of complementarity and compatibility.

As the third paper 'Global technological knowledge compliance management: action research on organisational transformation in three Asian countries' in this special issue, Umeda and Shirahada study knowledge management and explore how Japanese knowledge management approaches can be used in other countries. In particular, they focus their attention on finding success factors for the global expansion in overseas businesses. The paper presents a model for technological knowledge compliance applying the best practices used in Japan to overseas subsidiaries. The results are interesting because the authors have recorded a positive outcome on how quickly organisational transformation occurred. However, not all the countries have absorbed the best practices in the same way. This last implication is discussed with a particular focus in the Philippines and China.

The fourth research 'Impacts of electrification of automotive transport in different OECD countries' is presented by Klemola and Karvonen. They focus on of the transportation electrification in OECD countries and provide important learnings for policy makers. Using life cycle assessment, they quantify the environmental impacts of electric cars in all OECD countries. In particular, comparing electrical engines to the thermic engines, this paper considers the environmental impacts throughout the entire life cycle of an engine, from raw material extraction to use and end-of-life treatment and final disposal. This longitudinal analysis shows significant differences in the environmental impacts of battery electric vehicles among the countries giving useful implications for policy maker and stressing out that for most of the countries the environmental gains of electric vehicles are questionable.

Finally, Bauer and Eastham present 'Case study: Nordic Windpower's critical blade failures', a case from the wind power sector highlighting the difficulties of starting up business in that sector. The paper analyses a Norwegian-based team and their wind turbine generator start-up. With a rigorous engineering approach, they analyse the N1000, a two-bladed, 1 MW WTG wind electricity generator. In particular, the focus of their attention on is what has gone wrong during commissioning and field testing which brought the firm to Section 7. Built upon a systems engineering perspective, the paper identifies best practices, and offers potential solutions for Nordic Windpower's development process that might be useful to other firms in the same sector.