From the Editors

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To cite this article: Toni Doolen & Eileen Van Aken (2016) From the Editors, Engineering Management Journal, 28:3, 133-133, DOI: 10.1080/10429247.2016.1204132

To link to this article: https://doi.org/10.1080/10429247.2016.1204132

Published online: 12 Sep 2016.
As co-Editors of the *Engineering Management Journal*, we are pleased to bring you this third issue of 2016. The September 2016 issue has five articles that cover a range of engineering management domain areas, including continuous improvement, product development, engineering economy, as well as knowledge management. This issue, like scholars and practitioners of engineering management, recognizes the diverse set of challenges presented in today’s organizational environments. In the first article, “Analysis of Clinic Layouts and Patient-Centered Procedural Innovations Using Discrete-Event Simulation,” Gosavi and colleagues present analyses and results from discrete-event simulation to compare the layouts of four different healthcare clinic configurations in support of Patient Aligned Care Teams. As healthcare costs in the U.S. continue to climb, engineering managers can use their expertise to identify effective layouts. The authors show that certain layouts will result in cost savings, while also reducing patient travel distances and wait times and positively impacting patient privacy and staff security. The approach used by the authors in this research demonstrates how valuable discrete-event simulation can be for engineers and managers working in healthcare.

In the second article, which is an applied engineering management article, Joshi, Lim, and Teng also use simulation in a healthcare environment, but focus on emergency department performance. The article, “Simulation Study: Improvement for Non-Urgent Patient Processes in the Emergency Department,” presents the results of analyses used to improve various performance metrics for non-urgent patients at an emergency department of a medical center. The authors propose a new process, in which workload of the medical staff is re-distributed, patient process flow is modified through a re-design of the consulting area layout, and patients are given flexible options for scheduling return visits. Simulation study results revealed that the enhanced processes could reduce average patient wait time by over 70%, while also reducing medical staff workload. The details provided in this article demonstrate how simulation can be used to effectively identify improvements and design changes to positively impact multiple aspects of operational performance.

In the third article, “Investments for New Product Development: A Break-Even Time Analysis,” Park and colleagues demonstrate important connections between product life cycle and product-process matrices. By combining the product-process matrix and cost-volume-profit analyses, the authors create a New Product Investment Curve (NPIC), based on annual cash flows for new product development. The NPIC was validated using data from 411 companies. The authors found that, on average, companies needed 12 years to recover initial and subsequent new product development investments. However, the break-even time varied across industries, depending on the speed of innovation and the cost structure of the industry. The authors conclude that engineering managers in industries requiring high levels of research and development and high fixed costs will experience longer break-even times. This article emphasizes the need for engineering managers to understand the financial aspects of new product development.

In the fourth article, “Dynamizing Knowledge Processes Through Actional Intelligence in an Engineering Context,” Albors-Garrigos, Ramos-Carrasco, and Peiro-Signes provide engineering managers with a better understanding of the knowledge management process and the steps necessary to systematize knowledge management processes with an organization. As a result of this study, the authors propose a six-step process and provide a practical framework for application, which is concentrated on “actioning knowledge” within an organization. By organizing actioning knowledge, engineering managers can take advantage of under-used, intangible assets. This article links the idea of actionable knowledge with competencies and organizational performance, resulting in a more practical and understandable approach to knowledge management for engineering management practitioners.

In the fifth article, “An Enterprise-Wide Knowledge Management Approach to Project Management,” Oun and colleagues also explore knowledge management, but with a focus on positively impacting project management. This article contributes to the body of knowledge by investigating possible benefits of an enterprise-wide knowledge management approach to the successful management of projects. In particular, the authors measured the association between four pillars of knowledge management (leadership, learning, organization, and technology) and project management knowledge areas. The results suggest that a holistic approach to knowledge management will result in an increased likelihood of project success. These findings suggest that project success can be influenced by the approach by which project knowledge is managed.

We hope that you will enjoy this issue of *EMJ* and that it provides value to all of our readers. We would like to thank Associate Editors Cudney, Pinheiro de Lima, Mazur, and Qin for their role in bringing you this issue. *EMJ* strives to bring useful knowledge to practicing engineering managers and to add to the body of knowledge for engineering management scholars. We invite participation and articles from both academics and practitioners. If you would like to submit a paper or discuss possible submissions, please contact us at: toni.doolen@oregonstate.edu and evanaken@vt.edu.