# **Special Issue of IEEE Transactions on Engineering Management on**

Research on Open Innovation and Social Product Development

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#### **Guest Editors**

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In today's competitive marketplace, the ability to create new products and innovative enhancements to existing ranges is seen as one of the strongest driving forces responsible for the sustained sales of manufactured products. In recent years, customers have become more selective in their choice of products and now demand greater satisfaction and value for money. Consequently, markets have become more aggressive and more demanding of manufacturers. In order to introduce new products to the marketplace, manufacturers have incorporated Innovative Product Development (IPD) into their operational strategies, aimed at developing new or enhanced concepts more effectively and efficiently.

Innovative product development requires an increased understanding of customer needs in order to design solutions that meet the demands of the market and secures market acceptance. Furthermore, it necessitates the integration of multi-disciplinary design knowledge from distributed design teams or organisations either within or outside of a manufacturing company. This integrated knowledge, relating to design, engineering and process know-how, paired with an understanding of customer requirements, leads to the innovative development of successful products [1].

Historically, products have been developed by internal research teams that implement the results of their research activities and push the product through to market. Manufacturers have traditionally acquired multi-disciplinary knowledge by recruiting engineers from different internal disciplines. However, researchers [2] concur that this closed approach to IPD has become obsolete due to various factors, including, but not limited to: (1) the availability of external knowledge, generated through various sources, including universities and social media channels, and (2) the availability of venture capital and crowdfunding mechanisms that have created start-up companies that acquire high-quality talent that are in direct competition with manufacturers.

With an increased demand for faster product innovation, manufacturers have turned to Open Innovation practices, including aspects of Social Product Development (mass collaboration, crowdsourcing and crowdfunding) [5], as a means of quickly obtaining multi-disciplinary product and subject-matter knowledge. This means that knowledge is not only gained within a company, but also from external sources. It assumes that manufacturers have the organisational structure and abilities to use externally-generated knowledge as well as internal ideas, and use both internal and external paths to market [3]. To successfully achieve this, bespoke business models must be created that acquire both external and internal ideas to create value for the manufacturer.

Open innovation is now widely adopted by large organisations [4] and has been extensively studied since its introduction in 2003 by academics, practitioners and strategists. Questions still exist, however, relating to how to best introduce, manage and adopt open innovation and Social Product Development initiatives to ensure that manufacturing organisations obtain the greatest value from external knowledge flows and successfully use them across their organisational boundaries. Open innovation and Social Product Development practices should also enable manufacturers to identify new markets and new product categories, in addition to increasing the number of products created. The purpose of this special issue, therefore, is to spur and develop research into the use of open innovation and Social Product Development in innovative product development settings.

## Potential topics of interests include, but are not limited to:

- Harnessing inflows and outflows of knowledge to improve product innovation.
- Methods for efficient extraction of customer knowledge from diverse market segments and online communities.
- Management approaches for capitalising on and protecting breakthrough ideas that emerge from outside of an organisation.
- Design and realignment of business models to support external knowledge searching activities.
- Strategies, including models and frameworks, for uniting internal R&D programmes with external programmes, such as consumer crowdsourcing activities.
- Social media monitoring and listening techniques to acquire external knowledge efficiently.
- Factors and conditions that lead to the failure of open innovation or social product development programmes.
- How and why should established manufacturers initiate open innovation or social product development activities?
- Lessons learnt from successful and failed open innovation or social product development implementations.
- Trust and intellectual property issues (e.g. patents and copyrights) in open innovation programmes.

Papers that are both conceptual and empirical based are welcome in this special issue, particularly those that provide greater insight into the adoption, implementation and/or management of open innovation and social product development initiatives in innovative product development settings. Topics are expected to be interdisciplinary and fill gaps in existing research. Empirical research is particularly welcomed that explores individual, team, online community or organisational opinions towards open innovation initiatives. We also seek conceptual and theoretical research, including new models and frameworks, that expand and contribute to theory by examining social and managerial aspects of open innovation adoption in innovative product development. Theoretical contributions should also provide practical insights for managers in the technology and engineering management arena.

### **Review Process**

The special issue's guest editors, the journal's editorial review board members, and *ad hoc* reviewers will referee the submitted papers. We anticipate *no more than* 3 months each for the first two rounds of review, and 1 month for the final round. If invited to revise their manuscript, authors will be given 3 months for the first revision, 2 months for the second revision, and 1 month for the final submission.

### **Submission Process**

Please prepare the manuscript according to the IEEE TEM's guidelines (http://www.ieee-tems.org/guidelines-for-authors/) and submit it by <u>September 28, 2018</u>. Please submit your manuscript at the journal's Manuscript Central site (https://mc.manuscriptcentral.com/tem-ieee), selecting **Richard Evans** and **Dirk Schaefer** as preferred editors. Please also clearly state in the cover letter that the submission is for this special issue. Questions regarding this special issue can be sent to R.Evans@westminster.ac.uk or Dirk.Schaefer@liverpool.ac.uk.

## References

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