

Editorial

Decades ago, companies believed that innovation and new product development (NPD) were activities that only big companies could carry out mainly due to their costs. Given the rapid changes and the more and more competitive environment where firms have to compete, most academics and practitioners now agree that these issues are much more important than previously envisioned, thus suggesting companies must develop a steady stream of new products and services. Thus, the relevance of innovation and NPD for the competitive performance of firms and for the long-term economic growth is a known topic, recognized as a fundamental requisite of a company in order to grow in today's competitive context, and as one of the key drivers of the firms' long-term success. In particular, during the last decades, a shift has been observed from the technology push innovation model to the market pull one, thus forcing companies to focus more on quality product rather than on internal efficiency, and to quickly identify changing customers' needs, to develop more complex products to satisfy those needs, and to provide higher level of customer supports and service. As a consequence, greater focus has been placed on NPD, that is often considered to be the lifeblood of a company.

On the basis of the above mentioned premises, the main objective of our special issues is to contribute to this thought process in the area of innovation management by collecting a set of high-quality papers examining topics such as product innovation, product engineering, quality management systems, reliability and quality control, integrated product engineering and so on.

We received a total of 19 submissions, and, after review, 9 papers were accepted for publication in the special issue. Such papers address a wide range of topics related to field of NPD and innovation, and can be grouped into four sets, depending on the topics examined. A first group of works includes the first, third and fifth papers, and proposes studies whose general aim is to improve the NPD process. In the first paper, Rashid et al. examine the issue of effectively capturing the voice of the customer in defining the product attributes, which is one of the first steps of a NPD process. They propose a computer system, exploiting the Monte-Carlo simulation technique, which allows determining the minimal number of respondents to make a reliable conclusion for a definite product attribute. In the third paper, De Felice and Petrillo propose a new methodological approach to define customer specifications in NPD. The approach grounds on the combined application of Quality Function Deployment (QFD) and Analytic Hierarchy Process (AHP) models, which are exploited with the purpose of delineating and ranking the relative importance weight of expressed judgments for customer needs and functional characteristics of a new product. In the fifth paper, Voigt and Ernst investigate the potential of using of Web 2.0 applications for generating and sharing knowledge in research and development departments of companies, especially on the emergence of innovations.

The second group of works includes the second and sixth papers, and provides real case examples of NPD processes. Specifically, the second paper, by Bigliardi et al., examines a successful case of new product development, in the field of the food packaging industry. From the analysis carried out, the authors derive the key elements for successful NPD in that context. In the sixth paper, La Scalia et al. focus on a specific NPD process, i.e. almond paste production, with the purpose of developing a new production process which allows delivering high nutritional contents of the raw almonds into the finished product.

The third group of works includes papers 4 and 8, i.e. empirical studies related to the NPD process. In the fourth paper, Lazzarotti and Pizzurno conduct an empirical study to investigate the role of companies offering technical and scientific services (TSS) in the new product development process. They aim at identifying TSS companies that support the entire NPD process, or that provide services to a smaller part of the innovation process, as well as at examining the profile of such companies. The eighth paper, by Kulatunga et al., examines R&D processes in the construction industry. Through a combination of literature review and in-field investigation, the authors derive a set of critical success factors that should be considered and implemented for successful R&D process in that field.

Finally, the fourth group of works, including the seventh and ninth papers, investigates industrial issues related to the characteristics of new products manufactured and to the new product development process. Through a case study related to the electronic industry, in the seventh paper Pero et al. examine the issue of effectively and efficiently managing a supply chain when new products are introduced. A case study is also proposed by Davoli et al. in the ninth paper. The authors examine the issue of scheduling manufacturing activities in the ceramic tiles industry; a simulation model is proposed as a useful tool to support management decisions related to production scheduling and investment planning.

Thanks to the variety of topics addressed, we believe that this special issue provides the scientific community with valuable information and knowledge in the field of new product development and innovation. The value-added by a special issue is only as good as the contributions of the manuscripts it receives, and the quality of the feedback provided by its reviewers. We are very

grateful to all the authors, who supported this special issue through their contributions. We are also indebted to the reviewers, who helped us in managing the papers received in a timely manner and provided useful and professional reports about the papers. Finally, we would like to thank the Editor in Chief of *International Journal of Engineering, Science and Technology*, which gave us the possibility of organizing the special issue and helped us in its successful completion.

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