

## EDITOR'S NOTE

We live in a dynamic world, one in which both the economic and individual factors to success are in constant change.

The last economic crisis has shown that challenges are a source of evolution. Companies only survive and grow if they are able to respond quickly to changes in the market and to effectively use the managerial, professional and creative resources of all of their employees.

There are currently several phenomena directly influencing the field of mechanical engineering.

Firstly, the products are no longer solely mechanical. They have become SMART, they contain significant electrical and software parts — and this is a growing trend. This trend causes companies to require experts in various fields and to employ multidisciplinary teams for cross-functional product development. There are companies that essentially manufacture mechanical products, which for the first time in their history have a larger number of software developers than mechanical engineers. The key tools in the development of such organisations are project management, project portfolios and the development of agile projects or projects surrounded by significant uncertainties.

There is much talk recently about the Internet of Things. The opportunity to connect product designers and technical support teams with devices of various functionalities is about to help enable remote diagnosis and to develop types of services unknown until now.

These facilities will enable the emergence of new business models, which will shed a new light

on customer needs and property transfer, as well as even having an impact on the modern lifestyle.

There is a widespread tendency to rethink the end user needs. Instead of purchasing a truck, for instance, a customer might prefer purchasing the number of kilometres the truck is going to travel. In such a scenario, the risks are left to the producer. For this new type of business, the producers will be required to integrate service lifecycle planning into their designs from the earliest concept stages.

The world which we live in is headed towards green technologies. The care for the environment is evermore present, especially within the European Community. Malmö, for instance, has been transformed from an industrial city to a city of knowledge, entirely focused on sustainable development. Europe is making efforts to get increasingly independent from any fossil fuels, which has an impact on the activities and the strategies of companies.

Another trend is the development of micro and nano technologies. We have various disciplines, such as biology, physics and engineering that nowadays have to work together in order to come up with new products.

In this utterly dynamic world, companies and individuals are subjected to great challenges.

The bold, the adaptive, the creative and the well-prepared will be the ones to succeed. They are the ones building a better world for tomorrow.

**Prof. eng. Livia Dana BEJU PhD.**  
**“Lucian Blaga” University of Sibiu**