



Editorial – Issue 23 – October 2015

Probably due to the tough times the overall economy has been through, we have noticed in the professional context a growing tendency to simplify problems, so as to spend fewer resources, in an attempt to do more with less, or at least leaving aside aspects which can be considered superfluous, focusing only on what is considered essential. This line of thought seems to be fully accepted and adopted whenever adverse situations emerge.

The "Occam's razor" principle, formulated by William of Ockham, an English philosopher, theologian and Franciscan friar, says that "among competing hypotheses, the one with the fewest assumptions should be selected". This principle is used in many ways in science, and was also known as the "law of parsimony". This principle could be argued upon and even questioned, but here in this text, we shall simply assume that it translates into "we should never complicate what is simple." This seems quite reasonable because complicating simple things leads to unnecessary and unjustifiable expenses, which in turn lead to other negative issues.

Despite the need to act with parsimony, we must not give up the complexity when it is an intrinsic part of a given problem. In the energy sector, we have routinely faced models that, in order to have their computations made possible, simplify aspects, implying inaccuracies that constitute compensation for viability and speed in the process, albeit approximate. But we all know that, aiming at perfection, we must avoid such approaches when possible.

Research and development activities have an inherently complex nature in relation to other activities performed in a company. Even under the academic point of view, the complexity of an R&D project becomes evident when it goes beyond the competence of the researchers, requiring the interaction between the academic and the application knowledge domain. This interaction can be regarded as a highly innovative potential, but it has an inherently complex nature.

When we try to simplify these activities, giving them a simplistic view, even though the real intention is to encourage them, we will be taking away their greatest potential. It is the complexity that calls the human capacity to create, by means of alternative lines of thought as well as the interaction between heterogeneous groups in the search for the solution to a given problem. Investing in complexity, therefore, does not mean wasting time with complicated issues, but rather stimulating creative solutions involving expertise, with the aim of achieving true competitive advantage.

This issue of Espaço Energia features papers that directly or indirectly demonstrate the above-mentioned concept, which address a variety of issues within the theme "Energy", starting with the complex regulation mechanism of the energy sector, proposing changes aiming at expanding the capacity to meet the peak demand of the national system, going through other issues such as a computer application aimed at the integrated forecast of energy markets, diagnosis of energy efficiency in a public building, road trees under power lines, R&D management focusing on products, monitoring of dams, and finally reaching the issue of environmental legislation in the oil sector. On behalf of the advisory and editorial boards, we wish you all a rewarding reading.

Klaus de Geus
Editor-in-chief