



## Editorial – Issue 31 – October 2019

Results of scientific work usually take significant time to become visible to the public. Even those of a purely theoretical nature require rigorous peer review so that they can be published in scientific vehicles. Applied scientific activities, such as the development of R&D projects and, in particular, in the specific case of the electricity sector, those undertaken under the auspices of the ANEEL R&D Programme, reach maturity over a minimum of five years and possibly ten years, or even longer, depending on factors such as the complexity involved in the solutions.

Even so, despite the incentive formalized in the context of the R&D programme to materialize the practical benefits produced in such ventures, including the possibility of exploiting the potential competitive advantage achieved by entrepreneurs, there is clearly a great difficulty in transforming the product of intellectual creation into a profitable product, whether for the institutions and people involved, or for society in general.

On the one hand, scientists produce what is best in their respective fields of knowledge, which gives them publications and hence reputation. On the other hand, professionals strive to find competitive advantages with strong foundation and which may provide practical benefits to their business. It turns out that the sustained competitive differential and the longed-for profitability do not simply consist of the sum of these two portions. There must be a component that allow for the connection between the two worlds. But what would be the nature of this component? Perhaps this should be the most creative part of the whole process! A poor view of the potential application of the new product can simply annihilate the chances of commercial exploitation and hence determine its early retirement. On the other hand, a visionary intervention on this potential may be the key to its success.

The interaction between all these players thus becomes an essential ingredient for the full success of an innovative product. In addition, this interaction should be driven by people with a real innovative mindset, who understand how each part works. In the scientific world, this means seeing the potential applications of experiments and research, getting rid of the common view that research does not mix with business. In the business world, this means seeing the sustained differential that a well-founded outcome can bring to business, shedding the stance that undertaking scientific activities means daydreaming and not committing to results that bring real benefits.

The success of such a venture can prove some interesting points. First, it is of no use adopting a recipe that never worked and hoping that one day, at insistence, or for some unknown reason, it will finally produce results. If the goal is to innovate for sustained benefits, then the way of thinking should be changed. Thinking about innovation in the same way that established processes in the company are thought is innocuous, and only generates frustration with successive failures. In addition, it may become evident that it is indeed possible to undertake an innovative R&D venture that achieves the desired practical results, and perhaps even results that had not even been considered in the beginning. To this end, it must be borne in mind that the sustainability of innovation takes into account the sound foundation of the venture and the creation of knowledge, and this takes time to achieve. Time cannot be seen as a barrier, especially in this context. Rather, it should be seen as the mechanism that separates innovators from imitators, and that provides the opportunity to achieve sustained competitive differentiation.

This issue of Espaço Energia features four papers on various topics related to reversible power plants, renewable energy, intelligent cloud meter data storage, and thermal generation cost function in the context of the hydrothermal dispatch. Once again, we appreciate the respectable and exquisite work of the distinguished members of the boards, without which this journal could never exist. We thank the help of the support groups and our sponsor Copel and, above all, we thank the authors of the published papers. May you all enjoy the reading.

Klaus de Geus  
*Editor-in-chief*