



Editorial – Issue 29 – October 2018

As we have emphasized throughout the period of existence of this scientific journal, there is a great barrier in Brazil between academia and industry, which, despite the fact that the country makes a significant contribution to the world scientific production, the difficulty of turning scientific inventions into practical innovations persists. With this, the country loses, failing to generate dividends, both in terms of experience and knowledge, and in terms of benefits to society.

Government development agencies have sought to create programmes to help the country's industry to awake. But what, after all, is still missing? First, it is necessary to break down the wall that separates the two worlds, academia and industry, merging them, if possible, into a single gear that generates knowledge and, with it, innovation. In more advanced countries, the number of researchers working in industry is much higher, and that allows for a more convergent functioning with academy, bringing balance and good results to society.

It is also necessary for the country to start thinking differently about business management. The economic situation experienced by the country in the last years contributes with a certain fear of taking risks which the management of the companies shows. This is natural, but very dangerous. This culture has led the country to think of industry as essentially a production line entity, where there is no room for thought, for the creation of new solutions.

Some authors, including Jordan Peterson, of the University of Toronto, have been investigating the issue, suggesting that companies are usually born from an innovative stance, but over time they end up abandoning it in order to manage established processes. Thus, managers become, mistakenly, far more important than 'innovators', that is, than those creative people who tend to think differently and to break rules, or, in other words, disobey. These people and their roles are paramount for the survival of companies.

The situation worsens in the country when management is based on methods dating back to the time of the industrial revolution, which advocates mass production, operational efficiency, and value translated into numbers. In the age of knowledge, these concepts should not only be questioned, but also challenged. Companies can no longer afford to rely solely on industrial methods, seeking only operational efficiency. There is no longer room for this culture, especially in certain segments, which rely heavily on knowledge and innovation to achieve success and ensure survival in an extremely dynamic market.

Many ventures have won, especially at the time of their own creation, important market victories. Some of them, however, resigned themselves to the differential achieved, and relaxed assuming that the partial victory was enough to guarantee them the future. Some others have even succumbed to a dynamic and extremely competitive market, even though they have been ahead of their competitors for the time that the sustainability of their innovations has allowed them.

It is likely that the effect of attaining a differential is similar to the effect of the negotiating wiles that have led us to the current financial crisis. This effect is nothing more than the false illusion that achievements are more sustainable than they actually are. In a world in constant change, both in terms of supply and demand, relying entirely on a well-defined step can mean the ultimate demise. The sustainability of innovation is only guaranteed when the thinking behind it is to make it obsolete. To be sustainable, innovation must constantly overcome itself.

Therefore, it is essential not only to challenge the crisis with a new look at the market but also to acquire a stance of constantly striving so that the competitive advantage achieved thanks to this new look is reduced to zero. The future belongs to those who now see beyond, but definitive success belongs to those who consistently question their own vision.

The electric sector is no different. A major step was taken by the National Electric Energy Agency (*Agência Nacional de Energia Elétrica - ANEEL*) with the creation of its R&D programme, which has acquired maturity over time in order to bring academia and industry closer together, and furthermore to generate effective innovations that bring real benefits to society.



However, there seems to be an inherent difficulty in the business mentality, because, despite the fact that there are programs which foster sustained innovation, through the generation of specialized knowledge, their results continue to be timid, presenting low success rates in terms of their practical application. The electricity sector, and more precisely, companies, must absorb the fact that R&D and innovation-driven activities are of a different nature and therefore must be carried out differently. Thus, a break in the way companies are conducted is necessary.

Papers published in this journal are the result of exemplary works, conducted by experienced people, who demonstrate their competence in energy issues. This edition presents two papers that present important works on alternative sources. The first one seeks to provide the reader with the information necessary for a good understanding of the alternative source “shale gas”, presenting extraction techniques and discussing the possibilities for the growth of exploitation. The second paper provides the reader with information on the alternative source called “marine energy”, which encompasses five distinct sources: waves, currents, tides, thermal gradients, and salt gradients.

As of this issue, the journal has a new title, namely, “Espaço Energia – Brazilian Open Journal of Energy”, an amendment that aims at its internationalization. To this end, the journal also has, from now on, a new international editorial board, which will be responsible for judging the structure of the submitted papers, pertinence, degree of interest to the community, writing style in the stretches written in English and, finally, the potential for scientific contribution. The new “double-blind review” process is represented by the diagram of the “peer review” option of the homepage.

We welcome the new editorial board and appreciate the impeccable work done by the other committees, in particular the committee responsible for the detailed evaluation of all papers, which greatly contributes to their quality. We also thank the authors for the prestige and for sharing their experience and knowledge, congratulating them for the publication achievement. We wish you all a great reading.

Klaus de Geus
Editor-in-chief