



## Editorial – Issue 32 – April 2020

Hard times. Perhaps this is an adequate way to characterize the moment, with the pandemic that is plaguing the planet. We all know that the disorders caused by this adversity can even exceed the limit of what we can consider normal, and that the world will probably not be the same from now on. Although all of our concerns are focused on this serious crisis, we know that history will continue its course, and that, therefore, life will go on. In this sense, I dare to refer here to the current crisis as a form of learning, which, whether we like it or not, will eventually happen. In a few months, when everything is in the past, we will look back, put the broken pieces together and stand up stronger, absorbing all the knowledge experienced in this battle, and prepared for future adversities.

These three attitudes, looking back, putting broken pieces together and becoming stronger with the absorption of the experienced knowledge, are, in fact, necessary steps to recover from moments of crisis. However, if we do this systematically, as a stance, we will be reinventing ourselves every day and taking precautions against future adversities, or, perhaps, at least mitigating its most harmful effects. On this occasion of crisis, we will be obliged to undertake, to conceive solutions, and even to reinvent ourselves, since it is a question of survival. On other occasions, however, we will have to remember the adversities we have been through so that we can continue to evolve as human race.

Why look back? Well, because there are mistakes, and mistakes are part of learning. It is of no use living in illusion, pretending to live in perfection, without making mistakes. Now, if mistakes are inevitable, we had better take them as a reference for the future, in order to avoid them and, above all, to prepare ourselves for equivalent situations. Therefore, we must indeed look back and identify errors and the conditions under which they happened. Errors raise questions and, from them, the impetus to propose solutions arises. And this is precisely a fertile field for activities aimed at innovation and research, which have the primary objective of ensuring the survival of a company throughout its history.

Why put broken pieces together? Because one does not start from scratch, but from what was built before, whether right or wrong. According to the educational psychologist David Ausubel, the actual learning, which he calls “meaningful learning”, occurs when the new information is anchored in relevant pre-existing concepts of the learner's cognitive structure. This is also how professional activities responsible for the future of a company or an institution work, such as R&D and innovation in general. Errors, therefore, have an important role in the development of the future, which is based, to a large extent, on experimentation, and, on many of the opportunities, on uncertain results. Some pieces may break in the middle of the way, and putting them together is part of building the future.

Why absorb the experienced knowledge? Although much emphasis is placed on products in the business world, more important than the products themselves is the knowledge we have about them. That is precisely where the value lies. It is better to know how to develop a product than to simply buy it. Thus, in adverse situations, it is better to know how to find the solution, given that this will also serve for future adversity, than simply obtaining a momentary solution. It is the difference that separates the leading country from the following country.

Many companies discover the value of science, the competitive advantage generated by R&D programs and solutions based on creativity when they face adversity. But what is our attitude when everything is fine, when apparently there is no need for elaborate solutions? Do we stop investing in them and channel all our efforts into those that generate direct and immediate profit? How long will they last? How long will it take for this advantage to be simply annihilated by competition, by global crises, or by those who, contrary to the mainstream, have decided to invest in learning?

This issue of Espaço Energia features three papers. The first makes an analysis of the correlation between energy use and the human development index. The second explores the growing participation of renewable and intermittent sources in the Brazilian energy matrix. Finally, the third presents a case study on the failure rate in the public lighting system. We would like, once again, to thank the interest and the excellent work done by the authors of the papers published in this issue, the splendid work of the boards of Espaço Energia, especially the



contribution made by Marcelo Rodrigues Bessa, and the collaboration of illustrious researchers, Paulo Henrique Dias dos Santos and Emerson Luís Alberti, in the process of analysing the manuscripts. We also thank the support groups and our sponsor company, Copel. We wish you all a great reading.

Klaus de Geus  
*Editor-chefe*

