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Carlos Härtel is Director of GE's European Research Center in Garching, near Munich, a position he has held since 2007. In addition, Härtel is a member of the management board of GE Germany. He is also President of EIRMA, the European Industrial Research Management Association. Prior to joining GE, Carlos Härtel held positions as a scientist and manager in the development of gas turbines at Alstom in Baden, Switzerland. He studied aerospace engineering at RWTH Aachen and TUM, and received his doctorate from the Institute of Fluid Mechanics of the German Aerospace Center (DLR) in Göttingen. Subsequently, he spent several years at ETH Zurich, where he qualified as a university lecturer in 1999.

Academia and Industry – Partners in Innovation

Never has innovation been viewed as more critical to growth, employment and prosperity than today. For Europe, stepping up its game is a must.

When launching the flagship initiative “Innovation Union,” the European Commission acknowledged that Europe needs to become much better at turning research into new services and products that can compete successfully on the world stage. A strong linkage between public and private actors, especially academic institutions and technology enterprises, will be a key enabler here. This not only creates pathways for taking early-stage ideas to market; it also exposes our students of natural sciences, engineering and entrepreneurship to the cutting edge of what’s technically feasible today. This offers invaluable learning experiences. And it provides inspiration to those who are eager to push the limits of science and technology in their own future careers.

For academic research, the main objective is the understanding of basic phenomena. Industry, on the other hand, is keen on mastering the application. Technology is the point where both parties meet: creating the know-how, the recipe for how scientific insights can be put to practical use. But while there’s a natural connection, there’s a natural divide, too. Universities and companies are fundamentally different

entities, and so differ in their work cultures, their priorities and their ambitions. Effective collaboration therefore requires teams from both sides to be well integrated and to work in synch during the duration of a project: from jointly defining the objectives, through to the execution phase with regular progress assessments, to decisions on adjustments that need to be made along the way. In fact, geographic proximity is ideal for achieving the intensity of engagement that leads to highly successful collaborations. Many regions and governments have begun to realize this, as evidenced by the emergence of technology parks and clusters with co-location of academic institutes and industrial labs. Our European Research Center is also situated on a research campus in Garching, a privilege that none of our other global R&D facilities enjoys. Consequently, the interaction with TUM has developed into a relationship that is richer and deeper than most other university programs of GE.

The symbiotic relationship between universities and private companies around Silicon Valley has led many to assume that business and academia are more tightly connected in the US than in Europe. But this is not generally true. Rather, Europe has a unique tradition of research partnerships, which we should build upon and expand to create a pillar of regional competitive advantage. Occasionally, this closeness is even criticized as an alleged threat to academic freedom. However, this has very little substance. Keeping an eye on potential conflicts of interest is, of course, important; but in my own experience, the vast majority of industry-funded university research is far from having such conflicts. On the contrary, it’s devoted to questions of fundamental scientific relevance. Through EIRMA, the European Industrial Research Management Association, leading companies from across Europe have been working with partners in academia and public research organizations to build a framework for how the private and the public sector can cooperate in ways that are fair, productive and mutually beneficial. The outcome is summarized in the guideline “Responsible Partnering,” which has served the community well for many years and which will continue to be updated and contemporized in the future. □