

Firms' New Innovation Practices and Global Networks

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Chairperson's Notes: Andrew Dearing, European Industrial Research Management Association

Introduction

- Achieving an effective, meaningful European Research Area initiative involves a sophisticated and complex mix of initiatives aimed at people, resources, infrastructures and the like. Yesterday, we heard several economic perspectives on the best ways forward. At one level, there was much in common between these analyses – for example the recognition of new patterns of innovation in increasingly open, globally-connected economies; the key role of the local environment within that global perspective; the need to go beyond purely research and technology-oriented views of innovation; and so on.
- But there were also, perhaps less evidently, some disagreements. It was not clear to me that the economic perspectives agreed on the approach to specialisation. The belated recognition of the need for company growth in areas of new technology was gratifying, but the speakers clearly did not have a shared view of the roles of start-ups, growing SMEs and multinationals, nor always recognise the part of players other than companies and universities in the innovation process.
- During this session, the intention is to hear from four senior delegates from the private sector, people who have leading positions in established multinational companies that depend upon research, technology and advanced knowledge for their continued profitability and capacity to innovate. These speakers come from different sectors of the economy and have different personal experiences: a Belgium-based chemicals company; Netherlands, French and US-based animal healthcare; the head of the Indian R&D laboratory of a global food and personal goods company; and a French-based defence, space and security company.
- I have asked these people to relate their personal experiences of the factors that influence their companies' development: how history, current skills and ambition interact with the demands of the global businesses they are in. I encourage you to listen to these experiences for their views on the question "How to do things well?". Without too much prejudging their presentations, I suspect that you are going to hear them speak about speed and organisation; effective connections; people; portfolios of activities and skills; and factors determining investment decisions.
- For starters, I give you a short history of my own experiences inside the major oil and energy company, Shell. Its main field of operation has not really changed over the thirty years I have had some connection with the company, yet the nature of the challenges it has aimed to address, and how it set out to address those challenges, including using R&D, changed dramatically. Connections between people and organisations have played a huge role in determining what worked and what did not work.
- Thirty years ago, when I worked in its corporate centre, few people in that centre seemed aware of the fact that the company was a major investor in R&D; employed two Nobel Laureates as part of a process aimed at diversification in the field of biotechnology; and was achieving major breakthroughs in catalysis based on an understanding that was superior to that in any university in the world. Those breakthroughs enabled the development of new gas-to-liquid fuels technology, now in use around the world and the development of a new engineering polymer, which

failed to achieve a major impact. One of the reasons came from the different quality of connection between research, a distinct function within the company, and the businesses that would be responsible for implementation.

- Twenty years ago, the head of Shell's research function, Harry Beckers, was widely considered to be one of the "biggest cheeses" in European R&D, and I am sure that, were this 1988, he would have been chairing this session, not me. Again, though, one of the challenges he faced came from connections – in this case, how to achieve maximum synergies between the tremendous range of skills and resources available in some 15 laboratories worldwide.
- Fifteen years ago, Shell aimed to reinvent the company, because its overall organisation based on national responsibilities and a functional structure, was no longer suited to the challenges the company faced. The 'local' organisation had failed to be sufficiently responsive to the demands of running global businesses. As just one example, one of our Japanese laboratories concentrated on local technical support but also became heavily involved in initiatives stimulated by MITI's "grand challenge" view of development. It was quite impossible for the Shell group to capitalise on what was being done in Japan, or for the group to bring to bear the resources needed to make a material contribution to major technological requirements. This has important lessons for those of us, including me, who believe that the time is now right for a new 'grand challenges' perspective.
- The re-organisation brought about tectonic shifts in the balance of power within the company. Basic research effectively disappeared; and emphasis shifted to value creation and radical innovation. Social and environmental changes became important, as those of you who recall the stories of the Brent Spar and of Ken Saro Wiwa will appreciate.
- These changes continued through to this day, and the underlying question has always been 'how to connect effectively'.
- With that in mind, let's hear our speakers' stories.

Summary of main points from presentations

- Leopold Demiddeleer, Solvay, highlighted the importance of vision and valuing knowledge. He reminded us that things take time, and that one has to build on the roots that exist. Many things have to be managed well in order that the overall outcome will be as intended. The company's evolution is a consequence of its ability to maintain its strengths.
- Ellen de Brabander, currently with Merial, spoke about how companies must learn to systematise open innovation, which involve company-to-company and company-to-society interactions as well as public-private sector interactions. She spoke about people and their mobility, which may be restricted geographically, or on a sector or disciplinary base, and how this contributes to a company's strengths and weaknesses in research, development and commercialisation. She described the importance of speed, with the example of the Blue Tongue vaccine, where only those companies that were adequately prepared could expect to gain profitable business from the scientific opportunity that has been presented.
- Abhi Abhiriman, recently retired from Hindustan Lever, Unilever's R&D facility in India, gave good examples of how global companies should, and should not, approach their management of facilities and people around the world. For example, purely cost-based views of R&D localisation are unlikely to be very effective, as are views that the western laboratory is the leader and the rest will follow in their own good time. He

emphasised the importance of high quality management, based on a view of high quality partnerships involving people you would be happy to employ at home; of developing multiple skills at the same time; and of understanding what you are trying to achieve and how progress can be tested.

- Erick Lansard, Thales, spoke of the shift from mainly closed patterns of innovation towards increasingly open models. He emphasised the management task of handling open innovation well, and mentioned the use of tools of filtering, shaping and refining the inputs through the stage-gate funnel. He considered the quality of the local innovation ecosystem to be fundamental in an ability to operate in a global network.
- In response to the question “How should ERA develop to best support companies’ activities and what will drive investment decisions,” one speaker said that there was no special focus on Europe and that companies now think globally, finding the required expertise where available. The social environment and the coherence of priorities do affect the attractiveness of a region for investment. The European Technology Platforms were mentioned as a useful recent initiative. As developments incur greater risk, there is need to find mechanisms, such as these platforms, that reduce risk and encourage engagement. The issue is not really about “moving investments” but “building ambition that allows investments to be combined to best effect.” The trend to growing collaboration has in many respects gone too far and become too complex. The requirement for reliable partners involves establishing the basis of trust for long-term partnerships that can respond agilely and produce swift results.
- In response to the question “What about the supply of motivated people,” all the speakers gave the same answer: there is a major and serious problem looming.
- Yves Dos summarised these presentations in five areas:
 - o Diversity of inputs
 - o Time and speed, in terms of addressing managerial complexity
 - o Aspiration as motivator
 - o Collaborative research and innovation
 - o The danger of too strong a belief in “designed outcomes”
- The session closed with these remarks:
 - o High quality management matters;
 - o Success comes from combining specialisms, yet we go through education systems that train us only to be specialists. Understanding how to achieve the “T-shaped” profiles that combine personal depth with the ability to work with others across boundaries will be key to using human resources to best effect.
 - o We need people who are motivated to contribute in all parts of the research and innovation system, yet younger people are increasingly “voting with their feet” to do something other than follow the traditional research and technological development career pathways.
 - o Recalling Luke Georghiou’s presentation of the future Rationale for the European Research Area, it is important to move the approach to become something that motivates all Europeans really to understand how ERA enables Europe to remain successful and fully capitalise upon its human talent.