

## Innovation comes primarily from the customer and not from technology

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**F**rance is renowned for its enormous capacity for R&D, both in the public and private domain, and yet few French companies are renowned for their capacity for innovation. However, innovation has nothing to do with empty design concepts and constitutes an essential element in a company's competitive edge. In order to be more innovative, companies need to take more note of their customers' needs, both underlying needs and those expressed by them, and improve the interface between two "hostile" brothers – R&D and Marketing.

### **I**nnovation: the new Holy Grail of modern economies?

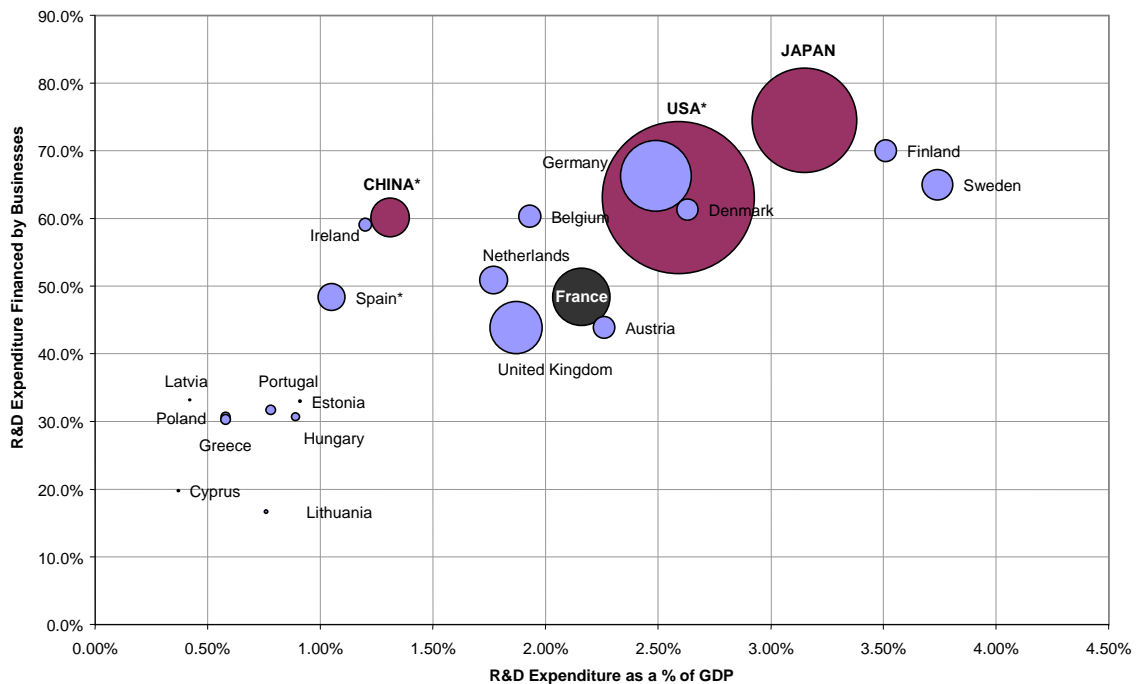
"Oh Lord God Innovation, come to our aid!" – such might well be the incantation of many a company director when trying to find new springboards for growth and to counter the threat of products from low cost countries.

- Innovation is the main preoccupation of businesses and governments. Innovation has become a key term in any talk on the subject of the economy, growth or the creation of value added. This focus of attention manifests itself in numerous public bodies, such as the 'Agence de l'Innovation Industrielle' or AII (Agency for Industrial Innovation) created in 2006, the 'Entreprise Innovante' (Innovative Company) label, etc. Innovation is also very much present in company ideology. In 2004, almost 32% of French businesses chose innovation as one of their values, way ahead of transparency, being responsible or customer satisfaction! Likewise, one of the MEDEF's ambitions is to "to do whatever it takes to make France a genuine land of innovation".
- Innovation brings numerous beneficial properties. At a time when there is so much offshoring, innovation would appear to constitute one of the last bastions of Western industry in the face of developing countries' labour cost competitiveness, with China at the top of the list. When the AII was first created, didn't Jacques Chirac state that "In a world where competition is fast increasing between businesses, between nations, between continents, science and innovation are the keys to progress, growth and employment" This trend can be seen with businesses, for example, Philippe Carli, CEO of Siemens France, believes that: "For France and Europe, innovation is the driving force".

And yet, few directors and employees know exactly what it involves and even less how to implement it: What is the difference between innovation and creativity? How can innovation be measured? What is the difference between R&D and innovation? A victim of its "marketing" success, innovation has become a generic concept with blurred edges, often set as an objective but difficult to quantify and therefore rarely used in a concrete manner in business management.

In our Cartesian country strongly marked by a long-standing engineering culture, it is common to associate innovation and R&D, and to demonstrate this I will use the example of the exemplary success of our engineering, recognised on a world scale: Concorde, Ariane 4 and Ariane 5, the Rafale, the Leclerc tank, the Airbus, nuclear power stations, etc. Even though such projects were incredible technological successes, some of them were not successful commercially, generally because they were too far removed from customers' needs. We can even go so far as to say that many French businesses from the military and industrial sector became accustomed to having their R&D financed by the French State to develop specific products in response to its own needs, at the risk of not having a package suited to the needs of overseas customers. So it is that France remains one of the major developed countries to continue to have more than 50% of its R&D expenses financed by the State, so making R&D far removed from the constraints of the market (see figure 1). In this context, it makes sense for France to be recognised among the world leaders in fundamental research (mathematics, astrophysics, soft sciences, etc), but to lag behind when it comes to applied R&D - i.e., R&D that makes it possible for an idea to be turned into a product.

**Figure 1 - R&D Expenditure by Country in 2004 (Bubble size = amount of expenditure in €m)**  
 (\*) 2003 Values Source: Eurostata, Hemeria Analysis



## Innovation: transforming ideas into profit

The 'Petit Robert' (French dictionary) provides little help in defining innovation – "introducing something new". In particular, this definition leaves out the fundamental notion of benefit. For us, innovation is the transformation of new skills and ideas into a benefit seen by users for commercial use or for the good of the public. Following their painful WAP experience, mobile phone operators can testify to the fact that new technology that is not seen as a benefit by customers has every chance of failing! Innovation can take on several forms. It may apply to new products (for example, GMOs, iPods, Post-It Notes), new production methods (for example, the Ford T, Benetton's delayed differentiation), new ways of organising a company (for example, franchising) or new distribution channels (for example, mail order selling) or indeed new uses for an existing product or service (for example, the Internet evolving from a military network into a means of world communication and then a sales channel). To use a witty remark illustrate this, R&D turns dollars into ideas (it invents) and innovation turns ideas into dollars (it brings things into being)!

Innovation cannot consequently be reduced to simple creativity. The former requires a collective process involving a business's key departments, the latter is essentially associated with an individual approach fuelled by exchanges and external data.

Likewise, innovation is not necessarily linked to R&D and should not be reduced to major technological breakthroughs. Hence, a product may be innovative without necessarily being based on new technology. For example, the phenomenal success of the iPod is based on a concept (the Walkman) and pre-existing technological building blocks (compressed formatting, flash memory and reduced size hard disks, etc). Proof of this lies in the fact that the concept was ready to be launched by Compaq, but stopped following its buy-out by HP. The iPod's innovative quality lies in the quality of its design, the ergonomics of use (the scroll wheel) and in the overall package made available to customers (iPod + iTunes on the PC + iTunes Store, etc).

Innovation can also be incremental and to do with processes, prices, developments in functionality etc. In addition to innovation processes leading to massive breakthroughs, every so-called innovative business excels in its short-term management of innovations – known as incremental innovation. These need to be released onto the market in quick succession if a business is to stay ahead of the competition.

The quality of a company's innovation may, for example, be measured by the percentage of turnover accounted for by new products launched within the last two years. 3M, through its "3M Acceleration" programme has set itself the objective of achieving 40% of its turnover from products launched within the last 4 years. In order to achieve such an objective, innovation has to have the sole objective of creating value added for customers, namely by reducing prices and costs (for example, Free and broadband, Skype and free VoIP, Easy Jet with low cost airlines), in other words by satisfying underlying needs (for example, SMS mobile phones). In order to provide customers with value for money, we have to understand in detail the needs of our various customers. That is the aim of a customer-oriented approach.

## **T**he customer-oriented approach – the driver behind innovation

The concept of the customer-oriented approach is not a recent one and was the subject of numerous publications during the 1990s. For a business, being customer-oriented means developing its aptitude to satisfy the needs of present and future customers as much as possible during their entire life cycle, whilst respecting shareholders' expectations. A customer-oriented business is not just a business that has a Marketing Department and a CRM software package. Customer orientation could be defined as a means of forging stronger links between the "front end" (Sales & Marketing, Customer Services, Sales Admin., etc) and the "back end" (R&D, Purchasing, Production, Finance, etc) for the benefit of the customer. By studying the practices of a number of companies that are widely recognised as innovative (Google, 3M, L'Oréal, Procter & Gamble, etc), it appears that two key levers that are often rarely dealt with by businesses are brought into play: The development of constant and in-depth interactions with customers, and organisation designed to reinforce the link between Marketing and R&D.

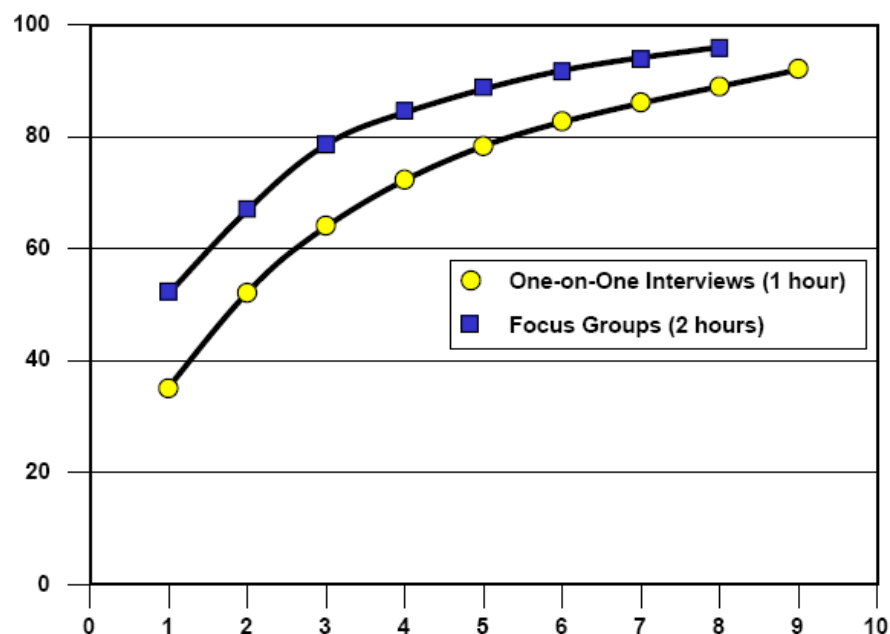
### **Lever 1: Constant and in-depth interaction with customers**

Rather than starting with technology, businesses who are leaders in innovation have all established a veritable "war machine" to better get to know the practices and expectations of customers. Indeed, this constitutes the fundamental breeding ground that will make it possible to develop products, adjust the focus of research programmes, stimulate the generation of new ideas and make it easier to prioritise projects.

Interaction with present or future customers should not be restricted to Sales and Marketing: Every department in a business is involved in a customer's experience of a product or service. Since the success of an innovation is linked to its response to an underlying customer need or one that has been expressed by them, the maximum number of employees working in development must be in constant contact with customers. To do this, it is essential to create a dedicated customer monitoring mechanism, drawing on all possible sources combined to better understand customer needs:

- Make use of all customer contact points for possible sources of innovation: Customer complaints, reports on visits drawn up by sales reps and distributors, reports on forums, feedback from customer services, surveys, comments made by customers on products, etc. Some businesses even pick out customers and sales reps to keep a "log" and note down their reactions to using or selling products.
- Meet customers in an environment where they can try out products and not necessarily in the office. Procter & Gamble, for example, is putting more and more trust in comments made during market research and observing consumers in situ with a view to identifying new uses for existing products and ideas for new products.
- Favour interviews, as they are generally just as effective as Focus Groups (see figure 2): Some businesses do not test the market for fear of alerting the attention of competitors. What is more, this approach makes it possible to interview people involved in the sale and use of a product: distributors, opinion leaders (journalists, official bodies, etc), principals, etc. Lastly, this gives R&D engineers the chance to listen to and meet customers. 3M organises immersion programmes for its staff with its main distributors (for example, Home Depot) so that consumers can be asked questions regarding their day to day problems whatever they may be. Likewise, all AOL's executives take part in meetings with subscribers and ask them questions about their perception of the service and possible ways of improving it.

**Figure 2 - Effectiveness of Interviews in comparison to Focus Groups**  
 De Griffin, Abbie, et Hauser « The Voice of the Customer » - Marketing Science, Vol. 12, N°1, 1993



- Capture the “What” rather than the “How” in customer feedback: Rather than retaining the solution proposed by a customer, we need to latch on to what that implies in terms of functional requirements. For example, when a cordless screwdriver manufacturer’s customer says “Why don’t you have a protective device to protect the battery contacts?” that has to be interpreted by us as “The screwdriver’s batteries are protected from being dropped accidentally” and not as “The screwdriver’s battery contacts are protected by plastic sliding flaps”. At this stage, it is very important to dissociate a customer’s needs or expectations (what he/she desires) from what is technically feasible (what is possible). In effect, the mistake that is usually made is to only retain what a company is able to achieve, so dismissing everything else that constitutes a wonderful melting pot of new opportunities for innovation. On the contrary, setting objectives that are possibly very ambitious ones, puts R&D under pressure and encourages them to come up with new solutions. The objective set for Canon’s Project Leader, for example, was to bring onto the market a “simple to use” photocopier, that “did not require heavy maintenance” and “cost less than \$1,000.” Even though everyone thought that this objective was impossible to achieve, the project team persevered and finally came up with the technology that made it possible to substantially reduce costs in comparison to other products on the market at the time.
- Identify and draw key users, that is to say those who can anticipate the benefits of a solution for their own needs and develop it or “tweak” it themselves. In this way, 3M selected a panel of trend-setting consumers, involved from the design phase, to test ideas and possibly come up with new ones. Likewise, based on the same concept, the company, Shure, initially specialised in products for sound professionals (sound engineers, musicians, etc) and produced among other things sound-isolating headphones for the stage. A blinkered approach to their usage would have prevented the company from realising that its costly headphones were also proving to be used by professional customers for their MP3 players. It would not then have seized the opportunity to successfully launch a specific range designed for individuals.

Customers can enable us to identify new ideas, but also to re-adjust our focus on a development that is already underway. So it is that Google quickly makes Beta versions available for users to test out, allowing it to fine tune a product’s functionality and make a decision as to whether to take a project further or not according to the interest shown by testers. As a matter of interest, Pfizer initially developed Viagra as a medicine for the treatment of cardio-vascular disease, clinical trials ended, but male patients did not want to give any surplus tablets back - Viagra was born!

## ***Lever 2: Organisation designed specifically to reinforce the link between marketing and R&D***

The company’s organisation should foster a maximum of interaction between Marketing and Technology, that is to say between what is desirable and what it is possible. Unfortunately, the relationship between Marketing and R&D is very often a stormy one, if not quite simply a non-existent one. The majority of businesses that design and market products encounter difficulties in coordinating these two departments that do not see things in the same light or have the same time constraints. Marketing works more on the short-term (“My competitor has brought out this, what can I do?”) and R&D on the medium-long term (“Let me think about tomorrow’s products!”). This lack of communication sometimes turns into a dialogue of the deaf. Marketing often says to R&D: “Here’s our idea for a product. Can you develop it as quickly as possible, please...” to which R&D replies “it’s not feasible” or “it’s not on the road map”. Generally, it’s R&D who comes to see marketing with the following spiel: “We have come up with a superb piece of technology. Do you have any ideas as to how we could put it to use?” These two departments thus become “accidental enemies”. With no vision of development opportunities and customer needs, Marketing focuses on the short-term which clearly prevents R&D from defining a strategy. With no clear direction, based on its own criteria, R&D develops what it considers to be the most useful and the most pertinent, namely long-term projects for which there is no actual use. Ill-suited to market objectives, products developed by R&D further restrict marketing’s chances of obtaining a better vision of development opportunities, etc.

*Unfortunately, this lack of communication has three particularly damaging effects on a company's competitiveness. The product package is not renewed enough through lack of structured innovation. So, products sold are just re-packaged without any real value added for customers and come up against competition from similar low cost products. The second effect, in the case of new products or services being released, is that the rate of failure on the market rises sharply, with the result that the company lives more and more off the success of past products with turnover being achieved essentially as a result of such products. Some businesses fight against this phenomenon by increasing the number of product releases at the risk of making their product range more complex and generating supplementary management and production costs. Finally, a substantial proportion of R&D works on pointless projects, or projects that are not in line with the company's strategic objectives, so increasing the amount of supplementary costs to be absorbed. As a director recently reminded me, going back over what is said about advertising, "I know that 50% of my R&D serves no purpose, but I don't know which part of it I should do away with."*

Two levers can be used to address this question:

- Create inter-departmental development teams from Marketing and R&D, assessed on the same project objectives with the market indicators: market release date, turnover generated, product margin, number of clients, etc. This is what EBay and Google do, where Project Leaders are taken from different departments and manage technological and marketing teams. Each team reports back to the Board of Directors who takes a look at the ideas and projects.
- Create a cross reference document of customers' functional needs and the corresponding technical characteristics so that the one assimilates the vocabulary of the other. In the case of projects involving several thousands of people, PSA, for example, put together a reference document that made it possible to measure in concrete terms the perceived quality of a vehicle and developed an indicator that facilitates communications between R&D and Marketing. In this way, a request from Marketing for a surface characteristic that is "pleasing to the touch" is translated into technological terms for R&D based on criteria that is validated by Marketing. Consequently, each vehicle belonging to the competition and each PSA vehicle project can be measured and compared by means of this scale. Communications between the two functions have been improved in this way and this had had an impact on the effectiveness of developments and the quality of products

Procter & Gamble's CEO regularly reminds people: "We can never get close enough to consumers, yet the closer we are to them, the more we know about what they do and how they live and what they need", yet Procter & Gamble has invested a considerable amount in this domain. Innovative businesses are always those that have established a customer-oriented organisation, so as to better identify their present and future needs and to come up with technology (or partners) to respond to them. Conversely, the majority of businesses that are truly customer-oriented also have a good capacity for innovation. Indeed, being innovative and being customer-oriented in both cases requires a very good understanding of the needs and expectations of customers so as to translate these into an attractive package (product + service + price). Furthermore, organising a business by customer segment rather than by product line makes it easier to bring a company's Marketing and Development departments more closely together and so encourage innovation. However, even when customer-oriented, the organisation should not be too inflexible, as customer needs are constantly changing and organisation that is inflexible does not allow for optimal responsiveness. Hence, though innovation is not a true science, customer-oriented organisation makes it easier to make it one. That is doubtless where it differs most from the Holy Grail...