

6. Idea development

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6.1. Own research and development activities

Research and experimental development (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications (Frascati, 1992).

No general guidance can be given on managing R&D and defining the R&D tasks because the work to be done varies greatly with the type of company and its circumstances. Some of the work is reactive to events, but most is concerned with creating the future, and this must necessarily start with decisions about where the company wants to go and how much it wants to invest in trying to create technology that it will be able to own and use to the exclusion of others.

In almost all industrial companies R&D is considered as a vital department that contributes to sustain and grow of a company's businesses. Within firms, decisions about the magnitude and nature of R&D performance are mainly guided by consideration of economic returns. Studies show that the rates of return of R&D to firms, although difficult to measure precisely, are high and that returns to society, from lower cost, improved, or new products and services, are even higher.

Naturally, firms will usually engage in R&D only when the results are appropriable and offer rates of return exceeding those of other available investment options such as acquisition of new machinery, advertising and marketing investments, or asset purchases.

Thus, managers of R&D must develop methods for integrating R&D into business operations, while simultaneously ensuring that the necessary research is accomplished. That means they must translate R&D results into terms that business managers can understand and support. Furthermore, R&D managers must establish procedures for selecting, planning, executing, and transferring R&D effectively, while at the same time nurturing a climate that promotes creativity. Therefore they must educate R&D people about using their skills for the company's benefit, while preserving the excitement of discovery within their organization.