Breakthrough R&D Stakeholders: The Challenges of Legitimacy in Highly Uncertain Projects

Sophie Hooge
Cédric Dalmasso
Center for Management Science, MINES ParisTech, Paris, France

ABSTRACT

This research explains the management of internal stakeholders in the context of breakthrough R&D projects. The results, based on a longitudinal study of a global car manufacturer over a period of six years, highlights the importance of stakeholders in the roles of technological experts, innovation design strategists, and internal collaboration strategists. These stakeholders play a major part in involving the individuals needed for the project’s progress. Moreover, the research shows that perception of their legitimacy by other actors constitutes a fundamental success factor.

THE PROBLEM

Breakthrough R&D projects are required for maintaining or creating a competitive advantage in firms. In the context of such uncertainty, stakeholder management becomes a major need to assure success. Hence, it is necessary to identify actors’ and decision-makers’ contributions and/or expectations.

The salience of stakeholders for R&D project management is based on their ownership of, at least, a relationship attribute of urgency, power, and legitimacy, as previously demonstrated by Mitchell, Agle and Wood. Building on this framework, this research studies the links and dynamics between the funding of breakthrough R&D projects and the different uses of legitimacy by internal stakeholders.

THE METHOD

The current research consists of two longitudinal studies carried out with the engineering department of a global car manufacturer between 2005 and 2010. One study focused on the innovation management process and organizational capability for innovation. A second study focused on the learning dynamics of professions and expertise. The distinctive features of the observed project portfolio lie in its technological and organizational variety, which allows multiple case studies in a unified context.

Quantitative data were gathered, linking the funding process with stakeholder management practices. Three types of accounting data were collected: (1) budget allocation; (2) expenses for each project; and (3) daily time tracking collaboration of the engineering department.
Following the quantitative analysis, a qualitative study was conducted based on in-depth interviews with project managers, technical and marketing experts, top decision-makers, and accounting managers. The qualitative analysis also included internal documents from the project management process.

**FINDINGS AND PRACTICAL IMPLICATIONS**

In the context of this research, stakeholders are "individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers."\(^4\)

This definition is of particular interest for understanding the interaction between funding and commitment on breakthrough R&D projects, because it underlines three elements that explain why stakeholder dynamics are not easy to describe in this kind of project:

- The contribution of a stakeholder to project performance may be unintentional, whether positive or negative.
- Contributions aim to increase the wealth-creating capacity of actors, which is difficult to assess either individually or collectively.
- Projects impact (positively or negatively) many internal actors of the firms, even if they have not decided to voluntarily get involved. Consequently, these impacts create internal stakeholders.

The research plots the stakeholders according to salience framework of Mitchell et al., which is a commendable practice. First, stakeholders are identified in different categories. With the assistance of project managers, each stakeholder is studied according to his expectations and investment. Then, researchers study the salience of stakeholders in the context of project completion (power vs. stake analysis); salience in the official decision-making process (process level stakeholder analysis), and in the behind-the-scenes consensus-building process (transactional level stakeholder analysis).

Two main results emerged from the quantitative and qualitative studies:

- Breakthrough R&D projects present two divergent and co-existent dynamics of engineering stakeholders: disengagement or over-commitment.

- From the point of view of engineering teams and decision-makers the positive or negative influences generated by stakeholders depend on three legitimacy logics:
  - The ability to explain the knowledge to acquire and the feasibility of its acquisition (as technological experts).
  - The ability to describe the benefits of the breakthrough R&D project in terms of competitiveness and skill differentiation (as innovation design strategists).
  - The ability to describe the organizational benefits of the collective activity (as internal collaboration strategists).

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1 Breakthrough R&D projects involve the newest technology, which may be ‘disruptive’ to the rest of the industry, and create an entirely new product category to define the industry.


3 A longitudinal study is a correlational research study that involves repeated observations of the same variables over long periods of time, often many decades.

Finally, Figure 1 plots stakeholders from a blended perspective that combines Mitchell’s logic of legitimacy framework and stakeholders’ abilities to explain knowledge gaps, to describe competitive contributions of the project, and to convey organizational benefits.

Legitimacy constitutes a lever to build an engineering network to deal with the unknown. The literature underscores the necessity to identify and involve key stakeholders of new product development as early as possible. In the case of disruptive innovations, the degree of the unknown in efficient technical contents and competitive business models could be quite high at the beginning of the project.

Legitimacy must be based on mastering the dominant design limits. The effects of the innovative design advancement on organizations of new product development follow propagation logic much closer to the technical expertise than to the functional organization chart.

Internal stakeholders of an innovation project have specific, often contradictory, needs and expectations. This diversity raises the central issue of stakeholder legitimacy both in the management of internal stakeholders and in innovation project management.

The research shows that internal collaboration strategists are the best-qualified persons to explain the benefits of the collective activity for whole firm performance.
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