

Innovation is a dilemma.

Most innovations fail. And companies that don't innovate die.
(Henry Chesbrough)

Innovation is the talk of the town. It is perceived by many in the corporate world as a silver bullet that will secure sustainable growth and long-term prosperity. And in many cases, it is exactly that. Numerous studies¹ and prominent success stories give testimony to the positive effects of successful innovation. Today, innovation is thought of as the most important generator of solid economic development and wealth creation. The fact that innovations can have a sustainable impact on enterprise development is hardly surprising given that it is all about shaping the future of the enterprise.

► Innovation is all about shaping the future of the enterprise.

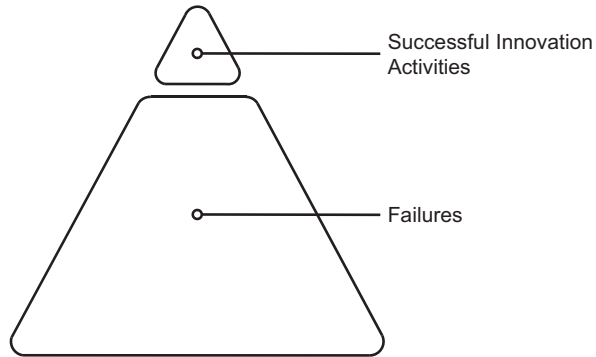
2.1 Innovation: A Dilemma

Despite the success stories, it is obvious that many attempts to innovate end in failure. Even specialists in the area of innovation are dissatisfied when it turns out that not even one of ten attempts to innovate proves successful. As shown in Fig. 2.1, successful innovation projects represent the small tip of an iceberg predominately comprised of failed innovation projects.

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¹For instance: McKinsey study “Entrepreneurship in Germany,” published in Meffert and Klein (2007).

Fig. 2.1 The innovation iceberg



Enterprise managers are often well-acquainted with innovation gridlock or outright failure. “*Most innovations fail. And companies that don’t innovate die,*” says Henry Chesbrough (2003, p. xvii). This quote gives expression to the conflicts faced by enterprises eager to secure the benefits of innovation. On the one hand, innovation appears to be essential for their well-being and survival. On the other hand, attempts to innovate are fraught with risk and can therefore threaten their very existence. Failure is indeed a typical outcome of attempts to innovate. The question therefore arises as to the extent to which this quandary is simply a part of the game or whether the usual attempts are marked by some, as yet poorly defined, albeit fundamental flaws.

2.2 The Crux of the Problem

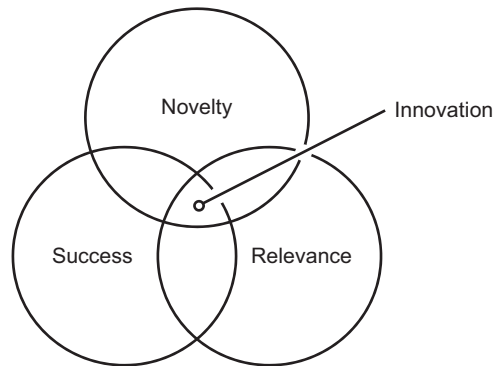
The difficulties associated with attempts to innovate, as well as the growing consensus on the necessity of innovation, have inspired extensive discussions on the subject of innovation in professional journals. These contributions to the literature include definitions of various types of innovation, extensive study results and various rules and recommendations to be mindful of when developing innovation projects. While all of these contributions are valuable, they tend to shed light only on specific aspects of innovation and have not yet been integrated into a generally accepted or standard model. In the area of innovation management, there is still no satisfactory systematic approach to innovation, let alone a specific and comprehensive methodology for significantly increasing the likelihood of successful innovation.

The problem therefore is that a very high percentage of innovation projects fail that we still do not know what to do to improve the prospects for success.

2.3 Innovation: A Difficult Definition

The difficulties seem to crop up as soon as we attempt to define the term *innovation*. Authors have so far tended to formulate their own definitions of innovation. Fortunately, a more uniform interpretation of the term has gained acceptance in recent years. In addition to the properties of novelty and relevance, this new

Fig. 2.2 The essential elements of innovation



interpretation takes account of the element of success (e.g. market success). In Fig. 2.2, we use a Venn diagram to clarify this interpretation of the term innovation, with innovation constituting the area of convergence of the elements novelty, success and relevance.

Consider, for instance, the Wikipedia definition:

Innovation is the creation of better or more effective products, processes, services, technologies, or ideas that are accepted by markets, governments, and society.²

This definition of the term innovation includes success. This proves to be very useful because it clarifies that innovation is not something that happens in enterprises, but something that takes place in the area of application, often on the market itself. Unsuccessful attempts to create innovations therefore do not qualify as innovations. This helps to clarify the term for purposes discussion.

2.4 Consulting the Literature for Clues to Innovation

What do the experts have to say about achieving innovation? While the advice one finds in the literature and in textbooks varies considerably with respect to many details, there do seem to be a number of common assumptions:

- Innovation is necessary for the long-term prosperity of enterprises.
- Innovation projects should take place outside the framework of daily business.
- It's always an organization, usually an enterprise, that is responsible for driving and realizing innovation.
- There is always an innovation process that takes place within this organization.
- Various specific organizational forms are proposed as being more suitable for generating successful innovation than others.
- A favorable enterprise culture is important.

²<http://en.wikipedia.org/wiki/Innovation>, reference date: December 28, 2011.

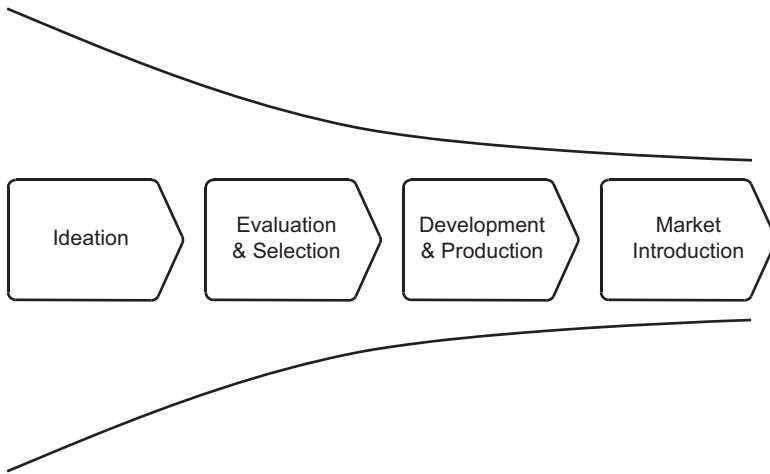


Fig. 2.3 The funnel model of the innovation process

While many different proposals have been made about the most appropriate organizational structures and enterprise cultures for achieving innovation, there is widespread agreement in the literature about the structure of the innovation process. As shown in Fig. 2.3, the innovation process is typically represented using a funnel model (e.g. Müller and Dörr 2011, p. 31).

According to textbook accounts, the innovation process begins with an ideation phase in which a large number of ideas are generated.³ The literature offers a variety of methods for approaching the actual generation of ideas during this initial phase.⁴ The generated ideas are then evaluated (cf. Eversheim 2003, p. 93)⁵ and the very best are selected for purposes of development (e.g. a new product). After successful development, the novel products are then produced and subsequently introduced to the market. If, as indicated above, their market introduction is met with success, then the products in question qualify as genuine innovations.

In general, one can assume that the number of innovation projects that are pursued simultaneously will tend to continuously decrease from process phase to process phase. This is illustrated in the image of the funnel. If this decrease is explicit in the evaluation-and-selection phase, it will tend to be implicit in all subsequent phases. There is, on the one hand, the awareness that the likelihood of project failure is relatively high. Added to this is the fact that the subsequent project phases become more complex and costly. And most enterprises do not have the necessary resources to keep all that many late-stage innovation projects on life support.

³“To have a great idea, have a lot of them” (Thomas Alva Edison).

⁴E.g. via brainstorming. A collection of different methods of generating ideas is available, for instance, in Vahs and Brem (2013), p. 280 ff.

⁵E.g. via cost-benefit analysis.

When comparing the contributions made in the literature, we find that while all of the authors in question essentially describe the same funnel model, they differ in terms of their focus and the degree to which they provide detailed accounts of specific phases depending on the orientation of their publication and the industry whose perspective they are depicting (Vahs and Brem 2013, p. 231 ff.). For instance, the development phase is often variously subdivided into a specifications-document phase and a pure development phase. The same can be seen when it comes to the production and market-introduction phases (see Vahs and Brem 2013, p. 232 ff.).

This does not apply, however, to the first two phases, the ideation and evaluation-and-selection phases. It is evident that these two phases are currently less amenable to proper structuring. While many different methods are available for the generation of ideas (e.g. Vahs and Brem 2013, p. 278 ff.), published accounts of the evaluation phase do not yet go much beyond cost-benefit analyses (Eversheim 2003, p. 93). Owing to the existing lack of clarity, these first two phases are often referred to as fuzzy front-end phases (see Boeddrich 2004 or Kahn 2012, p. 450).

Since the 1980s, however, considerable progress has been made in the area of innovation management. Many innovation management mysteries, for instance, have been explained. This progress includes the following contributions:

- Giovanni Dosi's work on technological paradigms and technology trajectories (Dosi 1982).
- William Abernathy and Kim Clark's distinction between architectural, market-niche, regular and revolutionary innovations (Abernathy and Clark 1985).
- Rebecca Henderson and Kim Clark draw a distinction between incremental, modular, architectural and radical innovations (Henderson and Clark 1990).
- In his book *Open Innovation*, Henry Chesbrough presents fundamentally new concepts, particularly with regard to the exploration part of the innovation process (Chesbrough 2003).
- W. Chan Kim and Renée Mauborgne place strategic aspects of innovation activities in the foreground and deliver the strategic contour as a suitable method (Chan and Mauborgne 2005).
- In a number of books published in the 1990s, Geoffrey Moore explained how to introduce innovations to the market and to avoid common pitfalls while doing so (e.g. Moore 1995).
- In his book *The Innovator's Dilemma*, Clayton Christensen presents explanations for a number of surprising innovation successes (and a number of no less surprising failures) and introduces a new class of innovations referred to as *disruptive innovations* (Christensen 1997). Disruptive innovations are capable of forcing entire markets to undergo processes of restructuring and sometimes lead to the dethroning of the originally dominant market players.
- Steve Blank examines the development process of startups and introduces the customer-development process (Blank and Dorf 2012, p. 19). Steve Blank also points out the fundamental difference between a startup and a normal enterprise,

with startups being organizations that are on the lookout for a business model while enterprises are organizations that have already found a business model.

- Building upon the work of Steve Blank, Eric Ries introduces the concept of the lean startup and the minimum viable product (Ries 2011, p. 77).

Despite these contributions, however, innovation management remains an extraordinarily difficult discipline.

2.5 Assessing the Status of Innovation in Practice

“Most innovations fail. But companies that don’t innovate die” (Chesbrough 2003, p. xvii). Are we to take this statement at face value, or was Henry Chesbrough just making a point? After all, there seems to be no end to (successful) innovations.⁶ Perhaps the management of innovations isn’t as bad as it’s made out to be. Let’s consider the situation from the perspective of the results.

A look at the innovation results reveals the following facts: Yes, there is no end to (successful) innovations. And when we analyze the individual success stories, we find the following recurring pattern:

- The corresponding innovation projects were abandoned (often on multiple occasions) before they became successful.
- After their official abandonment, however, they were often continued, against the rules, in an unofficial capacity and then later resumed as official projects . . . before, oftentimes, being scrapped yet again. Depending on the case, this pattern may include multiple repetitions.
- The innovations were nearly always successful because one or only a very few specific persons. If the involvement of these key individuals had been removed from the innovation projects, there would very likely have been no success (see Mock et al. 2013, Chap. 2, p. 19 ff.).

It turns out that most (successful) innovations depend on particular individuals and that their development often proceeds despite official enterprise decisions to cut off their support! This offers a strong indication that existing systematic innovation management programs in enterprises are not really working the way they should be.

- Successful innovations usually depend on particular individuals and often arise despite official enterprise decisions to cut off their support.

In light of these findings, it is instructive to take a closer look at the current innovation practices of enterprises. Most enterprises maintain officially approved innovation programs. Larger enterprises will often even have taken the further step

⁶There are also very successful copy cats. While copy cats represent a very specific strategy of exploiting the market potential associated with the innovations of others, they can be highly successful. All that is required is an established brand and a critical mass.

of establishing independent organizational units to cover innovation. In many cases, the enterprises are proud of their innovation efforts and are accordingly willing to invest considerable amounts of money in them. Our investigations, however, indicate that this typical approach to innovation seldom leads to commercial success. Many innovation projects fail at the point of market introduction, and far more fail before any sort of new product is ever readied for a market launch (Vahs and Brem 2013, p. 54). This means that most development projects are abandoned or are simply never brought to a successful conclusion. And very many more good ideas never even make it to the development phase.

To find out more, we can ask the enterprise executives themselves whether they are satisfied with the results of the innovation programs that have been initiated in their enterprises. When we do this, we are usually told that the program results have fallen way short of expectations and that the initiated innovation projects have tended to lack efficiency. There is a prevailing atmosphere of impatience and a pronounced desire for the enterprise to at last take a fast track to innovation (see Dueck 2013, p. 280; BCG 2010; McKinsey 2008). However, when asked how this is to be managed, the responses reveal a sense of helplessness. This strongly suggests that enterprise executives are also of the opinion that their internal innovation management programs are not really doing what they are supposed to do.

All things considered, we wind up with grounds for concern: Only a small percentage of the innovation ideas that are assessed as promising actually turn out to be successful. And the lion's share of the few ideas that make it owe their success to the determination of individuals who are forced to proceed without the support of their own enterprise management. The success of enterprise-approved and systematically managed innovation projects ranges from disappointing to non-existent!

2.6 Conclusion and Proposition 1

The success of most systematic innovation efforts is apparently marginal while cases of greater success seem to depend on the efforts of particular individuals and often come despite explicit decisions on the part of enterprise management to cut off their support. We can conclude from this that there remains a broad lack of understanding as to how to improve an enterprise's capacity for (successful) innovation.

- Proposition 1: Innovation has remained an enigma.

The Research Question: What Is the Best Approach to Systematic Innovation?

Based on our Proposition 1, that innovation has largely remained an enigma, and Henry Chesbrough's suggestion that most innovation projects fail, we will now attempt to identify the reasons for the failure. After all, if you know why systematic approaches to innovation fail, you should be able to show the prerequisites that need to be fulfilled for the ability to carry out successful systematic innovation. This second point is naturally of crucial significance for economic development. Our first question as to why most innovation projects fail is therefore essentially subordinate to our second question as to the best approach to systematic innovation. Our research question can therefore be formulated as follows:

What is the best approach to systematic innovation? Questions subordinate to this one include:

- Why do most innovation projects fail?
- What model do enterprises need to follow to achieve successful systematic innovation?
- How can this be achieved?

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