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Strategic foresight for collaborative exploration of new business fields

Tobias Heger [1], René Rohrbeck *

[a] Chair for Innovation Management and Entrepreneurship, University of Potsdam, August-Bebel-Straße 89, 14482 Potsdam, Germany
[b] Department of Business Administration, Business and Social Sciences, Aarhus University, Fuglesangs Allé 4, 8210 Aarhus, Denmark

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ABSTRACT

To ensure long-term competitiveness, companies need to develop the ability to explore, plan, and develop new business fields. A suitable approach faces multiple challenges because it needs to (1) integrate multiple perspectives, (2) ensure a high level of participation of the major stakeholders and decision-makers, (3) function despite a high level of uncertainty, and (4) take into account interdependencies between the influencing factors. In this paper, we present an integrated approach that combines multiple strategic-foresight methods in a synergetic way. It was applied in an inter-organizational business field exploration project in the telecommunications industry.

1. Introduction

In the past decades, much knowledge has been generated on how to conduct foresight activities. In the 1960s, scholars started to study national foresight programs. They aimed to identify future technologies that would generate the largest potential for economic welfare [1]. In a corporate context, foresight activities have been employed to make better long-term decisions [2,3], support innovation activities [4] and strategic planning by identifying alternative trajectories [5] for emerging technology [6] trends and creating future scenarios [7]. As a result, we now have a rich body of knowledge of methods that can be used to address specific management challenges.

In our literature review, we argue that more knowledge is needed to successfully apply strategic-foresight techniques to complex planning tasks such as exploring new business fields [8–10]. From a company's perspective, new business fields are characterized by a multi-dimensional uncertainty [11] that results in typical planning questions such as: Is there an underserved demand? If yes, how much are customers willing to pay? How can the demand be satisfied? Should we address the market with a product, a service, or a hybrid product that combines both a physical product and a service? Which (emerging) technologies should be used to build the product and service? How will we produce? Is the business opportunity financially interesting?

This multi-dimensional uncertainty translates into the "chicken or egg" dilemma: if the firm does not know which technologies it should employ to build a certain product, it will not be able to define the properties of the final product. If the product properties are unknown, it cannot ask its potential customers how much they are willing to pay. If the willingness to pay is unknown, so is the business potential. This will make it impossible to take the required investment decisions. This dilemma results in a dual planning challenge: (a) dealing with uncertainty, and (b) dealing with the interdependencies between the multiple aspects of the new business fields.

Our point of departure is the expectation that strategic-foresight methods could help to reduce the uncertainty and that the challenge of interdependencies can be met by integrating multiple methods. More specifically, we expect that strategic foresight could help in (1) combining an external trend analysis with an internal analysis [12], (2) facilitating the strategy-formation process [13–15], (3) supporting strategic decision-making [16,17], and (4) moderating innovation planning [4,18].

* Corresponding author.
E-mail addresses: Tobias.Heger@eict.de (T. Heger), rrohr@asb.dk (R. Rohrbeck).
[1] Tel.: +49 30 3670 235 21.

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Based on strategic-management frameworks and strategic-foresight methods, we have developed such an integrated methodology that is designed to support collaborative business field exploration. In this article, we report on the application of the methodology in a pilot project that aimed to explore the new market for intelligent and adaptive management of broadband networks. This is a potentially large market that enables the delivery of high-quality services over the Internet such as Internet Protocol-based Television (IPTV), multimedia services that build on high-quality video streaming, or broadband-intensive cloud-computing applications that require reliable connections. It is also a new business field in which multiple parties need to work together to jointly create a market and come up with solutions. In our case, a consortium of nine partners from academia and industry came together to conduct the project collaboratively.

2. Literature review

In the following literature review, we show why strategic planning of new business fields is particularly challenging and why we expect that those challenges can be met effectively with an integrated strategic-foresight methodology.

2.1. The challenge of exploring new business fields

When Jeffrey Immelt says that ‘Constant reinventing is the central necessity at GE…We're all just a step away from the commodity hell’, he emphasizes the need to continuously create new products and move into new business fields [19]. This has also been discussed in strategic-management literature; it is concluded that companies need to master two roles: the first role is to improve processes and incrementally improve their current portfolio of products and services. The second role is to continuously explore new business fields [20]. Companies that are good at both roles are called ambidextrous organizations [21,22].

Companies such as Nokia have shown how moving into new business fields can be done successfully. In its 150-year history, Nokia has changed from a pulp-and-paper company and from producing rubber boots and tires to becoming the world's leading manufacturer of mobile phones [23]. Nowadays, Nokia is at the brink of becoming a service company, which would be the third major transition and the third time that the company has moved into a totally new business field.

However, many companies continue to struggle to move into new business fields for multiple reasons:

- Information on *emerging business fields is not detected* by corporate sensors who are directed towards the current business [24], foresight could help by proactive scanning.
- Top management suffers from an overflow of information and *lacks the ability to access the economic potential* [25,26], particularly if faced by multi-dimensional uncertainty. In this case, foresight could show the interdependency between the signals from different perspectives (competitive environment, emerging technologies, customer needs, etc.).
- Information on business potential is *filtered by a middle management* which fears that the new business may cannibalize current business [27,28]. This means that foresight should ensure to reach or, even better, integrate top management in the exercise because participation is the best way to lay the basis for decision-making and taking action [8].
- Complexity of company structure that triggers *inertia* and prevents companies from seizing business opportunities because they are too slow to react [29,30]. This increases the need to reach top-level management with foresight results and include not only top management, but also other relevant internal stakeholders [31].

That means that in order to support business-field exploration with foresight activities, companies need to be able to *integrate multiple perspectives*, *integrate stakeholders throughout the process* of the foresight exercise, and ensure top-management visibility or, better, *top-management participation*.

2.2. Planning new business fields

Planning new business fields has many similarities with strategic planning, it

- concerns the *long term*, in which the investment is expected to pay off [32],
- aims to create a *synthesis* of what should be achieved and how the firm can achieve it [33,34],
- involves *looking ahead* and, to a certain extent, forecasting and anticipating possible futures [12,31],
- requires *integrating stakeholders* to tied planning to execution [33], and
- needs to *encourage* strategic thinking and *support* the strategy formation/new business-field exploration process [35].

We can therefore tap into the much larger pool of knowledge that has been created in the field of strategic management to define what should be done in a new business-field exploration project. In particular, we want to use three groups of frameworks as guides to the relevant questions and aspects in a new business-field exploration project:

- Porters 5 Forces help to grasp the *extent of competition* in a (new) market [36].
- Business-modeling frameworks direct the analysis towards the *major elements of a viable new business field* [37,38].
- Business-planning frameworks ensure that all *important aspects of founding a company* are taken into account [39].

For our new methodology for business-field exploration, the elements of all three frameworks were considered as potentially relevant aspects for our analysis. Table 1 shows how the elements of the three frameworks match with the elements of our analysis.