

BUSINESS MODEL INNOVATION: CAN ESTABLISHED FINANCIAL SERVICE PROVIDERS UTILIZE CONCEPTS OF START-UP COMPANIES?

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Abstract

Banks and insurance companies are facing increasing pressure due to harsh regulation, low interest margins, new technologies, aggressive incumbents, and changing customer preferences. Many of them not only have to overhaul their processes and information systems, but also their complete business model. But how can a financial service provider get to a new business model? What should the process of business model development look like? Usually, there is no such definitive process. However, an interesting starting point might be to utilize the concepts that are used by start-up companies. In particular, Design Thinking and Lean Start-up appear to be promising ideas. In this paper, we analyze whether and how these concepts can be used to develop a process for traditional financial service providers to renew their business models. The strategies used by start-up companies follow the approach of a consequent customer focus, so the process we develop shows the same characteristics. It offers a great opportunity for established banks and insurers to fight back against upcoming attackers and to cope with challenging conditions.

Key words: *business model innovation, design thinking, financial services, lean start-up, start-up strategies*

1 INTRODUCTION

Shrinking margins, severe regulatory requirements, and a massive demand for digitalization are confronting established financial service providers. Furthermore, banks' and insurers' traditional market positions are being threatened by new competitors who are building on up-to-date technology (so-called fintechs), competitors from other business sectors that are based on white-label infrastructure (e.g., Telefónica/Fidor Bank), and banks and other financial service companies that are already working with highly efficient business processes (e.g., BBVA, ING Direct, Santander). In addition, internet giants and electronics companies (e.g., Amazon, Apple, Google, Samsung) are entering selected areas of the financial services market.

Banks and insurance companies are therefore being forced to reconsider their current business models (McKinsey & Company 2012; Skan et al. 2015). Business model innovation is a major task for today's bank and insurance management. However, working on and renewing business models is a relatively new concept within the financial services industry. Therefore, there are few experiences available in this regard to date. Typically, there is no predefined internal process that guides and supports the systematic innovation of a business model.

It is thus reasonable to look at those companies that are also confronted with the challenge of defining their business models, i.e., for example, start-up companies such as fintechs. They need to define their business models in a manner that enables them to gain profits through the services offered. This challenge seems to be significant, as the whole business model needs to be developed from scratch (Cavalcante et al. 2011; Trimi/Berbegal-Mirabent 2012). Due to the dynamic nature of the market, the creation of a suitable business model in order to gain profits needs to be achieved rapidly (Reed/Storrud-Barnes 2010; Sarasvathy et al. 1998). These requirements of the should-be business model call for experimental and hypotheses-based approaches, rather than traditional and analytic ones (McGrath 2010).

Two of the most popular approaches toward developing innovative business models are Design Thinking and Lean Start-up. Both are also referred to as start-up strategies. These procedures form the conceptual basis for many current business models of start-up companies.

When reconsidering its business model, an established bank or insurer is principally confronted with the same challenges as a start-up. Therefore, Design Thinking and Lean Start-up can be used as the theoretical background for developing a process that is suitable for innovating the existing business model (Spieth et al. 2014). The aim of this contribution is to provide such a process for banks and insurance companies based on one or both methodological approaches.

The article is structured as follows. Section 2 outlines the conceptual background of our paper. It includes a framework on business model innovation, as well as the concepts of design thinking and lean start-up. Section 3 explains the methodology used to develop a process suitable for business model innovation in the financial industry. Section 4 describes the logic of such a process and defines its components. Section 5 evaluates and discusses the process created, and Section 6 concludes.

2 BACKGROUND

2.1 Business model innovation

This section describes a framework that combines the theoretical concept of business models with the concepts of corporate strategy and entrepreneurship (Cavalcante et al. 2011). In order to achieve practical results, the perspective of a strategic entrepreneur is chosen, because it integrates both the pursuit of competitive advantages in order to achieve business objectives (“strategy”), and the pursuit of new, promising business opportunities (“entrepreneurship”) (Hitt et al. 2001). Figure 1 shows the framework and the interaction between business model innovation (right) and entrepreneurship (left). Both elements are allocated to the business model level, which is positioned between the strategy level and the business process level (Osterwalder/Pigneur 2002).

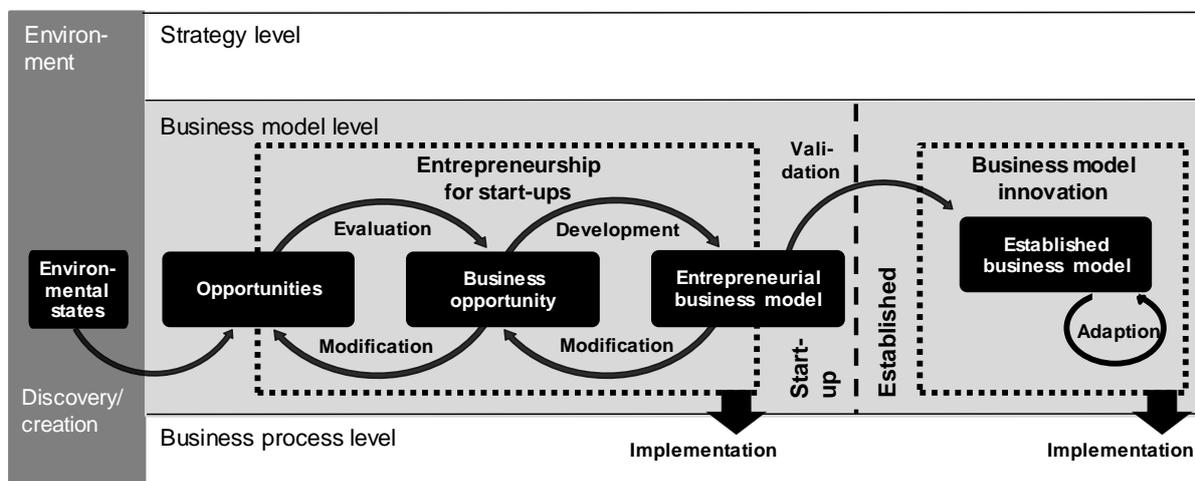


Figure 1. Interplay between entrepreneurship and business model innovation

Based on Osterwalder and Pigneur (2004), the process to be developed here—i.e., the founding process of a company—is located on the business model level. A start-up company begins by searching for and creating new opportunities (problem solutions), which are generated from certain situations in the environment (Samli 2009). The opportunities identified will then be transformed into a business opportunity. This business opportunity describes the first comprehension of a promising implementation of the identified problem solution considering in different ways—i.e., hypotheses. These need to be further developed towards an entrepreneurial business model (Cavalcante et al. 2011;

Schneider/Spieth 2013). After introducing the problem solution to the market, the start-up will change its current status into an established company that is running an established business model.

Next, the established business model is developed further with regard to its efficiency. The company changes its mode from formerly explorative into exploitative (March 1991). The exploitative mode can be described with reference to a continuous, yet granular, adaption of the business model towards higher efficiency. Thus, the business model will not change fundamentally. Consequently, the approaches used are not suitable for the exploitative mode, and vice versa. Hence, if a company remains in the exploitative mode for a long period of time, the change of mode that is needed for adaptations to changes in the environment bears a number of risks.

The term “adaption” refers to a fundamental renewal of the business model; thus, its implications for the company can be more severe, as in the case of merely further developing the business model. These threats and other issues resulting from changes to the mode are topics of the research field of Organizational Ambidexterity (Holland 1975; Kuran 1988; O’Reilly/Tushman 2013; Schumpeter 1934). One important finding is that approaches established in the exploitative mode should not be used for intended adaption of a business model. The consequences of such an adaption are more comparable to the first-time development of a business model (start-up) than to the efficiency-oriented further development of an existing business model. Thus, for our purpose it is more reasonable to consider approaches that have been established within the field of entrepreneurship for start-up companies.

The following section introduces two approaches for the successful creation of start-ups. Our aim is to design a process for business model innovation in the financial industry based on these approaches.

2.2 Design Thinking and Lean Start-up

The methodology Design Thinking has only recently come into the focus of start-up companies; however, it offers huge potential due to its innovative procedural model (Brunswick et al. 2013; Zott/Amit 2015). In principle, Design Thinking is a systematic and collaborative approach for the identification and creative solution of problems. It has been developed as a customer-centric methodology by which to come up with new products, services, and processes, and it integrates technological, economic, and social elements (Meinel/Leifer 2012). The goal of Design Thinking thus matches that of start-ups, insofar as customer problems should be solved by developing new products, services, and processes. Since the specifications of Design Thinking vary depending on the literature source used, in the following we refer to the understanding posited by Product Development and Management Association (Luchs et al. 2015).

A further methodology, which is especially popular with U.S.-based start-ups, is that of Lean Start-up (Ries 2011). This approach was introduced in 2011 by Eric Ries by applying the lean manufacturing principles of Toyota to the customer development model (Blank 2006; Ries 2011). Thereby, lean start-up is a streamlined, customer-centric procedural model for developing and implementing innovative business models, products, and services under conditions of extreme uncertainty (Ries 2011). Use of a lean procedure is especially important for start-up companies in that it allows them to develop new products and services as quickly, and with as few resources, as possible. This applies to the same degree to business model innovation within established enterprises.

2.3 Comparison of both approaches

Here, analysis is required of which approach best fits our purpose, or whether both can be combined to develop an innovation process for business models in the financial industry. Figure 2 shows the procedural steps of each methodology.

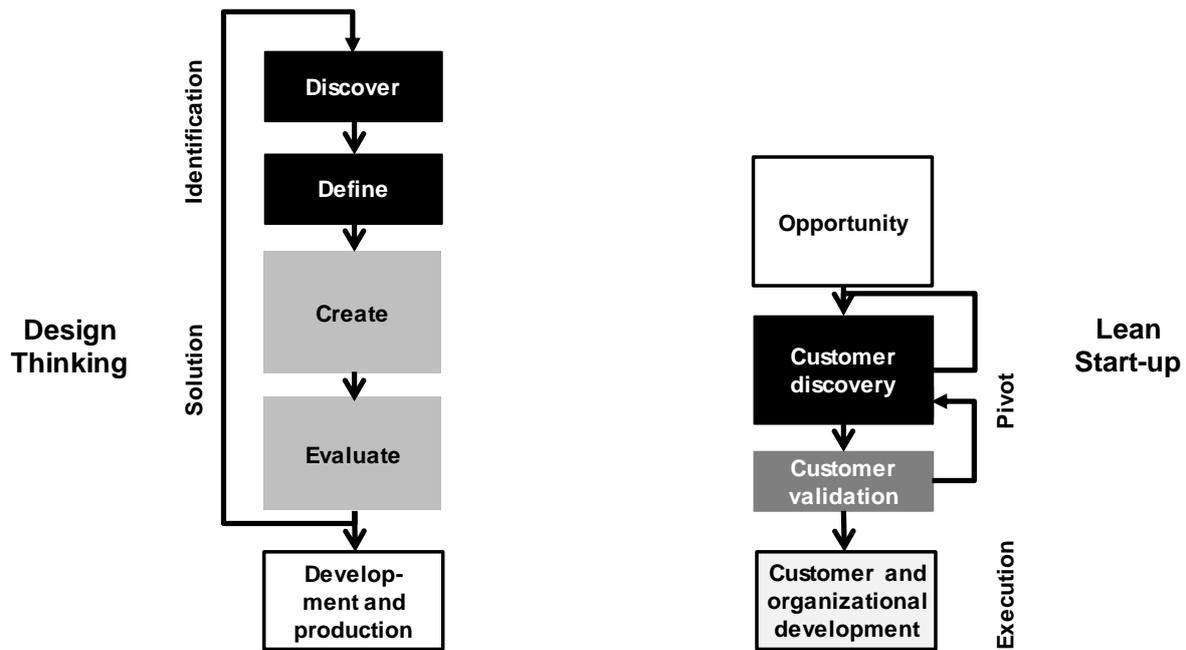


Figure 2. Steps of Design Thinking and Lean-Start-up

The first step of Design Thinking (“discover”) is composed of an iterative cycle of two activities: collecting customer information and synthesizing it. The term “customer information” not only comprises the use of statistical data, but also the collection of qualitative data to generate a comprehensive understanding of the customer (“customer insight”). This is referred to as an emphatic process and can be achieved through so-called “personas” and customer experience mapping (Bohlmann/McCreery 2015).

The “define” step within Design Thinking is thought to identify customer problems based on the customer information and insights gathered so far. Accordingly, customer insights will be deepened and prioritized. How customer problems can be obtained in detail from customer insights remains an open question, because of the difficulties that lie in generalizability. Next, a well-defined problem is formulated; this description comprises the customer type, customer needs, and reasoning in terms of why satisfaction of the specific customer need will produce significant value (Luchs 2015). Here, Design Thinking overlaps with “opportunity” in the Lean Start-up concept (called “business idea” by Ries [2011]), because this approach proceeds from an existing opportunity—and thus skips the first step of the identification phase of Design Thinking and also assumes that part of the “create” step of Design Thinking has already been completed (Blank 2013; Ries 2011). Hence, the focus of Lean Start-up is on activities in the following steps.

As soon as one or several problems have been clearly defined, in design thinking the “create” step begins, and forms the first part of the solution phase. Within this step as many ideas as possible are generated, which leads to the development of one or several solution concepts. This is followed by pre-evaluation based on three criteria: (1) attractiveness from the customer’s point of view, (2) technical feasibility, and (3) economic viability. In this way, the number of ideas should be limited—although not yet to a single idea. The solution concepts serve as a foundation for generating one or more prototypes. These may have various manifestations, which can range from a brief sketch to a three-dimensional printed model, and should demonstrate and test the most important functions of the solution concept (Gero 1990; Luchs 2015; Zeh 2015).

As noted above, the Lean Start-up concept starts with the assumption of an existing opportunity, which will be transformed into one or several business model hypotheses (“customer discovery” step). This parallels the “create” step within Design Thinking. The hypotheses (e.g. on customer needs and

thus the company's value proposition) will be validated in the following step by means of a Build–Measure–Learn cycle in cooperation with the customer (Ries 2011). Core elements of this cycle include the development of a minimum viable product (MVP) and measurement based on adequate performance indicators. Thereby Lean Start-up also uses prototypes, but anticipates part of Design Thinking's "evaluate" step (shown via a feedback loop at "customer discovery" in Figure 2, and overlapping with "create" and "evaluate" within Design Thinking). After the MVP has been developed, Lean Start-up continues, in analogy to the evaluation of Design Thinking, with "customer validation" (Blank 2013; Furr/Dyer 2014; Ries 2011).

The "evaluate" step within Design Thinking consists of market validation of the solution concept and the prototypes. The feedback that is gained from market validation is then synthesized via iteration with the already available customer insights, as well as further artifacts of the methodology. The feedback will also be used to make decisions regarding implementation. The "customer validation" phase of Lean Start-up is basically the same, with the exception that at this point almost no tools for synthesizing are offered. In the case that solution concepts or business model hypotheses in the form of prototypes prove to be unsuitable or even wrong, the process must start over from the beginning (Design Thinking: "discover"; Lean Start-up: "customer discovery"). Otherwise, both methodologies would start with implementation.

Since both methodologies follow similar steps, which partly overlap or supplement one another, we decided to use both approaches to develop the process for business model innovation in the financial services industry.

3 METHODOLOGY FOR DEVELOPING THE INNOVATION PROCESS

Since the goal of this paper is to develop a process—i.e., an artifact (March/Smith 1995)—we use the Design Science Research Methodology (DSRM), following Peffers et al. (2008). DSRM has been developed as a scientific procedure for the construction of artifacts. It thus represents a methodology in the context of construction research (Gericke/Winter 2009). Though construction of artifacts was initially a subject of design-oriented business informatics, it can also be used for furthering application-oriented work in the field of management research (van Aken 2004). Since practical relevance and applicability are in the foreground of our task, the use of DSRM appears to be justified.

Basically, DSRM consists of six successively ordered research activities (Figure 3). However, Peffers et al. (2008) do not stipulate starting with the first activity. Rather, entry is possible via the first four of the six activities, and the process can then move forward from the chosen entry point. In our case, we decided to use the construction- and design-centric starting point (see highlighted arrow), because the focus of our research is on construction and, furthermore, because the start-up methodologies to be used are already available as artifacts (Peffers et al. 2008).

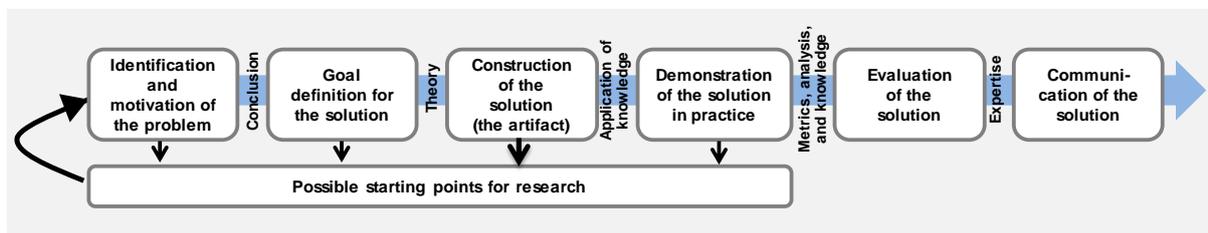


Figure 3. Phases of DSRM

In order to demonstrate and evaluate the innovation process, we conducted a number of expert interviews to gather qualitative data. The interviews intended (1) to present the developed innovation process in a large financial services company, and (2) to review the achievement level of the process. This was conducted based on the general criteria of DSRM and the objectives defined for our artifact (applicability, scientific foundation, effectivity, quality, benefit, and effective communication). These objectives were defined following DSRM.

This approach required us to select respondents, who (on the basis of their education, position in the company, and expertise in the field of innovation management of established financial service providers) would have the competence to answer questions about the developed process in an expedient way (Mieg/Näf 2005). We chose the financial service provider DZ Bank AG to discuss our results with, as this is one of the largest banks in Germany (no. 4 in terms of balance sheet total). In addition, it is the central institution for German cooperative banks, which account for roughly half of all banks operating in Germany. The DZ BANK Group includes the largest building society, and also one of the largest insurance companies, in Germany. The experts of DZ Bank were identified based on the organizational chart and on personal investigations.

4 STRUCTURE AND COMPONENTS OF THE INNOVATION PROCESS

The development of a process for business model innovation based on both the start-up strategies can only yield adequate results if it is scientifically justified and helpful for companies in the respective industry. For the construction of a company-internal innovation process, the methodologies of Design Thinking and Lean Start-up are more suitable than theory-based methodologies, such as effectuation and exaptation. The reasons for this are as follows (Venkataraman et al. 2012):

- Considering business model innovation, the entire entrepreneurial process has to be methodically grounded and newly developed, whereas previous approaches only refer to specific parts of the business processes.
- New and promising approaches have to be introduced (creative problem solving, validated learning, experimenting) (Günzel/Holm 2013; Sperry/Jetter 2009; Zott/Amit 2015).
- The chosen methodologies are particularly suitable for circumstances that require relatively little capital, time, and knowledge (and hence would not be adequate for developing, for example, a nuclear power plant). Start-up companies are frequently confronted with these circumstances, so the use of both start-up concepts in such contexts is not surprising (Maurya 2012).

In the case of banks and insurance companies, the above conditions are fulfilled; thus, Design Thinking and Lean Start-up can be used to develop the internal process for business model innovation. Furthermore, the abovementioned challenges for financial service providers and start-ups can be generalized as those of developing and commercializing new business models, products, services, and processes within conditions of uncertainty. The innovation process under development is consequently intended to support banks and insurers to overcome these challenges.

In this section, the resulting process towards business model innovation is explained. The process consists of two phases: (1) the customer-centric output conception, and (2) the conception of the market, operations, and revenue model.

4.1 Phase 1: Customer-centric output conception

In order to ensure that the new business model truly contributes to the long-term objectives of the financial service provider, the innovation process needs to be synchronized with the corporate strategy (Figure 4a). Such alignment can be achieved through (1) initiation of the innovation process from the corporate strategy and its derived business field strategies, which need to be developed through analytical approaches, and (2) a comparative analysis conducted while elaborating the business plan. Thus, we deal with a creative-emergent approach.

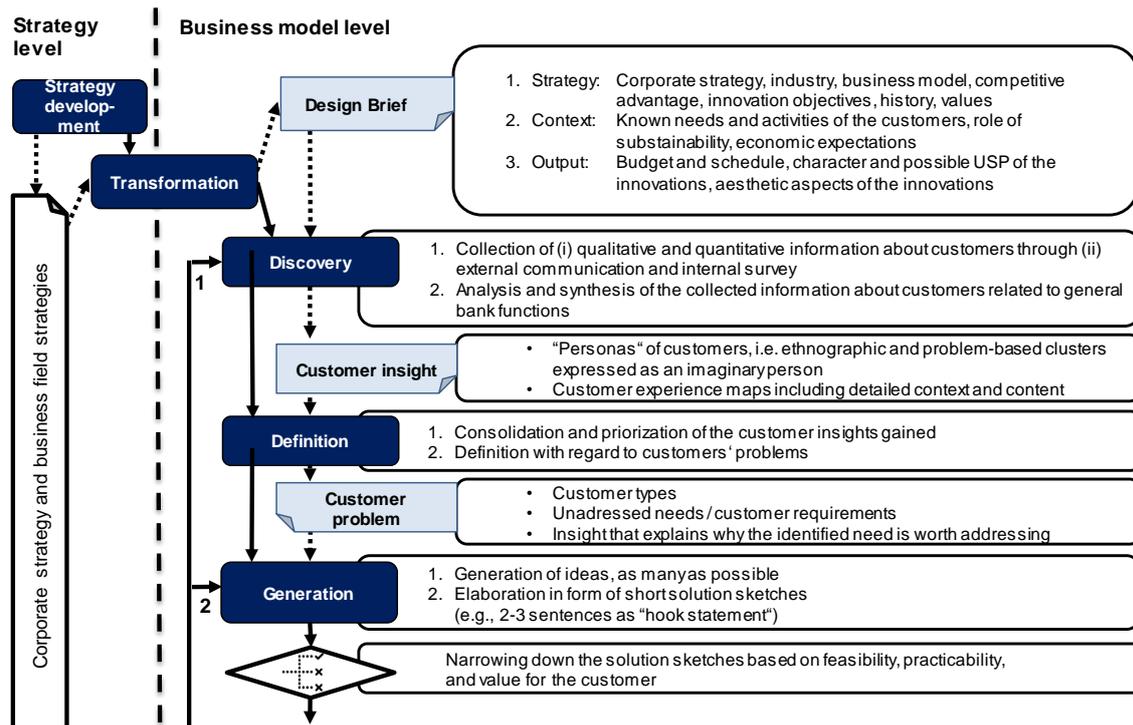


Figure 5a. Process steps for the customer-centric output conception

The corporate strategy is then transformed into a design brief (framework document), which is decisive for the innovation process (Petersen/Phillips 2011). It serves as the foundation and orientation for the whole innovation process, and in our case refers to Petersen and Joo (2015). The design brief comprises the strategic cornerstones, derived from corporate strategy; the context, which involves available knowledge, e.g. concerning customers; and the output, which provides the typical process requirements. Finally, the actual innovation process can start.

The customer-centric output conception is based on the first three steps of Design Thinking. As mentioned above, Lean Start-up assumes the existence of new opportunities and thus focuses on the lean and rapid evaluation and development of these opportunities. To ensure that the innovation process includes the discovery of opportunities based on environmental situations, only Design Thinking can be used. This phase of the innovation process should ensure, through creative discovery of opportunities in combination with customer centricity, that the potential for value creation (new, higher value) is particularly high. This phase also prevents simply taking over existing knowledge about customers as the only basis for the development of innovation (this approach would rather lead to innovations that are similar to existing solutions).

Basically, the customer-centric output conception consists of three steps: discovery, definition, and generation. These steps create the first central element of the business model—the value proposition towards the customer. Without this value proposition the developed innovation cannot succeed at all, because the customer is not offered any value. This is an important precondition for successful commercialization and the reason why start-ups use procedures that start with similar activities. The further elements of the market model are tightly aligned to the value proposition, but will be explicitly formulated only at the second phase.

As soon as the customer-centric output conception is finished, the first decision gate for filtering possible solution concepts for certain customer problems is passed (rhombus at the end of Figure 5a). This stage entails a decision to pursue certain opportunities (customer problem and solution concept) through considering the technical and economic feasibility, as well as the value potential for the customer, including potential interdependencies (e.g., high value potential, but also high costs). The

opportunities provide the foundation for the interactive experiments of the second stage of the innovation process.

4.2 Phase 2: Conception of the market, operations and revenue model

The selected opportunities are the fundamentals for phase 2, which builds on three steps: creation, validation, and elaboration (Figure 5b). The conception of the market, operations, and revenue model refers more strongly to steps of the Lean Start-up concept. The latter is more suitable for rapid processing of the creative design due to its validated learning and the lean Build–Measure–Learn cycle in conjunction with interaction with the customer. Thus, in the “Creation” step, following Lean Start-up, the opportunities will be further developed towards a hypothetical business model in the form of a business model canvas (Osterwalder/Pigneur 2010).

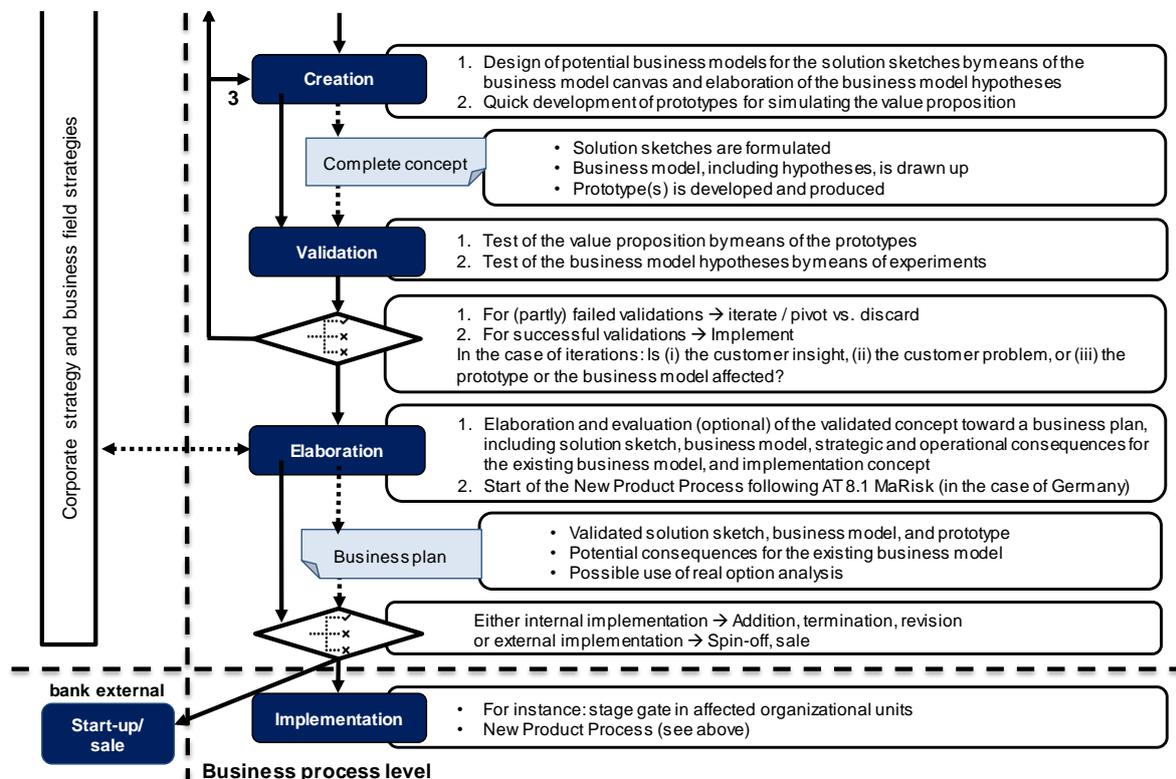


Figure 6b. Process steps for developing the market, operations and revenue model

In combination with a rapidly built prototype, central hypotheses of the business model (e.g. regarding the needs of the customers) can be directly tested during the validation step (e.g. in terms of interactive experiments with customers). Through further experiments with the complete solution concept, additional business model hypotheses can be validated. The results of the validation form the foundation for the second decision gate (rhombus in the middle of Figure 5b).

At this decision gate, in the case of a non-successful validation, the outcome is learned and is iterated back to the corresponding position of the innovation process. There are three options for reentrance, depending on the manner of the non-successful validation (Figure 4a: arrows numbered 1 and 2; Figure 4b: arrow numbered 3). The assumption is that a particularly innovative solution concept tends to result in less successful validations compared to an already known solution concept, and thus has to run more frequently through the innovation process compared to less innovative solutions. This is based on the rationale that more innovative solution concepts imply higher levels of uncertainty and, consequently, require a longer learning process.

Once a complete solution concept is successfully validated, the “elaboration” step follows. At this stage, a business plan needs to be developed based on the complete solution concept. Besides the solution concept, the business plan should analyze further information, especially that required for implementation. This is also the latest point in time at which the New Product Process (AT 8.1 MaRisk) can be started.

This is a legal requirement in Germany imposed by the Federal Financial Supervisory Authority. It states, that financial service providers have to fully understand the impact of new products on their risk profile as a whole. Therefore, the risk profile of the new business plan has to be analyzed in the light of the whole bank or insurance company. This requirement may put constraints on innovative solutions, as their inherent risk is often difficult to quantify, especially in respect to existing business units. Such types of legal requirements are outcomes of Basle III, the international regulatory framework for banks, which has to be transferred into national law by each country. For insurance companies, Solvency II, is the equivalent.

In case the impact on the existing business model appears to be too severe, or even contradicts the previously developed corporate strategy, a spin-off or sale should be considered. Otherwise, analysis can be conducted regarding whether the solution concept is an extension of the existing business model only, or whether it hints to a revision of the business model, e.g. by terminating certain elements of the existing business model. Huge impacts may require revision of the corporate strategy and the relevant strategies for the business fields (shown in Figure 4b as a dashed arrow between “elaboration” and “corporate strategy”). In case of contradictions, the potential for implementation needs to be assessed in comparison with the thereby lost potential of the existing business model.

5 EVALUATION AND DISCUSSION

5.1 Evaluation

Generally, each form of academic proof or logical reasoning can be used for evaluating an artifact (Peffer et al. 2008). Implementing the developed artifact in an established bank or insurance company is possible, but requires a significant amount of time. Therefore, an evaluation using quantitative data and experience reports from implementation is difficult to conduct. For our purposes, we decided to conduct guideline-based interviews with experts. Based on the interviews, we analyzed whether and to what extent the objectives of the constructed innovation process had been met. In our case, six carefully selected experts of a large European bank, German DZ Bank AG, were chosen.

Achievement of the aims, outlined by DSRM (applicability, scientific foundation, quality, etc.), were confirmed for the developed process for business model innovation by all of the experts to a very large extent. However, two reservations were made:

- Customer centricity (“market pull”) is seen as an important aspect of the process for business model innovation in the financial industry. According to the experts, however, there might be further perspectives, namely technology push and market observation. In order to consider the innovation process as a comprehensive, strategic approach for dealing with the challenges of banks and insurance companies, these perspectives should be included.
- It was mentioned that not every business model innovation has to be initiated by an innovation process as suggested here. Hence, there might be other approaches apart from Design Thinking and Lean Start-up that could lead to business model innovation as well.

According to the experts, the requirements for successful implementation of the innovation process for business models (conformity with corporate strategy, enhancement of efficiency, and effectivity) were fulfilled ex ante (with the limitations mentioned above). These are discussed in the following section.

5.2 Discussion

The experts saw the perspectives of technology push and market observation as relevant for the innovation process. The lack of these perspectives in our procedural model is an inherent consequence of the applied research design. The analysis of literature on the strategies of start-ups companies led to approaches with a strong focus on customers. This is not surprising, as the perspective of market pull is the most relevant for start-ups; indeed, in some cases it is even the only relevant and feasible perspective.

Technology push describes the development of a technology from basic research to an applied technology, which in many cases is characterized by high initial costs—in contrast to the initiation of business models through knowledge about customers. A business model innovation driven by technology push would require a start-up to have an idea concerning a technology that is worth being financially supported by investors, without focusing on the customer right from the beginning. However, this is unrealistic.

Regarding market observation, managers of established banks and insurance companies often have the opinion that experience in the market, observation of competitors, and thus existing knowledge can replace an early focus on customers. We do not agree with this opinion. We do not consider market observation as a suitable approach for business model innovation, because it does not lead to the development of a new business model. Our starting point was the approaches utilized by start-up companies; thus, the use of market observation is not consistent with our intended research focus.

In summary, the evaluation based on the expert interviews confirmed the achievement of our goals. The fact that the developed innovation process is consistently based on the value proposition to customers (customer-centrality, market pull) was identified as particularly valuable, which strongly mitigates the limitations outlined in section 5.1.

We renounced the iteration within the step of construction in DSRM, because the few abovementioned reservations would remain unchanged despite a new construction effort (Peffer et al. 2008). These limitations are ultimately a result of the research focus and the chosen research design.

6 CONCLUSION

This paper reveals that the analyzed start-up strategies—Design Thinking and Lean Start-up—can be applied to develop a process for business model innovation for traditional banks and insurance companies. Both approaches not only support and guide start-up companies when developing their business models and products, but can also help established financial service providers develop innovative business models. Since start-ups follow the perspective of market pull—and consequently focus on customer needs—the innovation process developed here shows the same characteristics.

A rigorous customer centricity is exactly what distinguishes start-ups, especially fintechs, from established enterprises in the financial industry. Fintechs integrate themselves with very specific, customer-related problem solutions at the interface between customer and bank or insurer. This is exactly what established providers have to do if they want to defend themselves and to preserve the contact to their clients. The process outlined in this paper enables traditional financial service providers to fight back. It is a creative tool for reinventing business models—a task that is of the utmost importance for today's top management.

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