A Novel Strategy Development Process Based on Design Thinking

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Design is not just what it looks like and feels like. Design is how it works—Steve Jobs

Most traditional strategy design processes are highly analytical. They are tedious and are built on abstract concepts, like a vision, a mission, and values statements. Although such statement may be sound in communicating about strategy, they often are challenging in driving the creative process of designing a strategy. They fail to provide the necessary guidance, that any creative process requires to avoid derailment. Typical strategy design theory focuses on the capabilities and resources that define a firm's competitive positioning. Little is left to creativity, and especially creativity at the strategic level. Innovation is related to technology rather than to how to conduct business. Traditional strategy development exercises, based on deductive data driven reasoning techniques, often end up in large binders of PowerPoint presentations, and substantial consulting bills. Too much time is spent on analyzing data about markets, their size, and competitors. Too little time is used to understanding customers and their jobs-to-be-done. This does not have to be the case!

Originally, mainly architects and urban planners relied on design thinking for developing innovative solutions. During recent years, design thinking has become a mainstream wicked problem-solving approach. Based on abductive reasoning, a formal logic of inference that starts with observing and identifying the nature of the desired value to achieve and seeks simple and most likely explanations (Dorst 2015), this book presents a tree-layer iterative approach to designing sound business strategies. Through designing and validating, each layer relies on what has been observed and learned to come-up with novel and tested options. Whenever possible, the strategy design process avoids unfocused research analysis by combining exploratory and confirmatory phases in an iterative and top-down way. The goal is offering a practical, hands-on approach built on solid theoretical concepts that can be applied to disruptive start-ups as well as traditional corporations in developing or reviewing their strategies. And more important, it does not require a multi-year MBA to be understood and successfully applied.

5.1 Process Overview

The strategy design process, also called *design thinking for strategy* ("DTS") process, is subdivided into three layers. Each layer is offering a specific focus in driving the development process. Figure 5.1 illustrates the three-layer approach and demonstrates how design thinking and game theory support strategy development at each stage, including intermediary milestones requiring decisions.

The *foundation layer* supports a high-level understanding of the industry and competition using an observing approach, with a focus on identifying those insights that matter most in developing the strategy. Based on the learnings, the foundation of the firm's strategy, that is, its strategic focus, is chosen. It is based on the four components of the lightweight business model and defines how the firm wants to compete and differentiate itself.

During the *business model layer*, the target detailed business model of the firm is designed and validated based on in-depth observations of customers, innovation capabilities, skills, and financial expertise, as well as the chosen strategic focus. Multiple iterations of observing, learning, designing, and validating, are usually necessary.

Once the business model has been finalized, the *competition layer* places it into the perspective of the industry in which the firm wants to compete. This is accomplished by seeking answers to Porter's five questions on strategy (Porter 1996; Magretta 2012). Game theory is used to understand if and how the designed business model works in its competitive environment. Depending on the findings, it may be necessary to refine the business model, or even the strategic focus.

Ultimately, the strategy developed is communicated in a way that allows its implementation to start. Strategy development and strategy implementation should not be mixed as they require different skillsets. The process from strategy development to implementation is not linear. Findings during the implementation phase may lead to adjustments in the development phase, and especially regarding specificities in the business model.

5.2 The Foundation Layer

The goal of the foundation layer is to decide along which of the four components of the lightweight business model the firm aims at competing. As stated by Porter (1985), as well as Treacy and Wiersema (1995), successful firms excel at exactly one component of the lightweight business model, while being competitive in the three others. If a firm decides to compete in more than one component, it will often fail due to the "stuck-in-the-middle" syndrome. Typical examples are failed airlines that tried to be both premium service providers and discounters. Note that focusing on a single lightweight business model dimension is only valid at the business strategy level, as it is possible to design a corporate strategy, that is, a strategy at the holding company level, where each business unit implements a different strategy
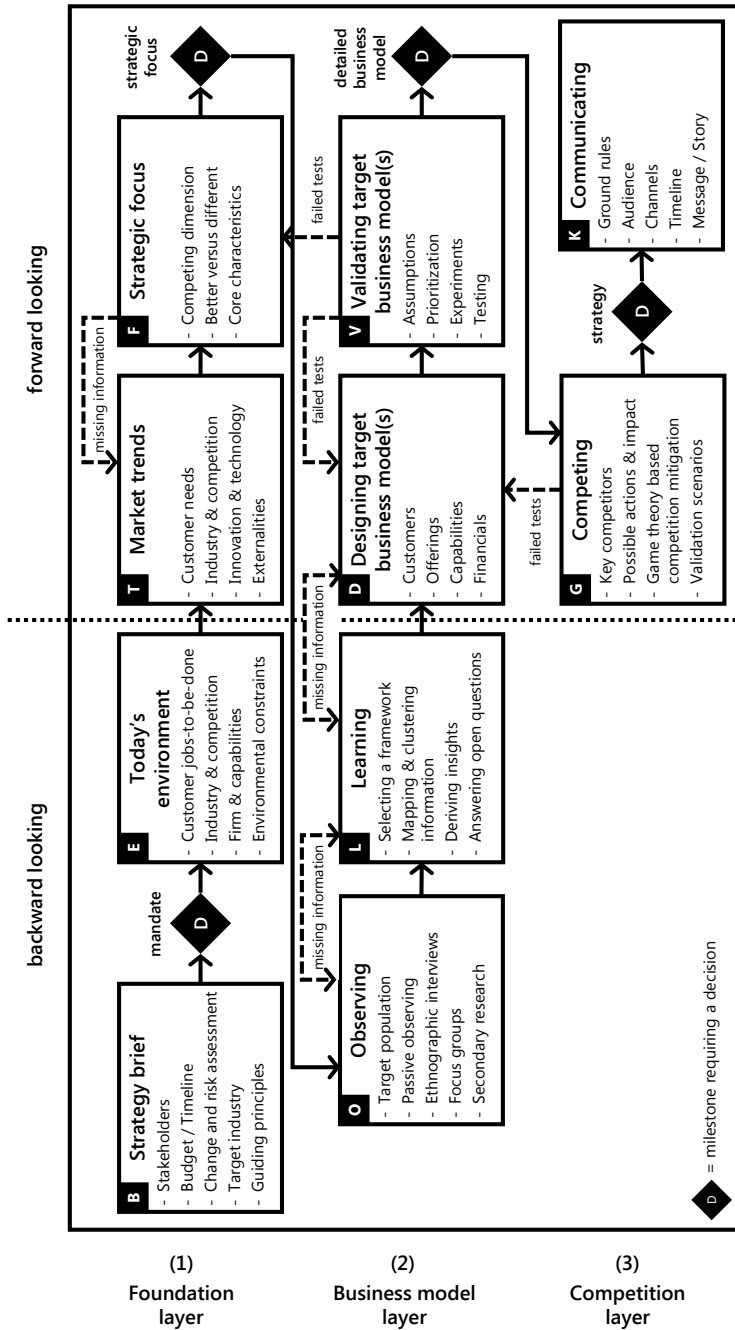
Fig. 5.1 Overview of the strategy design process

based on a different strategic focus, that is, competing along a different component of the lightweight business model.

5.2.1   Strategy Brief

Before starting the design of a new strategy or update an existing one, the *strategy brief* defines the overarching scope and goal of the strategy design process, which includes

– listing all the *stakeholders* that must be involved at different points along the timeline of the strategy design process,
– implementing a *culture fostering innovation and creativity*,
– determining a *raw budget and timeline*,
– understanding the firm's *capacity to handle change* and assessing the *potential risks* underlying strategic decisions to be taken
– identifying the *target industry* in which the firm expects to compete, and
– defining the *guiding principles* on which the strategy to be developed should be based.

In contrast with common project management approaches, the strategy brief is kept short and concise to avoid unnecessarily constraining the strategy design process. The strategy brief must avoid anticipating any possible outcome.

5.2.2   Understanding Today's Environment

Key industry players, competitors, and the firm, are observed, and findings are documented using the lightweight business model framework. The focus is put on what matters most by applying the 80/20 rule,[1] also called Pareto principle, and not on describing every little detail. Regulatory, political, economic, social, environmental, and technological externalities are observed and documented using a separate instance of the lightweight business model.

> **Example** Consider the payment industry, focusing on the online shopping world. Figure 5.2 illustrates today's environment focusing on the four components of the lightweight business model, that is, customers, offerings, capabilities, and financials. Customers are subdivided into retailers, providing the payment services, and buyers, using the services to pay.

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[1]The 80/20 rule, also known as the Pareto principle, states that roughly 80% of the effects come from 20% of the causes. Juran suggested the principle, and named it after the Italian economist Vilfredo Pareto, who noted the 80/20 connection in his 1896 paper *Cours d'économie politique*.

Customers	Offerings	Capabilities
Retailers looking for: - Solutions that integrate into their supply chain management system - Solutions that are widely accepted by buyers - Costs related to the attractiveness to clients served Buyers looking for: - Ease of use - Security - Acceptance by on-line stores - Supported by banks - Providing a credit line	- Credit card issuers, mainly large players (VISA, American Express, Mastercard, etc.) - Global technology firms, offering payment solutions like PayPal, ApplePay, SamsungPay - Large retailers, offering their own payment services - Banks, exploiting their wire transfer capabilities - Niche solutions focusing on specific markets and/or specific channels	- Interconnectivity - Technologies, like NFC, Bluetooth - Card transaction processing - Wire routing and processing - User experience design - Reach, both to retailers and buyers - Credit facility

Financials
- Transaction based pricing - Volume based pricing - Pricing power based on reach - High automation, minimizing variable costs

Fig. 5.2 Illustrative example describing key insights of today's environment around payment services, focusing primarily on the on-line shopping experience

5.2.3   Identifying Industry Trends

Various design thinking tools are applied to identify key industry trends along the four dimensions

– customers,
– innovation,
– capabilities, and
– externalities.

Possible industry trends are identified by trying to extrapolate today's environment into the future. The identified trends may be inconsistent among themselves and occurrence probabilities should be associated to them. They are predictions of the future and must be considered as such.

> **Example** Capability trends in the payment example shown, may include for example blockchain technology. Another trend identified may be leaning towards global offerings, focusing on a limited set of core features, rather than distinct domestic only solutions aiming at offering customized payment services, including wire transfers and mini consumer loans.

5.2.4   Choosing the Firm's Strategic Focus

The *strategic focus* of the firm is determined based on what has been learned from observations in the two processes understanding today's environment (process E in Fig. 5.1) and identifying market trends (process T in Fig. 5.1). The strategic focus is based on the lightweight business model component along which the firm wants to compete. It includes whether the competitive advantage should be based on being different or being superior. The other three components' key characteristics are also derived and documented as part of the strategic focus chosen.

At the end of the foundation layer, the firm should clearly recognize where it wants to develop its competitive advantage and why. The details regarding the "how" remain to be determined.

5.3   The Business Model Layer

The business model layer of the strategy design process aims at defining the strategic aspects which are needed by the firm to conduct business successfully. The focus is on the firm, rather than the industry, its competitors, or the external environment. Strategic business aspects are holistically addressed. The business model layer follows the four steps of the design thinking methodology, specifically, observing and learning, by looking backward, and designing and validating, by looking forward.

5.3.1   Observing

Rather than being unfocused, the observing process O targets observations around the strategic focus as defined in the foundation layer. Observing intends to lay the foundation for learning what customer needs are not met or met in an insufficient way and which jobs-to-be-done are relevant. Observing should not be confused with the traditional strategy analysis phase, focusing on market sizing. Passive observing aims at answering the "what" question and is often followed by interviews around the "why" questions to deepen understanding.

> **Example** Consider a hardware store that wants to re-focus its strategy along the financials dimension, notably competing to become superior in its cost management to be able to match competitors' prices. One key cost dimension is the service and support offered during the customer decision journey. Passive observing would involve identifying when and why customers seek human support, with a focus on the "what "question, that is, what do customers want to know? In a subsequent step, the observer would attempt to understand "why" customers seek human support by conducting ethnographic interviews. Is it because no alternative sources of information are available? Or is this due to a lack of under-standing? Or is it even because of an emotional need for human trust?

The key to successfully observing is avoiding an interpretation of the findings, prioritizing them, or trying to find solutions to the observed pain points. Observing must be neutral and not focused only on negative aspects. Positive observations are as important.

In addition to observing based on the chosen strategic focus, the observing process should be used to gain information about externalities, such as regulatory constraints. In terms of mathematical terminology, the question to be answered is "are the constraints binding or is there still slack"? It is good practice to use focus groups for generalizing the observed insights and outcomes from interviews and conduct secondary research to identify supporting or contradicting arguments related to the findings.

5.3.2 Learning

While still focusing on the past, the learning process L aims not only at understanding what has been observed, but also on gaining unique insights that may be exploited towards a competitive advantage. A centerpiece of learning involves separating relevant insights from irrelevant ones. Knowledge is extracted from the observations, structured, and related to the business model's different elements. Insights move beyond the original customer- or human-centric design thinking. They also relate to non-customer facing activities, like observed capabilities, unique technologies, or distinct challenges identified when trying to address the jobs-to-be-done, including investments and expenses. Depending on the knowledge gained, further passive observations may be needed following ethnographic interviews.[2] Such iterations are a part of the strategy design process and should not be negatively connotated.

> **Example** Consider again the hardware store example. Assume you have observed that customers ask for human assistance after spending time considering various alternatives for buying a given tool and before making a final purchasing decision. Key questions asked to the human assistance relate to specific features of the tools that the customer has included in his consideration set.[3] First, it is a sound idea to use a framework to structure the information gained, in this case, using the McKinsey's consumer decision journey framework (Court et al. 2009). Knowledge is extracted from the observations by mapping the observed onto the chosen framework. This could include customers looking for comparative as well as objective information about the tool alternatives not yet identified. Customers may trust a

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[2]Ethnographic interviews are directed one-on-one interviews, aimed at understanding the behaviors and rituals of people interacting with individual products and services. They aim at better "understanding" the jobs-to-be-done and associated pain points as well as unmet sought-after gains identified during passive observing.

[3]The consideration set is the set of products to which a person has narrowed down their choice for buying from, based on their personal screening criteria.

human salesperson to make that information available to them in an objective way. One observation may reveal whether the relevant issue is a lack of available information, its complexity, or the objectivity of the salesperson. The gained knowledge about lack of availability or mediocre quality of the information is associated with the value proposition element when mapped onto the detailed business model in addition to the specific framework chosen. Customers focus more on the human trust aspect than on the actual information would be mapped to the customer relationship elements of the detailed business model. The learned knowledge is put into perspective relative to the chosen strategic focus. Figure 5.3 illustrates possible gained knowledge mapped onto the detailed business model framework. Note that the goal of the learning process is not to identify solutions to potential issues, but to understand the jobs-to-be-done and the root causes of the identified challenges.

Ideally, the learning outcomes cover all elements of the detailed business model. They should at least cover all elements that directly or indirectly relate to the chosen strategic focus, the value proposition, and the products and services elements. For example, if the chosen strategic focus is customers, then the learned knowledge should cover the customer segments, their jobs-to-be-done, the customer relationship, and the customer delivery elements. In the case where the observations and the subsequently derived knowledge fail to provide relevant insights, additional iterations of observing and learning must be performed, or the strategic focus chosen during the foundation layer revisited.

Customer Segments	Customer Relationship	Value Proposition
▪ Cost-conscious, but not poor ▪ Knowledgeable of characteristics sought after ▪ Rational decision maker ▪ Well informed and experienced ▪ Technology savvy	▪ Needs to see and touch the tools before buying ▪ Seeks advice before buying to ensure needs are effectively met ▪ Has experience with technology/ app-based support	▪ Assumes pre-sales support is part of the offering ▪ Seeks understanding of the uniqueness of their needs ▪ Looks for cheapest in-store price within a decent travel range
Customer Jobs-to-Be-Done	**Customer Delivery**	**Offerings**
▪ Needs specific features to perform a specific job ▪ Buying decision is based on price, given needs are met	▪ Walk-in customer type ▪ Wants to buy and leave with the tool once they has made their decision	▪ Favors suppliers that offer large variety of tools adapted to specific needs ▪ Availability of tools is important ▪ Brand is not relevant

Fig. 5.3 Mapping observations from ethnographic interviews onto the detailed business model focusing on customers and offerings (not shown: capabilities and financials insights)

5.3.3   Designing

The third process of the business model layer, during the designing process D, is forward-looking. Starting with covering elements related to the strategic focus, viable options of the firm's target detailed business model are designed. The insights gained from the learning process L serve as a point of reference. Although the goal is not to restrict creativity, the designed business model options should align with the chosen strategic focus. For example, if the strategic focus is defined as competing on price, it is unsound to propose a business model option based on a sophisticated and expensive after-sales support approach for the customer delivery element. It would be preferable to implement a discounter strategy or focus on cost reducing capabilities. The trends identified during the foundation layer analysis serve as guidelines to focus the creativity and ideation during the designing process D. Similarly, externalities should be perceived as potential opportunities to be exploited, rather than restrictions.

> **Example** Consider again the previous hardware store example. One knowledge gained is that some customers seeks answers from human salespersons to specific questions related to comparing the features of the tools to buy. One design choice, given a financial strategic focus, would be focusing on the customer segments that do not require human pre-sales support. Alternatively, the firm may decide to offer customized pre-sales supports while simultaneously remaining a discount retailer. This is where real creativity is needed. An artificial intelligence-based kiosk-style pre-sales support mechanism, or even an autonomous robot, could replace humans to deliver pre-sales support to customers. This would allow avoiding excessive costs associated with relying on human personnel for pre-sales support. Another idea could be to charge for the human pre-sales support, after validating the customer willingness to pay for it.

At the end of the designing process, a complete description of the detailed business model prototype should be available. Additionally, all elements should have been checked for consistency among each other. For example, if a given value proposition is offered, it must match a given customer jobs-to-be-done element on the customer side as well as activities in at least one of the three activities elements of the detailed business model. Again, if the detailed business model's description is incomplete or inconsistent, it is necessary to reiterate the observing and learning processes, or even revisit the foundation layer.

5.3.4   Validating

Assumptions made during the designing process are explicated during the validating process V. They are reformulated as testable formal strategy hypothesis. Executives and strategists make too often unjustified assumptions without knowledge. Hypothesis, that sound logical on paper, often fail a "reality" test. Therefore, it is key to test all formulated assumptions underlying the designed business model options in a real-world environment. To do so, experiments must be developed and conducted. Rather than confirm assumptions using statistical theory, the goal should

be on identifying what could make the assumptions fail. Hypothesis validating in strategy involves finding unexpected flaws rather than confirming the obvious. It is important to note that assumptions made for each element in the detailed business model must be validated, as well as assumptions underlying the relationships and interactions between elements. For example, if the business model designed focuses on offering a specific value proposition to a specific customer segment, it is key to validate that a customer relationship exists to links the customer segment to the value proposition.

> **Example** When considering the hardware store example, the designed business model prototype assumes that pre-sales support can be provided by artificial intelligence driven kiosks or robots at a cost significantly lower than that of human product sales experts. Three key assumptions underlying this design choice are:
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> (1) Customers accept pre-sales support kiosk-style mechanisms or robots as an alternative to human pre-sales professionals, assuming the same level of pre-sales support quality as provided by humans.
> (2) Kiosk-style mechanisms or robots, supported by artificial intelligence technology, can provide pre-sales support at a quality level that is accepted by customers as equivalent to that of humans.
> (3) Pre-sales support robots can be built or bought and trained at sufficiently low cost to support the discounter's strategic focus.

Assumptions should be prioritized in increasing order of the complexity of validating and relevance to the validity of the business model prototype. A mock-up kiosk or robot could be built to test the first assumption, answering customer questions remotely by a human without the customers knowing so. This would allow testing whether customers accept kiosk-style mechanisms or robots instead of humans, at the same level of pre-sales support quality.

The validation phase aims on failing fast to succeed faster, while ensuring the detailed business model's viability.

5.4 The Competition Layer

Although critical, the strategic focus and the detailed business model options are only two aspects of what defines a successful strategy. A third characteristic involves determining and understanding the firm's position in its competitive environment. The competition layer of the strategy design process includes two major processes:

(1) First, the competing process G determines an understanding of how the firm aims at competing and differentiating itself from peers and prepares for potential competitor reactions.
(2) Second, the developed strategy is communicated through process K in a way that managers and employees understand it, while providing sufficient details to support the strategy's implementation.

5.4.1 Understanding the Competitive Landscape

At the core of understanding the firm's competitive position stand Porter's five questions about competition in strategy (Porter 1996; Magretta 2012). They are answered during the competing process G to identify the firm's competitive advantage. This means,

– identifying the *distinct value proposition* elements of the detailed business model,
– relying on a *tailored value chain* in the activity elements of the detailed business model,
– making choices or *trade-offs that differ from those of competitors* throughout the detailed business model,
– ensuring that *choices made are interdependent* and support each other, and
– offering some sort of *continuity over time*.

> **Example** In the hardware store example, the distinctive value proposition as well as the trade-offs made are based on offering discounted prices combined with pre-sales advice not found at competing discounter hardware stores. The tailored value chain is supported by the use and reliance on artificial intelligence and robots to offer advice. The interdependence, or what Porter calls "fit", is ensured by including pre-sales advice in the process supporting the customer decision journey, which is primarily price-driven. As the strategy's foundation, being perceived as a discounter, does not change, the need for continuity over time is ensured.

Understanding the firm's position in the competitive landscape is important, not only for firms implementing strategies with a certain industry power, but also for those firms that aim to disrupt their market—even start-ups. Furthermore, game theory (Morgenstern and von Neumann 1947; Straffin 1993; Ghemawat 1997), including the Nash equilibrium theorem and min-max game trees, is used to understand and predict how other industry participants may react to certain strategic decisions, enabling to better understand and strengthen the competitive positioning of the firm. Understanding the challenges faced by a given positioning choice is less critical for firms implementing a blue ocean strategy (Kim and Mauborgne 2005), that is, a strategy that deliberately avoids competition through its unique positioning, than for those operating in a crowded environment.

> **Example** Consider again the example of a hardware store competing on price. A key differentiator proposed in the strategy involves offering extensive pre-sales support using kiosk-style mechanisms or robots. However, reactions from competitors and their implications to this strategy must be understood before committing to it. Table 5.1 illustrates four scenarios that describe the customer's expected reactions and their implications for the firm's strategy.
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> Two consequences can be derived from this analysis. First, customers' perceived value of the advice is key to whether offering pre-sales advice as a discounter is sound. Second, under the assumption that a kiosk-style mechanism or robot's advice can be replicated, superior capabilities to offer advice are necessary to compete with the proposed strategy. Rather than assign probabilities to each competitor reaction scenario, the analysis is defined as a worst-case analysis.
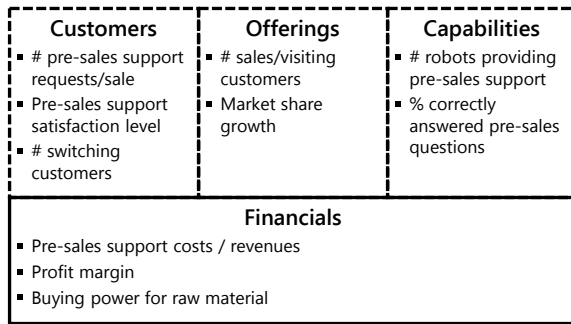
Table 5.1 Four scenarios reviewing how competitors may react to the discounter strategy

	Competitor reaction	Customer reaction	Outcome for the firm
(1)	– Only competing on price – No active price wars – No pre-sales support offered	– Customers do not switch at similar discounted prices – Advice is perceived as a free good which some customers value	– Attracts customers seeking advice switching from competitors – Customers that do not value advice do not switch
(2)	– Competing through price war – No pre-sales support offered	– Customers that only buy on price, buy from the cheapest retailer – Customers relying on pre-sales support in their buying decision process, will seek such support	– Differentiated positioning versus pure discounters possible – Loses customers solely buying on price – Attracts customers based on the perceived value of pre-sales support
(3)	– Primarily compete on price – Offer similar technology-based pre-sales support	– Customers perceive advice as a free good – Customers remain indifferent – Some customers accept technology-based pre-sales support	– Price discrimination occurs at similar pre-sales support quality – Superior technology-based pre-sales support quality attracts some customers from competitors
(4)	– Primarily compete on price – Offer human-based pre-sales support	– Customers prefer human-based over technology-based advice	– Customer will switch to competitors with comparable price – The outcome depends on the sustainability of competitors' strategy (costs) and the reluctance towards technology-based pre-sales support

The first process step, answering Porter's five questions, is a designing step while the second step, analyzing the firm's competitive position using game theory, focuses on validation. Findings from the earlier stages of the strategy design process may lead to a reiteration of previous steps to make adjustments to the retained detailed business model and re-validate the revised strategy.

5.4.2   Communicating

The second process of the competition layer and the final step of the strategy design process is the communicating process K. It summarizes the outcomes of the three layers:

Customers	Offerings	Capabilities
■ # pre-sales support requests/sale ■ Pre-sales support satisfaction level ■ # switching customers	■ # sales/visiting customers ■ Market share growth	■ # robots providing pre-sales support ■ % correctly answered pre-sales questions

Financials
- Pre-sales support costs / revenues
- Profit margin
- Buying power for raw material

Fig. 5.4 Sample description of the business model insights used in communicating the strategy

(1) The *strategic focus* from the foundation layer.
(2) The target *detailed business model* resulting from the business model layer.
(3) The *competition insights* gained from the competition layer.

Depending on the firm's culture, a vision, mission, and values statements, may be derived and used in communications. Firms that are accustomed to key performance indicator-based strategies may summarize the developed strategy by assigning a set of key performance indicators to each of the lightweight business model elements.

Example Figure 5.4 illustrates possible key performance indicators used in conjunction with the communicating process and structured around the lightweight business model's elements.

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