

Chapter 2

The Business Model Concept



It seems obvious that business models have a special relevance to the competitiveness and the success of companies. This chapter shall therefore provide the foundations of the business model concept in more detail. While Sect. 2.1 outlines the research streams of business models, Sect. 2.2 provides a classification of business models and Sect. 2.3 illustrates an overview of integrated business models. After having presented a general understanding of integrated business models, Sect. 2.4 provides the levels and goals of business models. Subsequently, Sect. 2.5 concludes with the presentation of core concepts of business models, i.e. the value-creation chain and the approach of assets and core competencies.¹

2.1 Research Streams of Business Models

The business model concept has a long history. During its development, the concept was taken up by different streams of research and associated with different schools of thought. In the literature, there are three different theoretical approaches to the business model concept: information technology, organizational theory and organizational strategy. These three basic research streams will be explained in the following.

- Information Technology

In the technological context, business models emerged from the research area of management information systems (Teece 2010). Thus, information technology is the first basic approach that was established in business model literature. The main consideration in the information technology approach is business modeling from which the business model results.

¹See also for the following chapter Wirtz (2013a, 2018a).

As early as 1975, Konczal described the procedure and benefits of business modeling and predicted that computerized business models would continue to gain importance (Konczal 1975). Early on, Konczal directed his work towards management and identified the business model as a management tool. The declared goals of business modeling were to create a business compliant architecture and to reduce the costs of hard- and software implementation.

Gradually, the methods and tools such as ARIS and PROMET were developed, which were suitable for process documentation, process analysis and conceptualization. Since the mid-1990s, system developers have been using UML, a standardized object-oriented modeling language. Business modeling occurs as a three-step process (Eriksson and Penker 2000): 1. The business objectives and available resources are determined by the CEO or the responsible unit managers. 2. The system developer drafts the structure and the business processes as well as the allocation of available resources, resulting in the business model as a simplified representation of the business processes. 3. The system developer creates an information system based on the business model.

In the sense of early information technology, the business model chiefly describes the activity of system modeling and is characterized by strongly functional aspects (Zott et al. 2011). During the course of the technological revolution caused by the Internet and the advent of e-business, the significance of the information-technological view on business models expanded. Due to changed competition and market conditions, it was often not possible to directly transfer traditional business concepts to the Internet (Wirtz and Becker 2002).

Hence, the task of the business model changed. Instead of only describing existing processes and structures for the technical system development, the business model itself became the first step in the modeling process. An Internet-based information system no longer refers to a real structure but is designed directly according to the business model.

Therefore, the business model is still to be seen as a preliminary conceptual stage but has become substantially more important in the overall modeling process. Apart from the classical information-technological view, business models had already increasingly gained an independent meaning detached from systemic considerations before the new economy. The business model changed from the plan of producing a suitable information system to an integrated depiction of the business organization in support of the management (Schoegel 2001).

- Organizational Theory

At the beginning of the 1990s, the business model concept lost its implicit connection to information systems. The focus changed and two new research streams evolved. One of these research streams was organizational theory. Since business models were no longer restricted to the preliminary conceptual stage of information system development, they evolved into an independent instrument of analysis (Zott et al. 2011). Hence, the direction of the concept's effect changed as well. In its early information-technological view, the business model was mainly regarded as a tool to transpose instructions from decision makers, but in its organization function, it can be used to support management decisions.

The business model now helps to understand how companies work. Organization theory views a business model as an abstract representation of the company's structure or architecture (Al-Debei et al. 2008). In this connection, Eriksson and Penker (2000) define the following functions of the business model:

Definition by Eriksson and Penker (2000)

- “To better understand the key mechanics of an existing business.
- To act as a basis for improving the current business structure and operations.
- To show the structure of an innovated business.
- To experiment with a new business concept or to copy or study a concept used by a competitive company (e.g. benchmarking on the model level).
- To identify outsourcing opportunities.” (Eriksson and Penker 2000, p. 3)

While information technology and the business model concept developed largely in parallel, the origins of organizational theory as an economic framework have to be placed much earlier in management theory. Organization theory as an analytical concept is already to be found in the pre-industrial area.

With the industrial revolution in the middle of the 19th century, this concept became increasingly relevant for companies and may be regarded as a preliminary stage of modern management theory. During this period the first charts of corporate structures were drawn. However, a scientific examination of the subject did not take place until the beginning of the 20th century. The most important attempts in this period are those from Taylor (1911), Gilbreth (1911) and Fayol (1916).

Early definitions of organization can be found in Barnard (1938) or March and Simon (1958), among others. To this day, the further development of organizational theory has produced many different schools and theories, many of which can be classified in the area of sociology. A list of the theories that are relevant in the context of business models can be found in the work by (Hedman and Kalling 2002).

Nowadays, in the context of business management, organizational theory concentrates on achieving efficient results by means of organizational regulations. For this purpose, it becomes necessary to decide on the results one aims to achieve. These objectives are defined by a strategy that the organization follows. Hedman and Kalling (2002) emphasize the close connection between organizational theory and strategy. They found that strategy has its roots in organizational theory and listed both constructs as basic theoretical approaches of the business model concept.

- Strategic Management

With the functional change of the business model to a management tool in the sense of organizational business planning, strategy as a further basic theoretical approach gained in importance. The business model became the comprehensive description of entrepreneurial activity in an aggregated form.

Since the year 2000, many papers closely relate strategy and business models. Wirtz and Kleineicken (2000) emphasize the close connection between the business model concept and business strategy. Here, the business model provides information about the production factors for implementing a company's business strategy. According to Hamel (2000), innovations in business models constitute competitive advantages. Thus, the business model includes an internal corporate view with a competitive-strategic component.

In the course of the differentiation of the concept, the strategic approach became increasingly important in academia, which is why the business model was extended especially by strategic components (Wirtz and Kleineicken 2000; Chesbrough and Rosenbloom 2002; Magretta 2002). Compared to organization theory, the strategic approach is a relatively new discipline in the business management research. However, strategic and organizational theories have not developed linearly; different schools of thought have developed simultaneously and affect the contemporary view of the business model concept in various ways.

Chandler (1962) did fundamental work in this field, not only decisively coining the term strategy, but also describing its relationship with the administrative structure of a company. Chandler describes how strategic considerations are reflected in the structure of the company and also connects the basic strategic and organizational approach. Many authors consider Chandler's "Strategy and Structure" (1962) to be the first pivotal work for the business model characterized by the strategic approach. A further development of Chandler's approach regarding the market orientation of strategy can be found in the work by (Ansoff 1965).

In 1971, Andrews published another early strategic work closely related to the concept of today's business model. Andrews was the first author to distinguish between a corporate strategy and a strategy of individual business segments. Chesbrough and Rosenbloom (2002) found that many business model definitions hardly differ from Andrew's definition of the strategy of individual business segments.

In addition, a multitude of different streams of strategic research can be found that influence the business model concept. One of these streams was shaped by Penrose (1951): The view of the management's influence on the resource allocation of the company (Kor and Mahoney 2004). Penrose laid the foundation for the resource-based view, which, in addition to the market-based view, became the prevailing strategic tendency. Furthermore, both schools of thought, the market-based view and the resource-based view, are particularly important for the concept of the business model.

In the context of the market-based view, the company is considered as part of an industry. Special emphasis is placed on the competitive orientation and the external view of the company. One of the most important representatives of the market-based view is Porter. Particularly Porter's five forces and his value chain model should be mentioned. In contrast to this, the resource-based view focuses on the individual company and its sustainable handling of resources.

The resource-based view is also used to explain the origin of the business model concept (Schweizer 2005; Seppänen and Mäkinen 2006). Today, the two originally divergent approaches are often considered complementary. Accordingly, many

authors see both schools of strategy as basic theoretical approaches of the business model concept and combine them in their descriptions.

The concept of innovation is another approach that is often used in the context of strategy. Within the scope of the business model, different authors trace this approach back to Schumpeter’s theory of creative destruction (1942) (Hedman and Kalling 2002; Schweizer 2005). In doing so, two different approaches are mainly considered. At the time of the new economy when strategic considerations first gained influence on business model literature, the creation of a new company—entrepreneurship—received special attention.

With the loss of importance of the new economy and a renewed focus on established companies, the possibility to innovate a company with a new business model and to achieve a restructuring of the company in the strategic sense (in most cases Internet-supported) became more important. Hence, the orientation of business models toward innovation is associated with the strategic approach.

Summarizing this section, it can be concluded that the basic research streams identified provide different explanatory approaches and access points to business model management. Figure 2.1 outlines a general overview of the research streams of the business model concept.

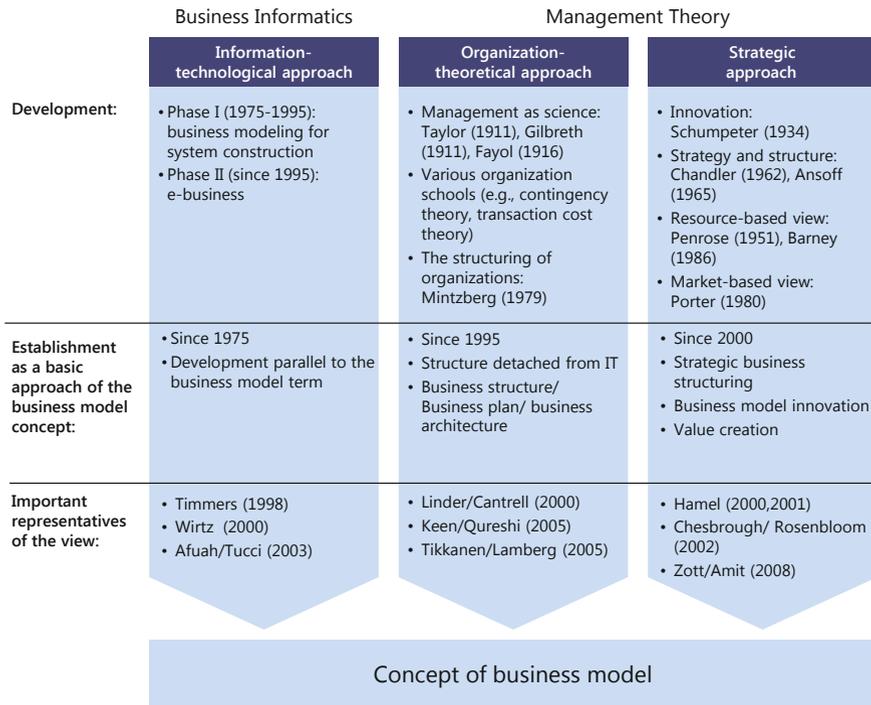


Fig. 2.1 Research streams of the business model concept. *Source* Wirtz (2010a, 2016a)

The different theoretical approaches underlying the business model concept have increasingly converged in recent years. Thus, in the current literature, a similar conceptual understanding of the business model concept has been established (see for the following Wirtz 2016a).

Between the years 2000 and 2002, the technologically-oriented business model articles have been very dominant in the context of e-business, but from 2002 on more and more strategy-oriented articles have been published. There are also some organisation-oriented articles, but they play a subordinate role compared to the other two currents in the scientific discourse. While allocating business model articles to the three basic perspectives has been clear and easy until the year 2000, it has become increasingly difficult to do the same with publications of the last few years.

Considering the concepts used and referenced in each article, it is easy to recognize that the boundaries between basic theories become blurred. In articles of the recent past, the authors mostly refer to the fundamental works and aspects of all three basic perspectives (Zott et al. 2011; Magretta 2002; Afuah and Tucci 2003; Tikkanen et al. 2005; Johnson et al. 2008). Accordingly, an increasingly uniform business model understanding seems to have been developing in recent years. An aspect that also shows this development is the abstraction level of the business model view used.

The focus of a business model in the literature ranges from a very detailed product level, the business level and the company level to the much aggregated industry level. Authors of very early technological orientation have a very detailed viewpoint in considering the business model to be a small part of a company. This profound point of view is no longer found among the authors of modern technological orientation (in the context of the new economy). In fact, these authors are much more abstract and see the business model increasingly as a representation of a company (Zott et al. 2011).

The authors of organization orientation also see the business model as a tool for the abstraction of an entire company. It is a different case, however, with the authors of strategy orientation. Here, also in early works, the business model is seen as a strongly abstract tool to get a picture of a company's competitive situation (Hamel 2000).

Altogether, in initial developments there have been great differences in the various approaches regarding the level of consideration. Yet, meanwhile a broader company perspective has become the main focus. Here, a competitive as well as a company-internal view is included in a company's actual focus (Osterwalder and Pigneur 2010).

There is also an increasing consensus among authors about the purpose of the business model concept and the role within already existent business concepts (from strongly operational process management to future-oriented strategy). Especially with the increasing involvement of authors with a strategy-oriented view, the question soon has come up about what the difference is between a business model and strategy. Although it has been found over time that both concepts intersect, they are not the same (Amit and Zott 2001). Casadesus-Masanell and Ricart (2010) emphasize: 'In our formulation, strategy and business model, though related, are different concepts: a business model is the direct result of strategy but is not, itself, strategy'.

Strategy involves a vision, the positioning to the environment or competitors or simply put, an idea of which direction it will go in the future (Chandler 1962). Fundamental decisions are made about medium and long-term objectives and activities of a company. At this point, the business model takes on concept and depicts the value creation logic of a company with a holistic description of company activities in an aggregated form (Osterwalder et al. 2005). The business model presents a means for the coherent implementation of a strategy (Dahan et al. 2010). Based on a business model, the operative implementation can take place in the course of an organizational design or business process model. The business model can thus be understood as a link between future planning (strategy) and the operative implementation (process management).

In summary, it can be stated that an increasingly converging view or a similar conceptual understanding in the literature has been established up to now. This can be demonstrated exemplarily by means of the aggregation levels used as well as the classification of business models in the areas of processes and strategy. This converging business model understanding is not so evident in all areas. Due to the inconsistent use of the term business model in the literature, there is still no generally accepted definition of the concept. Some authors quote definitions from the early business model phase that only partially reflect the understanding of the converging concept. After having outlined the research streams and related approaches, the following section uses this foundation to derive a classification of business models.

2.2 Classification of Business Models

At the beginning of the scientific analysis of the business model concept, rather rudimentary models existed, specialized for individual application scenarios. Today, a wide range of business model approaches exists. Authors from different research areas have fostered the development of business models and dealt with the term from different scientific perspectives. As stated in the previous section, it can be observed that over the course of time, different opinions have been condensed into an integrated understanding of the business model. Figure 2.2 illustrates this process.

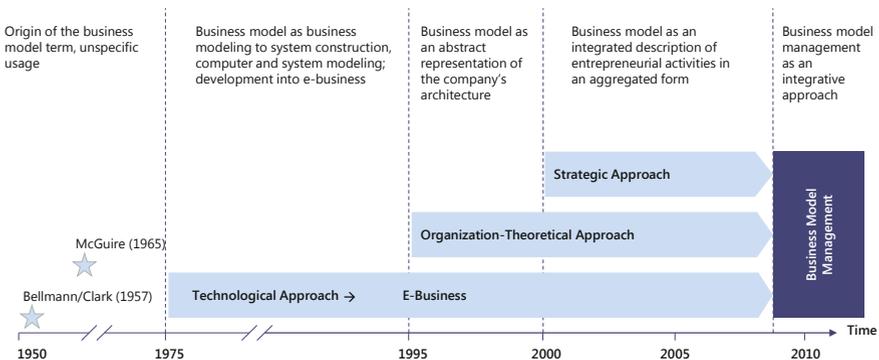


Fig. 2.2 Development of the business model concept. Source Wirtz (2010a, 2016a)

However, this multitude led to a pluralism of perspectives and a heterogeneous understanding of the concept in the early concept-forming phases, which is reflected by fragmented approaches. For this reason, multiple attempts were made in the literature to develop a synopsis of definitions (MacInnes and Hwang 2003; Pateli and Giaglis 2004; Al-Debei et al. 2008). It is noticeable that the authors use very different criteria for their systematization and that they associate different content with the term business model. In this context:

- components of business models are listed (Afuah and Tucci 2003; Osterwalder 2004),
- the context of the business model definition is taken into account (Pateli and Giaglis 2004),
- different categories of business models are formed (Al-Debei et al. 2008),
- existing business models from practice are grouped into categories (Krüger et al. 2003) or attempt to establish a taxonomy.

For instance, Bieger et al.'s (2002a) analysis compares eight selected contributions from business model literature and shortly outlines each publication. Eight core elements are extracted from the different approaches and it is emphasized that the respective contents overlap. The difficulty to clearly distinguish these categories involves the danger of varying interpretations. This might lead to misunderstandings, especially when implementing the model in practice. Moreover, the authors found great discrepancies regarding the scope of the descriptions. However, similarities exist with regard to the structure of business models. Based on this analysis, they suggest an eight-stage business model, which is depicted in Fig. 2.3.

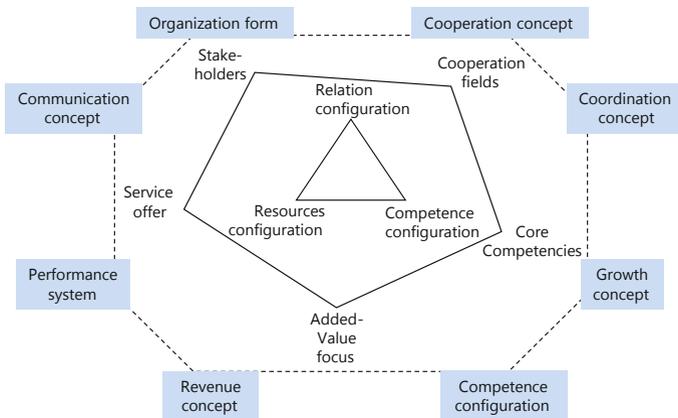


Fig. 2.3 Eight dimensions of a business model. *Source* Bieger et al. (2002b)

MacInnes and Hwang (2003) have analyzed different approaches to business models. In contrast to Bieger et al. (2002b), MacInnes and Hwang (2003) found that literature on business models can be divided into two categories: firstly, types and

characteristics of business models, and secondly, components of business models. MacInnes and Hwang (2003) say that the components of business models are vital for the success of a company. Therefore, they extract the relevant components from the seven contributions and classify the approaches based on these components.

Krüger et al. (2003) focus on types or characteristics and components of business models. They analyze three selected approaches regarding the taxonomy of Internet business models and subsequently derive components of business models from three further approaches. Krüger et al. (2003) argue that components may be linked to the corresponding taxonomies and illustrate this by a generic linking approach. Finally, they transfer their results from the analysis to the special context of the online news market.

The classification by Pateli and Giaglis (2004) is more comprehensive than the previous approaches. They note that the existing literature is characterized by a confusing diversity and emphasize the heterogeneity in general and the different angles of the existing approaches in particular. Based on their analysis, the authors conclude that there is no consistent framework for the analysis and research of business models in academia so far. Although all of the examined research approaches can be assigned to one or several sections of business models, these approaches have not yet been connected interdisciplinary. Figure 2.4 Sections and research approaches of business models depicts the eight principal sections identified by the authors.

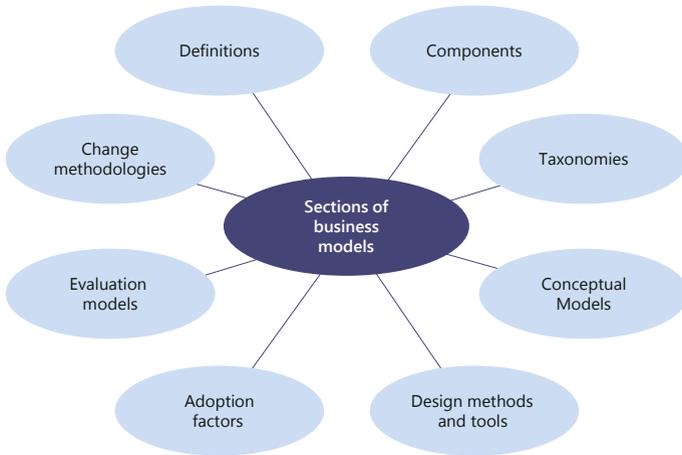


Fig. 2.4 Sections and research approaches of business models. *Datasource* Pateli and Giaglis (2004)

Osterwalder et al. (2005) also note that technology- and business-oriented authors have a different understanding of the business model concept. In their opinion, every publication in business model literature can be assigned to one of three categories: overarching business model concept, taxonomies or instance level. With this, the authors initially make a rough classification and subsequently examine the structure, differentiation and development of the business model concept. Based on this framework, four pillars with nine business model building

blocks are derived: the product pillar with the value proposition block, the customer interface pillar with the target customer—the distribution channel—and the relationship block, the infrastructure management pillar with the value configuration—the core competency—and the partner network block and the financial aspect pillar with the cost structure—and the revenue model block (Osterwalder et al. 2005).

Lambert (2006) classifies selected contributions of the existing literature. In contrast to the classification approaches above, the author adopts a perspective characterized by e-business. Lambert identifies four criteria to differentiate the literature and illustrates selected approaches by means of this research grid. The author argues that it is possible to create a universal approach from the existing approaches, but that this would be less significant because of the loss of specific criteria.

Wirtz et al. (2016b) provide a holistic classification of the business models literature by quantitatively investigating relevant research papers and carrying out a differentiated, research field-oriented qualitative analysis. Here, 681 peer-reviewed journal articles have been investigated for the period between 1965 and 2013.

Based on the heterogeneity of existing business model approaches and classifications, the authors identified three main categories, which have been further differentiated into specific subcategories. The first main category is concept/terminology and combines ‘definitions and scope’ of the business model concept. The second main category is business model structure, whose subcategories are ‘forms and components’, ‘value system’, ‘actors and interaction’ and ‘innovation’. The third main category is business model management process and comprises ‘design’, ‘implementation’, ‘operation’, ‘change and evolution’ and ‘performance and controlling’.

Figure 2.5 displays the described business model classification (Wirtz et al. 2016b).

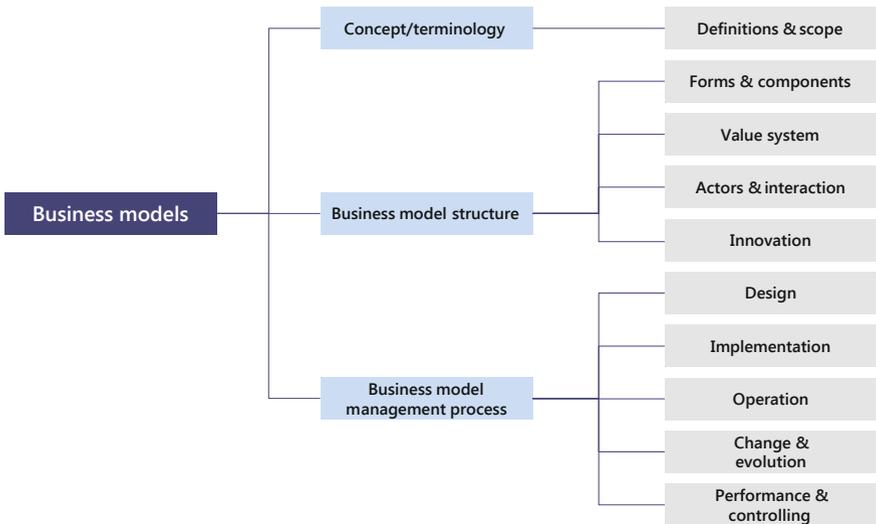


Fig. 2.5 Business model classification according to Wirtz et al. (2016b). *Source* Wirtz et al. (2016b)

Figure 2.6 summarizes the business model classification according to Wirtz et al. (2016b) and describes the individual subcategories. Based on the literature analysis, the figure further illustrates the research intensity regarding the individual subcategories divided into conceptual studies, case studies, and complex empirical studies. While the distribution between conceptual papers (46%) and case study-based research or other basic empirical work (49%) is almost balanced, there is a clear deficit and therefore high potential for research in the case of multivariate analyses (5%).

Considering the respective research fields based on the individual subcategories, the authors have identified four essential foci with special research intensity: innovation (26%), change and evolution (18%), performance and controlling (16%) as well as design (10%).

Upon a closer look at the distribution, it seems reasonable that innovation is the most important research field because globalization trends and the accordingly growing competitiveness in the marketplace becomes increasingly challenging for many companies. Therefore, it is highly important to understand how to become and remain innovative and thus successful with the company's business model. The research field of innovation is strongly related to the research area change and evolution, when considering how business models of various industries have fundamentally changed or been adapted over time, due to the rapid development of new information and communication technologies.

Furthermore, there is an increased research interest in performance and controlling of business models since new procedures are necessary to examine the profitability and sustainability of business models. This is particularly relevant considering the current situation, in which companies are increasingly challenged by competitive advantage and continuing discussions about their impact on and responsibility for society, environment and multiple stakeholders. Finally, the design of business models that has been investigated intensively as a distinctive arrangement of the design process, as well as well-structured graphical visualizations, ontologies and their communication within the company are essential for well-rounded decision-making (Wirtz et al. 2016b).

	Key Content	Research Status Conceptual	Research Status Case Study	Research Status Complex Empirical	Total
Definitions & Scope	<ul style="list-style-type: none"> • Basic definition of the concept • Differentiation from existing concepts 	27 (100%)	-	-	27 (4%)
Forms & Components	<ul style="list-style-type: none"> • Decomposition of the business model concept regarding partial models • Categorization of concrete parameters 	25 (45%)	31 (55%)	-	56 (8%)
Value System	<ul style="list-style-type: none"> • Structure of value creation • Topology of value chain partners 	22 (47%)	22 (47%)	3 (6%)	47 (7%)
Actors & Interaction	<ul style="list-style-type: none"> • Analysis of the interactions and relationships of the different business model actors 	14 (37%)	20 (53%)	4 (10%)	38 (5%)
Innovation	<ul style="list-style-type: none"> • Entrepreneurship, socio-economic implications of business model innovations 	87 (9%)	84 (48%)	5 (3%)	176 (26%)
Design	<ul style="list-style-type: none"> • Arrangement of the design process • Graphical visualizations (ontologies) 	38 (54%)	29 (41%)	4 (5%)	71 (10%)
Implementation	<ul style="list-style-type: none"> • Arrangement of the implementation process 	7 (37%)	12 (63%)	-	19 (3%)
Operation	<ul style="list-style-type: none"> • Arrangement of the operational process 	7 (37%)	12 (63%)	-	19 (3%)
Change & Evolution	<ul style="list-style-type: none"> • Change of business models over time (evolution / revolution) • Factors to adapt a business model 	59 (49%)	56 (47%)	5 (4%)	120 (18%)
Performance & Controlling	<ul style="list-style-type: none"> • Development of methods for testing the feasibility, sustainability and profitability 	29 (27%)	65 (59%)	15 (14%)	109 (16%)
Total		315 (46%)	330 (49%)	36 (5%)	681

Fig. 2.6 Research articles in the field of business model. Source Wirtz et al. (2016b)

By looking at the different perspectives of the individual authors regarding a business model classification, it can be summarized that particular overlaps are apparent regarding the classification criteria of the different authors, but a basic homogeneity is not discernible. Table 2.1 summarizes the criteria presented.

Table 2.1 Criteria for the classification of business models

Authors	Classification criteria
Bieger et al. (2002b)	<ul style="list-style-type: none"> • Incentive system • Concept of communication • Concept of revenue • Concept of growth • Configuration of competence • Form of organization • Concept of cooperation • Concentration of coordination/control
MacInnes and Hwang (2003)	<ul style="list-style-type: none"> • Types and development of business models • Components of business models
Krüger et al. (2003)	<ul style="list-style-type: none"> • Types of business models • Components • Taxonomies
Pateli and Giaglis (2004)	<ul style="list-style-type: none"> • Definitions • Components • Taxonomies • Conceptual models • Design methods and tools • Adoption factors • Evaluation models • Change methodologies
Osterwalder et al. (2005)	<ul style="list-style-type: none"> • Value proposition • Target customer • Distribution channel • Relationship • Value configuration • Core competency • Partner network • Cost structure • Revenue model
Lambert (2006)	<ul style="list-style-type: none"> • Referred to by the author(s) as • Criteria for differentiation • Number of categories and subcategories • Business model categories
Wirtz et al. (2016b)	<ul style="list-style-type: none"> • Concept/Terminology <ul style="list-style-type: none"> – Definition and scope • Business model structure <ul style="list-style-type: none"> – Forms and components – Value system – Actors and interaction – Innovation • Business model management process <ul style="list-style-type: none"> – Design – Implementation – Operation – Change and evolution – Performance and controlling

The briefly outlined classification attempts are exemplary of current literature. The observed categories are only suitable to a limited extent for a generalized classification of business model approaches. For instance, often only certain sections of the business model concept are considered and relations or implications are not sufficiently taken into account. For the most part, only selected approaches of the literature are examined.

Regarding the classifications of business models, it becomes evident that a component-oriented perspective is present in the majority of business model understandings. To develop a clear understanding of the business model concept, the extraction of relevant components is therefore considered to be highly relevant (see for the following Wirtz et al. 2016b).

Based on an elaborate meta-analysis in terms of a quantitative and qualitative examination of peer-reviewed journal articles, Wirtz et al. (2016b) identify that the first component-oriented approach has been mentioned by Hamel (2000). The author identifies core strategy as a central component of a business model. The contributions of Hedman and Kalling (2002), Afuah (2004), Yip (2004) and Tikkanen et al. (2005) in the following years also name strategy as a significant business model component.

Another important component is (material and immaterial) resources. In this context, company-internal and external resources and competencies/capabilities are observed (e.g. Wirtz 2000c; Osterwalder et al. 2005). An additional business model component is the network that influences the value creation of a company. The network component includes the various, mostly external interactions of a business model and serves as a management tool to monitor the value distribution with a joint value creation.

Further, the special importance of customers is frequently referred to in the literature. The customer model presents all products and services for specific customer segments of the business model. Another component often referred to in the literature is the market offering model that includes the frequently mentioned value proposition, i.e. the customer value delivered by a business model. Besides the focus on the own company, the main aspect here is the consideration of competitors (Hedman and Kalling 2002).

The revenue component is also frequently mentioned ranging from transaction-dependent and independent direct revenue to indirect forms of revenue. The support of the entire business model is determined by different revenue streams. The revenue streams and revenue structure are to be designed in such a way that they maximize revenues. The term service provision is also reflected in the components. In this context, Afuah (2004) and Johnson (2010), for instance, quote “activities”, “implementation and configuration of value creation activities”, and “processes”. Hence, the service provision model portrays the value creation of the business model, defining central parameters and depicting how lower order goods may be transformed into goods of higher order by internal company processes.

Today’s modern procurement management particularly needs to comply with globalization, decreasing production cycles as well as the change from producer to buyer markets. Therefore, the business model component of procurement is

obligatory since neglecting this aspect can have extensive impacts on other components. In this regard, an input-based understanding of procurement predominates in the literature (e.g. Hedman and Kalling 2002; Yip 2004). Finally, the financial model can be stated as the last component of a business model. It undertakes the functions of controlling and financial planning by means of detailed financial planning and the analysis of the cost structure (e.g. Demil and Lecocq 2010; Osterwalder et al. 2005; Osterwalder and Pigneur 2010). Figure 2.7 presents an analysis of the relevant business model components.

In summary, the business model literature presents various classification criteria mostly including a component-oriented view. In this context, many authors present specific research approaches but only implicitly address their significance for business models. Although the different authors do not use the same nomenclature, they quite obviously have a common understanding.

In this regard, Osterwalder (2004) explains that different points of view on business models can also exist within a company and a business model may be the link between these views. Here, one can distinguish between business strategy, business organization and ICT (information and communication technology) (Osterwalder 2004).

Bieger et al. (2002b) present a very similar point of view. They address the topic of business models by means of the following three analytical patterns: network effects and strategic network theory, strategy theory and value chain configuration. Pateli and Giaglis (2004) also draw on three research streams emphasizing that it is necessary to consider them not separately but as a whole (Pateli and Giaglis 2004). After having derived a classification, the following section uses this understanding to provide an outline of an integrated business model.

Component Author	Strategy	Resources	Network	Customers	Market offering (value proposition)	Revenues	Service provision	Procurement	Finances	Spectrum of the Components
Hamel (2000)	Core Strategy, Strategic Resources		Value Network	Customer Interface						☐
Mahadevan (2000)			Logistic Stream		Value Stream	Revenue Stream				☐
Wirtz (2000)	Combination of production strategy factors for implementation	Core competencies & Core assets		Market & customer segmentation	Service offer & Value proposition	Systematization of revenue forms	Combination & transformation of goods & services	Production factors & Suppliers	Financing & Refinancing	☐
Hedman/Kalling (2002)	Managerial and organizational longitudinal process component	Resources		Customers	Competitors, Offering		Activities & Organization	Factor & Production Input Suppliers		☐
Bouwman (2003)		Technical architecture		Customer/Value of Service					Financial arrangements	☐
Alfiah (2004)	Positions	Resources		Target Customers	Industry Factors	Revenue Model	Activities	Costs		☐
Mahadevan (2004)					Value Proposition		Value Delivery			☐
Voelpel/Leibold/Tekle (2004)		Leadership capabilities	Value Network (Relationship for the Value Creation)		Customer Value Proposition					☐
Yip (2004)	Scope Differentiation	Organization		Nature of Customers Channels	Value Proposition, Nature of Outputs		How to transform inputs (including technology)	Nature of inputs		☐
Lehmann-Ortega/Schoettl (2005)					Value Proposition, Value Architecture	Revenue Model				☐
Ostevaider/Pignatelli/Tucci (2005)		Core Competency	Partner Network	Target Customer, Distribution Channel, Relationship	Value Proposition	Revenue Model	Value Configuration		Cost Structure	☐
Tikkanen et al. (2005)	Strategy & Structure		Network				Operations		Finance & Accounting	☐
Al-Debei/Eldredge/Haddad/Avision (2008a)			Value Network		Value Proposition, Value Architecture				Value Finance	☐
Demi/Lecocq (2010)		Resources & Competencies Organization			Value Proposition	Volume & Structure of Revenue Streams			Volume & Structure of Revenue costs	☐
Johnson (2010)		Key Resources			Customer Value Proposition	Profit Formula	Key Processes			☐
Ostenvalder/Pigneur (2010)		Key Resources	Key Partners	Customer Relationships, Customers Segments	Value Proposition	Revenue Streams	Key Activities		Cost Structure	☐
Intensity of use	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

○ Very low ☐ Low ● Moderate ● High ● Very high

Fig. 2.7 Overview of selected business model components. Source Wirtz et al. (2016b)

2.3 Integrated Business Models

Concrete applications of the business model concept can be found in various fields. The scope of application reaches from the rough modeling of a business idea in the early stages of a start-up to the change management process for established and long-standing companies, in order to withstand changing basic conditions (Wirtz 2013b; Afuah 2004; Osterwalder et al. 2005). However, the application of the business model concept is always associated with a primary intention, namely, the development, implementation and protection of a lasting, successful and profitable corporate strategy (Wirtz and Becker 2002; Wirtz and Nitzsche 2011).

Nevertheless, a detailed analysis of a company's activities and the resulting effects on lasting success requires a certain precision. This ensures that relevant aspects of a business model are anticipated and integrated during the processes of formation and change, so that unnecessary sunk costs are prevented. The integrated business model concept cannot and should not replace necessary economic analyses during the individual processes, but rather should reveal a conceptual and aggregated framework of the most important components (Wirtz 2013b).

Those most important components constitute the partial business models of a so-called integrated business model approach. In total, the combination of those different parts ensure together a functional and integrated business model. This conceptual framework is important in order to show how a company creates value and thus how it can ensure its profitability. When looking at discussions of strategic management, both internal aspects and environmental conditions of a company need to be considered in order to derive the relevant components of a business model (Afuah 2004). Especially industry-specific factors are counted among the environmental conditions or external factors of profitability consideration.

In order to get a comprehensive picture of the partial models of business models, one can refer to the aspects introduced by Porter (1980): rivalry within the industry, supplier and customer power, potential new suppliers and substitute goods. However, possible cooperation between different companies also plays a role in the analysis of industry-specific factors in order to equitably deal with particular developments related to the value constellation. Some types of cooperation can generally lead to lower costs and consequently be suitable for the business model of a single company and the overall product (Dyer and Singh 1998; Dyer and Nobeoka 2000).

Concerning internal factors, a variety of influential variables can be identified. However, three comprehensive aspects have emerged: the positioning, activities and resources of a company (Afuah 2004). The positioning of a company provides information about which market and customers are to be served and how revenues will be generated. In this context, it is important to decide which possible strategies are suitable, what value is provided to the customers and in which segment a company wants to position itself compared to its competitors. This is closely connected to the activities of the company that are described in the business model. The critical questions in this context are: which activities shall be performed, and in what way and when, in order to achieve, hold and strengthen a profitable position in comparison to the main competitors.

In turn, the activities of the company are strongly influenced by the resources of the actors involved. Here, the core competencies and assets of a company must be taken into account to analyze the long-term success of the company. Especially in strongly diversified companies, a further observation of business models on the level of strategic business areas is useful (DeWit and Meyer 2010). Within a conglomerate, such as Siemens, a variety of relevant business models exist that may admittedly correspond to some extent but, which are not comparable in their entirety.

In the case of Siemens, examples include the strategic business units of Power and Gas and Mobility. Power and Gas provides utilities, independent power generators, plant builders and industrial customers such as the oil and gas industry with a wide range of products and solutions for environmentally friendly, resource-conserving power generation and the reliable transportation of oil and gas using fossil and renewable fuels. Mobility offers efficient, safe and environmentally friendly transport for passengers and goods by rail and road. Important products in this sector are the ICE high-speed train of Deutsche Bahn or the S70 urban railways, for instance. This example shows the differences between strategic business units within a company. The business models must be adapted to these different conditions.

The performance and business-specific orientation of business models not only takes place on the overall model level of the business model, but also concerns the configuration of the partial models of an integrated business model. In principle, each integrated business model consists of several partial models. Figure 2.8 illustrates the individual partial business models.

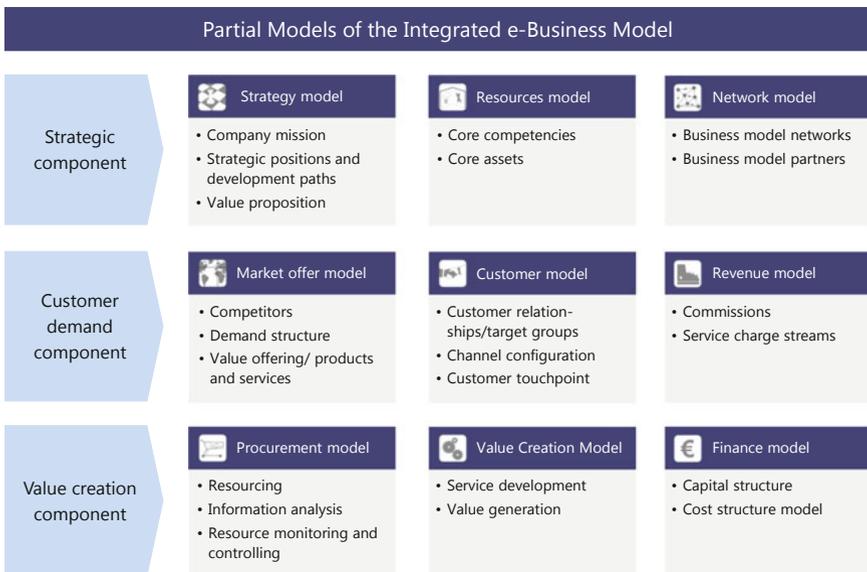


Fig. 2.8 Partial models of the integrated business model. Source Wirtz (2010a, 2016a)

The strategic components of an integrated business model consist of three partial models: The strategy model, the resource model and the network model. The internal resources and networks build an upper unit of the integrated business model concept and are therefore particularly important when analyzing value creation in business models. These strategic partial models generate an operational scope for the other partial models and define which types of value creation are generally possible.

In the strategy model, the top management defines medium and long-term goals and activities of a company in order to persist on the market. In this context, it is generally postulated that these strategies unite the business vision, mission and goals. The determination of the positioning and definition of strategic business areas is connected to this. A strategic situational analysis that comprises changes in framework conditions, scope of action and strengths and weaknesses of the company serves as a basis.

In the resources model, the core assets and core competencies are depicted as well as their subordinate elements relevant to value creation. It is thus a summary of all relevant tangible and intangible input factors of the business model. In this process, both internal and external resources and competencies are presented. The network model gives an overview of the value constellation partners in value creation and the connections between different business models. In this context, the network model is an instrument of the top management to control and manage value distribution within a collaborative value creation. Different tangible and intangible streams of information and goods are analyzed in this process. In this way, particular stakes in value creation may be determined and classified to a network of connections and relations.

The partial models of the area of customer and demand components depict basic influence factors for the design and operation of a business model. The three main components are the market offer model the customer model and the revenue model. The information from these models describe the corporate environment and connects it to internal value creation by means of revenue. They are consequently the link between the business strategy and its value generation. Before transferring strategic targets to the process of value creation, first adaptations to customer needs and market situations need to be made. The data that is obtained by means of the customer and market components can also be used for the corporate strategy.

The market offer model is oriented along the market environment. This model seeks to make use of available market opportunities. This partial model is therefore closely aligned with competitors, the market structure and the value offer, in other words, the products and services. As a result, the company's value proposition is developed and shaped against the background of an analysis of competing business models.

The customer model includes all activities aimed at a successful customer relation. Therefore, the major focus is an effective customer relationship management (CRM) and a target group orientation. This is also the core interest concerning the selection and design of sales channels. Customer orientation is also crucial regarding the setup of customer interfaces—in other words customer touch points—which are the sole points of interaction between the company and the customer (Wirtz 2018b; Wirtz and Daiser 2017b).

Actual revenue streams and their relevance to the business model are managed by the revenue model. This partial model depicts the value capture of internal value creation. This means that it clarifies how and to what extent the value generated can be monetized for the company. The revenue model is thus responsible for the absorption of a portion of the added value generated from the production of goods and services.

The partial models within the value creation component comprise the internal value generation. In this context, the manufacturing model, the procurement model and financial model are relevant. Here, the focus is put on how and under which conditions value can be generated by means of a central value creation logic. The partial models of value creation are thereby influenced by the strategic components as well as the customer and market components of the business model.

The procurement model describes the structure and sources of the raw materials, goods and services that are necessary for the production of value-added goods and services. The securing of suitable resources to favorable conditions, respective market screenings and information analysis is the basis for the value creation.

The manufacturing model depicts the generation of additional value as building on the topic of initial value creation. It defines key parameters of the offer-oriented business model and is of particular importance for the business model management process. The manufacturing model gives an overview of the conversion process of inferior goods and services to better-quality goods and services through internal processes. This conversion is accomplished through performance and production factors that function as input and can be subdivided into planning and elemental components.

The financial model combines two financial areas of the business model. On the one hand, the financing of the business model is depicted. Therefore, a capital model is developed that enables planning by means of equity and debt capital. On the other hand, the cost structure of the business model is also included in the financial model. In this way, a monetary quantification of the resource input is made that is particularly relevant for manufacturing and revenue.

The capital model of a business model is developed in accordance with the business model strategy. The financial model provides information about which financial resources are transferred to a business model and how the refinancing of corporate activities can be organized. Consequently, the model also shows the sources of financing for the business model. Furthermore, with the aid of data from recent periods it enables an evaluation of the financial success of a business model and thereby allows to forecast prospective financing and liquidity requirements.

The strategy, networks and resources of a company play a central, interdependent and superior role within the integrated business model approach since these partial models are increasingly concerned with one another as well as all other partial models. The partial models of the business model form an interdependent network of structural elements. For this reason, the single models cannot be observed separately or solely within the respective components but instead need to be applied to the whole spectrum of partial models in terms of their causes and effects. A holistic understanding of business models can therefore only be achieved with an overview of interactions for all partial models. In Fig. 2.9 the respective interactions are presented.

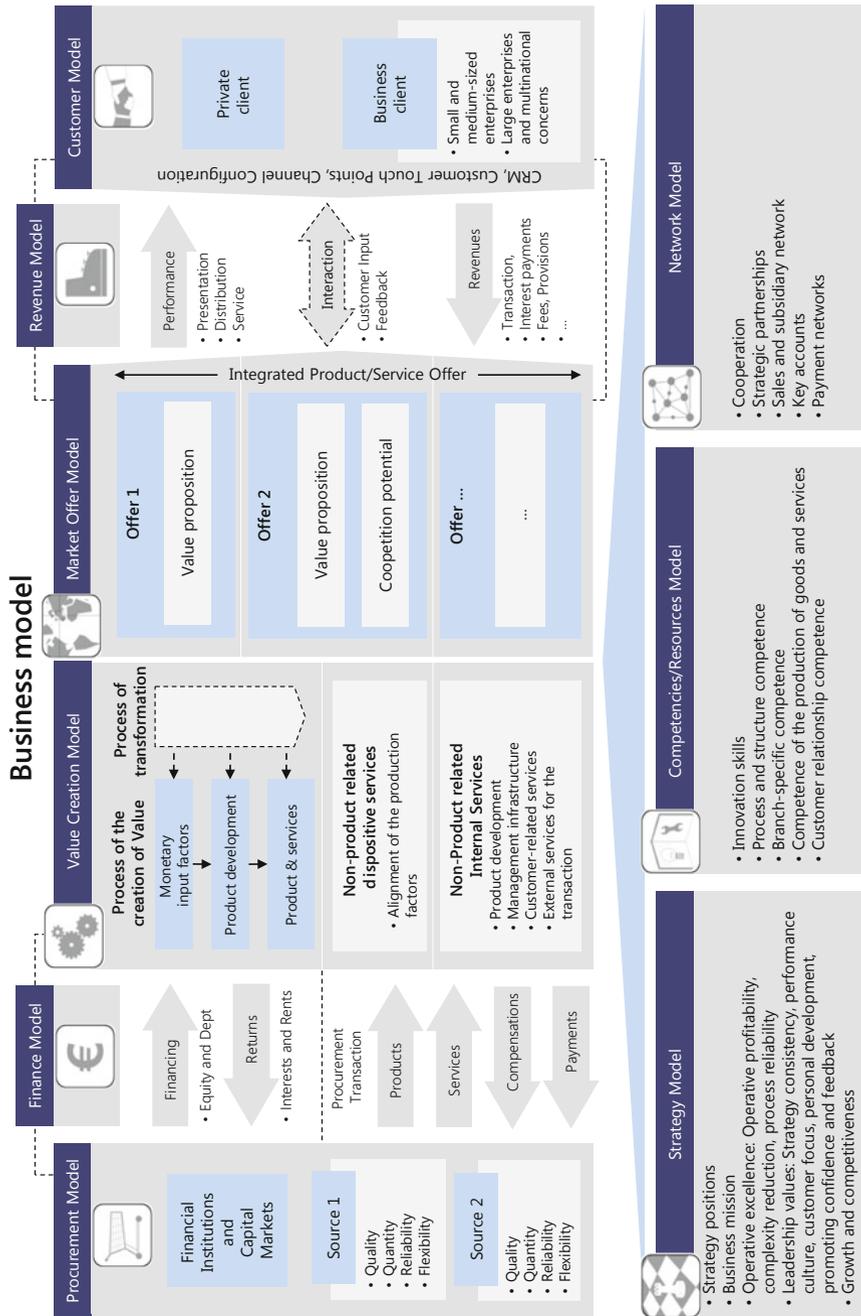


Fig. 2.9 Interactions of the partial models of the business models. Source Wirtz (2010a, 2016a)

The purpose of a business model is to accomplish long-term corporate goals such as high profitability or quality leadership. Thereby, the strategy model, resources model and network model affect the composition of value creation. The single models constitute a strategic framework and influence one another. In turn, the manufacturing model and the market offer model serve as a central partial model for value creation. An offer that is conceptualized and realized in a business model by employing capital is recapitalized on the market in order to generate a part of the added value as revenue.

Value creation enforces a transformative process in which, after a development phase, products or services are generated from monetary input factors and their transformation into elementary production factors. This process comprises the value generation part of the value creation. In order to obtain elementary production factors such as materials, information from the procurement model needs to be taken into account. The source of supply is weighted according to the criteria of quality, quantity, reliability and flexibility.

The monetary transaction of purchasing and the transaction related to the flow of goods are moderated by means of the financial model, for instance, by coordinating price negotiations and payment terms. Acquisition, however, not only serves to produce goods and services, but also to support non-product related planning services and non-product related internal services. Planning services are responsible for managing the production of goods and services, whereas internal services comprise activities within value creation that can take place either before or after the production of goods and services.

The market offer model and the customer model are intended for the planning of value capture that eventually appears in the revenue model. Therefore, the different offers of the business model are compared according to their value proposition, cost structure and, to some extent, their suitability for competition. As a second step, the offers of competitors are included in this analysis. Offers are finally made to customers that can be divided into different segments according to the customer model and which in turn interactively influence the design of offers. Performance can further be differentiated into the areas of presentation, distribution and service.

After the transaction has been made, the monetary revenue stream is transferred to the business model by the customers and completes the value creation phase of value capture. Through this interaction structure, the synergy of the single partial models within a business model is described on a general level, which results in a basic, generic understanding of their interdependent operation. Having provided the essential features of an integrated business model, the next section derives the different levels and goals of an integrated business model.

2.4 Levels and Goals of Business Models

In many fields it is important to apply the integrated business model concept specifically. The basis of a business model is to describe the relevant value creation and the value proposition. Here, the concept depicts an aggregate framework of the most important partial models and illustrates their structure (Wirtz 2001a). In this context, several levels of a business model can be distinguished. The relevant levels can be divided into industry, company, business units and product levels. These different levels build upon one another and can consequently explain the structure of industries or companies as a whole (Afuah 2004). Figure 2.10 illustrates this notion.

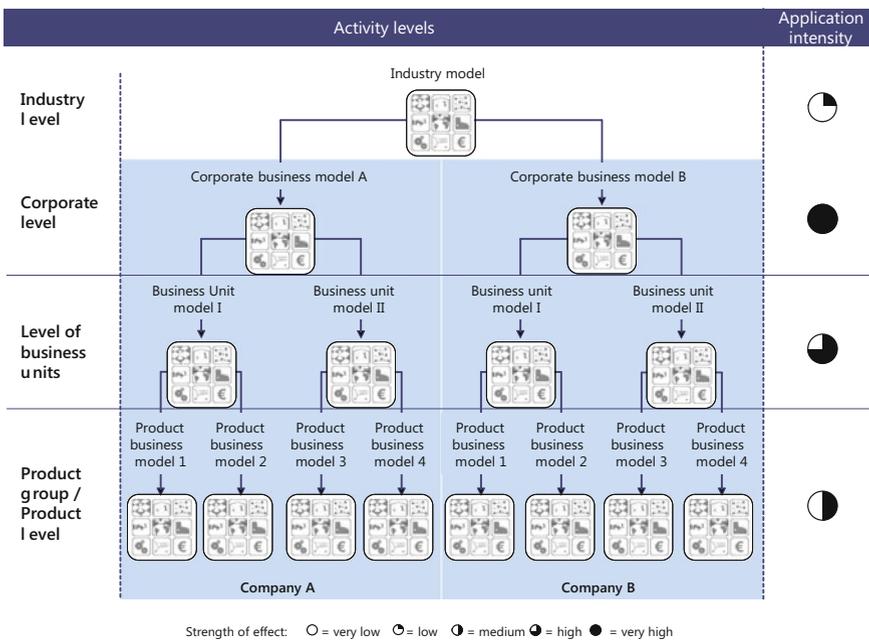


Fig. 2.10 Business model levels. Source Wirtz (2010a, 2016a)

Regarding the industry level, environmental conditions and external factors of the profitability consideration are included. This is carried out in line with familiar concepts of strategic management, such as Porter’s aspects of rivalry within an industry, supplier and customer power, potential market entrance and substitutes (Porter 1980). This industry model not only focuses on a comprehensive environmental analysis, but also on an analysis of the production of goods and services of different companies within an industry.

The company can be identified as another possible degree of abstraction in the business model concept. While the industry level focuses on the corporate environment, here, corporate factors and determinants are considered. Three essential factors should be emphasized in the context of business models: resources, activities and the positioning of a company (Afuah 2004). Along with the core competencies, resources form the foundation of a business model.

They considerably influence the configuration of the production system and significantly impact success. The positioning of a company not only determines its resources and activities but also its success. It further provides information about which consumers or markets can be served and how revenues can be generated.

In the case of smaller enterprises, a comprehensive overview of all activities can be achieved through the corporate view. However, in the case of large and diversified corporations, this degree of abstraction is too undifferentiated to ensure the management of the production of goods and services (Susman 2007). For this reason, an even more detailed degree of abstraction is introduced in the form of the strategic business unit level. A strategic business unit is the corporate segment that is responsible for the functioning of one or more business units or products. Many different business models may exist within a corporation. While single partial models of a business model may be consistent with one another, the consumer's perception may differ.

The product group/product level constitutes the lowest possible level of consideration of a business model. Here, different segments of the creation of goods and services can be summarized in an integrated view, and all relevant partial models and processes for a product can be illustrated. The cell phone iPhone by Apple Inc. serves as an example since the hardware development and software development is performed by different departments. Depending on the application context and the size of the company, the appropriate level for considering the business model has to be chosen. The levels are not mutually exclusive and in some cases it is reasonable to consider a company on several or all business model levels mentioned. Due to these different degrees of abstraction, the value creation and profitability of a company can be fully comprehended. This is the foundation of sustainable management and the creation of long-term competitive advantage through business models.

Apart from securing short and long-term competitive advantages as an overriding objective of business models, further objectives can be derived from the functional aspects of the business model concept, especially for business model management. Due to the instrumental character of business model management, six procedural objectives may be identified which, in turn, serve the prevailing business model objective. Figure 2.11 illustrates the procedural subgoals of business model management with the overriding business model goal as a core.

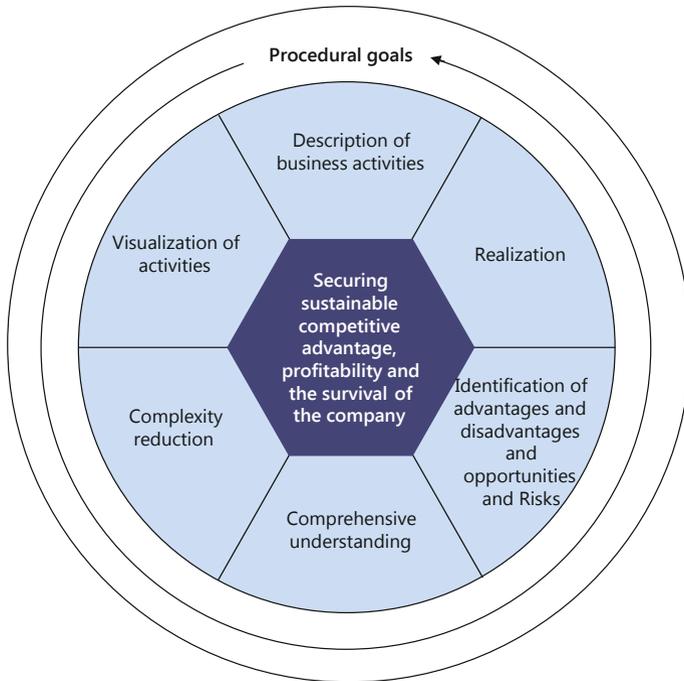


Fig. 2.11 Objectives of the business model and business model management. *Source* Wirtz (2010a, 2016a)

The first objective is to assist the companies in describing their business activity. The existing business concept can be explicated by means of a business model or the individual partial models. The theoretical business operations are graphically depicted in order to simplify the management of interactions, processes, etc. This graphical representation achieves a higher level of abstraction for all business activities and supports the corporate management in developing a better basis for decision-making. Furthermore, graphical depictions may also serve as a foundation for deliberations within the scope of further development or the adaptation of business models (Osterwalder 2004).

Another procedural goal is the reduction of complexity (Bridgeland and Zahavi 2009). The corporate management needs to be equipped with relevant and aggregate information regarding processes, resources, competencies, finances and competition in order to develop appropriate strategies that ensure competitive advantage. The simplified depiction of the business activity by means of a business model allows to clearly present information on the company as a whole. This, in turn, leads to a better basis for decision-making within business model management in order to successfully operate the company.

In the context of information processing, an increasing quantity of information and key figures is generated and provided to the corporate management. Business model management should not only support the management in daily decision-making but also enable a long-term, profit-based orientation. In the course of this long-term orientation, it is important for the manager to fully understand the relationships within the company as well as the processes and links to the corporate environment. For this reason, building a holistic understanding is another goal of business model management, in order to better identify potentials and evaluate risks more precisely (Eriksson and Penker 2000).

The internal and external potentials and risks have a considerable impact on decision-making in a company. Therefore, the identification of opportunities and risks constitutes an important procedural goal of business model management for the company (Debelak 2006). In this context, the individual partial models are continuously examined to assess whether further efficiency advantages or synergy effects can be used to better serve customers or to optimize the production of goods and services. In addition to this internal perspective, the business model facilitates the competition analysis and the identification of possible external value creation partners for the responsible business model managers. Apart from focusing on partial models, the business model management may also undertake the task of consistently evaluating the whole business model, in order to identify advantages and disadvantages of its strategic orientation.

The last procedural goal is to support companies in implementing the business models (Osterwalder et al. 2005). In the course of restructuring or changing the business model, business model management can help to present an overview of the relevant aspects of the company's change process. Furthermore, when implementing a new business model, business model management can ensure that all relevant aspects and partial models have been considered, which increases the probability of success. All procedural activities and subgoals are focused on the primal goal of securing sustainable competitive advantage, profitability and the survival of the company. Having described the essential levels and goals of business models, the next section outlines the foundation of business models, namely the value chain and competencies that are necessary to be considered for a full understanding of business models.

2.5 Business Models, Value Chain, Core Assets and Competencies

In order to understand the management of business model it is vital to assume that the company’s resources determine its success and development. The elements that are decisive for competitiveness of an enterprise are included in the value creation system. The value chain, the core assets and the core competencies as well as the business model of enterprises belong to the essential elements.

Figure 2.12 provides an overview of the value creation system of enterprises. Here the core assets, core competencies and value chains need to be taken into consideration as complementary topics of analysis. The value chain facilitates the differentiated and structured presentation and analysis of the value flow activities in enterprises, while core assets and core competencies describe the resource foundation of competitive advantages. The business model covers both concepts and in addition, takes a special look at external aspects of management of enterprises.

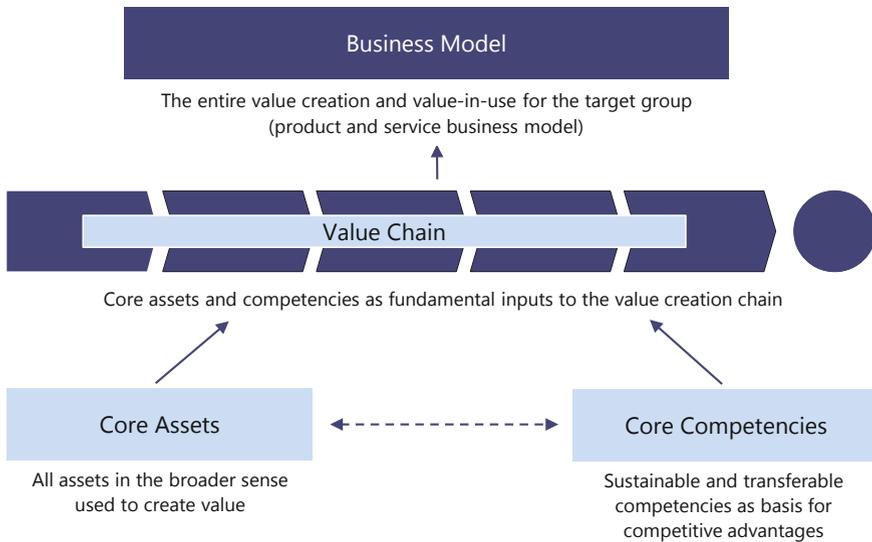


Fig. 2.12 Value creation system. *Source* Wirtz (2005, 2018b)

The following section primarily focuses on core assets, core competencies and the value chain to gain a holistic understanding of business models as such. It thus provides the basis of the aforementioned introduction to business models.

- Core Assets and Core Competencies

In classic management theory, core assets and core competencies give companies a sustainable competitive advantage, which leads to the achievement of superior

returns in the long term (see for the following Wirtz 2011b) Moreover, competitive advantage is regarded to lead to better, superior product and service offerings, which in turn lead to an enhanced demand position (Fahy and Smithee 1999). Therefore, all other factors being equal, the best product and service offer from a customer point of view will finally result in a market leadership position by better satisfying customer demand than competitors. Transferred to the digital sector, the concept of competitive advantage thus allows the respective enterprise to create better service offers and to provide its services with higher value for the customer. In addition, competitive advantage becomes a vital factor for the company for further reasons, such as cost efficiency and reliability.

The concept of core assets and core competencies arises from the resource-based theory approaches of strategic management. Therefore, the resource-based view and its advanced concepts—capability-based, dynamic capability-based, and knowledge-based view—form the basis for the following discussion of core assets and core competencies. The resource-based approaches are used to explain differences in results between companies and to derive strategies for the creation of competitive advantages. In this context, an inside-out perspective is applied, meaning that the accumulated internal assets and capabilities of the company are in focus.

Based on this reasoning, the achievement of sustainable competitive advantage is attributed to the unique and specific assets and competencies of an organization. Discrepancies in these assets and competencies as well as in their management are regarded as reasons for differences in entrepreneurial success. The classic resource-based view is primarily concerned with the assets and core assets of a company, largely neglecting competencies. The term asset in this context refers to an undifferentiated input factor, which is freely acquirable in the market and forms the necessary condition for all activities of a company (Teece et al. 1997). Thus, financial resources or human resources are general examples of assets.

If company-specific assets play a particularly important role in the value chain of the company, these are referred to as core assets. However, assets can only be classified as core assets if they are valuable to value creation, rarely available in the market, and not easy to imitate or to substitute. Otherwise, they cannot create the potential for sustainable competitive advantage. Based on this proposition, the following definition for the asset and core asset concept is derived.

Definition of Assets and Core Assets (Wirtz 2011b)

Assets are tangible and intangible resources that form the basis for the activities and the competitiveness of an enterprise. Core assets concern specific assets that are accumulated in-house or were at least refined and that have a special intrinsic value for a company's value creation process. They are relatively scarce and are difficult to imitate or substitute. Core assets form the basis for a lasting competitive advantage.

The resource-based view follows the fundamental premise of imperfect factor markets. This theoretical circumstance is the prerequisite for the asset heterogeneity of organizations that underlies the resource-based theory approach. According to this reasoning, above-average returns can only be achieved if the value of an acquired asset exceeds its cost. The employees, being the persons with the relevant know-how and competencies, are essential for value creation. Since their implicit knowledge and expertise is rarely available in the market and difficult to imitate, employees are core assets. The IT platform, being the interface between user and provider, as well as the technological infrastructure, providing the backbone of the functioning digital business, are core assets of a respective company.

The answer to the question how a core asset-based competitive advantage is transferred into superior services is provided by the competency-based perspective of the resource-based theory. The underlying assumption of this perspective is that organizational skills and abilities allow smart combinations of assets and core assets, creating surpassing services that are different from those of competitors and thus have the potential to create user preferences.

For this reason, competencies allow to manage core assets in a way to achieve competitive advantage. Company competencies are therefore a coordination capacity that is based on the social interaction patterns, the knowledge, and the individual skills of the company's employees and its management. According to the management-oriented explanation of Prahalad and Hamel (1990), core competencies are characterized by three features: (1) provide access to various business areas, (2) are transferable to a multitude of products/services and/or customer groups and (3) form the basis for its core products or services. Based on the previous discussion, competencies and core competencies of companies can be defined as follows:

Definition of Competencies and Core Competencies (Wirtz 2011b)

Competencies form the foundation for collective action and facilitate the service creation process, in which assets and core assets are combined into valuable services. Core competencies are a special form of competencies. They are relatively scarce and do not lend themselves to imitation or substitution by the competition. Core competencies make a significant contribution to the perceived customer benefits and provide companies with a lasting competitive advantage

Automatization and data processing competencies are of high importance for the digital management. The same holds true for content creation competency, which covers the abilities necessary for successfully producing information content that satisfies user demand. A competitive service business further requires collaboration competency since comprehensive service provision usually involves the collaboration among different companies or company units.

Experience design competency refers to the ability of creating a satisfying user experience in the context of an online offers. Technology and programming

competencies are indispensable abilities for digital business undertakings since these are needed to set up, maintain and develop the relevant IT infrastructure.

Running a successful digital business calls for distinct information and service bundling as well as service development competencies, since these directly influence the service offer, which is designed to satisfy the user’s demands. Finally, customer/user relationship management is an important core competency since this requires the activities to attract customers to the digital service or product and to maintain the growing customer base.

The system to provide digital services needs to be envisaged like a tree. In this picture, the trunk and major limbs are core services, the smaller branches are service segments and the leaves are the final services. Since the actual source of sustainable competitive advantage lies in an effective and enduring combination of core assets and core competencies, a superior final service may only result in a short-term competitive benefit, and for the most part not in a long-term competitive advantage. For this reason, the interconnected “treesystem” is based on its roots, the core competencies, which provide the nourishing basis for sustainable competitive service provision. Thus, like a tree, the service system grows from its roots and branches out to its final digital services (see Fig. 2.13).

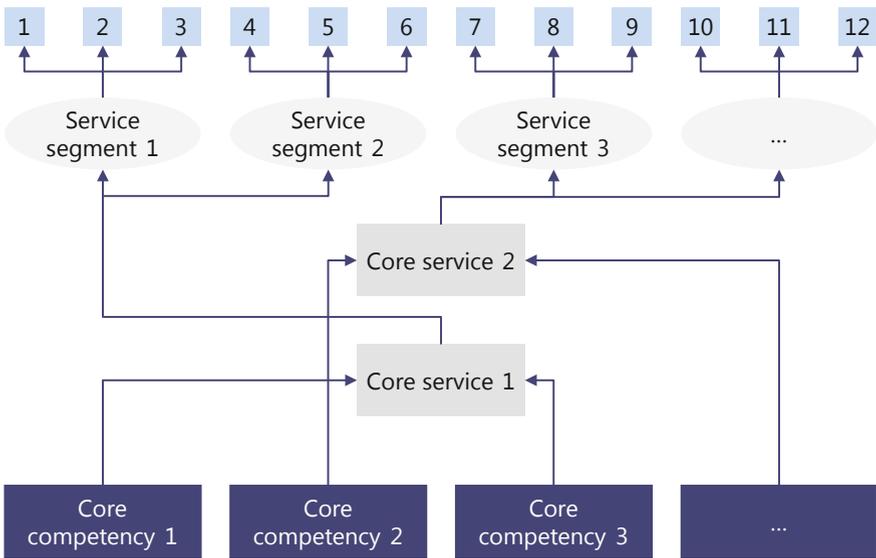


Fig. 2.13 Competences as the roots of competitive services. *Source* Based on Prahalad and Hamel (2006)

Prahalad and Hamel (1990) exemplify this matter by referring to a company that possesses the core competency of producing electronic displays. By using its competency, the company could successfully do business with different products in

different markets (e.g. pocket calculators, smartwatches, smartphones, tablets, cloud services, etc.).

Since both core assets and core competencies are not rigid or stiff objects but rather responsive factors that can be developed, the resource-based perspective was complemented with the dynamic capabilities view. Dynamic capabilities explain the development of resources and competencies over time and reflect an organization’s capability to build up, configure, integrate and coordinate core assets and competencies (Teece et al. 1997).

Building up or dismantling core assets or core competencies is, for example, required if organizations are constrained to adapt to varying surrounding conditions. This activity demands regular reviews of a company’s assets and competencies in order to decide which of them, for instance, need to be developed or degraded. These processes can be controlled by the management of the company through by defining specific goals and strategies that support an asset or competency-based development. Here, especially the customer needs and requirements should serve as a benchmark for the continuous review of the core asset and core competency profile. The cycle is illustrated in Fig. 2.14.

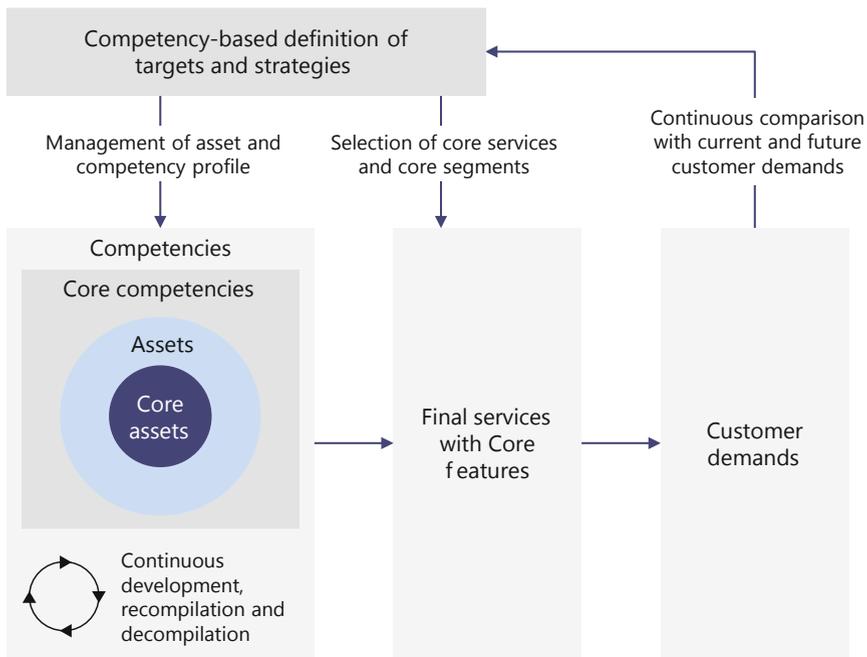


Fig. 2.14 Core asset and core competency development. *Source* Based on Wirtz (2005, 2016b)

Developing core assets and core competencies requires a systematic analysis and management process since this procedure plays a vital role in the formulation of recommendations for action in order to ensure the company’s future success.

First, the core assets and core competencies that possess strategic importance for the organization need to be determined. Here, future scenarios may be analyzed to identify promising core assets and core competencies, i.e. virtual reality is assumed to become an important digital markets trend and thus, IT platform, technological infrastructure, technology and programming, as well as service development are promising core assets and core competencies.

Second, the achieved hypothetical target state is compared with the current core asset and core competency profile to identify relevant fields of action. If, for instance, a company does not yet have access to the required core assets and core competencies to adequately address the previously mentioned virtual reality topic, they need to be actively developed. In the same manner, core assets or core competencies can be outsourced, reduced or completely dropped if they do not show strategic or operative relevance anymore.

Finally, the results of the target and actual situation outcome are transferred to derive the respective course of action. Core assets and core competencies that show, for instance, a high future significance but a low current state should be quickly build up, intensifying investments and knowledge management. However, core assets and core competencies that show a diametrically opposed picture (low future significance but high current state) should be dismantled and disinvested.

If specific core assets and core competencies have rather become obsolete (low future significance and low current state), they may be outsourced or further reduced. If core assets and core competencies, however, show high future significance and the companies already has achieved a high current state, they should be maintained and upgraded by all means. Figure 2.15 presents an overview of the analytical processes and the strategic course of action.

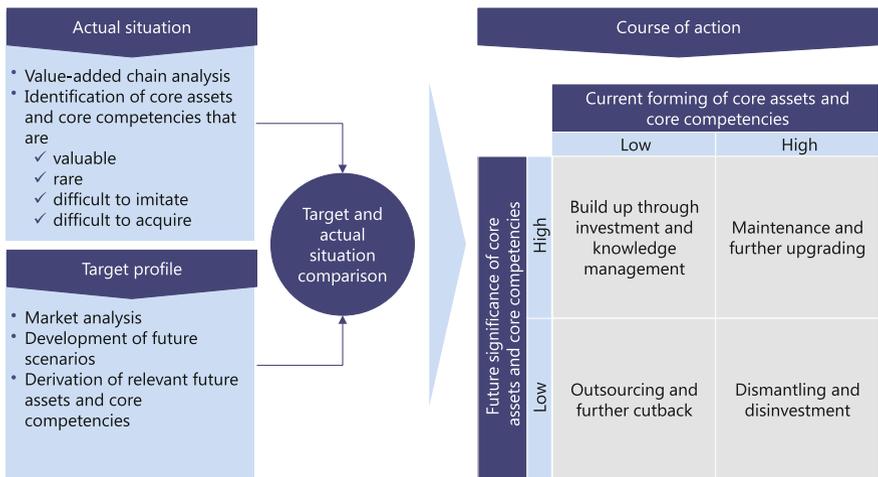


Fig. 2.15 Analysis and management of core assets and core competencies. *Source* Based on Wirtz (2005, 2016b)

Having set a clear strategic course of action, the respective core assets and core competencies can be systematically developed or dismantled and thus adjusted to the company's requirements. Apart from a strategic perspective on company's resources, which are a key factor of its success, it is also important to analyze the value creation process of companies. The next section outlines the value chain in enterprises.

- Value chain

In the development of a business model, it is primarily the individual value chain activities within the enterprise that are analyzed. This analysis especially focuses on the different physical and technological activities of an enterprise that are considered the building blocks of a product that is useful to the consumer (Porter 1986). A relatively simple but successful instrument for portraying the value generation of enterprises is the concept of the value chain analysis by Porter (1986).

The value chain serves to provide a functional structure for in-house activities in order to identify approaches to improve the quality of products and processes. Primarily developed for manufacturing companies, the value chain consists of primary activities and support activities. Primary activities deal with the physical production and transfer of the product to the customer and include inbound logistics, operations (production), outbound logistics, marketing and sales, and customer service. Support activities are infrastructure, human resource management, technological development and procurement. They are necessary during the entire value creation process and influence the individual primary activities (Porter 1986).

The sequential portrayal of all the activities clarifies the consistent orientation of all value creation activities to the consumer, whereas the profit margin actually constitutes the end goal. This is made up of the difference between the total value and the sum of the costs that accrued in conducting the value activities (Porter 2004).

The value chain can be understood as a very simplified structure that can and must be individually adapted to each enterprise. In the analysis of the primary activities, it will, however, become clear that the structure cannot be transferred to service enterprises or media enterprises without any problems. The inbound logistics cannot be viewed here as a logistic activity in the sense of inventory planning because the input factors of the production process are often of an intangible nature. Furthermore, the first contact with advertising clients occurs at this juncture—in connection with activities that are directed to the advertising market—because the advertising enterprise makes a considerable contribution to the input. In the portrayal of production in digital enterprises, it is pointless to summarize all the production activities at one level. For this reason, the aggregation and production of content is separated from the configuration of the product and technical production. In sectors in which the content is connected to a tangible storage medium for transmission, a distinction can be made between technical production and distribution, whereas in other sectors, both activities coincide to the greatest possible extent. Not even customer services have the same importance in

the value creation chain of digital enterprises than in the material goods sector and in many service enterprises. An analysis of customer services, if necessary, can, hence, be carried out within the framework of distribution.

Having provided a comprehensive understanding of the link between business models, assets, competencies and the value chain in this chapter, the next chapter gives insight into digital business.