

A Framework for Business Models in Business Value Networks

White Paper – September 8th, 2008

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No. 001-08

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The project was funded by means of the German Federal Ministry of Economy and Technology under the promotional reference "01MQ07012". The authors take the responsibility for the contents.

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1 Abstract

Business models are oftentimes considered as “the most discussed and least understood aspect of the web” [Rapp01]. Despite a rough understanding that seems to be widespread – namely an aggregation of essential, relevant aspects from economic branches providing a compressed overview on business activities – dimensions, components, perspectives and core issues are depicted non-uniformly and confusing [PeKT01; Wirt01]. In particular, literature lacks contributions that particularly consider business model frameworks for networked economies, especially newly emerging loosely-coupled configurations as assumed in the business web theory.

In order to address these shortcomings, we introduce a business model framework for business value networks as a result from an extensive literature review comprising two areas.

Firstly, I conduct a state-of-the-art analysis of existent definitions of the term “business model” with emphasize on the elements that should be included, i.e. the relevant aspects of business activity. The study confirms the statements made by several authors: Some elements are broadly accepted – a description of created and offered value, revenue models, and business actors was included in more than 75% of the literature contributions. However, there are substantial differences in other components, e.g. market consideration, cost structure, or technology. In this connection, I also present a segregation of the concept business model from related concepts.

Secondly, I outline the characteristics of business value networks as a newly emerging organizational form of loosely-coupled business networks. As a result, the partner network and the roles of these actors, their core competencies, and the role of the customer are identified as crucial elements that are to be considered in business models of companies acting in business value networks.

Resulting from the literature analysis and a brief outlook how the customers are likely to be integrated in value creation processes in future, I propose a business model framework for business value networks comprising the five basic pillars value creation model, partner model, value offering model, customer model, and profit model. These pillars are decomposed into eleven business model components value configuration, core competencies, position in value system, partners and their roles, service/product portfolio, target customer, distribution channel, customer integration, revenue, pricing, and cost structure.

Thus, the contribution of this article is twofold. On the one hand an updated understanding of the concept of business models within business value networks shall be established. On the other hand, I provide a framework which shall serve as a basis for further research, be it for the creation of a business model taxonomy in networked economies, the analysis of existent networked business models, or the development of concrete business models in the business value network context.

2 Introduction and Purpose of Article

According to Rappa, “[b]usiness models are perhaps the most discussed and least understood aspect of the web. There is so much talk about how the web changes traditional business models. But there is little clear-cut evidence of exactly what this means” [Rapp01]. Today, seven years later, this statement is still very true, especially when we consider business models in newly arising flexible and loosely coupled networks. I claim that state-of-the-art business models, themselves being not yet fully grasped, cannot be mapped one-to-one to business models of companies acting in business value networks¹. Thus, this document shall establish a common understanding of the concept of business models in business value networks as a basis for further research. The document is structured as follows:

Chapter 3 gives an introductory overview on the concept “business model”, pinpointing the origin of the term and the different usages of the concept. In chapter 4 I present an extensive literature review on business model research, incorporating 26 state-of-the-art business model definitions which were investigated both for business model components and for elements to be excluded from the concept. Based on these considerations, I segregate the business model from related concepts and associate it with the overall organizational context. A first overview on business model taxonomies given in web 1.0 related literature rounds off chapter 4. Taking these insights as one pillar for the definition of a business model framework for business value networks, the characteristics of the latter elaborated in chapter 5 constitute the second basis. To this end, related literature on business webs, business ecosystems, and value webs is reviewed and characteristics that potentially impact on business models are singled out. Based on a central feature of business value networks, namely customer-centricity, I expand on this idea towards real customer integration in the value creation process. This outlook is presented in chapter 6. As a symbiosis of the insights provided in chapters 4 to 6, I introduce a (draft) business model framework for business value networks in chapter 7. It aims at providing a basis for developing new business models for the various actors within (future) business value networks and for the network itself as well as reviewing existent business models in a networked environment. Finally, chapter 8 summarizes this paper and gives a short outlook on open issues and next steps to be taken.

¹ Business value networks is a term I unify the characteristics of business webs, value webs, and business ecosystems in (cf. esp. section 5.3).

3 The Concept “Business Model”

3.1 Origin and Development of the Concept “Business Model”

The term “business model” is being intensively discussed in literature since the mid 1990s. Osterwalder et al. [OsPT05, p. 30] used a method by Abrahamson [AbFa99] to trace the appearance of “business model” in journals². The query confirms that, even though appearing in 1957 the first time³, research gathered momentum not until the mid 1990s. At about the same the first internet-based e-commerce solution emerged. In the course of the internet boom (1999-2001) the concept “business model” has once again gained increased popularity. Even though after the burst of the dot coms bubble the concept of business models “fell out of fashion nearly as quickly as the .com appendage itself” [Magr02, p. 86] it has recovered quite imposingly and is today being accepted as a tool with enormous hands-on value.

For e-business companies, which can be partitioned into the three disciplines e-commerce as electronic trading in the truest sense, e-information as electronic information mediation and e-cooperation as value-enabling collaboration via electronic ways (cf. Figure 1) [BaLa00], the concept of business models is quite intensively discussed in academic literature. Surprisingly, a consistent definition of what a business model is comprised of did not win recognition [SaWe06, p. 20], even though a couple of authors are being repeatedly cited (e.g. Timmers [Timm98];[Timm99], Zimmermann and Alt [AlZi01], Chesbrough and Rosenbloom [ChRo02], or Wirtz [Wirt01] and Stähler [Stae02] in the German-speaking community). Timmers was the first author to present a definition that gained acceptance though never prevailed as the one and only notion: A business model is the organization (or “architecture”, as Timmers calls it) of product, service and information flows, and the potential benefits and sources of revenues for involved (business) actors [Timm99, p. 32]. In addition, there is not only dissent in the essence of a business model - there is also dissonance in the very utilization of the term “business model” (cf. section 3.2).

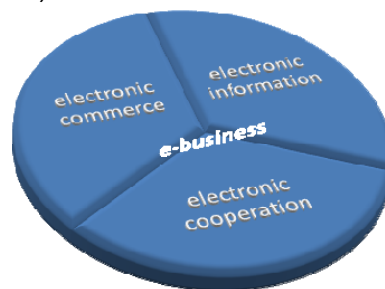


Figure 1: Disciplines covered by the term “e-business”

Determining the concept of a business model solely by means of an analysis of the term is suitable for a first introduction, but certainly the outcome is altogether far too sketchy [Schö02, p. 379].

A “model” is a simplified representation of a fact from reality. Transferred to a business environment, the outcome of such a representation should be a structure-alike or at least homomorphous mapping of a business activity. Derived from the general concept of “model”, the purpose of a business model is to represent the elements and relations of a business (activity) in such a simplified way that the mostly highly complex real system can

² Titles, abstracts, keywords, and full texts of all articles in the Business Source Premier database of scholarly business journals were searched electronically for the string “business models”.

³ Bellman, Clark et al. [BCMC57] used the term in an article published in a journal for operations research.

be wholly captured [BaCo02, p. 13]. Conversely it must be understood that a model is neither able nor willing to provide an entirely adequate and consistent representation of reality – a model is therefore subject to “focused attention” [PeKT01] while detracting from other factors. A total capture of the business activities would be inappropriate or by unreasonable means and efforts.

Whereas the understanding of the term “model” is relatively clear, the scope of the term “business” cannot be determined intuitively and depends on the range one assigns to the essence of a business. Such a definition requires a specification of the minimal set of elements and properties necessary to map a considered business into a model.

Since the beginning of the 21st century, the basic parameters for e-business have changed. The burst of the dot com bubble had the new economy held its breath. As a result of the crash, countless internet start-ups have become insolvent with their investors losing both huge amounts of money and their confidence in new markets. Contrary to common belief, O’Reilly⁴ was convinced that rather than being damaged by the market crash, the web was now even more important than ever before [ORei05]. This milestone was subsequently referred to as the beginning of web 2.0 – the selection process resulting from the burst of the bubble filtered those businesses that had generated sustainable and convincing concepts. Those concepts were in their infancy in the early 2000s, today they are becoming more and more pre-requisite for companies that wish to be ready for an environment moving towards new paradigms such as customer empowerment and integration, self-organization and peering, mass collaboration and the likes [TaWi06]. These concepts are reflected in social networks by using applications like blogs, wikis, mash-ups, or social benchmarking and tagging [Laza07]. These paradigms are likely to be the “next big thing” integrated in business models (cf. also chapter 6).

Furthermore, the way value is created in networks has changed. While outsourcing succeeded vertical integration and launched the trend to a joint value creation process in the early 1990s, value networks are on the way to transform themselves to more and more loosely-coupled networks which heavily impact on the business models of participating partners within such formations. I will discuss these concepts in depth in chapter 5.

Noticeably, new contributions to business model science incorporating the above mentioned paradigm changes are scarce. Why so?

Is the step from the first wave of e-business to web 2.0-related business too small for the development of new business model concepts? From a mere technological perspective, one could support this thesis. Osterwalder [Oste04, p. 12] emphasizes that major progress in information and communication technology (ICT) has made it possible to offer entirely new products and services, or traditional products and services via a whole new distribution channel respectively. Thanks to the internet, customers can be approached in a new and innovative way, radically pushing away physical restrictions. This was a major cut, in fact longing for whole new strategies and concepts to approach the newly arising electronic markets with a multitude of new pricing and revenue mechanisms opening up (cp. section 4.2.5). With respect to these far-reaching impacts of the world wide web, the chance from first- to second-generation e-business is naturally smaller than the very possibility to conduct business via the internet.

ICT has also significantly reduced transaction and coordination costs. Today, the benefit of integrating partners and customers in intra-company processes and communication networks has exceeded its costs many times over [PKRF05]. Both cost reductions can be

⁴ Tim O’Reilly is founder and CEO of O’Reilly Media. He is reckoned a pioneer supporter of the open source movement and is widely credited with coining the term Web 2.0, cp. http://en.wikipedia.org/wiki/Tim_O%27Reilly/ - 2008-01-09.

interpreted as fundamental drivers towards collaboration in value networks and active customer integration, the latter being postulated a vital element of web 2.0. Certainly, it is not only ICT that pushed the customer from the mere buyer status right into the center of consideration, it is also the shift in the customers' demands themselves towards customized, holistic solutions. This shift is closely related to the emergence of networks since the more complicated products and services get, the more specialized partners are required to contribute complementary elements to an integrated overall product or service (cp. chapter 5). Not only the isolated product or service, but the whole ecosystem of suppliers is being considered [KaÖs06, p. 15].

Consequently, due to considerable paradigm changes and the lack of scientific contributions in this area so far, I do see a necessity to at least update the existing understanding about business models by analyzing the state-of-the-art literature and subsequently enrich definitions and concepts with the newly emerging features touched on above.

Before delving deeper into this analysis, different perspectives on the term “business model” as well as different understandings of what a business model actually is, and which elements it is comprised of respectively, should be outlined and distinguished.

3.2 Different Perspectives and Usage of the Term “Business Model”

The literature does not utilize and understand the term “business model” the same way. Linder and Cantrell point out that business models can usually be interpreted in three different ways [LiCa00]: As actual components of business models, real operating business models, and change models. Another field which is oftentimes addressed when speaking of business models in a more formal sense is an overarching concept of business models [OsPT05, p. 8], in terms of a systematizing reference model [AlZi01]. If we neglect the change model as a special case of a conceptual model, the common understanding of “business model” from generic to concrete can be classified in four categories:

- Overarching concept in terms of a systematizing reference model
- Distinctive parts of business models (e.g. the revenue model)
- Types/typologies of business models (taxonomies)
- Concrete instances of business models

To clarify the different categories mentioned above, I consult an illustration based on [OsPT05, p. 9]. I will also use this categorization in chapter 4 to classify existent contributions to business model science.

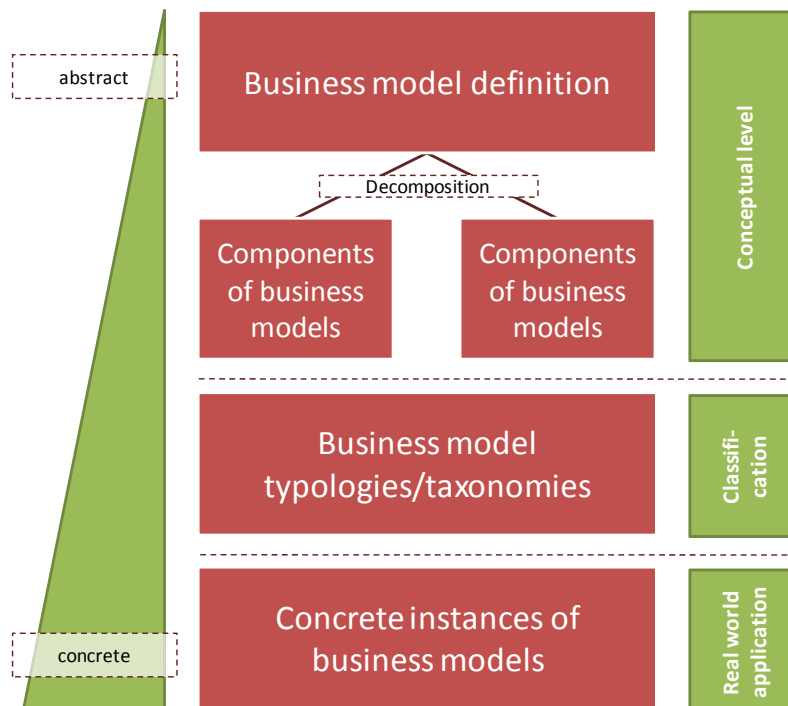


Figure 2: Distinction of different business model understandings

a) Conceptual level:

In this abstraction level, we can find definitions of what a business model actually is and of which components/elements a business model is generally comprised. The latter can be seen as a meta-model [OsPT05, p. 10]. I want to stress that single elements of a business model like the revenue model is indeed a part of the whole, but as itself not yet a business model. Occasionally, particularly specific types of pricing and revenue mechanisms are misleadingly titled a “business model”, especially in more practice-oriented coherences. Nevertheless, a business model is more than having a pricing scheme (cf. e.g. [LiCa00; OsPT05]). I will elaborate on this issue in chapters 4 and 7.

b) Classification:

I define taxonomies as a classification of business model types into categories according to common characteristics. The basis for such a typology can be manifold. A categorization strategy that is often utilized is based on specific elements of business models. Wirtz [Wirt01] applies classifications based upon terms of the separation criteria “value creation” whereas other authors (e.g. [Betz02; EiHT01; Rapp01; Timm99; WeVi01]) use categories that use more than one criteria⁵. Note that it is usually not possible to distinctly separate different groups so that overlaps of the classifiers have to be accepted [Wirt01, p. 87].

c) Real-world application:

In this case, the term “business model” denotes concrete existent or planned real-world business models, which are in scientific purpose oftentimes consulted and described when analyzing and/or comparing companies (cf. e.g. [ChRo02]).

From above-mentioned different approaches to business model concepts, we can observe different intentions on the usage of constructed business model definitions.

⁵ More detailed information on possible taxonomies will be given in section 4.2.5.

- Basis for classifier for business models
- Analyzer and description unit for present real-world business models
- Advisor for the implementation of concrete business models on a strategic level [AlZi01, p. 5]

Lastly, a differentiation according to the background of the authors seems to be a fruitful approach to understand the origins of different perspectives and accentuations of the concept. While some authors' background is more based on strategic considerations (cf. e.g. [Magr02; MüLe01]), others approach the topic from a traditional economic perspective focused on e-business (cf. e.g. [Stae02; Timm98; Wirt01; Yu01]), and a whole range of contributions is dedicated to implementing models or ontologies after defining the concept "business model" (cf. e.g. [Lind99; NiTN99; OsPi02; Oste04]).

4 State-of-the-Art Business Models – an Analysis

After introducing the concept of business models and showing different perspectives on how the term can be interpreted in chapter 3, I want to elaborate on existing definitions and frameworks for business models in this chapter.

4.1 Methodology

Subject to study shall be preferably independent business model definitions put forth by academic literature in recent years. Definitions and framework based on earlier work were only included if they considerably modify the piece of work they are built upon.

General sampling criterion for the choice of sources was the amount of relevant citations in related literature as well as mentions in literature that is also concerned with giving an overview on business model definitions and typologies such as [BiRR02; Oste04; SaWe06; ScDL03; Schw04; Stae02]. Objective of this overview is to test state of the art definitions for essential elements.

To classify these definitions, I assign them to the scheme presented in Figure 2. I will also indicate the disciplinary background of the authors (cf. Figure 11).

In this analysis, I will not only filter elements which are referred to as distinct part of a business model, I will also consider aspects mentioned implicitly. The same approach applies for elements which are – according to the respective author(s) - not part of a business model.

The result shall be a consolidated view on existing definitions, frameworks, and classification schemes based on a qualitative and quantitative analysis. Using this result, I also want to differentiate the concept “business model” from related concepts that are oftentimes utilized as synonyms, but are actually not the same, be it on the strategic or the implementation layer.

4.2 Overview on State-of-the-Art Business Models

As stated in chapter 2, business models in newly arising flexible and loosely coupled networks are poorly supported by scientific research. Additionally, state-of-the-art business models are themselves not yet fully grasped and far from consistent. Before identifying the characteristics of loosely-coupled business value networks and the requirements they impose for business models in this context, the state-of-the-art landscape of business model research have to be scrutinized. On the one hand, the objective is to elaborate elements that are commonly supported in literature. On the other hand, attention is turned upon elements that are subject to controversy. Having in mind the context of business value networks in the internet of services, it is needless to say that particular emphasize is put upon elements associated with joint value creation, modularization, core competencies in a networked value system, and the likes.

4.2.1 Qualitative Analysis of State-of-the-Art Definitions

4.2.1.1 Timmers (1998/1999)

Timmers [Timm98; Timm99] exclusively relates the concept “business model” to internet-based e-commerce. He refers to the inconsistencies in the usage of the term, hence the following definition is provided: A business model is

- “An architecture for product, service and information flows, including a description of the various business actors and their roles; and
- a description of the potential benefits for the various business actors; and

- a description of the sources of revenue.” [Timm99, p. 32]

The above-mentioned architecture is being built from the interplay of the actors (“interaction patterns” [Timm99, p. 33]) and the integration of information into the value chain. The technical implementation of such an architecture depends on the currently available technology. Beyond business models, Timmers identifies a marketing model, which is composed of the business model plus the corresponding marketing strategy. Consequently, the marketing model is not part of a business model, it rather supplements it. Especially the competitive advantage – we will see in following definitions that authors heavily disagree upon this particular issue – is according to Timmers not an integral part of the business model. The competitive advantage can then be interpreted as a direct consequence of a company’s business model and its marketing model.

4.2.1.2 Lindström (1999)

Lindström [Lind99] also focuses on the process and purpose of business modeling, not on the elements of a business model. Regarding to Lindström, business modeling deals with the two disciplines “business” and “information”, the former is defined as using “a limited set of resources intended to create/increase customer-perceived value” [Lind99, p. 152]. The latter are eventually human thoughts or mental models that can be formalized via business modeling and thus made transparent to all stakeholders within an organization. Lindström mentions some modeling tools, which implicitly point at some possible elements of business models:

- Organigrams pinpoint the responsibilities within an organizations
- Business process models describe actors, processes, and their interplay to attain maximum customer satisfaction

Summarized, this definition is also too vague and non-specific in respect to identifying elements of business models.

4.2.1.3 Nilsson et al. (1999)

The definition by Nilsson at al. is meant to be an introductory chapter for a book on business modeling [NiTN99, p. 1]. Due to the technical background of the authors, they emphasize the use of models and methods to both understand and change organizations. They identify the bridging of information gaps between business people and system people to be main objective of modeling a business. So, most importantly, this contribution to business model literature does not define the business model itself or the elements subsumed under the business activity of an organization, but the concept of “business modeling”. For my purposes, the definition is applicable only in a limited degree since the focal point is the development (“modeling”) process itself rather than the intrinsic content of a business model.

4.2.1.4 Hamel (2000)

Hamel (2000) identifies and describes four components of a “business concept”, which is obviously equated with the “business model”. The author subdivides the business concept into several elements:

- Core strategy
 - Business mission: General objective of the strategy, e.g. value proposition, purpose, high level aims, etc.
 - Product/ market scope: Positioning of the company
 - Basis for differentiation
- Strategic resources
 - Core competencies
 - Strategic assets such as brands, patents, infrastructure, and standards

- Core processes: Value creation processes transforming input factors into output, thus generating value for the customers. Herein, Hamel identifies a fundamental starting point for innovation [Hame00, p. 80]
- Customer interface
 - Fulfillment and support describes the go-to-market strategy, distribution channels and customer relationship management
 - Information and insight about customers
 - Relationship dynamics in respect to the customer (e.g. direct, indirect, firm, etc.)
 - Pricing structure, including pricing and revenue models
- Value network
 - Suppliers
 - Partners, which typically generate complementary goods and services contributing to the overall product or solution, respectively
 - Coalitions

These components are interconnected via three “bridges” [Hame00, p. 73]:

- “Customer benefits” link the core strategy with the customer interface and highlights the benefits for the customer
- “Configuration” interconnects core strategy with the strategic resources, merging competencies, assets, and processes
- “Company boundaries” link the strategic resources and the value network, modeling competencies and relationships between actors.

Hamel depicts a very extensive definition of a business model, integrating both the concepts of strategy and marketing. Hence, Hamel disassociates himself from other contributions to literature.

4.2.1.5 Heinrich (2000) / Heinrich and Leist (2000)

[Hein00; HeLe00] introduce a business model framework for commercial banks in times of e-business. According to the authors, a business model is a description of the actual condition of a company in terms of market, value creation, and potential. To describe such a condition, representative, endogenous, and determinable dimensions have to be found. These dimensions can be divided into an external view - market appearance of a company - and an internal, structural view.

- The external view considers the market-related business configurations and their interdependencies, including target markets, market and customer segments, relation to the customers (in terms of value added, compensation, and communication). Furthermore, the value creation, its logic, and its success factors, as well as distribution channels are considered. The definition is strongly marketing-driven.
- The internal view mainly characterizes cooperation partners, degree of coordination between distribution channels, and locations. Furthermore, the organizational structure and competencies are considered.

The business model should represent the essential results of the strategy planning. Hence, a business model is to be differentiated from the strategy.

4.2.1.6 Klueber (2000)

Klueber defines business models as “summary of the value creation logic of an organization or a business network including assumptions about its partners, competitors and customers”. A business model defines “the business and IS architecture, rules, potential benefits and sources of revenue” [Klue00, p. 797].

Interestingly, Klueber highlights that his definition is also valid for business networks. [Klue00] includes competitors as well as technology as integral parts of business models unlike other authors who see these elements as external forces impacting on business models.

4.2.1.7 Mahadevan (2000)

Mahadevan accentuates three fundamental aspects of a business model:

- Value streams between business partners and customers which identifies the value proposition for the buyers.
- The revenue stream describes how revenue is generated and assured and
- The logistical stream “addresses various issues related to the design of the supply chain for the business” [Maha00].

Mahadevan uses each of these streams to define a more detailed topology classifying business models refining the pre-identified three basic market models “portal”, “product/service provider” (PSP), and “market maker” (MM).

4.2.1.8 Zimmermann (2000)

Zimmermann [Zimm00] bases his definition on the work provided by [Timm98; Timm99], though extending it in several issues. “A business model is defined as [...]: An architecture for the product or service addressing certain customer needs, A definition of the relevant business community, including a description of the various agents and their roles and protocols of interaction, A description of the potential benefits for the agents, A description of the sources of revenue” [Zimm00, p. 729]. In contrast to [Timm98; Timm99], Zimmermann emphasizes the interplay and the pattern of action of the actors.

4.2.1.9 Bartelt and Lamersdorf (2000) / Bartelt et al. (2001)

Bartelt and Lamersdorf consider business models for e-business [BaLa00], while the follow-up paper is especially dedicated to e-information [BaZF00]. The definition of business models is based on [Timm99], being an architecture consisting of products, services, information flows, and a description of involved actors. Additionally, the benefits for the actors and the sources of revenue should be accentuated [BaZF00].

The major contribution of the two papers are classification schemes for e-business models [BaLa00], and a classification scheme for e-information models [BaZF00]. In the former, the classification is made by means of “economic agent” (provider, intermediary, consumer) and “type of communication” (active, passive), the latter is categorized by the domain of the e-information business model, namely literature, internet, and business-related information⁶. I did not explicitly list [BaLa00; BaZF00] in the matrix overview in section 4.2.2 due to the similarities to [Timm99].

4.2.1.10 Afuah and Tucci (2001)

Afuah and Tucci identify three major determinants of business performance, one of which is the business model:

⁶ cf. section 5.2.5

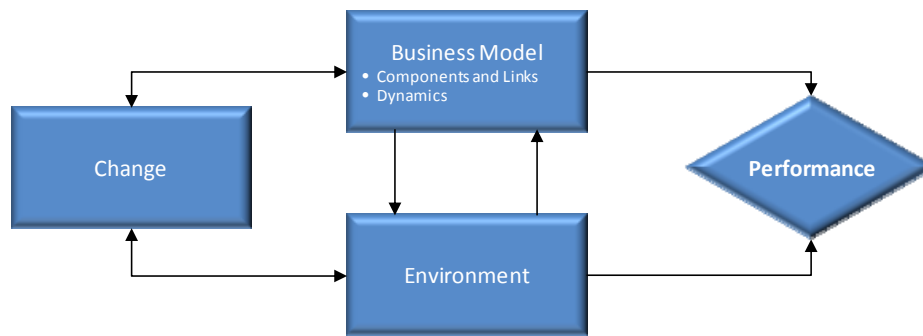


Figure 3: Components of business performance according to [AfTu03]

Source: Adapted from [AfTu03, p. 4]

A business model is defined to be the method which mainly addresses

- how a firm creates value, i.e. how resources are built and used within the value creation process. In this consideration, the target segment of customers and which product/service to offer to which segment are important elements of a business model.
- the money making potential that lays behind above-mentioned value proposition. Afuah and Tucci consider short-term as well as long-term revenue.

Thus, a business model is a system built upon components, linkages between components, and dynamics. Afuah and Tucci name ten components of a business model [AfTu03, p. 51]:

- *Profit site*: Relative advantage of a firm vis-à-vis “its suppliers, customers, rivals, potential new entrants, complementors, and substitutes” [AfTu03, p. 53].
- *Customer value*: Differentiation of the offered product from competitor’s products. This can be done in several dimensions (product features, timing, location, service, product mix, linkage between functions, linkage with other firms, and reputation).
- *Scope*: Allocation of offered products to market segments (target customer).
- *Price*: Pricing is considered separated from revenues, the component describes the pricing strategy of a firm, e.g. menu pricing, one-to-one-bargaining, auction pricing, or barter⁷.
- *Revenue sources*: The sources of a firm’s revenue and profits are considered a crucial element of a business model. This includes financial flows indicating who pays for what and when.
- *Connected activities*: In the process of delivering value to the customer, firms have to perform additional activities such as research and development, product design, testing, marketing, sales, or field support. So, a business model has to clarify which activities in the value chain are performed and when.
- *Implementation*: The component “implementation” describes the transformation of reached business decisions, incorporating necessary organizational structure, systems, and people.
- *Capabilities*: Resources needed to create value. These assets can be tangible (physical and financial), intangible (e.g. patents or customer relationships), and human (skills and knowledge). (Core) Competencies and missing capabilities as well as the question how to fill such competence gaps are also included.

⁷ Cp. section 7.2 for more information.

- *Sustainability*: The component sustainability is mainly a strategic one, outlining how a firm sustains its competitive advantage and thus keeps making money.
- *Cost structure*: Cost drivers in each component of the business model. Cost drivers can be economies of scale, technology costs, or transaction costs.

Dynamics is all about the changeability of a business model. A Business model has to be always ready to be re-invented due to environmental changes before competitors do.

According to the authors, a business model is the very cause for competitive advantage and thus, crucial to sustain a firm's profitability [AfTu03, p. 73]. Nevertheless, competitive advantage itself as well as related factors such as sustainability are considered an integral part of the business model. On the other hand, Afuah and Tucci depict technological change, and the environment (which, of course, can also be a competitors) of a firm as influencing factors which urge firms to innovate their business models. So, conversely, components dealing with the competitive advantage and sustainability of a business model as well as implementation-related elements can be considered an outcome or result of a business model rather than a component itself (cp. also section 4.2.4).

4.2.1.11 Alt and Zimmermann (2001)

Alt and Zimmermann utilize a literature review in order to identify the common denominator of all definitions, i.e. the authors rely on a quantitative analysis of the state-of-the-art contributions to literature. In doing so, they reveal "six generic elements of a business model" [AlZi01]:

- The *mission* includes a high level understanding of the vision pursued by the company, its strategic goals, and a value proposition pointing out the fundamental characteristics of the product or service.
- The *structure* determines the roles and agents which form a so-called business community, collaborating in a value chain or a value web. Moreover, the structure defines the focus on customer, industry, and products.
- The processes deliver detailed insight into the mission and structure, providing the elements of value creation process.
- Revenues are being highlighted as the bottom line of a business model. They include sources as well as necessary investments
- Legal issues are being introduced as an element of business model, though rather being a limiting or shaping element for business models which impacts on each of the four above-mentioned elements (cf. Figure 4).
- Technology takes over a double role, being enabler and constraint for business models at the same time. However, as well as legal elements, technology is not considered an integral part, but a shaping element for business models

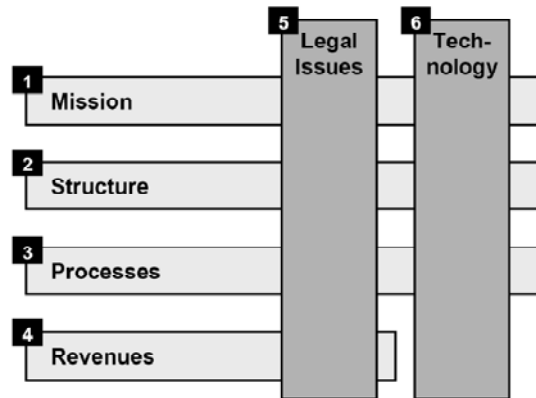


Figure 4: Generic elements of a business model according to [AlZi01]

Source: [AlZi01, p. 7]

4.2.1.12 Amit and Zott (2001)

Amit and Zott provide a transaction-based definition of business models. Added value is grounded on the content, the structure, and the governance of the transactions [AmZo01, p. 511]. The “transaction content” describes the information and goods that are being exchanged as well as the resources and capabilities required to enable exchanges, i.e. auxiliary means. The “transaction structure” addresses the way actors are linked with each other when executing transactions. Moreover, the sequencing of transactions (i.e. the value creation process) and the mechanism of how value is created are considered. The “transaction governance” deals with actors in charge of monitoring and controlling flows of information, of goods, and of resources. Interestingly, the authors also include incentives for transaction participants into the business model definition. As very closely linked to the transaction cost theory, the definition provided by Amit and Zott differs from other definitions in terms of not considering the output side (e.g. customers, distribution channel, revenue model, etc.).

4.2.1.13 Buchholz and Bach (2001)/ Bach et al. (2003)

According to the authors, the processes represented in a business model have to be targeted on the provision of value/benefit and enable revenue generation. Thus, a business model conduces to the implementation of competitive strategies instead of strategy being an integral part of the business model [BaBE03, p. 10]. The authors identify four constituent components of business models [BuBa01, p. 7] which are valid both for firms and for networks [BaBE03, p. 11]: Process model, transaction model, participant model, and revenue model.

The *process model* describes the value creation processes. In case a single company is considered, its position in the value system is part of the description. The *participant model* outlines who contributes in which role to the value creation process. Since the customer is more and more incorporated into the value creation processes, he has become an increasingly important partner, not only due the trend towards customizing, but also by reason of the number of customers relevant to exploit network effects (cp. also section 5.1.3.4). Moreover, the participant model is affected by the coordination form of the value network. The *transaction model* answers the question how buyers and sellers come together (static vs. dynamic transaction modes). This partial model is interwoven with the forth pillar, the *revenue model* which outlines the logic of revenue generation and provides a scheme distributing these generated revenues within the network or the participating partners, respectively.

Interestingly, the definition provided by [BaBE03; BuBa01] is universally applicable to individual firms and to networks, emphasizing the importance of a partner network which cannot be distinctly separated from the customer network anymore.

4.2.1.14 Rappa (2001)

Rappa sees business models as the “method of doing business by which a company can sustain itself” [Rapp01]. For Rappa, the business model shows how a company generates revenue by specifying its position in the value chain. Rappa is not willing to define business models and its elements, he presents a taxonomy of business models which are present on the world wide web. These model types are a mixture of describing the service provided and the way revenue is generated:

- Brokerage Model
- Advertising Model
- Infomediary Model
- Merchant Model
- Manufacturer Model
- Affiliate Model
- Community Model
- Subscription Model
- Utility Model

Please consult section 4.2.5.5 for a description of this classification scheme.

4.2.1.15 Gordijn and Akkermans (2001)

Just like the bulk of the literature considered, [GoAk01] concentrate on e-business models. Since the core purpose of the paper is the introduction of ontology-based operators for e-business model de- and re-construction, the concept of a business model is introduced quite quickly. An e-business model shows how a “network of actors creates, exchanges and consumes objects of value by performing value-adding activities” [GoAk01, p. 60]. Though very short, the definition accentuates two quite important issues: joint value creation in a network and the fact that consuming is also considered a value-adding activity, indicating that the consumer might be part of the network and is involved at more than just the output side.

4.2.1.16 Müller-Stewens and Lechner (2001)

The authors approach the definition of a business model by extending the so-called value creation mode which depicts the central activities of a business and their systematic interplay [MüLe01, p. 374]. This model has to be considered and concretized from a capitalization perspective. The capitalization results from four partial models [MüLe01, p. 410]:

- The value offering model allocates the product/service portfolio of a company to the targeted customer segment. Furthermore, the needs of these segments are considered.
- The value creation model shows the structure of the value creation (resources, make-or-buy-decisions, tasks of partners, internal communication channels and coordination mechanisms). Here, the IT infrastructure is considered a critical success factor.
- The marketing model defines the relation between customer and company.
- Revenue model

According to authors, the business plan is not an integral part of the capitalization, though “completing” the business model. Hence, the authors blur the boundaries between these two concepts which is rather unique in business model or business plan literature respectively.

4.2.1.17 Weill and Vitale (2001)

Weill and Vitale [WeVi01] talk about different abstraction levels when introducing the concept of e-business models. Atomic e-business models describe the very essence of how business is conducted. While the authors describe nine such atomic models in a taxonomy (cf. section 4.2.5), each of them is characterized by four elements: “strategic objectives, sources of revenue, critical success factors, and core competencies” [WeVi01, p. 25]. The actual e-business model combines atomic e-business models, describing a firm’s business activities in a particular initiative (i.e. for example in a particular business segment). This e-business model enriches the atomic e-business models by adding roles and relationships among a firm’s customers, allies, and suppliers. Furthermore, product, information, and financial flows are being summarized, the latter related to the participant’s benefits.

Closely related to the e-business model, but as itself not part of it, is the e-business initiative which is the combination of the above-mentioned e-business model and the target customer segment, distribution channels, and the IT infrastructure. Finally, the e-business implementation completes the e-business model and the e-business initiative by considering factors like financing, recruitment, marketing, and incentives.

Weill and Vitale’s perspective is summarized in Figure 5.

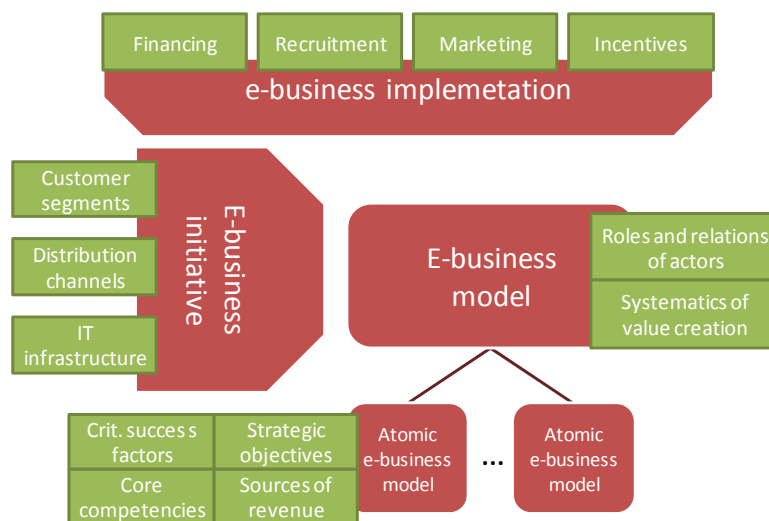


Figure 5: E-business model according to [WeVi01]

4.2.1.18 Wirtz (2001)

According to Wirtz, the business model comprises of the illustration of the workflow as well as the flow of materials and information both within the organization and between the organization and external stakeholders, and finally the stream of revenues [Wirt01, p. 81]. Business models constitute an aggregated presentation and conceptualization form, consisting of six partial models that combine to an integrated business model (cf. Figure 6).

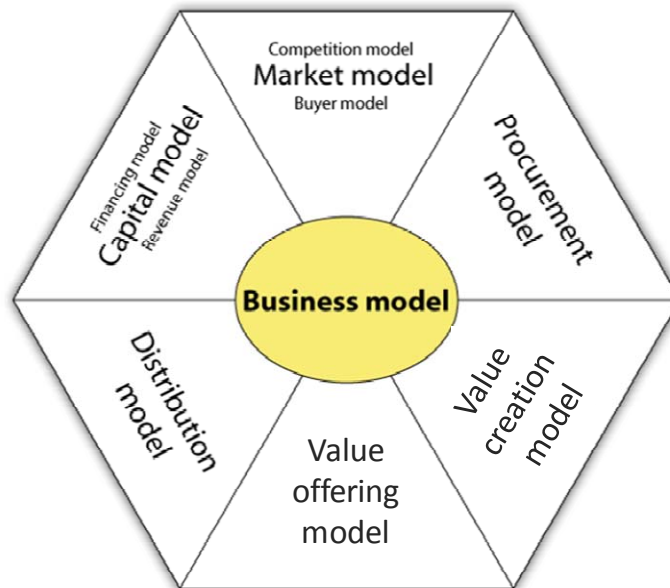


Figure 6: Business model elements according to [Wirt01]

Source: Based on [Wirt01, p. 83]

- The market model can be divided into competition- and buyer model and describes the mutual forces of the organizational environment as a market and the individual buyer.
- The procurement model describes how to organize the company's input factors. Input factors are in particular production factors that are influenced by the previously mentioned market behavior and market structure.
- The value creation model describes the combination of goods and services and their transformation into offerings with emphasize on input/output ratio.
- The value offering model shows which goods and services are being offered to which customer segment.
- The distribution model links to the previous model by asking the subsequent question of how and under what conditions the respective goods and services are made available to the customer. It is important to make a distinction here between tangible products that need to be distributed physically on the one hand and intangible products or services that can be transmitted electronically on the other hand.
- The capital model can be regarded as the most important of the six sub-models. It illuminates financing opportunities and feasible revenue generation models. Special attention should be paid to the various revenue generation models. These are the core of an enterprise in electronic business [Wirt01, p. 85].

After identifying the partial models that constitute a business model, Wirtz introduces a basic typology to classify e-business models: The 4C-Net-Business-Model [Wirt01, p. 88]. This is a collection of four basic business models – Content, Commerce, Context, and Connection – that organizations can be assigned to (cf. section 4.2.5.7).

4.2.1.19 Yu (2001)

“The [e-commerce] [...] business model can be defined as a conceptual architecture for representing entities and relationships of model components with identified critical success factors of electronic businesses” [Yu01, p. 114]. Importantly, Yu limits the

business model to components that are crucial for the success of a company. Yu identifies 15 key components of business models: Market and customer segmentation, role of customer, product description, service description, assets (including raised money, technology infrastructure, patents, knowledge, expertise, and the likes), costs, pricing strategies, promotion as specific marketing activity, distribution channels, revenues and its sources, profits, market share, economic scale, marketing strategies and plans, and competitive advantage. The interactions of these components are shown in Figure 7.

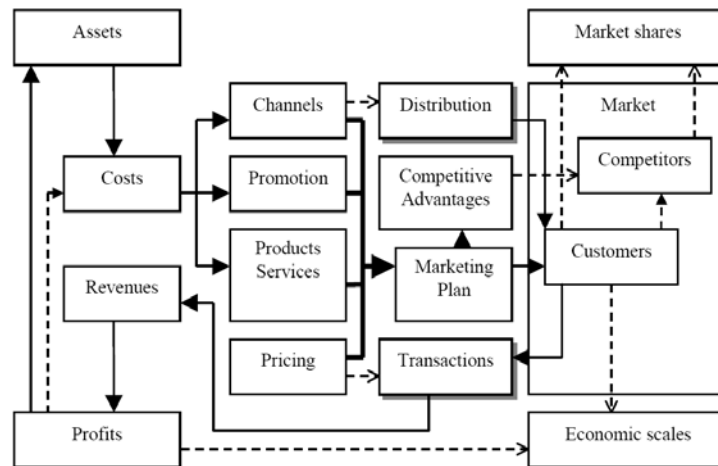


Figure 7: Interdependencies between business model components according to [Yu01]

Source: [Yu01, p. 115]

Obviously, Yu depicts a very detailed view on business models, integrating aspects which might cause the business model to be too complex. Furthermore, the definition mixes the concept of a business model with related concepts, which are oftentimes considered not to be part of a business model, like business plan and marketing model.

In contrast to the configuration shown in Figure 7, Yu changes his mind in the course of his paper. Marketing strategies and plans as well as competitive advantages are considered to be elements excluded from the business model itself [Yu01, p. 118].

4.2.1.20 Bieger et al. (2002)

Bieger et al. [BiRR02] identify eight trends of the modern net economy each of which is mapped into a business model element. They stress that the focus cannot be on single companies any more, but on networked organizations (or even whole industries): A business model is the way a company, a networked organization, or an industry creates value, giving answers to the following partial models [BiRR02, p. 50]:

- *Value offering concept*: Definition of target customer segment and value proposition.
- *Communication concept*: Retention of the goods or services in the customer segments to establish long-term customer relations
- *Revenue concept* for the whole network
- *Growth concept*
- *Configuration of competencies*: Core competencies and their interaction in the network as well as identifying areas where external know-how has to be purchased. Furthermore, the mechanism for partner management has to be settled.

- *Organizational form*: Positioning in the value chain according to above-mentioned core competencies.
- *Cooperation concept*: Choice of cooperation partners. It is not clear if the authors refer to cooperation partners within the network (from each company's point of view) or network-external partners.
- *Coordination concept*: Choice of coordination form.

The extensive definition given by [BiRR02] are mainly from a whole network perspective, emphasizing the importance of joint value creation and the associated challenges in terms of coordination and communication. This point of view seems to be occasionally inconsistent, furthermore some of the proposed elements are very basic issues which might also be addressed in a network's overall strategy (cf. section 4.2.4.1).

4.2.1.21 Chesbrough and Rosenbloom (2002)

Chesbrough and Rosenbloom [ChRo02] consider the business model as a mediating construct between technology and economic value. They put forth six functions of a business model⁸:

- The value proposition is the value which is created for users by the product or service offering.
- The market segment highlights the user group that is targeted by the offering.
- The structure of a firm in the value chain required to create and distribute the offering.
- The cost structure and profit potential of producing the offering.
- The position of the firm within the value network links suppliers and customers, including identification of potential complementors and competitors.
- The competitive strategy ensures that the firm will gain and hold advantage over rivals

4.2.1.22 Magretta (2002)

Business models are "stories that explain how enterprises work" [Magr02]. It accentuates potential customers and their valuation as well as the revenue model of a business. Furthermore, the business model outlines the economic logic that shows how to deliver value to customers at an appropriate cost, i.e. the way value is created efficiently.

Magretta sees every business model as a variation on the "generic business value chain underlying all businesses" [Magr02]. This general logic is divided into producing and selling products or services (cf. Figure 8).

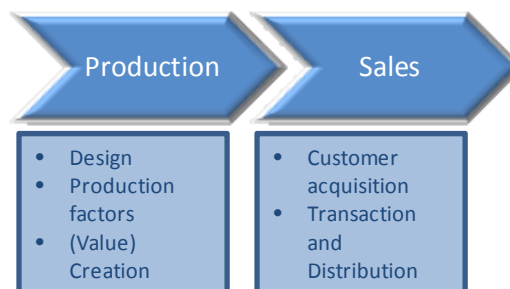


Figure 8: Business value chain

Importantly a "business model isn't the same thing as a strategy, even though many people use the terms interchangeably" [Magr02]. Business models rather ought to show the interplay of the elements of the whole system, implying at least the consideration

⁸ The definition was initially set up in 2000 as a working paper [ChRo00].

product and information flows as well as the various actors and their coordination. Processes of value creation might also be a part of this interplay. So, business models do not factor competition, which is in fact a crucial performance factor – it is in fact a matter of strategy to deal with these kinds of reality. “Doing better than your rivals” [Magr02], that is being able to differentiate oneself from others, is a matter of competitive strategy.

4.2.1.23 Osterwalder and Pigneur (2002)

Analog to [PeKT01], the authors position the business model between strategy and implementation into processes. The business model describes “the value a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams” [OsPi02].

The e-business ontology developed in [OsPi02] is founded on four pillars:

- Products and services offered by the firm, representing the value proposition, the target customers, and the capabilities of the firm itself.
- The infrastructure and the network of partners describes the activity configuration, the resources and assets, and a firm’s partner network necessary to fulfill the value proposition.
- Customer relationship defines the distribution channels and the strategy to retain customers’ trust and loyalty.
- The financial aspect is composed of the revenue model and the cost structure of a firm which result in the profit model.

Even if Osterwalder and Pigneur introduce a definition for firms, they highlight the importance of a partner network. The next step, namely incorporating the firm as an integral component into a business value network will be the discussed in chapter 7 in detail. Another important notion is the high level character of a business model, stating that detailed process descriptions cannot be given in a business model.

4.2.1.24 Stähler (2002)

Based on a brief literature overview, Stähler develops a tripartite definition comprising the value proposition, the configuration of value creation, and the revenue model [Stae02, p.41].

- The value proposition describes the utility, i.e. the value for customers as well as partners which is created by applying the business model. The value proposition for customers describes the benefit gained by the customer. Thus, it is a determination of customer needs to be fulfilled, implicitly showing the focusing of the company. The value proposition for partners describes the benefits gained by partners contributing to the value creation process, revealing their intrinsic motivation to participate and become a part of the business model.
- The architecture of value creation is composed of the product and brand design, the internal architecture, and the external architecture. The product design is the configuration of the product which is offered to fulfill its value proposition. By offering this very product, the company can set apart from its competitors⁹. Furthermore, targeted market and customer segments are described. The internal architecture of value creation is composed of the input resources (core competencies and assets), the transformation process and the coordination mechanisms. The external architecture comprises the customer interface (communication and distribution) and a description of external partners.

⁹ Consequently, an explicit description of the competitive landscape is not part of a business model. Rather, the business model answers the question, how a company can differentiate itself from other competitors.

Apparently, there are overlaps between the internal value creation process and the role of external partners.

- The revenue model reveals the sources of revenue and the way a company earns profits (i.e. which are the pricing mechanisms and who pays?).

4.2.1.25 Pateli and Giaglis (2003)

Pateli and Giaglis design a generic framework which is based on a state-of-the-art analysis of literature. They provide a two-dimensional framework extending the model of [Alzi01].

The horizontal frame includes the “primary components” [PaGi03, p. 338] of a business model:

- Mission (Strategic Objectives)
- Target Market
- Value Proposition
- Resources (capabilities and assets)
- Intra- and inter-organizational processes
- Cost and revenue models including pricing strategies
- Value chain/net (partnerships)

The vertical frame is comprised of what the authors call underlying components, but rather being enablers, influencing and limiting factors, respectively:

- Market trends
- Regulation
- Technology

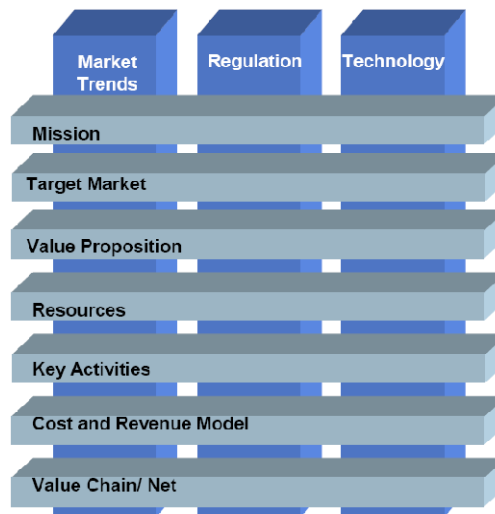


Figure 9: Business model components framework according to [PaGi03]

Source: [PaGi03, p. 339]

4.2.1.26 Scheer et al. (2003)

Scheer et al. distinguish between business models and internet-based business models after comprehensively analyzing the state of the art literature. Business models describe in a simplified way (“bird’s eye view”) the regular business conducted by an organizational unit (i.e. an independent profit center). This business consists of involved actors (or roles), transformation processes reflecting the value creation, transfer streams (product, information, and financial flows), influencing factors from the market (e.g. competitive forces, changes in the customer segments), and auxiliary means [ScDL03, p.

22]. The latter is the only explicit differentiation criteria of business models and internet-based business models, namely the internet technology as enabler. Contrary, technology can also be used in traditional business models [ScDL03, p. 21] such that a differentiation generally seems to be not necessary. Despite conducting a comprehensive literature analysis, the authors do not consider the revenue model, just name financial flows as compensation for delivered goods or services. On the other hand, factors like influencing factors from the market and auxiliary means are being interpreted integral parts of a business model though oftentimes being considered external forces imposing pressure upon the business model from outside (cp. e.g. [Oste04, p. 16]).

4.2.1.27 Osterwalder (2004)/ Osterwalder et al. (2005)

Osterwalder’s contribution to business models research [OsPT05; Oste04] is twofold: On the one hand, it clarifies the concept of business models by outlining the differences to related concepts, on the other hand an ontology to “conceptually express the business logic of a firm in a structured form” [Oste04, p. 5] is being created. Due to the latter purpose, Osterwalder erected a very detailed framework to capture the business model of a firm as a basis for his ontological implementation.

The author identifies four areas that should be addressed by a business model [Oste04, p. 42]:

- *Product*: A business model has to explain the type of business a firm is in, the very goods and services being offered, and the value proposition.
- The *Customer Interface* identifies the target customers, the distribution logic and channels, and the customer relationship management.
- The logic of the value creation in a network of partners, including infrastructural and logistical issues is being outlined in the *Infrastructure Management*.
- *Financial Aspects*: The business model’s sustainability from a financial point of view is described by its revenue model and cost structure.

In order to evaluate these four “pillars” more detailed, nine partial models (building blocks) of business models are being introduced:

Pillar	Building Block
Product	<ul style="list-style-type: none"> • Value Proposition: Overall view of the portfolio offered by the firm
Customer Interface	<ul style="list-style-type: none"> • Target Customer: Customer segment the created value is offered to • Distribution Channel • Relationship: Link established between customer and firm
Infrastructure Management	<ul style="list-style-type: none"> • Value Configuration: Arrangement of activities and resources necessary to create value • Capability • Partnership: Co-operations of the firm initiated in order to create value
Financial Aspects	<ul style="list-style-type: none"> • Cost structure • Revenue Model

Table 1: Building blocks of a business model according to [Oste04]

The interconnection of these building blocks is shown in Figure 10. In a detailed ontology description, the author gives examples for a possible taxonomy for each of the nine building blocks (cp. Section 4.2.5).

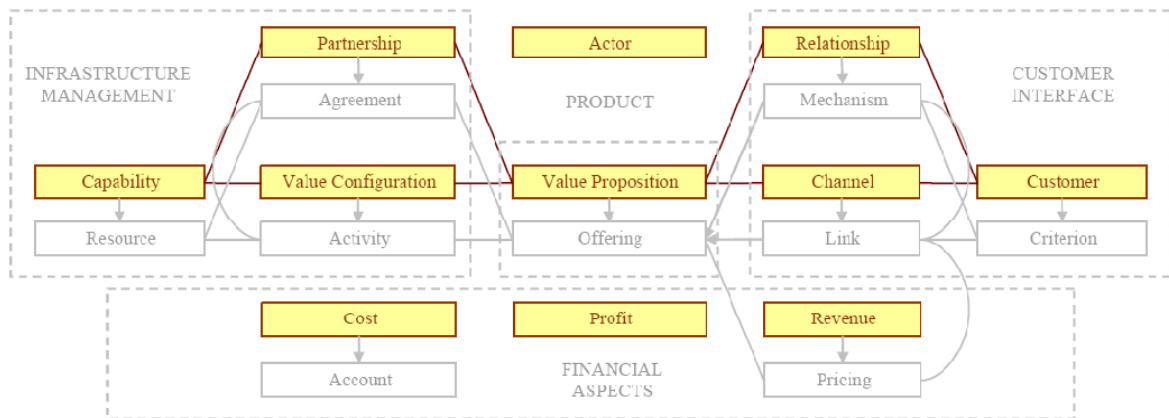


Figure 10: Interconnection of the building blocks according to [Oste04]

Source: [Oste04, p. 44]

In respect to the clarification of the concept of business models, Osterwalder identified elements that are important business aspects related to the competitive landscape and the implementation of a business model, though itself not being a part of the business model:

- Capital model as external source of capital
- Market model as means to situate the business in the competitive landscape, including strategic considerations like the company's positioning vis-à-vis rivals, potential new entrants, or substitutes
- ICT is considered an enabler for business models, but not an integral part of it

4.2.2 Quantitative Analysis

In order to grasp the contributions of the state-of-the-art literature presented in sections 4.2.1.1 to 4.2.1.13, a matrix allocating named aspects to categories is utilized.

The rows show the contributions to scientific literature. As indicated in section 4.1, I incorporated those contributions providing either a definition or a decomposition of the concept business models into partial models.

The columns indicate specific components of the business model definition which were assigned to six interim categories value creation, network, customers, profit, market view, and miscellaneous. The interim categories and their characteristics are depicted in Table 2.

Interim category	Characteristic	Description
Value creation	Value creation and offering	Description of products or services offered; the value is created by transforming a given initial state into a (preliminary) final state [ScDL03, p. 21]
	Value creation process	Not only the description mentioned above, but also a more detailed overview on the underlying processes. Closely related to Product/ service flows.
	Value proposition	The value proposition is, similar to the value creation, but much more condensed and translated into the customer view, an overview on the portfolio of goods and services offered (and that create value for the customer) [Oste04, p. 44].
	Product/ service flows	Dependencies in the value creation process, showing the arrangement of activities and resources needed to create value.
	Information flows	Exchange of information that is required within the value creation process.
	Success factors of product	Explanation why a product or service is able to differentiate against competitors' offers and to ensure a sustainable success.
	Core competencies	Major capabilities of the organizational unit considered.
Network	Business partners, actors, and their roles	Depending on the scope of consideration, the actors can be either partners from a single company's perspective or the participating actors that constitute a value network.
	Position in value system	Closely related to the actors and roles. The position in the value system indicates what the company itself contributes to the goods and services offered by the value network. Thus, there's also a connection to the core competencies.
	Coordination of actors and activities	Also closely connected to product/ service flows, additionally incorporating the actors.
	Know-how of employees/ assets	Assets can be financial, intangible such as patents or copyrights, but also human, outlining the knowledge of the employees [AfTu03, p. 69].
	Incentives	Motivation for actors to participate in the value creation process.
Customers	Communication with customers	Description of link established to the customers.
	Customer-centricity	Highlighted position of customer as center of the value creation. The customer is not only situated at the output side, but also involved in the value creation process (cf. section 5.1.3.6 and chapter 6).
	Customer segments	Addressed target group.
	Distribution (channels)	The channel via a customer is approached.
Profit	Revenue	Description of the way revenue is generated
	Benefits for actors	Closely connected with value proposition, benefit/

		utility provided by the goods and services offered, for internal and external actors.
	Financial flows	Transfer flows of the actors to requite obtained goods or services (both internally and externally).
	Costs	Consideration of the cost structure of the business, e.g. caused by transactions or coordination.
	Funding (external sources)	Sources of funding from external investors used to finance the business activity.
Market view	Market consideration	Description of the environment of a firm, e.g. suppliers, competitors, complementors, possible entrants, etc.
	Marketing	Description of marketing strategy of the organizational unit under consideration [Timm99, p. 32].
	Competition	Sub-characteristic of market consideration, merely relating to the competitive environment.
Misc	Technology	Technology as enabler for value creation.
	Strategic objectives	Description of the mission, i.e. the strategic alignment of the organizational unit.
	Business model = strategy	Equalization of “business model” and strategy or the statement that strategy is a part of the business model.

Table 2: Interim categories for the qualitative analysis

Via the matrix, the different contributions to business model research are allocated to addressed characteristics. In order to visualize the statements of the authors, I introduce four different color schemes. Dark-green indicates explicit definition building blocks whereas light-green is used for implicitly named characteristics. Furthermore nominations of components which are explicitly not an integral part of a business model (dark-red), analogously a light-red flag denotes an implicitly mentioned negative nomination are kept in mind. As regards to the number of mentions, explicit ones are counted fully, implicit ones are counted as 0.5.

Note that the building blocks for the business model definition will be introduced in chapter 7. The above-introduced components are only for analyzing purposes of the state-of-the-art literature.

In addition, the matrix is enhanced with some additional information on the source analyzed:

- A specification of the author's objective, namely the provisioning of a general definition or a decomposition of the concept business model into partial models (1), devising a taxonomy that outlines generic types of business models (2), or the investigation of specific real-world business models (3). Contributions to literature¹⁰ providing solely formalisms for representing business models, change and adaptation methodologies, or evaluation models without introducing new aspects [PaGi03, p. 332] were not considered.
- The research background of the author, displaying the discipline which motivates the objective of the respective contribution. I identified contributions from technically motivated authors (T), authors situated at the interface between

¹⁰ Cp. e.g. [PaPD01; Schw04]

business and internet topics (eB), and authors mainly concerned with business strategy (S).

- Source of the publication: Book (B), dissertation (D), book chapter (C), journal (J), conference or workshop proceedings (P), working paper (W), or merely electronically published (E).

4.2.3 Summary of State-of-the-Art Analysis and Result

The literature review reinforces the statement of several authors saying that the general understanding of the term “business model” is still rather discordant about what constitutes a business model. The portfolio of definitions ranges from more tightly drawn concepts (cf. e.g. [Magr02; Oste04; Timm99; WeVi01]) explicitly factoring out market consideration to very comprehensive perceptions (cf. e.g. [AfTu03; Hame00; PeKT01; Wirt01; Yu01]) blurring the boundaries to other concepts such as strategic alignment or business plan.

On the other hand, the pool of scientific contributions provides both high-level definitions with low granularity (cf. e.g. [GoAk01; Lind99; NiTN99]) and highly detailed disquisitions on the components of a business model [AfTu03; Hame00; Oste04]. The aim of this document is also the development of a rather detailed definition including dependencies. Nevertheless, short descriptions of what a business model actually is can give valuable hints for the own definition presented in chapter 7 and the differentiation to related concepts (cf. section 4.2.4).

The detailed allocation of business model components to the characteristics introduced in the previous section is visualized in Figure 11.

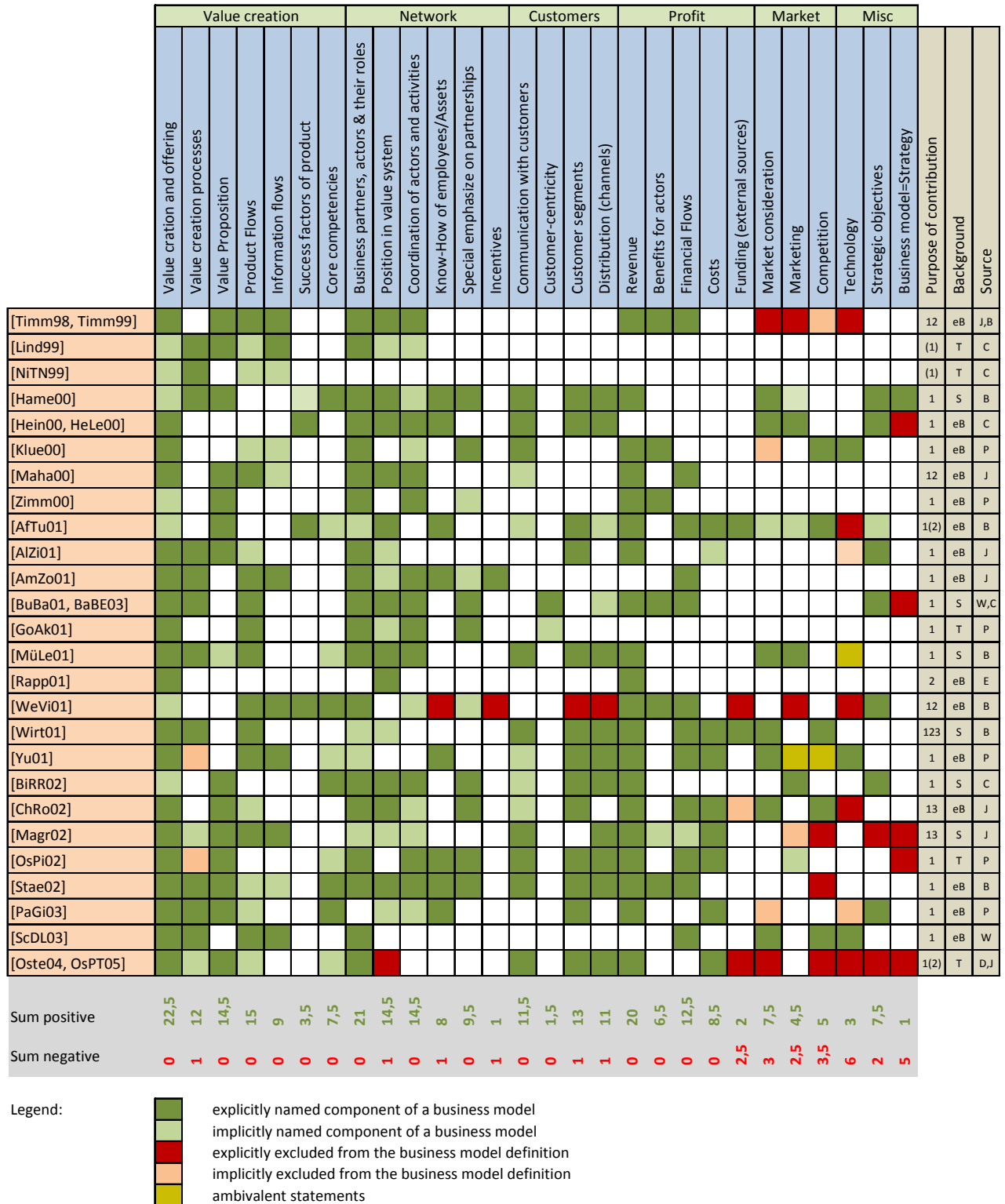


Figure 11: Quantitative state-of-the-art analysis of business model literature

However, considering the broad range of literature, a certain subset of common elements can be identified. Based on the number of nominations in literature, we can constitute that

the categories *value creation*, *network*, *customer*, and *profit* are generally well-established components of business models.

- Value creation: Doubtlessly, some description of what is actually offered to the customer is an essential part of a business model. Dissent can be observed in the question of how detailed such a description should be. While some authors leave it at a more marketing-biased value proposition, a large share of authors call for the description of dependencies and activities performed in order to create value. 12 contributions see a description of the processes underlying the value creation as an integral part of business model. However, the requested granularity differs significantly, from a high level overview to a detailed description of business processes.
- Network: The description of business partners, actors, and their roles is supported by the majority of authors. The bulk of the literature speaks of business models for individual companies. However, actors are sometimes also interpreted as universal organizational units. Depending on the perspective, business models can apply for both single companies and value networks [BaBE03; BuBa01; ScDL03].
- Customer (and market): As the value creation process is finally adjusted to fit customer needs, a certain integration of the link established to the customers, addressed segments, or distribution channels are oftentimes mentioned (cf. e.g. [AfTu03; BiRR02; ChRo02; Hame00; HeLe00; Klue00; Oste04; Stae02]). In this connection, only a few authors strictly interpret customers as part of the market(ing) model and therefore strictly differentiate a business model from measurements to reach customers which include for example distribution channels or other links (cf. [Timm99; WeVi01]). Others deny an extensive consideration of the market including competitors, possible entrants, etc., but concede as true that certain relations to the customer do not only impact a business model, but are an integral part of it (e.g. the determination of target segments, distribution channels, and integration of customers in the value creation process) [BaBE03; Magr02; OsPT05; Oste04].
- Profit: The business model is oftentimes referred to as a description of how a company makes money (cf. e.g. [AfTu03; Rapp01]). Several publications speak of the revenue generation as one of the most important components of a business model (cf. e.g. [Stae02; Wirt01]). Some facet of financial aspect is covered in 22 out of 26 references sources. The cost structure as a counterpart of revenue generation was interestingly neglected in earlier literature, but significantly gained importance in later contributions to business model research.

Accordingly, after having gotten a detailed overview, we can state that the above-mentioned elements value creation, (partner) network, customer, and profit shall be compulsively included in the business model framework. However, a lesson learned is that we cannot establish a consistent and accurate business model definition without thoroughly scrutinizing what to include into the very business model essence and what to be left aside as a related concept.

I will incorporate the state-of-the-art analysis as one major part into the business model framework introduced in chapter 7. Additionally, I will consider the demands made on business models by business value networks (cf. chapter 5). In addition, the analysis will be the basis for a substantial differentiation of the concept “business model” from related concepts (cf. section 4.2.4). I include this section since I am struck by the still unclear role of the business model from an overall perspective on a firm or a network.

4.2.4 Elements and Concepts Related to but not Part of a Business Model

A striking insight provided by the literature review is not only the disunity among authors concerning related elements, but also blurry notions about what actually belongs to a business model, i.e. elements prior to or subsequent to the business model (e.g. technology, marketing, strategy, business plan, funding, or legal aspects).

4.2.4.1 Differentiation from Strategy

The differentiation between business models and strategy is extensively discussed in literature. According to Stähler, a business model is not a strategy [Stae02, p. 48]. Magretta agrees, saying that “a business model isn’t the same thing as a strategy” [Magr02, p. 89]. Business models do not consider competition, determining how to be better by differentiating from competitors is addressed by the strategy. Consequently, the strategy can be considered as a precondition for business models, outlining the vision and objectives of a company [Oste04, p. 14].

Most commonly, strategy is defined as a design for action, a deliberate plan before starting a concrete course of action [Mint87, p. 11]. Thus, the strategy is situated one level above the business model (cf. Figure 12).

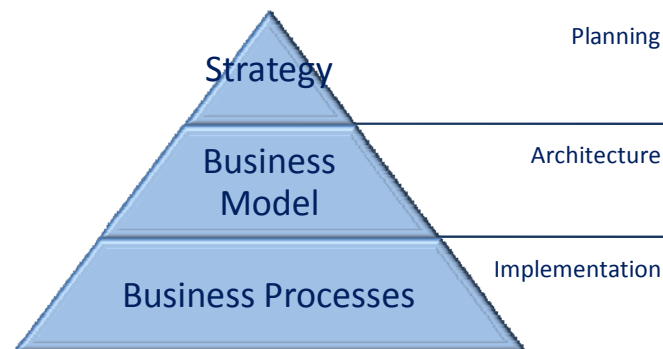


Figure 12: Business logic triangle

Source: Adapted from [OsPi02, p. 76]

4.2.4.2 Differentiation from Implementation

Just as the strategy of a firm is the basis for a business model on the one side, its implementation should also be excluded from the business model concept. The organizations and workflows that are necessary to execute a business model should be located to process layer, not to the business model layer. Osterwalder et al. put it as follows: “[A] business mode cannot be successful per se” although a couple of authors speak of successful business models. [OsPT05]. Oftentimes, the business model as itself is not enough to illustrate a company’s success. When it comes to sustainable market success, the market(ing) model can be the differentiating element [SaWe06; Timm98]. Furthermore, part of the implementation is the relationship management among partners based on trust [Alle02; BiRü02] which I see intimately connected with the incentive mechanisms (cf. section 4.2.4.4).

4.2.4.3 Differentiation from Business Plan and Business Case

In case of considering a start-up, after elaborating a business model, a business plan is being set up. A business plan finally justifies to external sources, e.g. investors¹¹ or analysts from rating agencies, that a business model is elaborate, feasible, and finally

¹¹ Venture Capitalists or outside creditors as well as investors when it comes to going public.

profitable [Stae02, p. 48]. Hence, a business plan can be interpreted as an intermediate step between the conceptual business model and its implementation, consulting competitive considerations made in a company's strategy. The content addressed in a business plan exceeds the scope of a business model in several areas. The business model itself does not explain *how* an organizational unit implements its vision or objective, respectively [Timm98, p. 32]. This is concretized in the marketing strategy which is amongst other things (e.g. funding) outlined in the business plan. Thus, a business plan aims to draw a broad picture of the economic perspective and the value creation of an organizational unit [Brug05, p. 30].

Several criteria of the business plan do not directly address the business and the participating actors themselves, but are focused on the implementation of a business (model) by considering external factors which determine the success (or failure) of a business model. For instance, the business plan introduces the marketing strategy in a much more detailed and holistic level than the business model, which only singles out specific factors that are directly connected to delivering value to customers. Moreover, the business plan pinpoints a realization schedule, risk analyses, and sources of funding, which are in turn not directly allocated to the business model, but rather consider its implementation and environment.

The business case is another instrument which is to be differentiated from a business model or a business plan. A business case is considered a scenario to economically evaluate an investment [Brug05, p. 11]. So, the scope of a business case is much more detailed than the scope of a business model. It highlights a single project, whereas business model and business plan picture a generalized view on the whole organizational unit.

4.2.4.4 Differentiation from Incentive Mechanisms

An incentive is defined as any monetary or non-monetary factor that provides a motive for a particular course of action, or counts as a reason for preferring one choice to the alternatives¹². As humans are purposeful creatures tending to opportunistic behavior, they deviate from acting in favor of a company or value system under certain circumstances. In order to ensure an organizational success, companies or networks, respectively, need to provide suitable incentive schemes to motivate participants to act in favor of the whole value system. Incentive systems are a crucial factor when it comes to implementing and executing business models, however they are not inherently connected with the essence of a company's or a network's business. Assuming a business-oriented behavior of involved actors, the business model would work as itself. Therefore, I exclude incentive mechanisms from the business model and assign them to the implementation phase of a business. However, incentive mechanisms are certainly a crucial factor to the functioning of a business.

4.2.4.5 Differentiation from External Forces

Not only the business model, but also strategy and implementation are subject to external forces. This environment is comprised by three kinds of influencing factors: Regulation/legal environment, market trends, and technology [AlZi01; Oste04; PaGi03; PaPD01]. Through changes in legal environment, business models can actually become illegal. Especially changes in internet-related regulation, e.g. privacy, must be continually considered by companies in the e-business sector. The market forces emanate from two sources: customer and competitors. The competitive environment as an external factor and the business model are strongly linked since it is the business model which enables

¹² See <http://en.wikipedia.org/wiki/Incentives>

a firm to have competitive advantage. Technological change enables companies to exploit whole new business opportunities, not only in the value creation process, but also by providing new billing opportunities, distribution channels, or ways to communicate with partners. However, especially the link between business models and ICT is obviously very strong. With the emergence of e-business models, the business model cannot be decoupled from technology anymore. ICT can be both an essential part of the value creation (e.g. an online auction) and an enabler for innovative business models, e.g. facilitating the communication in large and globally distributed partner networks. So, the environment does not only take influence on the business model in a competitive manner, but also in a macroeconomic manner, exerting pressure through government policies, regulation and deregulation, technological improvement

4.2.4.6 Summary

Following the differentiations made in this section, I was able to integrate the business model in an overall view on a firm or a network, respectively and thus clarify its role in respect to related concepts. These dependencies are illustrated in Figure 13 via a business stack. Roughly spoken, the business model closes the gap between more abstract strategic issues and detailed business process considerations.

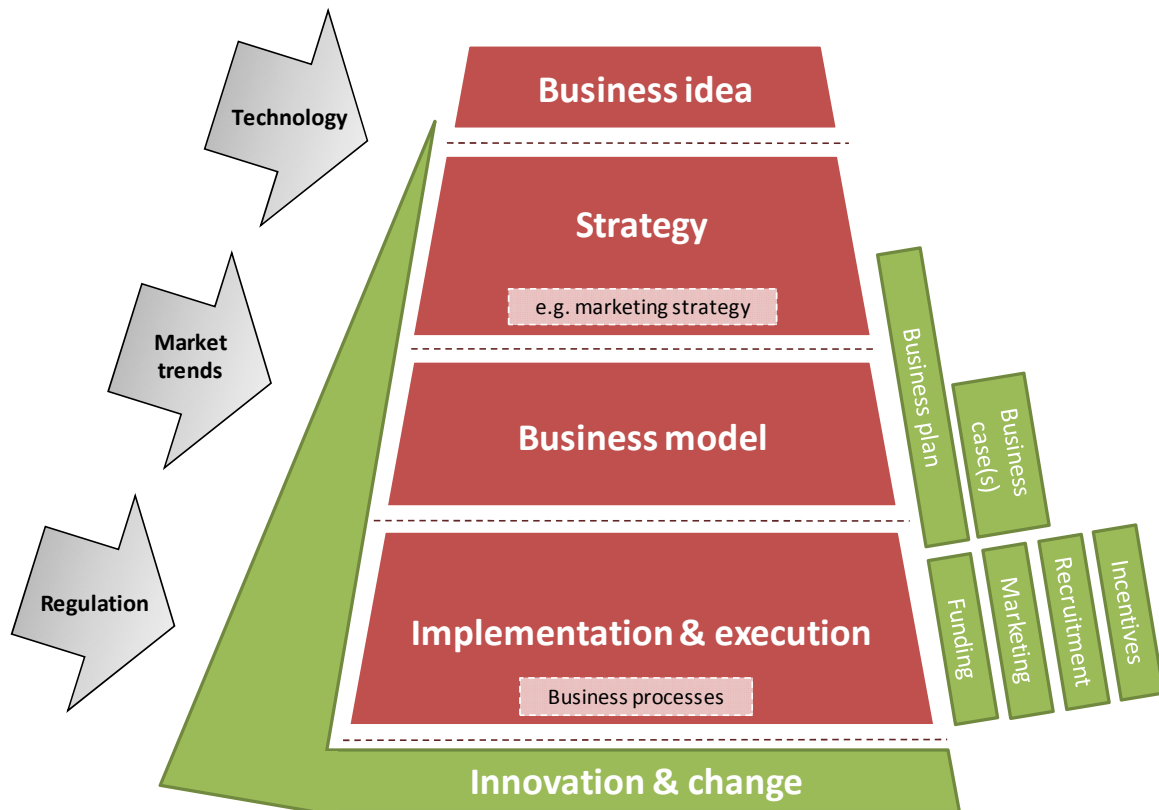


Figure 13: The business stack

4.2.5 Typologies of State-of-the-Art Business Models

Business model research is not only about defining the concept and decoupling it into partial models or components, respectively. A considerable number of authors¹³ also dealt with classifying business models, thus providing generic business models that are mostly categorized on the basis of specific criteria [PaGi03, p. 339].

¹³ Cf. e.g. [AfTu03; EiHT01; LiCa00; Rapp01; Timm98; WeVi01; Wirt01]

Business models are abstract, rather complex concepts which can be concretized by developing a classification scheme [Lamb06, p. 2]. Since companies in networked economies pursue a variety of business models, it is useful to typecast them. The basic idea that enables a differentiation of individual business model types is the identifiability of the criteria raised. Now, the subsequent question is precisely what criteria to use for classification. In theory each and every business model component could be applied. We will see in the following sections which criteria seem to have prevailed for typology purposes.

Besides the contribution of Tapscott et al., literature lacks business model typologies for business value networks. However, looking closer at the definition of Tapscott et al. [TaLT00], they provide a hybrid form somewhere between a categorization of business web types and a typology of business models in business value networks (cf. section 5.1.4.2) so that we can support the novelty of a typology for business value networks. In preparation of such a typology that is planned to be provided in future work, I will shortly introduce some of the mostly-cited typologies for traditional e-business companies.

4.2.5.1 Generalized Business Models by Timmers (1998)

Timmers compares e-business transactions with a well-known concept, the value chain. Here, it is important to know how the elements of a value chain can be identified and what mutual relationship the interaction partners have. On grounds of these observations, the value chain can be recombined with the newly acquired information.

This systematic approach to recognize business models with the help of the value chain leads to a large amount of differing models. Timmers, however, limits the discussion on the eleven most important business models [Timm98; Timm99, pp. 5-7] which are visualized in Figure 14:

- E-shop as web marketing of a company with the possibility to order and pay online
- E-procurement as electronic tendering and procurement of goods and services
- E-auction as the offering of bidding mechanisms via the internet
- E-mall as an electronic collection of e-shops aggregated under one common umbrella
- 3rd party marketplace as an agency overtaking marketing activities for other companies, possibly enriched by value added services such as payment, ordering, or secure transactions.
- Virtual communities as providers of added value for communities
- Value chain service providers as specialized providers of a specific function in the value chain, e.g. payment or logistics
- Value chain integrator as providers that integrate several steps of the value chain
- Collaboration platforms as providers of platforms offering tools and an appropriate environment for collaboration between companies
- Information brokers as providers adding value to the huge amount of data available on the web, e.g. search engines or customer profiling
- Trust services as 3rd parties making money by offering trust services such as certification or notarization.

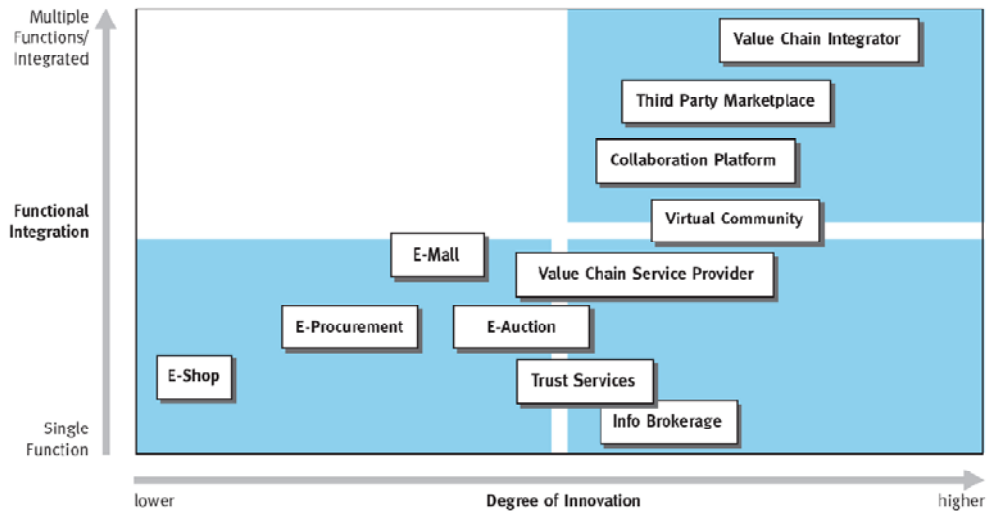


Figure 14: Classification of internet business models according to Timmers

Source: [Timm98, p. 7]

The internet business models are classified by their degree of innovation and their functional integration – where the basic criterion for the typology is the value offered to customers. Here, degree of innovation is reflected in several business model components. For instance, a business model can be innovative because of new revenue models, distribution channels, collaboration approaches, or novel products or services offered.

This classification enables a differentiation of organizations based on the range of services offered and the innovativeness of the applied models. This means that companies that merely expand their existing business to an online platform are hardly innovative and are limited in functionality.

4.2.5.2 Operating Business Models by Linder and Cantrell (2000)

Linder and Cantrell categorize business models by two dimensions, a model's core profit-making activity and its relative position at the price/ value continuum [LiCa00, p. 6]. The core activity can be providing goods or services, channel services, or intermediary services. The price/ value continuum indicates if a business model offers premium innovations or low-priced standardized offerings or something in between.

- Price models such as buying clubs or free offerings combined with advertising revenues
- Convenience models such as one-stop convenient or packaged offerings
- Commodity-plus models such as branded reliable commodities or mass-customized commodities
- Experience models such as extensive selling or relying on the image of a brand
- Channel models such as vertically integrated offerings or value-added reselling
- Intermediary models such as market aggregation or market making
- Trust models such as trusted solutions or trusted advisory
- Innovation models such as the offering of incomparable products or services

4.2.5.3 Taxonomy of business models by Afuah and Tucci (2001)

Afuah and Tucci introduce seven major business models characterized by the revenue model [AfTu03, p. 103].

- Commission: Fees imposed by a 3rd party based on the size of transactions

- Advertising: Free or cheap offerings subsidized by advertising (cf. also Rappa's Advertising model).
- Markup: Value added in sales, e.g. virtual merchants
- Production: Value added in production, analogue to Rappa's manufacturing model. Customers are approached directly without intermediaries.
- Referral: Fees for steering customers to another business
- Subscription: Fees for flat rates/ unlimited use
- Fee-for-service: Fees for metered service (cf. also Rappa's utility model)

The taxonomy is organized by the revenue model, however, the authors state that this is only one of (at least) four dimension to classify business models which have been developed in advance (cf. also 4.2.1.10): Profit site (position in the value network where the profit is created), commerce strategy (B2C, P2P, etc.), and the pricing model (fixed price, auctioning, etc.). For these dimensions, the authors provide similar taxonomies [AfTu03, pp. 114-116].

4.2.5.4 Internet business model taxonomy by Eisenmann et al. (2001)

Not introducing a new definition for business models, the authors base their understanding of the concept on [ChRo02]. Eisenmann et al. point out that most of the internet companies facilitate the delivery of information, goods, or services to end-customers and can be allocated to one of the following eight generic business models [EiHT01, p. xii]. The business model types are evaluated using the dimensions value proposition (how value is created for the user), economics (revenue, cost, contribution margin¹⁴, customer lifetime value¹⁵, customer acquisition cost, and profitability), and general growth strategies ("get big fast", "get it right first"). However, sound criteria for the classification are not provided.

- Internet service providers: Connection of customers and businesses to the internet.
- Online portals: Navigational assistance referring to third party content and offerings.
- Online content providers: Distribution of copyrighted information and entertainment via the internet.
- Online retailers: Distribution of physical goods via the internet (e.g. "click-and-mortar"¹⁶) delivery is usually managed by 3rd parties. Analogue to Afuah and Tucci's Markup-based business model.
- Online brokers: Support in bringing together buyers and sellers as well as support in completing the mediated transaction.
- Online market makers: Similar to online brokers, online market makers facilitate information discovery. The difference can be found in their role. While online brokers represent clients, market makers just organize a marketplace by providing a trading infrastructure and respective rules.
- Networked utility providers: Providers of connections between users and websites or with each other.
- Application service providers (ASPs): Provisioning of application software on remote servers which is mostly paid for per usage.

¹⁴ Total revenue – Total variable cost

¹⁵ The customer lifetime value (CLV) is the total contribution margin generated by a customer while she is bound to a specific service provider.

¹⁶ Traditional stores that also sell over the internet [AfTu03].

4.2.5.5 Taxonomy of Business Model Types by Rappa (2001)

Rappa's attempt to "present a comprehensive and cogent taxonomy of business models observable on the web" [Rapp01] bases on several criteria that are not consistent. For instance, whereas the business model type "advertisement" is categorized by the revenue model, the type "manufacturer" is more based on the distribution channel, while "intermediaries" are characterized by the type of service offered. Rappa introduces nine (generic) forms of e-business models:

- Brokerage model: Brokers or market makers that bring buyers and sellers together and facilitate transactions (e.g. search agents or hosting services for online merchants).
- Advertising model: Providers of product or service offerings that also generate revenues by additionally displaying advertising messages.
- Infomediary model: Data collectors which analyze and preprocess data about consumers or producers.
- Merchant model: Wholesalers and retailers of goods and services.
- Manufacturer (direct) model: Manufacturers that reach their customers directly without intermediaries by exploiting the "short cuts" on the Web.
- Affiliate model: Providers that offer "pervasive" purchase opportunities, wherever users on the web surf (e.g. banner exchange and pay-per-click providers)
- Community model: Providers pinning users down by offering goods and services users invested a good amount of time and emotions into, i.e. exploiting the loyalty of users.
- Subscription model: Providers that charge a periodic fee to subscribe to a service offered electronically. Within this model, price discrimination (premium vs. basic membership) is considered a profitable measure.
- Utility model: Metered services based on actual usage rates.

4.2.5.6 Typology of Atomic E-Business Models by Weill and Vitale (2001)

Based on their differentiation between atomic e-business models and e-business models (cf. 4.2.1.17), Weill and Vitale's developed a typology for atomic e-business models characterized by strategic objectives, revenue sources, success factors, and core competencies [WeVi01, p. 25]. However, a clear distinction of how the components are included in the typology cannot be found. Each of the eight models describes a different ways of conducting business electronically.

- Content provider: Companies that create and provide digital content via 3rd parties
- Direct to customer: Analogue to Rappa or Afuah and Tucci's Production and Manufacturer model, respectively, direct to customer describes companies that directly interact with end-customers
- Full-Service Provider: Vertically integrated providers, covering the full range of customer needs, oftentimes via a single point of contact
- Intermediary: Parties that link multiple buyers and sellers (cf. e.g. the intermediary model of Linder and Cantrell)
- Shared infrastructure: Provider of infrastructure shared by its owners, obviously a superset of the collaboration platforms introduced by Timmers.
- Value net integrator: Coordination of product flows from suppliers to allies and customers.
- Virtual Community: Communication facilitator in communities
- Whole-of-Enterprise/Government: Single point of contact in B2C and G2C applications

4.2.5.7 4C-Net-Business Model by Wirtz (2001)

Wirtz introduces a basic typology to classify e-business models: The 4C-Net-Business-Model [Wirt01, p. 88]. This is a collection of four basic business models – Content, Commerce, Context, and Connection – that organizations can be assigned to. Obviously, Wirtz uses the type of value created to make a distinction into categories. Companies that can be assigned to the Content model largely do business with information. This includes “public interest content” as much as “special interest content”. Many of these companies run information portals, such as news publishers that offer their services online. Other companies focus on topics that are not of any interest to the general topic. In these niches in particular, there is enormous potential - the large amount of niche products adds up to a market comparably attractive.

The business model Commerce is the most traditional of the four business types. Here, business transactions occur directly between the customer and the company.

The quickly growing information availability on the internet and the accompanying complexity has paved the way for a new business area. The business model Context describes services that enable a higher market transparency. Here, the user is supplied with an overview of how and where to find the desired information.

The Connection model deals with establishing the network connection itself. These physical network connections are a basic prerequisite for using the internet and are ordinarily offered through internet service providers.

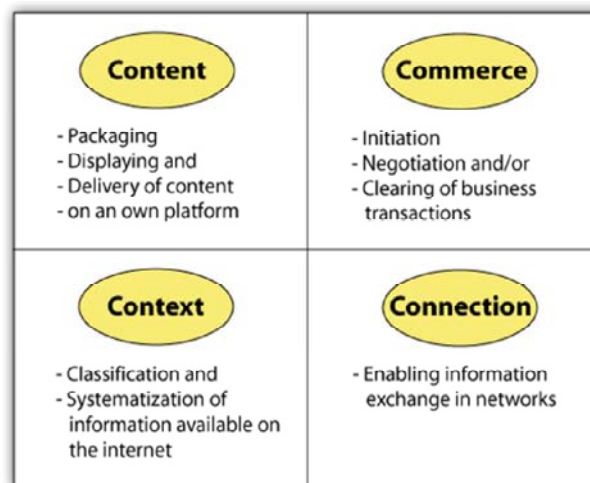


Figure 15: The 4C business model according to [Wirt01]

Source: Adapted from [Wirt01, p. 88]

4.2.5.8 Summary

Summarized, one can constitute that the proposed taxonomy by the afore-mentioned authors cannot be considered exhaustive or definitive. Due to their highly dynamic environment, internet business models continue to evolve. New and interesting variations can be expected in the future (cf. also [Rapp01]) – e.g. with respect to business value networks.

As assumed, the criteria used for the classification of business models differ, oftentimes they seem to be more intuitively chosen than based on a specific business model component. The question which criterion to use for a distinction of business model typologies cannot be answered in general. Still, precise use of business model components when designing business model topologies would provide a more coherent framework. Wirtz suggests the usage of the value created as classification criterion since

it provides homogeneous classes since it captures a lot of “pure players” offering an exactly circumscribable value, whereas other criteria oftentimes lead to duplications. Moreover, the concrete business models assigned to the classes would be more heterogeneous than in the case of using the value created as classification criterion.

Nevertheless, a unique classification of specific business models into a category is of course not always possible, such that a certain overlap between the categories must be accepted [Wirt01]. A firm may combine several different models as part of its overall Internet business strategy. For example, when using the revenue model as classification criterion, businesses might want to blend advertising with a subscription model [Rapp01]. Importantly, the criterion according to which the business models are classified and the criteria they are evaluated against might be different (cf. e.g. [Timm98]).

A noticeably large number of contributions explicitly or implicitly act upon the assumption of business-to-consumer (B2C) relations. Wirtz maps his categories to a business-to-business environment after having concentrated on B2C relations, finding out that the basic framework stays the same, but varying in some characteristics [Wirt01, p. 95].

Which criterion/criteria to be chosen for a classification of business model types in business value networks is an open issue – first indications are given in the analysis of business value network characteristics provided in chapter 5 and in the business model framework provided in chapter 7.

5 Business Value Networks

In the last decades, the business environment has changed. Hierarchical firms started to cooperate in firmly-coupled strategic networks with stable inter-organizational ties [AmZo01, p. 498], recently exploring the benefits of moving to more loosely-coupled configurations of legally independent firms.

Though the characteristics of such business webs evoke new challenges, specific contributions to business model science is scarce since the burst of the dot com bubble. In order to be able to discuss the impact of such business webs on business models and business model frameworks, one has to preliminarily look at the characteristics of business webs. Furthermore, the terms business web, value network, (future) business value network, and derivatives thereof are used inconsistently in academic literature, with the distinction of these terms being rather fuzzy.

My approach is to start with the definition of business webs since this stream of research provides the richest literature basis. Afterwards I enrich the outcome with the additional characteristics of value webs and business ecosystems to finally come to the definition of business value networks as a concept made up of the three afore-mentioned organizational formats.

I concentrate my analysis on economic aspects, delving deeper into facets that are relevant for a revised definition of business models, deliberately disregarding the technological aspects emphasized in some contributions to literature (cf. e.g. [BaDB05, BaDu06, Gala05]).

5.1 State-of-the-Art Analysis of Business Webs

This section introduces the concept of business webs. Business webs are not to be mistaken as a form of business models. Rather they are an organizational form¹⁷ being discussed for roughly a decade, especially for inter-organizational coordination. The continuum of organizations reaches from hierarchy to market, depending on the degree of ownership integration, as illustrated in Figure 16. Between both extremes there are countless hybrid forms of coordination. Where boundaries between firms are blurring network forms of organization come to existence.

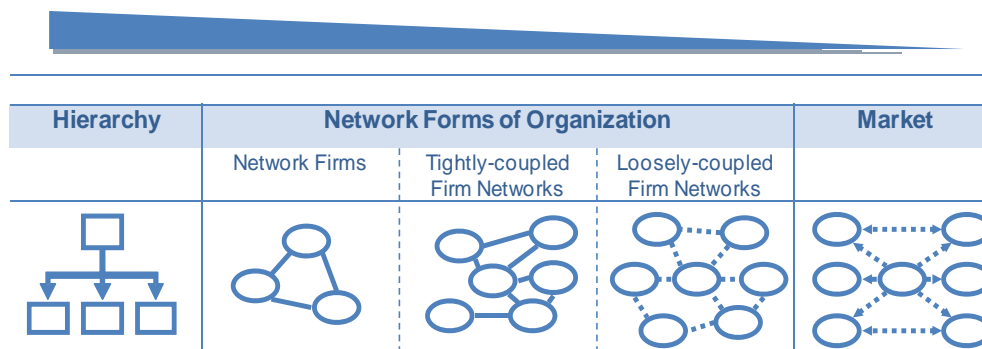


Figure 16: Continuum of organizations between hierarchy and market

¹⁷ However, they often depend on each other, either as enabler or requirement. Business webs, for instance, result in a new overall business model that stands beside the business models of the participating companies. On the other hand, participating in a business web requires dynamic and flexible individual business models of the partners.

Business webs are an instance of the category of loosely-coupled firm networks, since the participants are bound by the greatest degree of independence. The differentiation to the market form of organization is that business webs still exhibit implicit relations, not only anonymous, standardized transactions.

5.1.1 Brief Literature Review

Presumably, Hagel was the first author to describe business webs as “a set of companies that use a common architecture to deliver independent elements of an overall value proposition that grows stronger as more companies join”¹⁸ [Hage96, p. 72]. Written in 1996, his article was strongly influenced by the rise of the internet and associated technologies. The environment for companies was changing rapidly, challenging established industries with risk and uncertainty. Especially in high-tech industries the innovation rate was increasing dramatically. As a result, companies were looking for new strategies to face those challenges.

Independently from Hagel’s article, Tapscott et al. introduce their view on business webs in 2000, stating that a “b-web is a distinct system of suppliers, distributors, commerce services providers, infrastructure providers, and customers that use the Internet for their primary business communications” [TaLT00, p. 4]. While Hagel’s view on business webs is more general and strategic, Tapscott et al. define five concrete business models that are based on business webs: agora, aggregation, value chain, alliance, and distributive network. These business webs are characterized by nine features: internet infrastructure, value proposition innovation, multi-enterprise capability machine, five classes of participants, coopetition, customer centricity, context reigns, rules and standards, and bathed in knowledge [TaLT00, p. 19].

Also in 2000, Zerdick et al. pick up Hagel’s concept of business webs as “Business webs are groups of companies that participate in the same value chain system independently of one another and thus exist in mutual complementarity” [ZPSA00, p. 179] proposing it as a new competition strategy for media and communications companies in the age of the internet economy¹⁹.

In 2005, Steiner considered formation and early growth of business webs, coming up with a rather extensive definition of business webs as “customer centric, heterarchical organizational forms consisting of legally independent but economically interdependent specialized firms that co-opetitively contribute modules to a product system based on a value-enabling platform under the presence of network externalities which are supported by extensive usage of information and communication technologies” [Ste05, p. 53]. The term heterarchy goes back to McCulloch (1945) [McCu45]. Today, the term is used to describe one way of how organizations can be organized: hierarchy, heterarchy, and responsible autonomy. Fairtlough calls these three ways the triarchy. “Heterarchy is multiple rule, a balance of powers rather than the single rule of hierarchy” [Fair07].

As a summary of above-mentioned contributions, business webs can be defined as heterarchical clusters of companies²⁰ consisting of independent enterprises that work for a common goal. In doing so, the participants increase flexibility, spread risk, share

¹⁸ Hagel speaks about “webs” in general and he introduces the term “economic web”. From the context it can be derived that this is equivalent to the term “business web” that later authors use.

¹⁹ Franz [Fran03] also extensively deals with business webs, though not providing an own definition but relying on the definition established by Zerdick et al. [ZPSA00].

²⁰ Heterarchy of partners can be seen as a state wherein any pair of cooperating organizational units is likely to be related in two or more differing ways (see <http://en.wikipedia.org/wiki/Heterarchy>), but still with a more central element than a market.

investment cost (e.g. that comes with the introduction of new technologies), and leverage the capabilities of each other. The main difference to other forms of cooperation is that there is no fixed contractual relationship between participants. It is the economic self-interest that drives them in a co-opetitive environment, supported by an ad hoc creation of contracts, usually between anonymous or generic entities.

5.1.2 Formation of Business Webs

As stated above, the rapidly changing business environment forces firms into collaborating in business webs. There are literally three forces for the emergence of business webs: policy issues, heterogeneity in customer demand connected with the requirement for firms to concentrate on their core competencies, and rapid technological change amongst others favouring globalization [Ste05; TaWi06]. These three factors result in modularization, a prerequisite for the formation of business webs [Ste05, p. 123].

- Policy issues summarize the impact of liberalization and deregulation on the market structure of industries. Increased competition in those markets leads to disaggregation, specialization and the international division of labour (cp. also second and third factor).
- Today, customers are more demanding. Mass products do not serve their needs any more, they ask for individual products that better serve their needs [Ka06, p. 16]. With this increasing production complexity, “traditional” economies of scale do not work anymore. Mass customization and modular design with partners creating complementary goods and services within their core competence field are approaches in high-volume industries to react on this challenge.
- Rapid technological change is a major driver for modularization. “The loosely coupled organizational forms allow organizational components to be flexibly recombined into a variety of configurations, much as a modular product system enables multiple end product configurations from a given set of components.” [ScSt01, p. 1149]. Technology is also a major driver for smoother and more seamless communication and in connection with this for globalization.

These three contingencies result in modularization of organizations, which in turn creates new opportunities for the formation of business webs. Business webs re-aggregate those modules. “The establishment of a business web is an act of institutional entrepreneurship, where entrepreneurial firms define rules and standards for the new market or industry.” [Ste05, p. 124] This task is undertaken by the so called shaper (cp. Section 5.1.3.3).

5.1.3 Characteristics of Business Webs

5.1.3.1 System Product

The companies in a business web deliver independent elements of an overall value proposition [Hage96, p. 72]. These independent elements, e.g. goods and services, complement each other in a way that the total value perceived by the customer is higher than the sum of all individual parts. Moreover, the customer may even only value the whole system product and not its individual parts [ZPSA00, p. 179]. Obviously, interoperability and compatibility become an issue in a systemic environment. This is why Hagel sees a (technological) standard as a precondition for the formation of business webs. The standard insures that the independent elements of the system product fit together. It is the shaper who imposes a standard as the central element in a business web. Then adapters align their complementary products to it. Standards can be open or proprietary, market-based or cooperatively defined in official standardization bodies.

Most of the time, companies follow a mixed strategy, because there is a trade-off between open and proprietary standards. Open standards reduce the risk for adapters and thus make it easier to introduce a new system product. However, the shaper loses control over the business web to some extent. This is why standards are only open as much as it is needed to attract enough adapters.

The standard is the foundation of a so-called value-enabling platform. “A value-enabling platform is a socio-technical system that provides the infrastructure for suppliers of complementary modules which are loosely connected via open interfaces” [Ste05, p. 55]. Depending on the type of business web (cp. Section 5.1.4 for details) such a platform can either be a technical standard, a marketplace, an installed customer base, or a combination of these.

5.1.3.2 Co-Opetition

It is crucial for the participants in the business web to support the whole value network, because their market success is coupled with one another [ZPSA00, p. 179]. Generally, in the network economy the primary focus of a company shifts from maximizing its own value to maximizing the network’s value [Kell99, p. 67].

This is the reason why participants cooperate even though there is no contractual agreement between them. Economic incentives bring the participants together, not a contractual relationship [Hage96, p. 76] - a so-called “win-win” situation. The participants produce complementary parts, thus they heavily depend on the system product as a whole. Of course, this does not stop competition to take place. All participants maximize the network’s value, but there is intense competition for shares of the generated value. Moreover, strategic inner-network partnerships of two or more participants are possible in creating a particular value, while there is “traditional” competition of partners within the network in other fields where they offer homogeneous products.

5.1.3.3 Strategic Roles

Generally, the literature refers to two different classes of strategic roles in business webs: adaption and shaping. The shaper controls the central element in a business web, and adapters add complementary goods to it [Hage96]. Tapscott et al. do not use the terms shaper and adapter, instead they use the terms “context provider” and “b-web leader” as synonyms, and “participant”. Despite the different naming, the context provider takes the same position as the shaper, managing customer relationships and choreographing the value-creating activities of the entire system. Additionally, the context provider imposes rules and standards that participants must know and adhere to [TaLT00, p. 21].

Zerdick et al. state that the relation between shaper and adapters is hierarchical [ZPSA00, p. 179]. The shaper controls the business web and adapters take a more or less reactive position. However, the market determines how many adapters are in place, e.g. how many complementary products are in demand [Fran03].

Steiner argues against a hierarchical structure with centralized decision making by the shaper [Ste05, p. 54]. He sees a heterarchical governance structure in business webs with dispersed decision rights. However, the shaper still plays an important role in controlling the business web and there are differences in how tight the relationships to adapters are. Whereas earlier literature [Hage96; ZPSA00] sees the adapters as a homogenous mass, motivated only through the win-win situation, a different notion can be found in [Fran03; Stei05]:

- Core adapters: Tightly coupled relationships/ inner circle adapters
- First tier co-operations: Contractual relationships/ outer circle adapters

- Second tier co-operations: Informal relationships/ registered adapter
- Third tier co-operations: No close relationship/ independent adapters

Nevertheless, second tier co-operators and third tier co-operators already contribute to the whole network value without contractual relations to the shaper. Certainly, the shaper will establish contractual relationships with some core adapters. Obviously, the ideal conception of loosely-coupled organizations without any contractual linkages is not feasible in practice for all connections in the network. Core actors within the network which are essential for retaining the value creation are oftentimes bound by contracts, not only via mere network effects. But this is not characteristically for business webs. Rather these tight relationships better relate to network firms and tightly-coupled firm networks. Like [Hage96, p. 76] and [ZPSA00, p. 181] argue, the differentiating feature to other concepts is that the shaper-adapter relation is based on the win-win situation. This is a major difference to other network types (cp. also 5.2). Although the inner and outer circles of adapters are quite important because they deliver core components, it is the registered and independent adapters that are the critical mass that determine the success of the business web [Fran03, p. 61].

5.1.3.4 Increasing Returns

The term increasing returns goes back to economist Brian Arthur: “Increasing returns are the tendency for that which is ahead to get farther ahead, for that which loses advantage to lose further advantage.” [Arth96]. Kelly describes increasing returns as “self-reinforcing success” [Kell99, p. 23]. Generally, increasing returns are a result of positive feedback loops (cp. Figure 17).

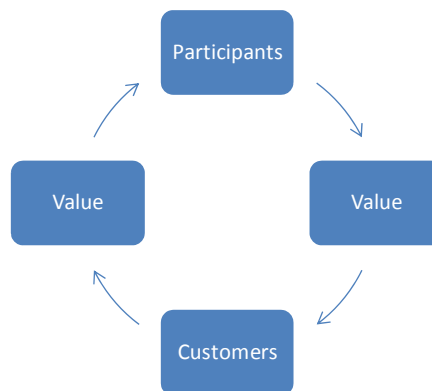


Figure 17: Positive feedback loops

The more participants join the business web with their product or service offerings, the higher the value of the combined system product realized and experienced by the customer respectively. At the same time, this makes the web more attractive for new participants which in turn draw in more customers: “The value of connecting to a network depends on the number of other people already connected to it” [ShVa99, p. 174]. Due to the underlying network effects, the overall value of a business web increases exponentially²¹. This attracts more and more customers and participants to join. As a result, business webs often create “winner-takes-all” markets [ShVa99; Stei05].

²¹ Metcalfe’s Law says that the value of the network is proportional to the square of its peers (N^2). In a network with N peers there are $N * \frac{N-1}{2}$ possible individual connections.

The shaper of a business web needs to be aware of these dynamics and actively manage them. Increasing returns lock in customers and participants, and once the business web gains momentum, growth will be self-reinforcing. On the other hand, adapters have to watch out for promising business webs that are about to gain momentum. For them it is crucial to identify winners in an early stage, because competition for share will be much more intense in later stages. This can turn out to be extremely difficult: “In the past, an innovation’s momentum indicated significance. Now, in the network environment, where biological behavior reigns, significance precedes momentum” [Kell99, p. 35].

5.1.3.5 Modularization and Specialization

Modularity is a factor describing the degree to which single components of a (product) system can be separated and recombined. It describes both to the tightness of coupling between components and the degree to which the system architecture enables (or prohibits) the combination and matching of components [Schi00, p. 312]. Thus a modular system can be decomposed into sub systems so that the inner workings of these sub systems do not affect each other. These individual modules can be reorganized and recomposed to new systems without any change to them. Modularization is the process of defining modules, e.g. by decomposing systems. The above-mentioned system product (cp. Chapter 5.1.3.1) is a prime example for a modularized product.

Obviously, the idea of modularity is not only applied to technology but also to organizational design. Moreover, products and organizations design are closely related: Although organizations supposedly design products, it can also be argued that products design organizations, since “the coordination tasks implicit in specific product designs largely determine the feasible organization designs for developing and producing those products” [SaMa96].

Complete industries are moving from vertical integration to horizontal specialization. In theory, the whole system product could be produced by a single vertically integrated company. But in this case the company could not focus on its core competencies, having to cover the whole spectrum of the value chain. Also, it had to burden all the risks in a complex, changing and uncertain environment by itself. This is why companies tend to engage in networked value creation which allows participants to focus on their strengths. Hence, the web becomes a safety net: “The b-web’s leaders can leverage the capital assets of partners, but need to carry none of the associated liabilities” [TaLT00, p. 23].

Recently, single companies became aware of the phenomena that focusing on niches bears an enormous potential. This is mainly attributable to the lack of comparable offerings in such niches. This has been referred to as “long tail” [Ande06]. The rather simple concept behind “long tail” is that the niche markets, which are being occupied gradually, can be satisfied as profitably as the main markets. The large amount of niche products adds up to a market comparably attractive (cf. also Figure 18).

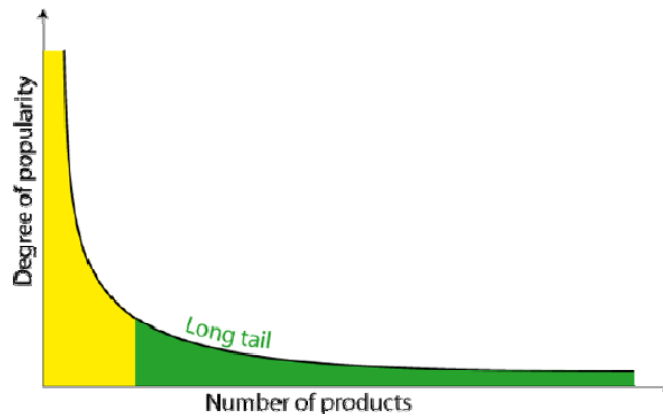


Figure 18: The long tail

Focusing on core competencies does not put constraints on the company or limit the reach of it. In contrary, by re-aggregating with partners in the business web a company can broaden its range of customer attractions. To which degree a system product is produced by division of labor between different companies varies. Efficient boundaries for organizations can be determined using the transaction cost theory approach²². The two extremes of how to organize business are hierarchy and market. It is the cost of transactions that decide whether to make internally or to buy on the market²³. The publication and specification of interfaces to the (proprietary) standard can minimize transaction costs for complementary products [Fran03, p. 67]. This is why the shaper oftentimes provides a value-enabling platform to the participants of the business web. To a high degree transaction costs are also lowered by means of extensive usage of information and communication technologies.

On the other hand, the participants in a business web need to be coordinated: Sometimes “integrated system products from a single firm such as Apple do better than products stemming from coordination between a number of concerns” [ZPSA00, p. 180]. The main cost driver here is the coordination of interfaces between the individual system components. Contributions to literature suggest that the term transaction cost should be replaced by the term interaction cost, which does not only cover the costs related to the formal exchange of goods and services, but also the costs of exchanging ideas and information [HaSi00]. Thus efficient partner management is one of the most important tasks of the shaper. The challenge is to solve the coordination problem subject to minimizing the cost of the transaction relations.

Summarizing it can be stated that modular design – and thus the associated paradigm of specialization - is not per se efficient. However, especially in complex and highly dynamic industries, forming value networks – especially business webs with their open structure - is more than an attractive strategic alternative. Zerdick et al. summarize the advantages of business webs related to modularization and specialization:

- Concentrating on core competencies strengthens specialization
- Sharing the risk involved
- High level of flexibility

²² Which was originally developed by Ronald Coase [Coas37].

²³ In business webs this does not necessarily mean buy on the market, instead let somebody else sell it.

- Modularization brings potential for innovation and allows for rapid market penetration
- Partners in the business web provide access to more extensive resources
- Fruitful interplay of competition and partnership

5.1.3.6 Customer-Centricity

Customer-centricity can be seen as a huge paradigm shift. Industrial-age companies were focused on mass production of goods and services. “Any customer can have a car painted any colour that he wants so long as it is black” [Ford17]. This citation by Henry Ford, bringing up the issue of efficient production is highly outdated nowadays.

The primary reason for this strategy was to gain economies of scale. Today, customers are way more demanding, asking for customized goods, tailored to their individual needs. At the same time, competition within industries increased dramatically, e.g. as a result of ongoing globalization. In order to differentiate themselves from competitors, it is no longer sufficient for companies to follow a lowest price strategy.

Indirectly, customer-centricity is already contained in Hagel’s definition in that business webs deliver a value proposition: “economic activity in technology webs focuses on maximizing value to the customer” [Hage96, p. 72]. Tapscott et al. see business webs as “highly responsive customer-fulfillment networks” [TaLT00, p. 21].

The business web concept makes customization a lot easier, offering each customer a unique value proposition. In the business web, the customer can choose from a huge variety of complementary goods and services and ideally assemble a personalized solution.

Customer-centricity as a thoroughgoing occurrence of customization as described by [Hage96; Stei05; TaLT00; Vand99] is just a milestone on the way to real customer integration into the value creation processes of organizations and webs. This phenomenon is described in chapter 6 in more detail.

5.1.4 Typologies

5.1.4.1 Typology Based on Hagel III (1996)

[Hage96] distinguishes between three different kinds of business webs: technology webs, customer webs, and market webs. The differentiation is based on the element that is holding together the business web, either a technological standard, a customer segment, or a marketplace.

“Technology webs organize around specific technology platforms” [Hage96, p. 72] For technology webs the concept of system products becomes clear. At the core stands a (de facto) standard that is provided by the shaper. In contrary to proprietary architectures, interface specifications are made available so that adapters can easily add complementary products and/or components.

The most prominent example for technology webs is the cooperation between Microsoft and Intel that has been formed in the 1980s. Around the so called “Wintel” platform, consisting of the Windows operating system and Intel microprocessor architecture, an ecosystem of independent software suppliers and hardware vendors developed. Until today, this technology web dominates the market for PCs.

“Customer webs revolve around the ownership of customer relations” [Hage96, p. 79]. The relationships to a particular customer segment are the assets that the shaper controls in this kind of business web. Shapers can make use of this knowledge to address target groups with individual service offerings. In return, these additional service offerings increase the value of the shaper from the point of view of customers. This leads to increasing returns dynamics.

Recent takeovers of Internet-based firms show how valuable such customer relations are. For example, in 2006 Google bought the video community YouTube for \$1.65 billion.²⁴ As the shaper, Google controls access to a vast community of daily users. At the beginning it was only community members sharing their videos online. However more and more professional firms (shapers) use YouTube as a channel to provide target groups with video material, e.g. advertisements. In September 2007, nearly 70 million people viewed more than 2.5 billion videos on YouTube.com.²⁵

“Market webs [are] organized around a specific type of transaction” [Hage96, p. 79]. In this case, the shaper does not control access to a certain customer group. Instead it is a physical or virtual marketplace that focuses on one special kind of transaction. The market web shaper brings together a critical mass of buyers and sellers by offering them all services needed for the transaction.

Amazon is a very good example for a market web. In the beginning, Amazon did only trade for own account, selling books to end customers. Then Amazon opened the marketplace for other sellers, providing them with a technical infrastructure to do business²⁶.

Some authors argue that technology webs build the most stable business web, since they create a technology-based lock-in effect for customers [Fran03; ZPSA00]. However, technological progress and shorter product lifecycles put much pressure on technology webs. Furthermore, due to network externalities that create positive feedback loops, market webs and customer webs can gain such momentum that they become monopolists in their area.

The distinction between technology webs, customer webs, and market webs is not strict. In contrary, transitions are seamless. Amazon is not only a market web that provides a marketplace for buyers and sellers. It also creates detailed user profiles on buying behavior that can be used in a customer web. And of course Amazon can be seen as a technology web shaper, offering an open e-commerce platform.

5.1.4.2 Typology Based on Tapscott et al. (2000)

Tapscott et al identify economic control and value integration as dimensions of differentiation for business webs. Within these two dimensions of differentiation, five basic types of business webs are being defined (see Figure 19).

The degree of control varies from hierarchical to self-organizing. Value integration can be low or high. Here, low value integration means that the business web offers a selection to the customer. While high integration stands for a combined service or product offering provided by different business web participants.

²⁴ See http://www.google.com/intl/en/press/pressrel/google_youtube.html.

²⁵ See <http://www.comscore.com/press/release.asp?press=1929>.

²⁶ Amazon Web Services (<http://www.amazon.com/gp/browse.html?node=3435361>).

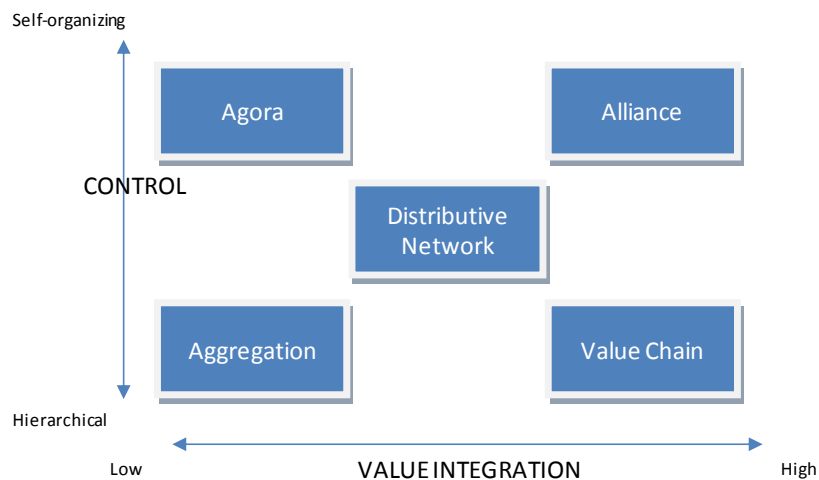


Figure 19: Business Web typologies introduced by [TaLT00]

Source: Adapted from [TaLT00, p. 28]

Agoras are “a real or virtual marketplace where buyers and sellers come together to collectively discover the price for a good or service” [TaLT00, p. 39]. The operator of an agora does not take possession of goods for resale. It is a neutral third party that offers a price discovery mechanism: open market, sell-side auction, buy-side auction, or an exchange²⁷.

In an *aggregation* business web, one company is a hierarchical leader, positioned as a value-adding intermediary between producers and customers. The main difference to the agora is that the operator directly deals with the customers. Aggregators add value in six ways: selection, organization, price, convenience, matching, and fulfillment. Thus, customer relationship management is a key success factor here²⁸.

In a *value chain* the level of value integration is typically very high. “Value Chains design, produce, and deliver products or services to meet a specific set of customer needs” [TaLT00, p. 95]. The business web leader, in this context called integrator, choreographs a network of partners that jointly deliver a highly integrated value proposition. In contrast to vertically integrated, industrial-age value chains, the business web is customer-centric. (customer-fulfillment network, cp. Chapter 5.1.3.6)²⁹.

*Alliances*³⁰ are the purest manifestation of business webs, since they “strive for high value integration without hierarchical control” [TaLT00, p. 164]. Typically, alliances enjoy network effects and increasing returns. “The core value proposition of an Alliance b-web is creative collaboration in aid of a goal that is shared across a community of contributors”

²⁷ eBay is probably the most prominent example for an agora. But there are other examples as well. In Germany, My-Hammer.de brings together craftsmen and clients.

²⁸ For example, the Internet platform Expedia offers travel products and services worldwide, delivering “consumers everything they need for researching, planning, and purchasing a whole trip”. See <http://www.expedia.com/daily/service/about.asp>.

²⁹ Dell sells computers directly to end-customers. Production processes are demand-driven only, there is virtually no stock. Thus, Dell developed not only high efficiency in production but also high customer satisfaction levels.

³⁰ Tapscott et al. use the term “alliance” different from other authors, cp. section 5.2.1).

[TaLT00, p. 140]. The authors identify six types of alliances: social, discussion, help, design collaborative, production, and games³¹.

Distributive networks neither create nor consume a product; they simply serve as transportation medium for the other business web types: “The core value proposition of a distributive network is to facilitate the exchange and delivery of information, goods, and services” [TaLT00, p. 164]. Most importantly, distributive networks evince network effects. The more customers use the network, the higher the value for all participants.

5.1.4.3 Comparison of the Typologies

Upon first reading, Hagel and Tapscott et al. take strikingly different approaches to categorize business webs. However, a comparison of the two typologies brings up many analogies.

Tapscott et al. describe production alliances as follows: “Participants create collections of modular goods, which connect with one another to provide users with an integrated solution to a need. Each participant is an autonomous producer” [TaLT00, p. 140]. This is exactly the same as the technology web Hagel describes. Even the idea of the system product is included.

An agora like eBay is a perfect example for a market web. Aggregations are like customer webs in that they focus on a certain customer group.

At a first glance, value chains are different in that the integrator takes much control over the production network. This could prohibit network effects and increasing returns. However, if the integrator offers an open platform/standard that all kinds of producers can connect to, then network effects might unfold. So depending on the organization, value chains might be more a tight network (cp. Section 5.2) or an open business web.

Finally, distributive networks are much like technology webs. The business web leader offers a medium for transportation which is by design an open network. But the business web is more than that. Only the services that are added to the medium and the connected businesses form the web. Consequently, the distributive network is mostly comparable to the technology web.

So where is the difference between the two approaches presented above? It is the view that the authors take on business webs. Hagel discusses them from a more theoretical and abstract perspective. His typology distinguishes between technology, customer and market webs. These are very basic concepts about what can be at the core of a business web. But it is not a concrete business model. Tapscott et al. take a different approach. They define five generic business models depending on the two dimensions control and value integration. Given these examples, Tapscott et al. see business webs more comprehensive than Hagel does. However, the differences are not so wide that the theories do not fit together. In contrary, they supplement each other well.

5.2 Differentiation to Related Concepts

There are many other concepts being discussed that are similar to business webs as they are described here: virtual organizations, value nets, value webs, business ecosystems, and economic webs, to name a view. Steiner describes the labelling problem as follows: “The various authors discuss comparable organizational forms with similar firm examples using different labels [...] and differing organizational forms with differing examples from the field using the same label (business web)” [Ste05, p. 45]. For example, Cisco is being described as a virtual organization, a network orchestrator, a value net, a business web,

³¹ The Wintel partnership is also a prime example for a production alliance.

and calls itself a networked virtual organization³². Undoubtedly, the above mentioned concepts are related to each other, however they are not entire synonyms.

Thus, still there is a need to differentiate business webs to other well known concepts. Importantly, I refrain from differentiate networks from the idea of business webs like Häcki and Lighton did [HäLi01]. They claim that webs operate without any formal relationships among participants whereas networks are well-defined and often mirror a traditional manufacturing value chain. I disagree, arguing that the concept of “networks³³” or “webs” is rather an umbrella term for the multitude of different manifestations of networked value creation than a specific type of cooperation. Of course, the business web itself can again be split up in more concrete manifestations, but not at the same level as “networks”.

Similar to the concept of business models, academic literature lacks a continuously and consistently used definition of networks. Following Sydow’s working definition [Sydo92], a network is a hybrid organizational form between hierarchy and market (cp. also Figure 16) which is characterized by economic relationships between legally independent organizations. The participating partners act as value creating units, leveraging their specific competencies and resources in order to optimize the overall value of the network. Each partner brings in its specific core competencies, thus dissolving the conflict of goals between specialization and a broad range of service offerings [BaBE03, p. 3]. This holds true for virtually any type of networks.

In the following sections, different network types will be presented and their main differences will be elaborated.

5.2.1 Traditional Network Types

Exact definitions of more “traditional” network types than business webs are also not trivial – as in many other areas in business science, approved definitions are scarce. We heavily base my definitions upon [Fran03].

- Joint ventures are co-operations where legally autonomous partners hold equal shares. The choice of partners is mutually selective, aiming at the pursuit of a common objective. Such bonds are often undertaken in order to cope with highly complex tasks which cannot be performed by single company.
- A strategic alliance is a formalized, long-term relationship of companies aiming at counterbalancing own weaknesses with strength potentials of partners. Such networks are basically open to further companies, provided that they put forth new resources.
- Strategic networks differ from general business networks by featuring a strategic leadership of one or more focal companies. The focal company decisively influences the partners’ overarching strategy and the form and substance of their inter-organizational relationships. Such networks are often open to new partners as long as they obey to the commonly developed strategy. Amit and Zott allude to the very stable ties that are established between the network partners [AmZo01, p. 498].
- A virtual organization is a temporarily installed network (oftentimes to work on a complex project) of autonomous companies connected via information technology. These companies team up by pooling parts of their resources in order to accomplish a common aim and to pool risks and costs [HTWK07, p. 23]. The cooperation is comparably loose, a formalized organization or hierarchies are not characteristic to virtual organizations.

³² Cp. [BoMa00; HäLi01; KrDe02; TaLT00], and <http://www.cisco.com/web/about/ac79/wp/bridge.html>

³³ There is no exact translation for the German term “Wertschöpfungsnetz(werk)“. We continue to use “network” knowing that this term also might incorporate non-business areas.

Table 3 compares business webs with the other existing coordination forms mentioned above. The strategic network exhibits the greatest similarity to business webs, nevertheless having much more stringent ties between the partners. Not displayed in Table 3 **Fehler! Verweisquelle konnte nicht gefunden werden.**, but being one of the most striking differentiators between business webs and the other network types mentioned above is the setting of the partners within the network. While the shaper in the business web does not have to know of the existence of (independent) adapters (cp. section 5.1.3.3), the partners are known among one another in joint ventures, strategic alliances, strategic networks, and virtual organizations.

	Duration	Cross ownership	Choice of partners	Openness of network	Market models	Type of product	Leadership position
Joint venture	Long-term	Not usual	Tightly focused	conditionally closed	independent	Individual or system	No
Strategic alliance	Long-term	Yes	Tightly focused	Closed	independent	Individual or system	Yes
Strategic network	Long-term	Not usual	Planned, evolutionary	conditionally open	independent	Individual or system	Focal company
Virtual organization	Rather short-term	Not usual	Ad hoc	Open	independent	Individual or system	Depending on problem
Business web	Long-term	Not usual	Planned, evolutionary	Rather open	Network effects	System	Shaper

Table 3: Different network types

Source: Adapted from [Fran03, p. 46]

5.2.2 Value Webs

The term value web was introduced by Selz in 1999: “The value web is an evolving organizational model with a modular design of suppliers, customers, even erstwhile rivals grouped around and organized by a central value web broker” [Selz99, p. 9].

The value web broker is at the heart of the value web. First of all, the value web broker is an intermediary, linking together demand and supply. The value web broker adds value by acting as an infomediary or by assembling formerly discrete products and services. Playing the intermediary, the value web broker does not own all or even most necessary assets. Instead it acts as coordinator, integrator and interface, to bring together all partners accordingly. Depending on the importance of partners, the relationships will vary from loose connections to full vertical integration.

Obviously, there are many similarities between business webs and value webs. In the words of Selz, the main difference is that “value webs are constituted and defined by the role of the broker while business webs are characterized by more open and flexible exchange relations” [SeKI02, p. 130]. But this difference is very vague. In both concepts there are different degrees of relationships, from loose to more tight. Another difference might be that the value web broker is the only party that directly deals with the customers and offers them the complete integrated solution. However, Tapscott et al. describe the business web leader in a value chain exactly the same way.

5.2.3 Business Ecosystems

The concept was first introduced by Moore in 1993 [Moor93], defining business ecosystems as an “economic community supported by a foundation of interacting organizations and individuals - the organisms of the business world. This economic community produces goods and services of value to customers, who are themselves members of the ecosystem. The member organizations also include suppliers, lead producers, competitors, and other stakeholders. Over time, they co-evolve their capabilities and roles, and tend to align themselves with the directions set by one or more central companies. Those companies holding leadership roles may change over time, but the function of ecosystem leader is valued by the community because it enables members to move toward shared visions to align their investments and to find mutually supportive roles.” Thus, in business ecosystems, companies co-evolve around a new innovation, working cooperatively and competitively to support new products and satisfy customer needs.

The similarities to the above-mentioned business webs are striking as the characteristics of business ecosystems are just analogue to the attributes we assume to be inherent to business webs. Iansiti and Levien solidify this notion, pointing out that the such loose networks “affect, and are affected by, the creation and delivery of a company’s own offerings” [IaLe04, p. 69]. The authors highlight that participants in such a business ecosystem ultimately share the fate of the network as a whole, regardless of their strength. To enable this situation of co-opetition carried to the extreme, the actors having a leadership role (cf. shaper or focal company in the business web context) provide a platform, i.e. services, tools, or technologies, that members of the network can access. Again, the similarity to the so-called system product we assume to be present in a business web is striking.

5.3 Conclusion: Business Value Networks as a Symbiosis

Summarized, it is quite difficult to clearly differentiate the concepts “business web“, “business ecosystem“, and “value web” since they share the same vision: Rigid contracts and fixed ties between companies are replaced by loosely-coupled relationships based on network effects rather than contractual engagements. Co-opetition and increasing returns, i.e. the awareness of the partners that it is crucial to support the whole value network, because their market success is coupled with one another, are the reason for contracts no longer being necessary in such networks. A leadership position is still present in such networks, but being a nucleus, an initiator in an otherwise heterarchical environment rather than the supreme element in a hierarchically structured network. Leveraging the core competencies of one another, each partner contributes a complementary module to a whole product system which in turn facilitates the provision of highly customized products, at the same time being able to revert to out-of-the-shelf modules.

Since the three above-mentioned concepts emanate from different research streams, I want to unify their identified characteristics under one common umbrella, namely *business value networks* (BVNs) a concept being rather unassigned in academic literature. Please refer to Table 4 for a summary of characteristics relevant for the development of a business model definition for business value networks, showing their intensity in each of the three research streams.

Characteristic	Business webs	Value web	Business ecosystem
System product	Broadly approved by all authors. Supported by a value-enabling platform that can be a standard, a marketplace, an integration platform, etc.		Ecosystem thought: Provision of a holistic solution. A platform is provided by the leading companies
Co-opetition	Co-opetition as a vital element	Incorporation of erstwhile rivals	Own success of partners and success of the network
Shaper-adapter-configuration	Shaper-adapter / focal company	Broker as central element	Leading companies and partners
Increasing returns	Crucial for the success of a business web. Promoted by permeability of network boundaries		Loose character of network leads to lower entry barriers
Modularization/specialization	Companies concentrate on their core competencies and leverage the capabilities of partners that provide complementary products	Modular design of suppliers and customers	Company's offerings and network output strongly linked. The partners provide parts of a holistic service/good
Customer-centricity	Mass customization enabled through combination of standardized modules	Role of broker ensures individualized offerings for complex customer demands	Customers are themselves members of the ecosystem

Table 4: An overview on characteristics of business value networks

In summary, I identify three core elements of business value networks that need to be incorporated into a business model framework suitable for business value networks:

- *Partner network*: An indication of partners, their roles and the value they incorporate reflects the system product, co-opetition, shaper-adapter configuration, and modularization.
- *Core competencies*: In the course of modularization, companies need to spotlight their major capabilities (which are a crucial source of differentiation against competitors).
- *Role of customer*: As customers are oftentimes included into the partner system, the role of the customer and the way he is integrated into the business of a company or network, respectively, should be addressed. I argue that the role of the customer is likely to go beyond mass customization, with a more active integration into value creation processes (cf. chapter 6).

6 Customer Integration

Customer integration is likely to be the next level of customer-centricity (cf. section 5.1.3.6).

As customer-centricity as a pervasive occurrence of customization has already found its way into related literature, real customer integration, i.e. any form of integration into value creation processes that exceeds the “mere” customization, e.g. through configurators or requests to mediators, is frequently postulated [TaWi06], yet still in its infancy.

Advances in information and communication technology already altered and still have a huge potential to radically change collaboration patterns. Collaboration approaches in heterarchies and market structures supersede firms being organized in fixed hierarchies. New business and organizational models, respectively, tend to put more emphasis on community, collaboration, and self-organization, at the same time disregarding hierarchy and control.

Let's consider the fundamental idea of outsourcing, at heart going back to Coase [Coas37]. Very simply spoken, as long as the administrative and coordinative costs for another transaction within an organization is cheaper (or “better”) than a transaction on the open market, a firm will not outsource any processes. As soon as this threshold is reached, outsourcing is profitable. As mentioned earlier, collaboration among firms is already established, evolving from fixed contracts to loosely coupling (cf. section 5.1.3). So, what we already see happening in inter-organizational collaboration is still uncommon in the business-consumer relationship.

6.1 Two Facets of Customer Integration

Fundamentally, customer integration has two facets. On the one hand, we talk about prosumption when customers are directly connected with the product or service offered. On the other hand, open innovation or crowdsourcing approaches consult private individuals that are not directly connected to the product or service to solve problems.

6.1.1 Prosumption

This type of involvement is considered the silver bullet of customer integration since people with a directly connected, oftentimes emotional binding to the offered goods or services. To describe this modus of collaboration, the term prosumption is oftentimes consulted. Interestingly, it was in the pre-internet era, prior to the possibility to simply access a huge pool of possible ideas, innovations, development potential, and the likes via the world wide web, when Toffler [Toff80] coined the illustrative term *prosumption*, a made-up combination of the terms *production* and *consumption*. Today, the term describes a situation where customers co-create and co-innovate goods and services rather than simply consuming the end product. [TaWi06, p. 1]. Moreover, prosumption is more than mass customization or customer-centricity which the tailoring of a product or service by composing inherently standardized modules. Prosumption is about consumers having a “genuine role in designing the products of the future [...] in their own networks, and for their own ends” [TaWi06, p. 149]. Especially the last aspect is important: customers participate for their own ends, meaning that an involvement is associated with personal advantages.

As an example, let's consider Lego's Mindstorms³⁴, Lego toys with programmable sensors, motors, and controllers. To deeply involve the community – which turned out to be build up by lots of adults, not only by the primary target group teenagers – Lego offers a free software development kit to modify the programmable parts in the toys³⁵. As a result, users post their creations on the website – other users who can order this bundle made up of bricks, parts, and instructions. Each new customer-generated application enhances LEGO's product portfolio, making the toy more and more valuable. When Lego planned to develop the next generation of the toy, Mindstorms NXT, they hired four of the most prolific users as de-facto employees for the development cycle [TaWi06, p. 130-131]. Moreover, the Mindstorms Developer Program is a sub-community of 100 pioneers from around the globe who design kits that are not only purchasable via the website, but are officially released.

6.1.2 Open Innovation and Crowdsourcing

The second facet of customer integration is usually circumscribed as open innovation [Ches03; ChVW06] or the made-up term, *crowdsourcing* (crowd + outsourcing). These concepts denote the same idea as prosumption, but addressing a different scope or "target audience". Corporate tasks and structures are not outsourced to other companies but to an anonymous crowd of "spare time labor". The objective is to inspire an undefined, large community of customers and users to generate solutions to problems previously processed internally or by professional outsourcing-providers. Mostly, product management tasks and research tasks as well as unsolved problems are being crowdsourced. That is, tasks are outsourced to private individuals that are not directly bound to the product or service, rather being interested in the domain at hand in general.

While LEGO's integration model is based on non-monetary incentives – e.g. own benefits and reputation in the community, other crowdsourcing approaches are compensated in monetary means. For example, InnoCentive³⁶ is an open innovation marketplace providing a platform for companies (so-called seekers) to outsource unsolved challenges to a solver-community who can earn up to \$1,000,000 for a solution. According to statistics, InnoCentive unifies 135,000 solvers dedicated to 40 different industries³⁷. Renowned companies like Procter & Gamble, Boeing, or DuPont are registered as seekers.

6.2 Interim Conclusion

Consequently, motivating customers to participate seems to be a major challenge that is, however, dependent on the approach taken. As more and more companies desire to harness the global innovation pool, the resource "crowd" is getting an attractive resource. When being confronted with a multitude of participation opportunities, even the most ambitious community members are likely to surrender. Thus, winner in the competition for attracting the crowd as problem solvers will be the companies which manage to provide the most attractive incentives – be it monetary or non-monetary ones.

Prosumption as well as crowdsourcing particularly suggest themselves in business value network environments for two major reasons:

³⁴ <http://mindstorms.lego.com/>

³⁵ The Mindstorms software license includes a "right to hack".

³⁶ <http://innocentive.com/>

³⁷ Source: <http://www.innocentive.com/seekers-innovation-management.php>, status: 31.01.2008.

- Usually, a large customer base is addressed by the value proposition of such networks, which is much larger than any customer base that could be addressed by a single company. Therefore, participants in BVNs are not only able to leverage the capabilities of partners, they are also able to leverage the knowledge provided by customers.
- Business models of companies operating in BVNs are already more open to openness, peering, (knowledge) sharing, or globality, consequently have already overcome resentments in this regard – “not-invented-here”-resistances against external knowledge should be lower due to already opened interfaces to a multitude of partners which are coupled loosely, not via contracts. Furthermore, the ability to transfer external inputs into internal process is required in open business networks anyway, integration platforms and the likes might already be in place.

With market trends being one of the major drivers and demanders for business model change/innovation, it's all about market sensitivity, i.e. early identification of changing or newly arising customer needs. So, why not directly having one's finger at the pulse of time by incorporating consumers into design and innovation processes? As I consider customer integration as an important feature of innovative business models, I dedicate a separate business model component to this phenomenon (cf. section 7.2.2.4).

7 A Business Model Framework for Business Value Networks

The objective of designing a business model framework for business value networks is not to establish yet another framework which is supposed to be just better than the ones already in place. I intend to derive business model elements from existent business model definitions and to enrich this compilation by adding new components that are characteristic for business webs. Thus, I want to introduce a framework which just suits better to companies in BVN environment and at the same time, to the BVNs itself.

The new framework serves two purposes:

- Clarify the concept “business model” which is still used in several different meanings. It is not the ultimate aim to find the right perspective upon the concept, in fact I want to support a common understanding when discussing about business models in a BVN environment.
- Enrich state of the art business model framework which did not evolve as fast as the environment did. In a profound analysis of state of the art business models (cp. chapter 4) I found out that key elements of business value networks are not represented properly in current definitions.

7.1 Shortcomings of State-of-the-Art Business Models

The extensive literature review has shown that there is in fact a heterogeneous notion of what exactly constitutes a business model, on the other hand, common “pillars” of business models could be identified (cf. section 4.2.3 and Figure 11), namely value creation, network, customers, and profit. In detail, several differences have been detected, e.g. strict segregation of market aspects (cf. e.g. [Timm98; WeVi01]) versus permitting market-related aspects directly related to conducting the business (cf. e.g. [Magr02; Oste04]) versus full incorporation of market and marketing issues (cf. e.g. [ChRo00; Hame00]). Most of the contributions, however, lack a consideration of interrelations of the business model components.

In section 4.2.4 my view on the business model’s overall role has already been outlined, segregating it from strategy, marketing measures, implementation, and related concepts, nevertheless pinpointing their interdependencies. This analysis will also be incorporated in the business model framework.

Eventually, the core characteristics of business value networks resulting from the analysis performed in chapter 5 (cf. esp. section 5.3) are underrepresented in current business model definitions. The relationship and role of the customer is indeed addressed, but still being purely consumer- focused without considering links into the value creation process. The partner network has found its way into several definitions, still oftentimes implicitly assuming that the respective company is the center of the network. In business value networks we have to move away from this notion, clearly understanding that a multitude of partners equally contributes complementary goods and services to an overall holistic offering. To grasp this situation, own core competencies should be highlighted in the business model while clearly showing a company’s place in the value system and the (relevant) components from partners (and their roles). This level of partner integration is not included in most of the business model definition, with Bach et al. [BaBE03] being an exception.

7.2 Working Definition of a Business Model Framework for Business Value Networks

As already mentioned earlier, the business model framework for business value networks addresses two levels of business models and three levels of applications:

- The framework shall apply both for companies within a BVN and for the BVN or itself, if it is possible to assign one. However, I will start with developing a framework for companies and then adjust it to partial and whole networks.
- On the one hand, the framework shall be the basis for elaborating new business models in an BVN environment. On the other hand, I want to provide an instrument for the analysis of current networked business models³⁸. Additionally, the business model framework will provide the basis for a business model taxonomy for BVNs (cf. section 3.2).

To support the opinion, that the definition of a business model should be decomposed in several partial models to ensure a systemized approach when designing or analyzing business models (cf. e.g. [AfTu03; BiRR02; Oste04; Schw04; Wirt01]). Moreover, the definition should not only include components as a loose collection of elements without clearly identifying their interrelation (cf. e.g. [Oste04; Wirt01; Yu01])

Hence, I follow Osterwalder [Oste04] and Wirtz [Wirt01] in structuring my business model definition. They provided a clear decomposition in partial models as well as an overview on their dependencies. I identified five major pillars (partial models) of business models (value configuration model, participant model, offering model, customer model, and profit model) which are subsequently refined into 11 business model components. In this context, I do not only provide elements, but also visualize their dependencies. Finally, I evaluate, whether we can speak of a business model in respect to the whole business value network. At least, business models for a set of the BVN members shall also be captured with the proposed framework.

7.2.1 Pillars, Components, and Dependencies

As above-mentioned, I identified five basic pillars of business models for companies which circumscribe the essence of the business performed in a reasonable extent. That is involving the essence of the whole business and at the same time providing a simplified representation radically flattening real world complexity.

I involved only elements that are directly connected with creating, offering, and selling the goods and services provided, abstracting away from related elements that deal with making up a general mission statement (general business idea, strategy), motivation for participants (incentive schemes), considering the competitive landscape (marketing strategy), and the likes. In particular, I introduce a “given environment view” to separate elements directly involved in the provision of goods and services and external factors as well as internal measures that are more connected to the success or failure of a business. For instance, the business model should not consider

- if the business is sufficiently funded when launched, or
- if the targeted customer group actually is large enough, or
- if the external visibility is good enough to stand up to providers of substitutes, or
- if the selling proposition is “unique enough” to prevail in the market, or

³⁸ E.g. Strikelron (cf. <http://www.strikeiron.com>). However, we should sort things out clearly here: Is Strikelron considered the whole business web or the shaper in a business web, providing a value-enabling platform and rules (i.e. specifications) for participating service providers? (cf. first bullet point of section 7.2).

- if incentives for participants are set properly so that all partners act in favor of the whole network.

These questions are answered by the concepts that group around a business model named above (cf. also Figure 13). As mentioned earlier, it is necessary to reduce the business activity to a minimum set of elements, yet still capable of capturing the essence of the business. That's why I strictly separate the elements above from the concept of a business model.

Based on the state-of-the-art review of business model literature and a requirements analysis of business value networks, I propose the following five basic pillars of business models in BVNs:

- Value creation model
- Partner model
- Value offering model
- Customer model
- Profit model

The *value creation model* includes the transformation of input factors into product or service offerings. Consequently, this partial model is strongly linked with the *partner model*. It includes sources of procurement (suppliers) as well as actors that are involved in the value creation process including their roles. Additionally, there is also a link into the customer model when it comes to joint distribution of goods and services. The *value offering model* is the primary connector between value creation and providing goods or services to the customer, indicating the business a company is in and the portfolio of goods and services offered. Again, a strong link to another partial model is obvious: the *customer model*. At this interface, target customers and the associated distribution channel are determined (i.e. which product or service is offered to which customer on which way?). Additionally, the kind of customer relationship is indicated, i.e. if a company relies on the customer not only as a consumer but also as a product manager or prosumer, there is a link to the participant model as well as to the value configuration model. Eventually, the *profit model* highlighting costs as well as revenues is a transversal model influence by and influencing all other partial models.

The above-mentioned business model pillars shall now be refined and decomposed into business model components. Table 5 gives a short overview on the proposed components and allocates them to the respective partial model. A detailed description of each component is given in section 7.2.2, moreover I outline the reason for including the component and name related elements which were deliberately excluded.

Partial business models	Business model component	Short description
Value creation model	Value configuration	Arrangement of activities necessary to provide value for the customer.
	Core competencies	Major capacities of an organizational unit.
	Position in value system	Position/role a company takes over in the overall value creation provided by the network.
Partner model	Partners and their roles	Actors involved in the value creation and offering including their roles.
Value offering model	Service/product portfolio	Bundle of goods and services offered to the customer.

	Target customer	Group of customers addressed.
	Distribution channel	Channels a product or service is delivered to the customer.
	Customer integration	Role of customer in the value creation process.
Profit model	Revenue	Way of revenue generation and its sources.
	Pricing	Price mechanisms allocated to service/product offerings.
	Cost structure	Expenditures connected with creating, offering, and distributing goods and services.

Table 5: Components of the business model framework for business value networks

Figure 20 illustrates the dependencies of business model components.

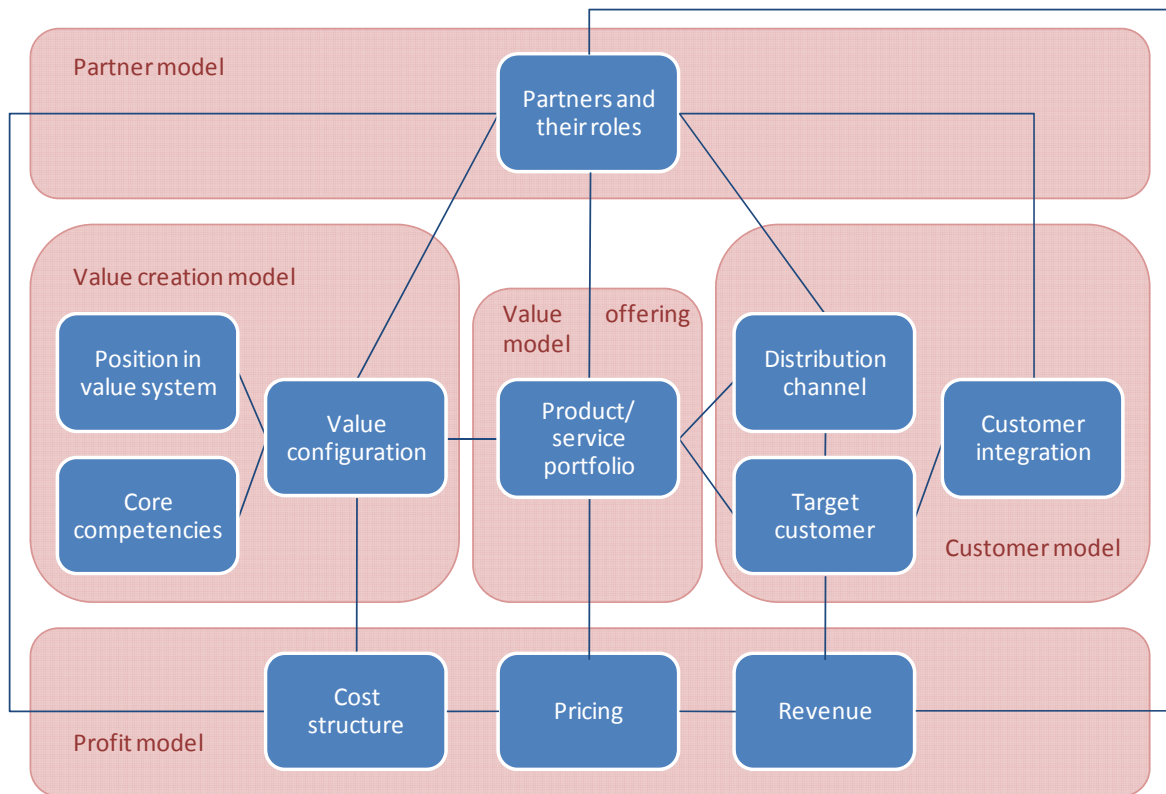


Figure 20: Relationships of business model components

7.2.2 Detailed Description of Components and Dependencies

7.2.2.1 Value Creation Model

The value creation model is called for by several authors (cf. e.g. [BuBa01; MüLe01; Oste04; ScDL03; Stae02; Wirt01]). I identify three components to be included in this partial model circumscribing the process of transforming input factors into a product or service offering that is provided to an end-customer or a business customer for further processing.

The *position in the value system* indicated the position a company takes in the overall value creation that is provided by several actors in a business value network. The positioning of a company depends on the strategic role taken over. If we map Porter's

value chain to the output created by a business value network, we might identify the following activities or roles to be performed [Port85, pp. 11-15], [Port01, p. 75]:

- Activities related to the reception, storage, scheduling, and dissemination of input. The collection, analysis, and preparation of information might also be included here (“inbound logistics”).
- Any role in the transformation process from inputs into outputs (“operations”)
- Activities subsequent to the value creation, such as storage or distribution of output, but also monitoring services (“outbound logistics”).
- Marketing and sales activities that provide information for potential customers and auxiliary services inducing customers to purchase offerings and facilitate their purchase, such as information brokering, product/ service configurators, or payment services (“Marketing and Sales”).
- Any kind of after-sales services to maintain/support the offered product or service (“service”).

Besides the above-described dependence upon Porter’s value chain, an orientation at a product or service lifecycle might be appropriate in a BVN environment³⁹.

A company’s position in the value system is usually heavily intertwined with its *core competencies*. Competencies or capacities is what follows from resources and assets owned by a company. Resources can be tangible (e.g. equipment), intangible (e.g. patents, copyright, reputation, etc.), or human (skills and knowledge of employees) [AfTu03, p. 69]. I did not list the resources as individual component, rather seeing it as indicator/cause for capabilities. A competency or a capability can be defined as repeatable pattern of actions that in some way creates value for the customer [Oste04, p. 80]. On the one hand, capabilities determine a company’s place in the value system⁴⁰, on the other hand competencies are a pre-requisite for creating value. The decreasing cost for modularization and subsequent re-configuration to a joint complex product or service offers companies the possibility to concentrate on core competencies and leverage the capabilities of partnering firms in other areas (cf. section 5.1.3.5) [HaSi00].

I define *value configuration* following Osterwalder’s definition as “arrangement of activities [...] that are necessary to create value for the customer” [Oste04, p. 43]. It pictures the building blocks that are being put together to create the output that is offered in a company’s value proposition. Not only the level of added value, but also the sequence and the participating actors should be highlighted, including the most important product/service and information flows. Thus, the value configuration is closely linked with the partner model. A central question is the degree of detail required. As not only the arrangement, but also the sequence of value-creating activity is a frequent call in literature (cf. e.g. [AlZi01; AmZo01; Hame00; MüLe01; Stae02]), a high-level consideration of the process can be supported. However, sticking to the notion a business model shall simplify complex real systems, detailed process descriptions cannot be given in a business model [OsPi02].

7.2.2.2 Partner Model

Consideration of the partner network is supported by the majority of contributions to literature, but to a different extent. I extracted the partner model as a separate partial model since I consider it fundamental part of business models owned by companies in a

³⁹ For instance, a service lifecycle can be composed of the phases *innovation, offering, matchmaking, usage, and feedback*, the latter again being closely connected to (re-)innovation (adapted from traditional product value chains, cf. e.g. [KoAr01]).

⁴⁰ Or vice versa, a company entering a new business might acquire its core capabilities according to a desired position in the value system.

networked environment. In such BVNs, there's virtually no good or service that is offered or purchased individually. Let's consider a service provider offering an application via Strikelron⁴¹. Here, customers do not only buy complex, packetized solutions, they also might buy single applications. But even if they do so, this individual application comes with a payment service offered by a 3rd party. Moreover, being a software-as-a-service (SaaS) concept, the purchased piece of software is hosted, maybe by another 3rd party provider. In addition, Strikelron provides the interface a customer uses to retrieve the desired service. Even this small-sized example shows that firms are hardly able to offer a value proposition without leveraging the competencies of other providers.

I see the partner model more as a transversal model equally influencing all other partial models. This is not only true in the value creation or offering model. The customer model with the customer becoming a more and more valued partner being integrated in the value creation process, is also connected to the partner model. Lastly, partners are oftentimes indirect sources of revenue, for instance through advertising or provisions.

So, the business model component *partners and their roles* is more general than other components, depending on where the link to the respective partner (actor) can be assigned to. It is a follow-up of the team-up strategy of a company that should be part of the overall strategic considerations that lead the way to a business model.

7.2.2.3 Value Offering Model

The value offering model includes the offerings provided to customers. That is, the result of value creation/ value configuration described in the value creation model. Thus, the value configuration and the partners and their roles describe *how* value is created and *who* participates in this process whereas the value offering model clarifies *what* products and services are offered. Auxiliary goods or services offered by 3rd parties should also be included in the value proposition, if they are closely connected to the core offering.

So, the business model component *product/service portfolio* refers to the portfolio of goods and services offered by a company, if applicable broken down into elementary offerings. The offerings are closely coupled to several other business model components. On the one hand, they are allocated to a dedicated customer segment reached via a specific distribution channel. On the other hand, offerings are always connected with a pricing model (which is an element of the profit model).

Importantly, I exclude related elements such as unique selling proposition or success factors of the goods and services offered from the value offering model. A unique selling proposition is what can be derived from a portfolio that is singular enough to differentiate against competitors. That's why I refrain from using the term "value proposition". A value proposition outlines the benefits provided to customers, referring to the value creation process that is in turn dependent on available capabilities. I consider this element as a part of the marketing strategy, not of the business model. Similarly, success factors of a product are what a company should do particularly well to flourish [WeVi01]. Being included as an integral part of a business model by several authors (e.g. [Hein00; WeVi01]), I consider this element being included rather implicitly, being explicitly addressed in a company's strategy. The business model itself provides a more objective view on the business, however, as a concentration on key processes and activities, oftentimes inherently turning its attention to critical procedures.

⁴¹ For more information, please consult <http://www.strikeiron.com>.

7.2.2.4 Customer Model

The customer model describes the interface to the customer. Importantly, I concentrate on direct interfaces to value creation and value offering.

The target customers define the group of customers that is addressed by the service offerings or a specific element of the offering, respectively. Moreover, it outlines the geographic areas to be addressed. A basic decision of a firm is whether to enter the B2C or the B2B sector. Considering the B2C market, different industries can be addressed. Zooming further in, each industry offers the possibility to market firms of different size and sophistication [AfTu03, p. 57]. The B2B sector allows for attending several segments that can be defined by demographics, lifestyle, income, and the likes.

The *distribution channel* is closely connected to the target customers, indicating via which channels a product or service is delivered to the customer, connecting the value offering with the dedicated customer (segment). Generally, links can be indirect or direct.

- Direct distribution via a sales force or over a web site (cf. e.g. manufacturer model [Rapp01], for instance implemented by Dell ⁴², refraining from consulting intermediaries to sell their products).
- Indirect distribution via dedicated mediating actors such as resellers, information or service brokers, or data and process transformation.

Obviously, ICT is an important factor in connection with distribution channels, with progresses in technology continuously providing new opportunities. This is a good example for ICT being enabler and integral part of a business model at the same time.

Although suggested by some authors (cf. e.g. [Hame00; Oste04]), I do not include relationship with customers, i.e. customer relationship management (CRM). CRM is a part of a company's marketing activities, exploiting methodologies of customer analysis like surveys, after-sales-management, or complaint management dealing with customer acquisition, customer retention, customer retrieval, add-on selling, and the likes. However, I propose the adding of the component *customer integration* which I want to use for a description of the integration of customer in value creation processes. Customer integration can range from very low (standardized products), to mass customized goods and services (cf. section 5.1.3.6), to real integration of customers as product managers or partners adding value to an overall value proposition (cf. chapter 6). High degrees of customer integration are oftentimes realized by addressing communities rather than individual customers.

As already outlined in section 4.2.4, the competitive landscape is neither a part of the customer model, nor included in any other partial model. Market forces such as price wars or new entrants and other influencing factors, e.g. changes in the demographic structure of target groups or legal issues, are external forces that impact on a business model, but do not belong to business models themselves. Such aspects need to be addressed in a competitive strategy.

7.2.2.5 Profit Model

Oftentimes referred to as most important element of a business model, the partial model dedicated to generate revenues and profits is certainly a core element explaining the money making logic of a company. An overview on costs and revenues makes it possible to plan the commercial success of a product or service. In order to make assumptions on prices and revenues, we need to know the cost structure of the underlying business.

⁴² <http://www.dell.com>

Thereupon, pricing models can be built up which account for revenue streams acquired from different sources.

Just as the partner model, the profit model is transversal, having an influence on all other partial business models. The cost structure is more or less determined by the infrastructure required to create value (i.e., the value creation model and the partner model). Moreover, the prices are offered in connection with the value offering model. Lastly, price discrimination leads to different prices for different target groups. Generally, the customer is considered the main source of revenue, although models of indirect revenue generation are quite common in e-business. Following these insights, I introduce three components categorized into the profit model, dealing with costs, pricing, and revenues.

The *cost structure* summarizes the expenditures connected with creating (value configuration and transaction and coordination costs incurred by the partner network) and distributing the offered value. The cost structure expresses the relationship between a company's revenues and the underlying costs of generating the revenues [AfTu03, p. 73]. Major cost drivers can be an important indicator when it comes to make-outsource-or-buy decisions.

Pricing models allocate a pricing mechanism to an offered good or service. Generally, there are five types of pricing, which can either be static or dynamic [AfTu03, p. 60]:

- Menu pricing: Most common form of pricing with a fixed price offered to customers. E.g., such fixed prices can be based on subscription (i.e. flat rate) or on pay-per-use (i.e. metered pricing).
- One-to-one bargaining: Negotiation between seller and buyer.
- Auction: The seller solicits bids from many buyers and sells to the buyer with the best bid.
- Reverse auctions: Sellers compete for business, i.e. place bids on customer requests. In a weakened mode of the reverse auction, buyers propose a price, sellers then decide whether to accept or reject a bid.
- Barter: Swapping (goods for goods, goods for services, etc.).

Furthermore, price differentiation strategies can be applied, especially when using static pricing. Price differentiation can be based on several characteristics, for example product features, customer characteristics, volume, or value.

Now that we know of pricing models, we still need to determine the way *revenues* are generated and which sources are approached. As an exemplary illustration, Wirtz' distinction among direct vs. indirect revenue generation as well as transaction-dependent vs. transaction-independent revenue generation is being considered [Wirt01, p. 85].

Transaction-dependent revenues are triggered by the interrelation of the organization and the individual who consumes the organization's respective services. If that is not the case, the revenues are transaction-independent. One refers to direct revenues if the revenues are generated without interaction with a third party. Indirect revenues are earned through third parties such as agents. A special form of such commissions are gain sharing revenues, where an intermediary pockets a share of the savings buyers and/or sellers gain through conduct business via the mediating party [BuBa01]. An isolated application of revenue models is infrequent.

This implies that it hardly makes sense for business models in electronic business to focus on one revenue model only. Rather, a weighted combination of the various revenue models should lead to an individual hybrid solution. Wirtz refers to this as a "multi-revenue-stream-optimization".

The model of the transaction-independent, indirect revenue generation – data mining revenues in particular – occupy a special role in the Web. Through the branding-up of social software, this is and has been an enormous growth market. It is worth noting that these companies would be of little value without their cumulated user profiles and that they tend to stay in business through data mining revenues and – to a limited extent – through (personalized) banner advertisements.

	direct revenue generation	indirect revenue generation
transaction-dependent	<ul style="list-style-type: none"> • Transaction revenues in the narrow sense • Connection fees • Usage fees 	<ul style="list-style-type: none"> • Commissions
transaction-independent	<ul style="list-style-type: none"> • Setup fees • Base fees 	<ul style="list-style-type: none"> • Banner Advertisement • Data Mining Revenues • Sponsorship

Figure 21: Revenue models

Source: Adapted from [Wirt01, p. 86]

The combination of costs and revenues (supported by pricing models), i.e. the profit model, results in the margin structure of the business model. This combination indicates (among others) a business model's sustainability. It is not in the scope of the business model to explicitly list the reasons for a business model to be sustainable. It is the overall business model that answers this issue.

Furthermore, I exclude the funding by external capitalists, creditors, or trusters, e.g. introduced by Wirtz as funding model. I argue that this external factor is not directly connected with the essence of a company's business, rather being an enabler for conducting it.

7.2.3 The Business Model from an Overall Point of View

I already provided a segregation of business models from related concepts of the business model in section 4.2.4.6. I identified the business idea, strategy, and implementation/execution as subsequent or prior concepts at different levels of an organization's business (cf. Figure 13). The business plan and business cases cannot be allocated to one single concept mentioned above, but affecting strategy, business model, and implementation at the same time. Funding, marketing, recruitment, and ensuring effective incentives play an important role when launching a business, though certainly must be elaborated prior to that step. A weightily part complementing the above-described "business stack" is innovation and change which influences each of the concepts.

Furthermore, I identified three major external forces which impact on each of the identified partial business models⁴³ (partner model, value creation model, value offering model, customer model, and profit model): Technological change enables companies to exploit whole new business opportunities. Market trends can have two major roots:

⁴³ Actually, these external forces do not only affect the business model, but also strategy and implementation. However, these phases shall be disregarded here.

Changes in customer needs and the emergence of threatening competitive initiatives. Through changes in regulation, business models can actually become illegal or dubious.

In conclusion, I provide an overall picture on business models and external influencing factors as well as implications that can be drawn from a business model (cf. Figure 22). The very business models itself then decides upon crucial questions such as “does the company or value network provide a unique selling proposition?”, “is it easy/possible to imitate the business?”, “is the business sustainable?”, or “does the business generate a competitive advantage?”.

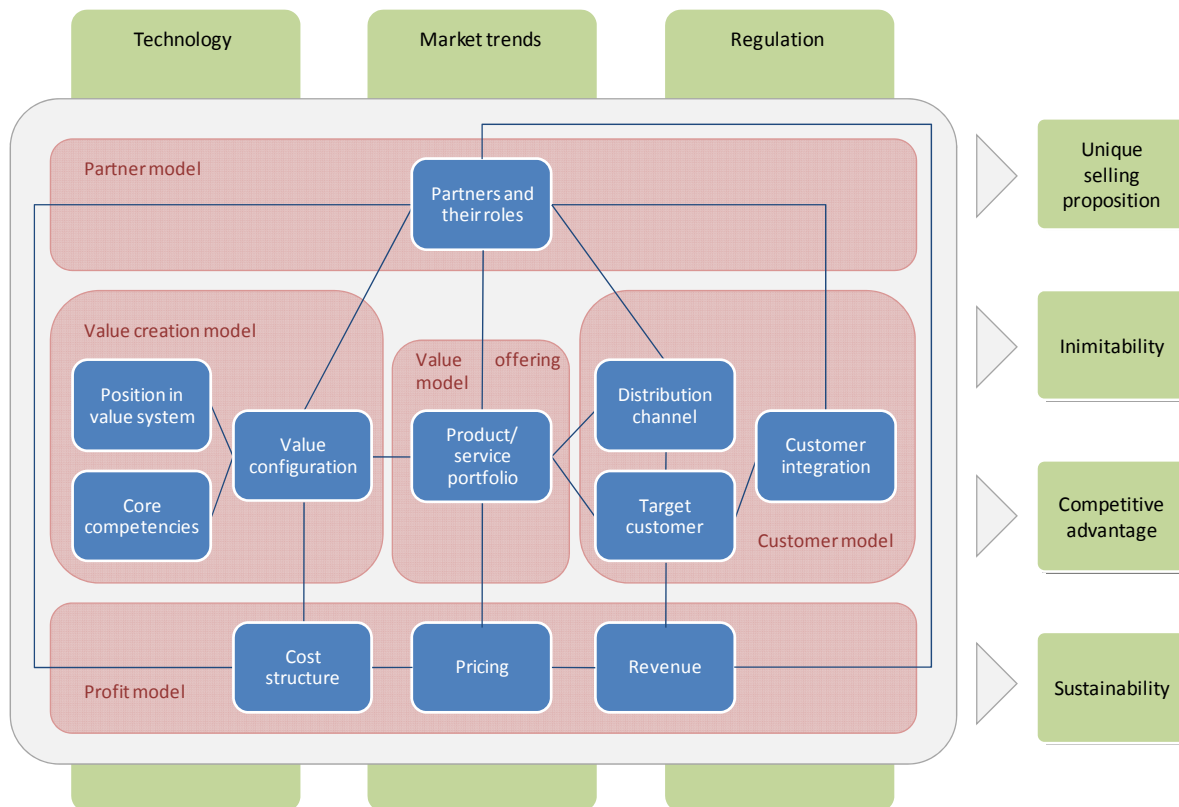


Figure 22: Business model framework for companies acting in business value networks

E-business model frameworks can never be definitely defined. Instead, they are subject to continuous evolution [Stae02, p. 200]. Similarly, business value networks, as just recently developed from more traditional forms of networked economies, are still in their infancy. Hence, I am aware of the fact that there cannot be an ultimate framework for the categorization of business models within business value networks.

7.2.4 Business Models for the Entire Business Value Network

After introducing a business model framework for companies in a business value network, we still need a coherent pattern for the whole BVN. If the network as a whole offers a joint value proposition, the elements introduced for the business model framework can be re-used, only two of them have to be re-arranged as explained in the following.

As we now look at the jointly created value as a whole package, the respective roles and activities of the partners are moving even more in the center of consideration. Therefore, a company’s position in the value system and the core competencies shall also be

considered in the partner model, as a sub-category of the partners' roles. Still, these two concepts should be considered in the value creation model in case the offered value does not span the whole value chain. All other business model components can be incorporated as they apply for networks just as well as for companies participating in business value networks.

Furthermore, Bach et al. put forth an interesting basis for discussion: They incorporate the mechanism to internally distribute the value created among the partners [BaBE03]. Doubtlessly, the question how to distribute generated revenues when a multitude of partners jointly create value is more than valid. However, the internal distribution is not an essential part of the value creation itself. Certainly, when it comes to the payout, partners in BVNs will compete heavily for the shares of the generated profit. Companies will not stay a member of the network if they find themselves with a negative balance at the end of the day or the distribution mechanism to be unfair. On the other hand, finding a fair mechanism is not a trivial task and might, if based on investments made by the partners, heavily depend on a proper incentive system that makes participants disclose their true costs. Thus, internal revenue distribution is not only intertwined with the value creation or offering itself, it is also related to incentive mechanisms which we already excluded from the business model (cf. section 4.2.4.4).

Summarized, the business model framework for companies in business value networks has to just slightly be adapted to also fit for whole business value networks, with the position in the value system and the core competencies being additionally a business model component in the partner model (cf. Figure 23)

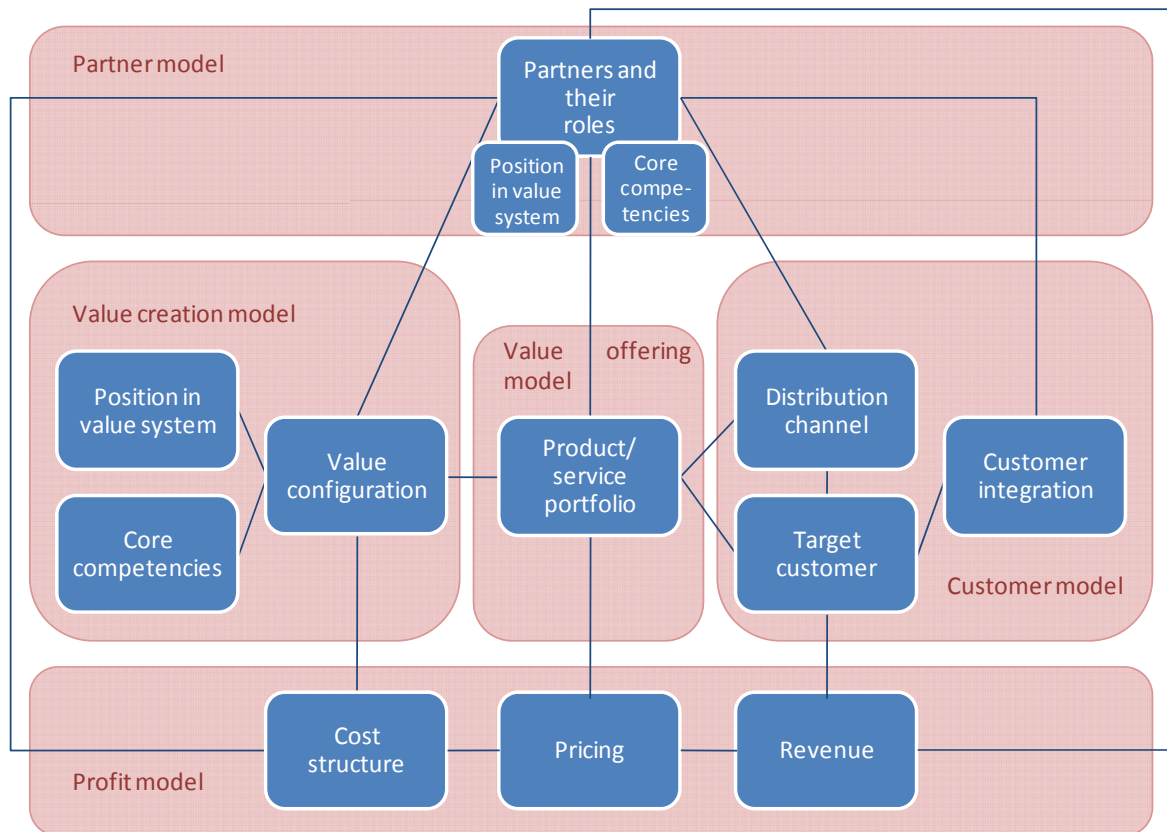


Figure 23: Business model framework for the overall BVN

8 Conclusion and Next Steps

8.1.1 Summary

The concept “business model” is said to be blurry up to now, neither having a unique, well-established definition nor being segregated properly from related concepts. As a basis for our future work, I introduced a common understanding of what we exactly mean when we talk about business models.

Therefore, I initially highlighted three basic interpretations of the concept “business model”, ranging from definitions and decompositions into components, to building taxonomies that classify business model types, to providing concrete business models. In this document, I focused on the first interpretation. In order to capture the whole range of contributions to business model research, a comprehensive state-of-the-art analysis was conducted: 26 business model definitions were examined for common elements. The result verified the general tenor in business model science stated above: Existing definitions are quite heterogeneous, whereas several similarities were identified. Elements like “configuration of value”, “business partners”, or “revenue” were considered an integral part of the business model more than 75 percent of the literature contributions. However, in some other elements, there is clear dissent (cf. Figure 11 for an overview). Additionally I segregated the business model from related, but different concepts such as strategy or business process implementation, as well as influencing factors.

Moreover, I analyzed characteristics of loosely coupled business networks that are relevant for business models applied by their participants. In short, these are the centric role of the customer, the striking importance of the partner network, and interconnected with this, the concentration of companies on their core competencies resulting in modularization. As a side effect of the literature review, I merged different, but closely-related concepts like business webs, value webs, and business ecosystems to a uniform concept namely business value network (BVN).

Taking the business model and business value network analysis as well as an extension of the customer-centricity paradigm as a basis, a new framework for business models is presented, consisting of five partial models and eleven components, respectively:

- Value creation model: Value configuration, core competencies, and position in value system
- Partner model: Partners and their roles
- Value offering model: Product/service portfolio
- Customer model: Distribution channel, target customer, and customer integration
- Revenue model: Cost structure, pricing, and revenue

Slightly adapted, this framework is also applicable for the whole BVN itself.

Thus, the contribution of this article is two-fold. On the one hand a common understanding of the concept of business models within business value networks was presented. On the other hand, I provided a framework which shall serve as a basis for further research, be it for the creation of a BVN business model taxonomy, the analysis of existent networked business models, or the development of concrete business models for companies operating in business value networks.

8.1.2 Next Steps

The framework will provide the basis for further business model related research. This document is principally concerned with the definition of a business model concept in a business value network environment and the elements it is composed of.

In further work, we intend to provide a taxonomy of generic business models business value networks based on relevant actors identified in such environments.

Referring to the new role of customers in business value networks that goes beyond customer-centricity scribed in chapter 6, we will study the applicability of such customer integration models (customers as prosumers, crowdsourcing) in a BVN environment – with a focus on their impact on business models. In this context, crucial yet still unclear issues like quality assurance or legal constraints must be considered.

The consideration of incentive systems is highly relevant when designing a business model in highly specialized and modular environments. In this connection mechanisms ensuring a fair internal distribution of generated profits is essential. Blau et al. give a first overview on how such an incentive-compatible pricing mechanism in business value networks (specialized on providing complex, electronic services) could look like [BLNW08; BMNW08].

Moreover, we plan to provide examinations to explain interdependencies between efficiency and stability of business value networks with focus upon the balance of power in such nets, the latter being particularly difficult due to network permeability prevents the emergence of high lock-in costs for participants.

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