The added value of business models

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The Added Value of Business Models

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Contents

THE ADDED VALUE OF BUSINESS MODELS: INTRODUCTION 3
BUSINESS MODELS 3
THE BUSINESS MODEL AS A METHOD OF CLASSIFICATION 5
THE BUSINESS MODEL AS A RESEARCH OBJECT 9
THE BUSINESS MODEL APPLIED 12
THE BUSINESS MODEL IN CONTEXT 13
THE BUSINESS MODEL IN CONTEXT: BETWEEN STRATEGY AND OPERATION 17
THE BUSINESS MODEL IN CONTEXT: FROM SCENARIO ANALYSIS TO ROADMAPPING 19
THE BUSINESS MODEL IN CONTEXT: INTERNAL COMPONENTS AND EXTERNAL BEHAVIOUR 22
RESEARCH FRAMEWORK FOR NEW SERVICES AND PRODUCTS 26
REFERENCES 29

The added value of business models: introduction

An overview of innovations in a particular area, for example retail developments in the fashion sector (Van Vliet, 2014), and a subsequent discussion about the probability as to whether these innovations will realise a 'breakthrough', has to be supplemented with the question of what the added value is for the customer of such a new service or product. The added value for the customer must not only be clear as to its direct (instrumental or hedonic) incentives but it must also be tested on its merits from a business point of view. This requires a methodology. Working with business models is a method for describing the added value of products/services for customers in a systematic and structured manner. The fact that this is not always simple is evident from the discussions about retail developments, which do not excel in well-grounded business models. If there is talk about business models at all, it is more likely to concern strategic positioning in the market or value chain, or the discussion is about specifics like earning- and distribution-models (see Molenaar, 2011; Shopping 2020, 2014). Here we shall deal with two aspects of business models. First of all we shall look at the different perspectives in the use of business models, ultimately arriving at four distinctive perspectives or methods of use. Secondly, we shall outline the context within which business models operate. As a conclusion we shall distil a research framework from these discussions by presenting an integrated model as the basis for further research into new services and product.

Business Models

In a relatively short period the term business model has gained a place in many discussions amongst directors, managers, consultants, conference speakers and even radio and TV commentators (Baden-Fuller & Morgan, 2010). In 2001, approximately one-quarter of the Fortune 500 companies used the term in their annual reports (Shafer, Smith & Linder, 2005). In a survey from 2005, half of the managers believed that the innovation of the business model was more relevant than product and service innovation (Johnson, Christensen & Kagermann, 2010). Just mentioning a new service or product instantly triggers the question about the underlying business model. Boosted by the explosion of new services or apps, this question has become dominant in the context of the development of Internet services, mobile applications and cross-media innovations. Just having a business model, separate from what it means and its quality, sometimes seems to be the only criterion for classifying a new service or product as favourable (Doganova & Eyquem-Renault, 2009).

Such a general use of the term business model indicates that business models refer to something that is considered important when talking about new services and products (Baden-Fuller & Morgan, 2010). Houtgraaf & Bekkers (2010) explicitly refer to the business models of Amazon.com, bol.com, Google, Zara, Ikea, Easyjet, eBay and Marktplaats.nl that have "caused the shockwave through our economic landscape" (p. 1). These iconic examples are examined and analysed on the basis of their success factors. After all, due to the steadily increasing competitive pressure it is important to understand the determining factors that make a new service or product a possible success. Organisations continuously try to create added value for

their customers. The choices that they have to make when doing so are often difficult because of the large number of determining factors, complex dependencies and the uncertainties about future developments. Success is uncertain, and the chance of failure is high. The search for robust business models reflects this importance.

Business models are a systematic and structured way of understanding the related factors that are relevant for the development, introduction and exploitation of the value that a new service or product offers. In that sense, business models fill the gap between the need to innovate and giving it a substantiated form: "The gap between the need to innovate and the tools for doing so leaves us with a problem: How can we move beyond the practices of today to invent the best practices of tomorrow?" (Malone, Crowston & Herman, 2003, p. 13). The assumption here is that by using such a business model approach the risks that are inherent in the development, introduction and exploitation of a new service or product can be controlled better, and the chance of service or product success can be increased. A business model is, therefore, a coherent statement about the logic of how value can be created and retained by the organisation.

The use of the term business model (or similar terms such as e-business model) increased substantially towards the end of the 1990s. Prior to that, the term was used sporadically, with the first academic reference in 1957. Parallel with the emergence of the Internet, business models began to receive increasing academic attention. For example, between 1997 and 2003 the number of appearances of the term business model in scientific journals increased 14-fold (Osterwalder, Pigneur & Tucci, 2005), and Zott, Amit & Massa (2011) talk of an explosive growth in publications about business models in the period 1995-2010.[1] That has also resulted in fragmentation: researchers use idiosyncratic definitions as a result of which it is difficult to talk about knowledge accumulation, and there are different contexts in which the research has developed, such as business models in relation to innovation management, strategic issues or IT in organisations (Zott, Amit & Massa, 2011).

During the past 15 years, there has also been an increase in theoretical development, which can be roughly split into two approaches. An initial approach considers the business model as a relatively simple representation of the complex reality of an organisation. The business model makes it possible to communicate properly about the organisation and to implement all kinds of business changes and optimisations. The main themes of this approach are about process architecture, information architecture and issues relating to the reengineering of the organisation using familiar tools such as UML and Petri nets (Malone, Crowston & Herman, 2003; Bridgeland & Zahavi, 2009).[2] A second approach views the business model as a design of the value that can be created in a complex combination of internal and external factors. Consequently, the model is

[1] Amongst other things, caused by the increasing business opportunities brought about by information technology (Internet, mobile, e-commerce) (Osterwalder, Pigneur & Tucci, 2005; Teece, 2010; Zott, Amit & Massa, 2011).

[2] Osterwalder, Pigneur & Tucci (2005) argue for a distinction between business models and business process models. The confusion of the latter also being classed as business models is caused by the use of the term 'business modelling' whilst for business process models this stands for the modelling of business processes. That is somewhat different from the business model as a conceptualization of the value that an organisation creates.

not so much a representation but rather a *presentation* of new business opportunities in the form of new services and products. The emphasis is more on the model as a literal blank canvas for seriously experimenting with the introduction of innovating products and services (Bouwman, de Vos & Haaker, 2008; Osterwalder & Pigneur, 2010; Haaker, 2012).[3] The difference between the approaches is the difference between what Doganova & Eyquem-Renault (2009) call an 'essentialist view' and a 'functionalist view': is the business model about a reliable description of the organisation or the predicted value and robustness of innovative products and services? This latter view focuses more on discovering and experimentation (McGrath, 2010). From now on we shall focus on this second approach because there is a more inherent emphasis on innovation and value creation.

The fact that business models represent a systematic and structured way of looking at new services and products is 'captured' in the word model. But what is a model? The answer to the question about what a model is can boast a rich tradition of the use of models by scientists in many disciplines, from historians and philosophers to economists, mathematicians and engineers. Baden-Fuller & Morgan (2010) present three interpretations of the term model from a reflection on the use of the term model in these different disciplines: as a method of classification, as an object of research and as a preparation for application. These three interpretations can also be used for indicating the different definitions of business models and their different use.

The business model as a method of classification

The first interpretation of a model proposed by Baden-Fuller & Morgan (2010) concerns a method of classification. This is in line with our intuition that particular situations are perhaps unique but are also not totally incommensurable, in other words, similar but not identical. This also means that we can learn from one situation for the benefit of the next situation by seeing the similarities and by filtering out the specific differences. We can represent those similarities between individual situations as a model: from this point of view a model is a more generic description of particular situations. In that generic description, the details of a particular situation are lost. A model is, therefore, by definition, a simplified form of a complex situation that it describes (Osterwalder, Pigneur & Tucci, 2005). By describing different situations in a similar manner, something can be said in general about all of these situations and about how they are distinctive from other kind of situations. Here a model serves to group together similar situations and to classify them as being of a certain type. A model, therefore, captures both the similarity of all situations covered by the model and also defines the difference, namely from other models,

[3] This is in part another division from the one which is championed by Houtgraaf & Dekkers (2010). They make a distinction between the approach that places the emphasis on how all elements of an organisation are related, and an approach focused on earning models. The latter is not followed here. Instead of curtailment to earning models, this approach is interpreted much more broadly as the bias towards value creation. Both approaches are ultimately related to each other. A business model with the potential of a new service or product is only taken seriously when the business model is embedded strategically in the organisation and is fleshed out operationally. That demands a good representation of the organisation.

that is, all other situations that are not captured under the model.

An example of grouping similar situations into a specific class is when we talk about the 'franchise' model for example. With this model organisations that work in this way are grouped together. It is wise to select a good level of generalisation. A generalisation that is implemented too broadly results in statements that are no longer distinctive, and a generalisation that is not sufficiently implemented remains too close to the specific situation, as a result of which no comparable situations can be grouped together. If we group all businesses based in Amsterdam as 'business' this is insufficiently distinctive, while the cheese shop in street such and such is, on the other hand, too specific. However, groupings such as 'catering establishments in Amsterdam' provides a level that is separate from the individual case yet is sufficiently distinctive from other types of businesses in Amsterdam. For such a group of businesses, it is then possible to look for similarities and to capture them in a model, for example, the earning model for catering establishments in Amsterdam.

This interpretation of the concept 'model' does raise two questions: How is the generalisation created? And: what method of classification is used? The way in which the generalisation is created depends on the selected object of the study: if one examines the emotions that people experience in particular situations you end up with 'emotion models', if you examine how organisations earn their money you end up with all kinds of 'earning models' and if you look at how organisations organise themselves for delivering their products and services you get all manner of 'organisation models'. It is wise to be aware of the criteria, if they are made explicit at all, on the basis of which an abstraction of specific cases has been obtained. Furthermore, this emphasises once again that a model is a relatively arbitrary structure. Through new insights, facts and experiences it is possible to expose other important aspects of a situation, thus resulting in a different model.

The question about the way in which a classification can be established has several answers. One way of classifying is by way of a taxonomy. A taxonomy is a systematic classification of objects based on observations. Observed occurrences are classified based on many aspects of similarities and differences. The result is often a hierarchical classification, such as the taxonomy of the vegetable and animal kingdom. The system is based on the naming and defining of the different hierarchical levels such as 'class', 'order' 'family' and 'species'. Within libraries, for example, taxonomies are also used extensively in order to classify books so they can be found more quickly and easily, an example of which is the use of the NUR code. We then talk about different 'kinds' of books (children's books, literary fiction, travel, etc.). Yahoo Directories can also be regarded as a (simple) taxonomy.

Another way of classifying is to use a typology. This appears to be very similar to a taxonomy, and the terms are often confused with each other. This confusion is understandable because the result of a taxonomy and a typology is often the same, namely a classification. The process to achieve a classification is, however, different. Where one starts from observations and collected occurrences for a taxonomy, for a typology one starts on the basis of a concept. One thinks of the distinctive characteristics that occurrences would normally possess and then classifies the actual occurrences according to these rules. One then talks about 'types' (unlike

'kinds' for a taxonomy). One can say that taxonomies are derived empirically or inductively, and typologies are derived conceptually or deductively (Lambert, 2006; Baden-Fuller & Morgan, 2010). Table 1 summarises the most important differences between taxonomies and typologies.[4]

Table 1: Differences between taxonomies and typologies (Lambert, 2006)

Taxonomy	Typology
General/natural classification	Specific/arbitrary/artificial classification
Categories (taxa) are empirically derived	Categories (types) are conceptually derived
Reasoning by inference	Reasoning by deduction
Many characteristics considered	Few characteristics considered
Quantitative classifications	Mostly qualitative classifications
Provides a basis for generalisation	Provides a basis for only limited generalisations

Different proposals have been made for classifying business models. According to Lambert (2006), since 1998 various attempts have been made to classify e-commerce business models though with little success. Not only are taxonomies and typologies interchanged, empirical proof is somewhat lacking. The efforts also result in not much more than a more or less random lists of business activities on the Internet. A significant deficiency is often the criteria on the basis of which one arrives at the classification into different 'kinds' or 'types'. These are lacking entirely or at best there are only a very limited number of criteria. This results in claims that on the basis of classification criteria such as 'business actors' and 'business transactions' it is possible to arrive at a full taxonomy. Lambert is right in being sceptical about this because it is very much the question whether so few criteria can ever cover the versatility and ambiguity that exist in reality.

A commonly quoted example of a classification of business models is that of Rappa (2004). However, this is an example of what Lambert would call "unstructured narrative" (2006, p. 5). Rappa gives no justification on the basis of which his taxonomy with nine categories (Table 2) was arrived at, other than that business models for the Internet will be a combination of old and new opportunities. The nine categories are also not of a similar order. For example, we

[4] One method of classification that is not stated by Baden-Fuller & Morgan (2010) is categorisation on the basis of family resemblance and prototypes. Also see Reisberg (2007), Loken, Barsalou & Joiner (2008), and Van Vliet (1991) for the use of these theoretical principles about categories for understanding the mental representation and experience of concepts of art, film and television.

encounter business models that are more about the role in the network (*brokerage*, *infomediary, community*), the way of earning money (*advertising*, *merchant, affiliate, subscription, utility*) or about a type of distribution (*manufacturer*). In fact, these could have just been three classification criteria (network role, sales, distribution) for a typology, however, Rappa does not recognize this opportunity. Such a typology had probably also done more justice to the many subcategories that Rappa refers to and which regularly create the impression that they can belong to various main categories. Rappa's inventory is a useful effort for exploring the different occurrences but as a classification it has serious shortcomings.

Table 2: Business model classification according to Rappa (2004)

Type of Model	**Description**
Brokerage model	Brokers are market-makers: they bring buyers and sellers together and facilitate transactions.
Advertising model	Advertising messages are added to a website. The advertising model only works when the volume of viewer traffic is large or highly specialised.
Infomediary model	Information intermediaries assisting buyers and/or sellers understand a given market.
Merchant model	Wholesalers and retailers of goods and services. Sales may be made based on list prices or through auction.
Manufacturer model	Manufacturers reach buyers directly and thereby compress the distribution channel.
Affiliate model	Offers financial incentives (in the form of a percentage of revenue) to affiliated partner sites for purchase-point-click-through to the merchant.
Community model	Based on user loyalty, with users having a high investment in both time and emotion.
Subscription model	Users are charged for a periodic fee to subscribe to a service.
Utility model	Based on metering usage, or a ‚pay as you go' approach.

The business model as a research object

The 'franchise' model of McDonalds represents something that stands for a category of businesses that operate in this way. However, scientists believe that it is not always sufficient to say that particular situations appear to be similar and that there are kinds and types of business models; they also want to know how that business model works, what the critical success factors are and why. To that end, a typical example is taken of a certain type, after which further research is undertaken with the expectation that the outcomes of the research will apply to other occurrences of the same type. Researching Google, Disney, Toyota, Easyjet or McDonalds, therefore, represents a specific sort of business model, for example, the 'format franchise model' in the case of McDonalds: "it is *the* model for business format franchising" (Baden-Fuller & Morgan, 2010, p. 164).

According to Baden-Fuller & Morgan (2010), this is a second interpretation of 'model': the one where the model is used for research. The model then becomes an instrument for arriving at new insights, testing hypotheses and for amassing knowledge. This is a not an uncommon way of using models: in economics calculation models are used for calculating specific effects, in biology the fruit fly is used for studying behaviour and in psychology mental models are used for researching cognitive processes. The research often consists of the question 'What if?': What if I manipulate this aspect of the model (an economic variable, a DNA sequence, a specific premise in thinking), What happens then?, What effect does it have? It is, therefore, important that the model provides this possibility of manipulation. The results of the research can be used to refine the theory, and it is possible to examine whether the effect also occurs in the real world and not just in the context of the model.

With the rise of the already mentioned academic interest in business models, research has also appeared that is specifically focused on analysing and understanding business models. An example of this is a study by Amit & Zott (2001). They tried to explain the development of new business created on the Internet. These virtual markets are characterised by, amongst other things, high connectivity, a focus on transactions, extensive reach, the importance of information (products) and substantially reduced costs of information processing. As a result of this, new ways of creating value are possible, as are new forms of collaboration and real-time adaptation of services and information. The existing different theoretical views about value creation, such as those of Porter, Schumpeter, RBV (*Resource-Based view*) and the *Transaction Cost Economics* (TCE) approach, fall short according to them: "We believe that the business-model construct is useful because it explains and predicts an empirical phenomenon (namely, value creation in e-business) that is not fully explained or predicted by conceptual frameworks already in existence." (Amit & Zott, 2001, p. 511). Via an analysis of 59 e-business firms they arrive at four 'value drivers' for e-business: *transaction efficiency* (lowering of transaction costs), *complementarities* (combining of services and goods, for example, the online booking of a trip and the provision of weather reports, currency exchange, other travel information, etc.), *lock-in* (repeated buying of services by consumers, and maintaining strategic partnerships) and *novelty* (not only in the form of new products and marketing but also in the form of new sorts of transactions, for example, eBay's *customer-to-customer auctions*). On the basis of the analysis, they arrive at the following

proposal: "we propose the business model construct as a unifying unit of analysis that captures the value creation arising from multiple sources. The business model depicts the design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities." (Amit & Zott, 2001, pp. 494-495).

The aspects of 'transaction content, structure and governance' from Amit & Zott (2001) consist of various components, such as resources/capabilities, partners, collaboration models, processes and the exchange of information - components that have been repeatedly endorsed in the last decade as important aspects of business models. The analysis of business models is also expressed in a search for completeness (the ability to state all relevant components) and relationship (component dependencies). Mapping all of the relevant components of a business model results in many a list and also meta-studies that try to isolate the components that are proposed by several studies (for example, Shafer, Smith & Linder, 2005). Components of business models that as a result emerge regularly are components such as the value propositions, collaboration partners and the value network, the channels to be used and for which market segments they are to be used, key resources and key processes, and the costs and revenues: profit formula (Doganova & Eyquem-Renault, 2009; Johnson, Christensen & Kagermann, 2010; Teece, 2010; Zott, Amit & Massa, 2011).

In addition to these lists, models of business models are also created which look at coordinating components and the relationship between them. One example of this is the STOF model. The STOF model describes business models on the basis of four related domains: Service domain, Technology domain, Organisation domain and the Financial domain (see Figure 1). It is from these four domains that the methodology derives its name. These four domains can be described as follows:

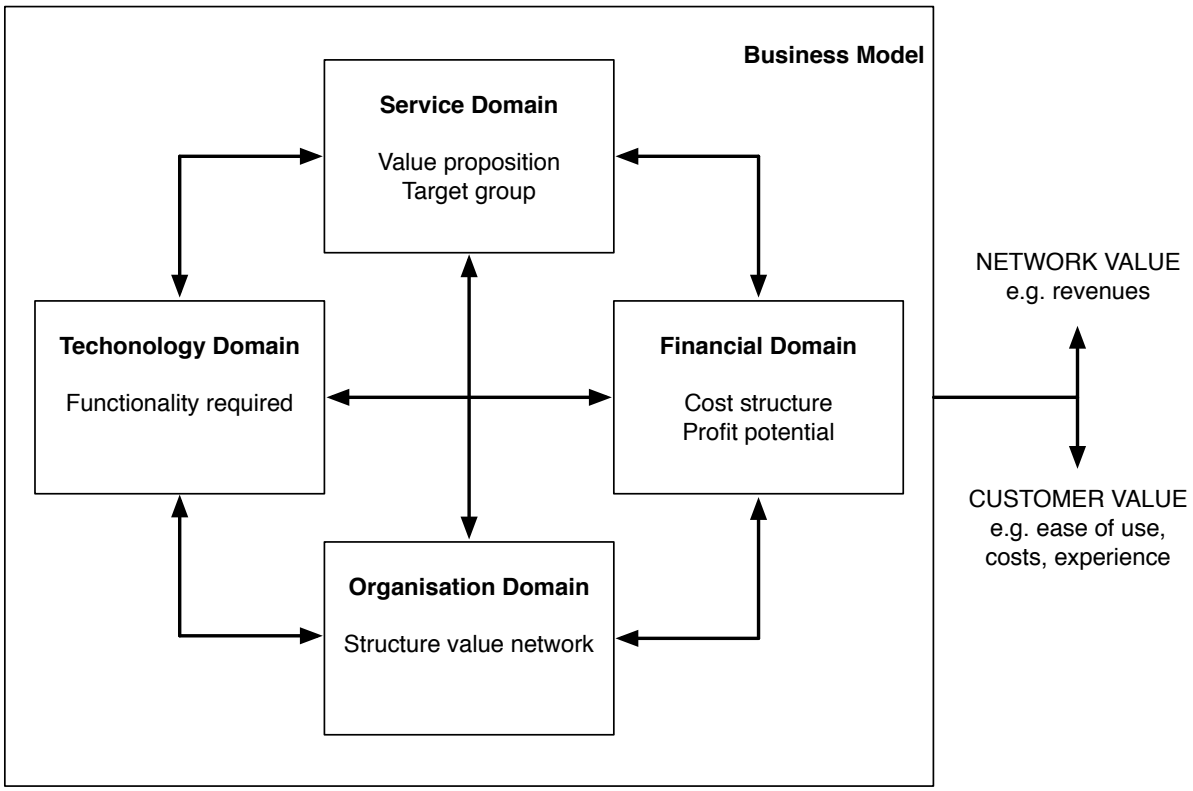
- Service domain: A description of the service; the value proposition (the added value of the service) and the market segment targeted by the service offered.

- Technology domain: A description of the technical functionality and architecture required for delivering the service. For mobile services for example: user authentication, profile management and data privacy.

- Organisation domain: A description of the network structure of the partners involved that is required for creating and providing the service, as well as the position of the organisation within the value network, and the tools and capacity required for delivering the service.

- Financial domain: A description of the way in which the value network aims to generate revenues from a particular service, and of the way in which risks, investments and revenues are divided amongst the various actors in the value network.

Figure 1: The STOF model (Haaker, 2012)



The STOF model is not just a structured way of describing the various components of a business model, it also forms part of a development method for business models: the STOF method. STOF is a method for helping organisations to model their 'business' systematically.5 The STOF method focuses on organisation networks and places the emphasis on the design of services that make use of innovative technologies. The method helps to develop a complex, cross-business collaboration between organisations and to exploit innovative ICT services. The fundamental principle of the method is that ultimately all business models are about creating value for the customer. Organisations provide services that appease the wishes of customers and have added value for the customer. The central question is therefore: How do you develop a successful business model with value for customers and partner providers? The entire process of the STOF method is iterative. The reality is that the development of a business model consists of jumping back and forth between insights into value propositions, thinking of solutions and evaluation of those solutions. The outcome of those four steps is a viable and feasible business model. This resulting business model is no guarantee for successful business, but by using a systematic method the risk of missing important aspects is reduced.

[5] The STOF method has been developed since 2002 by the Telematica Instituut (later Novay) and TU Delft in various research projects, such as Freeband, BiTa and B4U. See: Bouwman, de Vos & Haaker (2008); Faber & de Vos (2008) and Haaker (2012). The description of the STOF method here is largely based on a summary given in Van Vliet et al. (2013a).

The business model applied

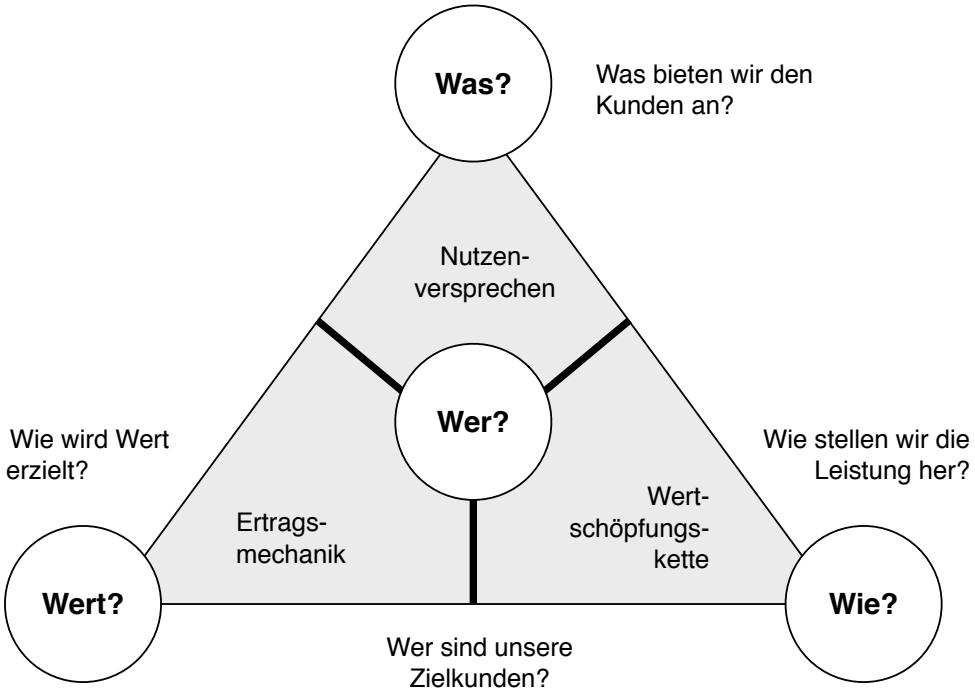
The third interpretation of 'model' according to Baden-Fuller & Morgan (2010) places an emphasis on practical use: the model as a recipe that describes how and with what ingredients (assets, products, target groups, technologies, etc.) a successful product or service can be created. Here, the model is a format that can be copied and that has proven itself, but which at the same time allows variation and innovation in order to arrive at an unique and new interpretation. The format shows what elements are important, how they are related and how these can be organised and integrated. Staying with the metaphor of recipes: a meal can be prepared on the basis of a recipe, however, by varying it one can still give the recipe a unique twist. New recipes (business model applications) are developed because tastes change (target groups), new ingredients become available (assets) or due to creative spirits such as chefs (entrepreneurs). One example of this is the development of a 'Spotify' for e-books, where the model of a subscription for unlimited use for music streaming (or video streaming: Netflix) is used on a different domain; e-books in this case.

A clear example of the business model as a recipe is the Business Model Canvas that has been developed by Alex Osterwalder and Yves Pigneur and which is based on Osterwalder's thesis from 2004. It is described in detail in their book Business Model Generation (Osterwalder & Pigneur, 2010). The Business Model Canvas is a visual instrument for exploring a (new) business model. It consists of nine components that in a mutual relationship describe all aspects of the business model such as customer segments, value proposition, partners, costs, etc. Because it is literally a blank canvas with nine components as the only structure, it provides full opportunity for developing new services as well as analysing existing (successful) services such as Google, Skype and others, and for identifying patterns that can be varied. The Business Model Canvas, with its accessible approach and visual support, is a method that has been embraced by many organisations. It does however need to be pointed out that a completed canvas is not yet a business model; that requires considerably more (quantitative) analysis, substantiation and justification. In practice, it also appears that the canvas pays insufficient attention to competition analysis. An example given by Kwakman & Smeulders (2013) is the business model developed for the Channel Tunnel, which looked very impressive, but did not take into account the price-reduction response by ferry operators. As a result of this, the demand was significantly lower than expected.

A comparable but less well-known example is the work of Grassmann, Frankenberger & Csik (2013). Their conceptualisation of the business model consists of four central questions (Figure 2): 1) Who is the customer? In other words, What are the distinctive customer segments; 2) What is being offered? In other words, What is the value proposition?; 3) How is the value proposition to be fulfilled? In other words, What are the organisation's activities, processes, resources and capabilities for delivering what it promises?; 4) How is (financial) value created? In other words, What are the cost structure and the income flows: the earning model? These are all identifiable components that we have already encountered earlier. The researchers then performed an analysis of hundreds of business innovations to derive patterns that formed the basis for business innovation. In the end, they came up with 55 patterns that can be regarded as

being 'recipes' that can be used and which can be varied upon. They also concluded that many innovations consist of a 'recombination' of existing concepts. Examples of such patterns are the 'razor and blade pattern', the most well-known example of which is Gillette (free razors and expensive blades), the subscription model, crowdsourcing, experience selling, etc.

Figure 2: The magic triangle: Business model definition
(Grassmann, Frankenberger & Csik, 2013)



The business model in context

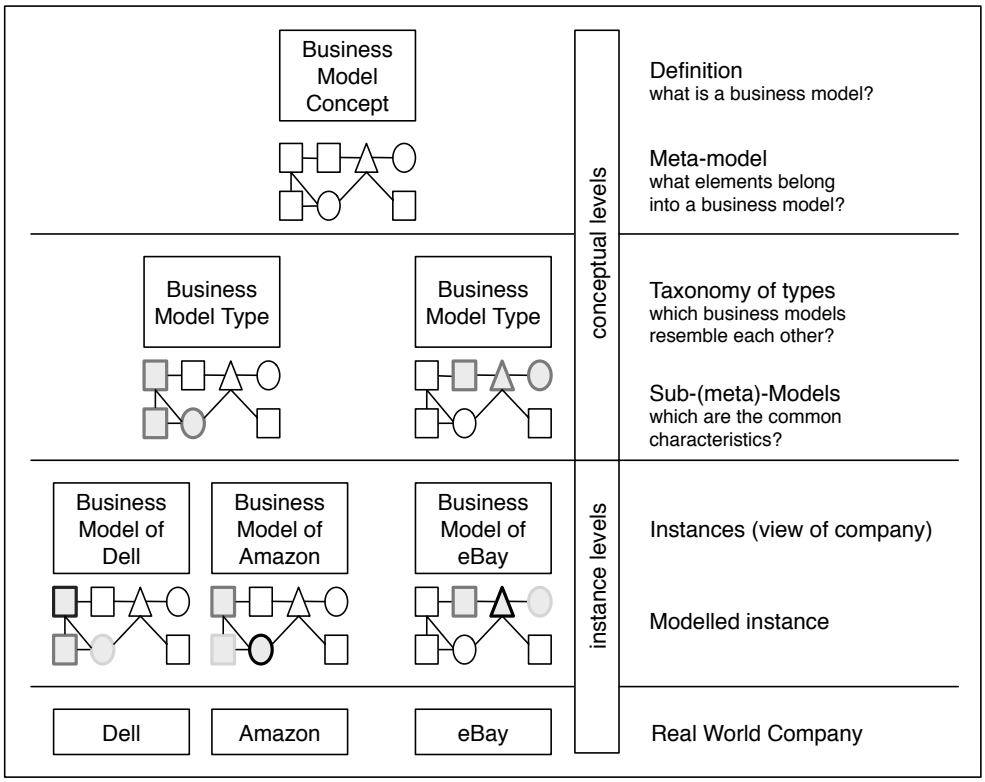
Baden-Fuller & Morgan (2010) come to the conclusion that the term model has a 'multivalent character' and that the three stated interpretations do not exclude each other: "We are not suggesting that business models are models in just one of these senses, or play just one of these roles, because these senses and functions are not mutually exclusive. Business models are not recipes *or* scientific models *or* scale and role models, but can play any - or all - of these different roles for different firms and for different purposes: and will often play multiple roles at the same time. This explains not only why the idea of business models seems to be so pervasive and yet also so challenging to grasp, but at the same time why the concept is so potentially rewarding for the future of management research." (p. 168). The 'YouTube model' and the 'Dell model' can, therefore, be regarded as abstractions which can be researched, but can just as easily be regarded as recipes for the development and implementation of a comparable service, or a variation on it by applying it in a different context. What is a shame about the Baden-Fuller & Morgan analysis, though, is that they do not examine the mutual relationship between the three interpretations. They do this on some occasions in their description of a particular case, but

not systematically. This mutual relationship of the different interpretations of the term model can help us see the coherence of the different ideas about, and definitions of business models.

Mutual relationships between the three interpretations of 'model' can be established. Osterwalder, Pigneur & Tucci (2005) observed that there is a considerable number of different views about business models and also that the term is used in different ways, which results in all kinds of (theoretical) confusion. According to them, the different views can be reduced to three categories that have a hierarchical relationship to one another:

1. A view that regards business models as an abstract description of all business activities in reality. This view is about describing and modelling the components and their mutual relationship. All kinds of (meta) models for business modelling are thus created.
2. A view that regards business models as a breakdown into different abstract types of business models. This view is about categorising the same occurrences that share a number of features with each other. All kinds of typologies and taxonomies of business models are thus created.
3. A view that regards business models as the conceptualisation of a specific business activity in reality. This view is about the description and representation of a 'real case'. All kinds of business model descriptions of different organisations (Dell, Amazon, General Motors, etc.) are thus created.

Figure 3: Hierarchy of business models (Osterwalder, Pigneur & Tucci, 2005)



The hierarchical relationship is that of abstraction (see Figure 3): from a conceptual description of individual cases to a conceptualisation of categories or types, and a generic conceptualisation of a meta-model of the business model. Each level has a specific added value when discussing business models. However, according to Osterwalder, Pigneur & Tucci (2005), it is prudent to make a conceptual distinction between these different levels in order to prevent or to interpret any confusion of tongues.

The three levels of conceptualisation in Osterwalder, Pigneur & Tucci (2005) do not differ substantially from the three classifications of the term model that we previously encountered in Baden-Fuller & Morgan (2010). The interpretation of model as a way of classifying corresponds with the second level of Osterwalder, Pigneur & Tucci (2005) as this concern the level of abstraction of a taxonomy. The interpretation of model as research corresponds with their first level because this concerns naming components and analysing their mutual relationship. The interpretation of model as applied corresponds with their third level as this concerns individual instances or businesses and their business model (Table 3).[6]

Table 3: Comparable perspectives on business models

Business models perspectives	Baden-Fuller & Morgan (2010)	Osterwalder, Pigneur & Tucci (2005)	Van Vliet
1	Classification	Level 2: Taxonomy of types	Descriptive
2	Research	Level 1: Meta-model	Explanatory
3	Applied	Level 3: Instances	Applied
4			Explorative

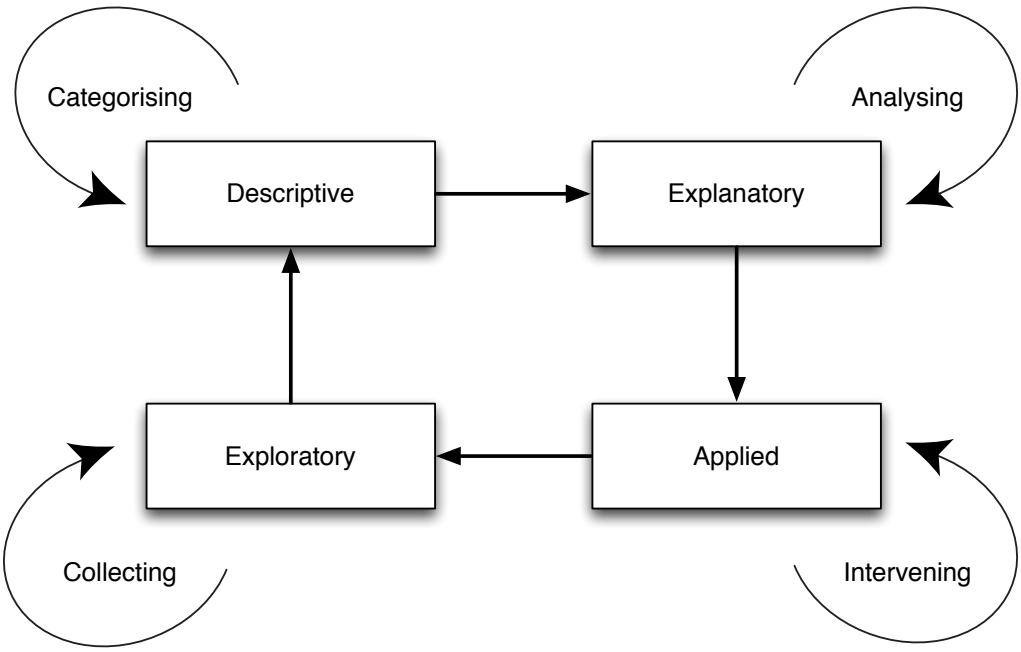
The different perspectives or stratification that Baden-Fuller & Morgan (2010) and Osterwalder, Pigneur & Tucci (2005) distinguish correspond almost seamlessly with generally known different research phases (Figure 4). There is a first phase of describing observations and categorising or classifying these on the basis of taxonomical or typological principles. Such a systematic description means that a common language is created for discussing occurrences, and a shared agenda of research questions. In the second phase in which analysis and explanation are central. The focus is on exposing why and how the described occurrences in the various categories work the way they do. This phase is about increasing knowledge about the operation and the conditions under which particular behaviour is displayed. The third phase of application uses the acquired knowledge in order to arrive at interventions in reality by, for example,

[6] Baden-Fuller & Morgan (2010) do not refer in their study to the paper of Osterwalder, Pigneur & Tucci (2005).

launching a new service. The most important issues that arise then relate to the implementation: how to move from model-based description to a real-life service. A fourth (actually a '0th' phase) can be added to this, namely that of exploration. There are researchers who travel the jungle and desert, or who explore the ocean depths in order to discover new 'species', collect them and encourage questions about whether they are 'really' new species or a variety of an existing species. In a similar way, there is a continuous exploration of new services and products where we can ask ourselves whether these are new species or variations on existing species. Is crowdfunding a new type of business model or a variation on an existing model? Is the 56th business model (Grassmann, Frankenberger & Csik, 2013) evident in new services such as SnappCar or Hapifork?

The impression can arise that following the analysis and classification of the different perspectives of business models we are done. However, a business model is not an isolated thing, it is a bit sad to let a business model coincide with just a collection of Post-it notes on a flip-chart or canvas. Not in the least because of the question 'What now?' is surely to come to mind. A new service or product has a specific (business) context, three of which we shall describe briefly here: 1) the relationship with the organisation's strategy and operational level, 2) the role of the business model in the design process for (new) services and products, and 3) the external 'behaviour' of business models based on internal components that can be modelled.

Figure 4: Research phases as a reference model for business model perspectives



The business model in context: between strategy and operation

A business model operates in the context of an organisation. Within an organisation, we can distinguish different levels, of which the most common subdivision is that of strategic – tactical – operational. This raises the question about the position of the business model. When this question is raised the most common answer is that the business model has to be placed between strategic and operational: "The business model is the connecting layer between the strategic vision and the organisation of the business organisation. It therefore structures and connects the strategy with the execution." (Houtgraaf & Bekkers, 2010, p. 29);[7] "the business model explains how the activities of the firm work together to execute its strategy, thus bridging strategy formulation and implementation" (Zott, Amit & Massa, 2011, p. 1031); and also "Business models can be positioned in between the strategic level of the boardroom and the operational level of functions and processes" (Haaker, 2012, p. 12).

The business model does not coincide with the strategic level: "a business model isn't the same thing as a strategy, even though many people use the terms interchangeably today." (Magretta, 2010, p. 11), but is a translation thereof: "it [the business model] is the translation of strategic issues, such as strategic positioning and strategic goals into a conceptual model that explicitly states how the business functions" (Osterwalder, Pigneur & Tucci, 2005, p. 4). The business model says nothing about the markets in which the organisation is active, nothing about the goals of the organisation or about the standards and values that an organisation maintains, nothing about competitors and nothing about market position. These strategic choices are however an input into and give direction to the business model, hence the reason it is wise to examine how, for example, strategic models relate to business models. These questions are addressed in the literature (see Teece, 2010). Haaker (2012), for example, states, amongst other things, how Porter's five forces model can be linked to the STOF model. In Osterwalder & Pigneur (2010) we can find the same exploration, where a link is made between the Blue Ocean Strategy and the Business Model Canvas. The business model itself also has to be translated into an operation level: "Business model implementation and management include the 'translation' of the business model as a plan into more concrete elements, such as a business structure (e.g. departments, units, human resources), business processes (e.g. Workflows (responsibilities) and infrastructure and systems (e.g. Buildings, ICT). Furthermore, the implementation of the business model must be financed through internal or external funding (e.g. Venture capital, cash flow)." (Osterwalder, Pigneur & Tucci, 2005, p. 14). The study of Solaimani (2014) is a recent example of a detailed analysis and elaboration of this translation of business models into 'business

[7] Houtgraaf & Dekkers (2010) are not clear in their further elaboration because at different moments they do not just see the business model as a 'connecting layer' between strategy and operations but also as encompassing the business strategy and business organisation, see for example Figure 2.1 on page 30 and Figure 3.7 on page 50, the statement "It [the business model] therefore also describes the relevant strategic and operational components " (p. 31), and the repeated choice of words that a business model 'also' 'contains' the connecting architecture layer, suggesting that the business model also contains other additional layers (strategy and organisation). The book also discusses the 'complete' and 'total' business model which includes all three of the components: strategy, connecting architecture layer and business organisation. This 'total' definition of business model is not followed here, but the stratification is.

operations' in networked environments.

Placing the business model between the strategic and operational level appears to lead to the unavoidable conclusion that the business model is located at the tactical level. That remains to be seen. In any event, the business model does not coincide with the tactical level in the sense that more ‘tactical’ questions can be asked than only end up in a business model, for example, about human resource management and about monitoring (performance indicators and accountability). Casadesus-Masanell & Ricart (2010) present a framework for positioning the concepts of strategy, business model and tactics in relation to each other. In this framework, strategy refers to "a firm's contingent plan as to which business model it will use" (p. 204) on the basis of the goals it has and a number of essential decisions that the organisation makes in relation to 'policies, assets and governance'. The business model is the actual reflection of the strategy. The difference is that a strategy can and must respond to unforeseen circumstances (crisis, competitors, etc.) that may result in a potential change to the business model: "a business model is a direct result of strategy but is not, itself, strategy" (p. 212). The tactical level refers to a further differentiation of the choices that are still available in the business model. The free newspaper Metro still has choices to make at a tactical level about advertising costs, number of advertisements, etc., however, Metro is unable to tamper with the basic principle of free of charge to the reader and therefore variation in price, since that is a fixed fact in the business model. A mobile phone operator or a budget airline organisation can still vary the price under the basic principle of 'low price' policy. Casadesus-Masanell & Ricart (2010), therefore, place the business model between strategy and tactics.

In the media strategy game the business model is also positioned between the strategic and tactical level (Van Vliet et al., 2013a). The media strategy game aims to answer the recurring questions about the possibilities and need for new means of communication that seem to manifest themselves with increasing speed, of which the most evident current example is social media. The media strategy game provides a method to arrive at an integrated consideration of the goals to be achieved, the instruments to be deployed, the activities to be conducted and the results to be expected of an organisation’s communication. These four generic steps in the game - goals, instruments, activities and results – are linked to a known distinction in thinking about (organisation) processes, namely: strategic, tactical and operational. Added to this is a further phase, namely that of ‘impact’.

Composing a matching quartet of goal-instrument-activity-result is one thing, but actually implementing the chosen solution is something else. In addition, in the game's workbook different models are provided in order to make the transition from one step to the next as effective as possible. The reason for this was a recurring comment in the game evaluation "What now?". A first set of models in the workbook involves the development or adaptation of the vision, mission and strategy of the organisation. This is of direct importance to be able to derive and establish the goals of the organisation. The second set of models helps to achieve the best translation of a particular goal into an instrument, for which different methods of business models are described for investigating whether the organisation succeeds in creating added value for the customer. Business models in the media strategy game are therefore positioned between the strategic and tactical levels. The third set of models concerns the most effective deployment

of a specific instrument in real activities. The choice of a campaign as an instrument, for example, does not answer the question about how a campaign can be deployed in the most effective way possible. The last set of models is about the ability to measure results systematically using performance indicators. The outcomes from these results can result in an adjustment to the organisation's strategy.

The business model in context: From scenario analysis to roadmapping

A business model is always under pressure: "keeping the model viable is also likely to be a continuing task" (Teece, 2010, p. 174). That pressure is not just in the interplay between strategy (Are we doing the right things?) and operation (Are we doing things right?), but also in the context in which it operates. A context with international competitors, new legislation, new technology, changing consumer behaviour and 'products' (information, digital content) for which the value is not always as easy to market. As a consequence, every business model is temporary: "Once a business model is successfully established, changing technology and enhanced competition will require more than defence against imitation. It is also likely that even successful business models will at some point need to be revamped, and possibly even abandoned." (Teece, 2010, p. 189). Examples of such evolutionary business models are, for example, the earning model for searching on the Internet which changed from a pay-as-you-go to a subscription structure and ultimately to free but with advertising; or how Amazon has dealt with 'third-party sellers', from individual shops to separate sections on the Amazon webpage to integration on Amazon's own pages (McGrath, 2010).

There are sufficient examples available of companies that were unable to respond adequately to developments, and that did not adapt their business model on time. Classic examples are Kodak and digital photography, Blockbuster and video streaming, car navigation systems and the emergence of mobile phone-based navigation, and the record industry in comparison to music services such as Napster, iTunes and Spotify. Chesbrough (2010) cites the example of Xerox. Xerox used a business model where the revenues did not come from the photocopiers but from the consumables (toner and paper). The technology search was focused on being able to make a photocopy machines copy faster, and also on the longer uptime for the machines so that more paper and ink would be consumed. Technologies that did not fit into this business model were not exploited further by Xerox but were capitalised on by others (point-and-click interface, Ethernet, postscript, etc.).

Business innovation by way of business models is therefore relevant in order to properly exploit new ideas and technologies. Examples often cited are entirely new services that conquered the market: from Dell's direct-selling via the Internet, Walmart that became a big player because of its stores in small towns, to standardisation of container transport so that unloading and loading could be quicker, and budget airlines. Raising the question of how to stay ahead of the competitor's imitation of the business model. Gateway has never been as successful as Dell due to its worse 'logistic' implementation and fear of offending their resellers when selling via the Internet, Blockbuster could only follow Netflix in using the Internet because it was concerned about the cannibalisation on sales through their shops, and then there is also the

enduring patents wars between, among others, Apple, Samsung and Google.

Innovating with business models also, of course, concerns organisations with existing business models that have to be adjusted and/or abandoned in favour of new business models, not an easy task: "it involves cannibalizing existing sales and profits or upsetting other important business relationships." (Teece, 2010, p. 182). Different aspects can be identified in this.[8] First and foremost, attention must be paid to "early detection of any erosion of their business model will be at a premium for company leaders" (McGrawth, 2010; p. 256). For example, by monitoring whether specific customer groups are not being served, where commoditisation occurs, what the competition is doing, etc. (Johnson, Christensen & Kagermann, 2010; Zook, 2010). It shall also be necessary to examine the extent to which the business model has to be adjusted; it is possible to introduce products to the market that make competitors trail behind but which require few fundamental changes to one's own business model, such as the Swiffer from Procter & Gamble (Johnson, Christensen & Kagermann, 2010). Linder & Catrell (in Osterwalder et al., 2005) distinguish four change models: realisation models, renewal models, extension models and journey models, in which the 'core logic' of the business model changes by an increasing amount.

Identifying any restraint and resistance from an organisation in abandoning the existing business model is important in introducing new business models. This existing business model is fully embedded in the organisation, all resources are supporting it, and people derive their status from it, and it gives (financial) certainty, etc. (Chesbrough, 2010). It is not easy to overcome possible resistance: "new models are often designed for customers that an incumbent doesn't serve, at price points they would consider unattractive, and builds on resources that they don't have: from the perspective of an established firm, new models can look positively unattractive" (McGrawth, 2010, p. 257). In an organisation there also has to be opportunity for experimenting with new business models, and a certain willpower to take risks because the new business model also carries with it, by definition, a number of uncertainties: "It is difficult, however, to plan analytically for which new models will supplant old ones, since so many of the variables relevant to their success are unknown at the outset." (McGrath, 2010, p. 252). It is difficult to get a new business model right first time around: Netflix threw its pay-per-rental model out of the window and replaced it with a subscription model (the 'Marque program') supplemented with a next-day delivery service for 90% of their subscribers, where a good balance of services (unlimited borrowing but a maximum of 3 at any one time) and pricing was sought. This experimentation demands a learning attitude on the part of the organisation, and that is not a 'given' for every organisation.

In order to meet the dilemmas and challenges that have been outlined, various proposals have been made about how to deal with these in relation to business models. An example is the 'discovery-driven approach' (McGrath, 2010; McGrath & MacMillan, 2010), in which business model assumptions are made explicit, tested, evaluated and adjusted on the basis of all kinds of

[8] These aspects are related to the so-called *dynamic capabilities* of an organisation: "the sensing, seizing and reconfiguring skills that the business enterprise needs if it is to stay in sync with changing markets, and which enable it not just to stay alive, but to adapt to and itself shape the (changing) business environment" (Teece, 2010, p. 190).

criteria and checklists. Another example is the 'St. Gallen Business Model Navigator', a method for quickly creating new business models via recombination of recurring patterns in business models (Grassmann, Frankenberger & Csik, 2013). Haaker (2012) proposes a four-phase design process for business models – a systematic and practical method for answering the question about how business models remain viable and robust in the long term. Through all kinds of developments, it is important to implement the correct changes at the correct moment in the business model in order to remain competitive and to continue to capitalise on innovations. Haaker (2012) summarises this by calling it 'robust business models': "Robustness is the degree that a business model can deal with changing external circumstances" (p. 9).

The four phases in the design process are:

1. Scenario analysis. An analysis of possible relevant scenarios of the environment in which the new service or product will operate. Scenarios provide insight into the underlying dynamics that determine the future and thus give the possibility of holding a structured discussion about future conditions of the business model. This allows the identification of trends that have a great probability of occurring and uncertainties that are less certain. Possible outcomes are defined for those uncertainties. Those possible outcomes can be used in the stress tests (What is the effect of that possible outcome on the business model?) or for creating scenarios based on, for example, two uncertainties and then intersecting these in a coordinates system. This is a common way of building scenarios (see Van Vliet, 2014).

2. Business models. Selecting a modelling method such as the STOF method or the Osterwalder's Business Model Canvas (see above).

3. Stress testing. The phase in which the business model and its underlying assumptions are 'tested', in other words, subjected to critical analysis about how the business model will behave given particular developments. How well does the business model 'fit' into future environments? Stress testing is a way of determining the quality of a business model by holding it up against a number of criteria and by reasoning how the business model will react to them, and so identifying strengths and weaknesses. Those criteria can originate from scenario analysis, established uncertainties, success factors or performance indicators. The result of a stress test can be visualised in what is known as a 'heat signature' in which elements of the business model turns to green or red if they are or are not 'resistant' to the relevant change.[9] This always requires interpretation and discussion, the quality of which depends on the expertise present.

4. Roadmapping. The phase relating to the transition to a new business model and a description how to arrive at the desired business model by formulating the steps and the critical choices that are required to reach the new business model. It concerns changes in the actual business model and the activities that are required for implementing the changes. Changes to the business model can concern launching a new service, approaching a new market or the use of new technology. The consequences of these changes on the entire business model are examined, after which there is a translation to the activities that are necessary to implement the transition. That can be about finding new collaboration partners, additional finance, alternative

[9] Also see GfK (2013) for a similar method when plotting specific development against personas.

governance, etc. The visualisation of the roadmap consists of critical choices and 'points-of-no-return' in their mutual dependency and plotted over time.

In *The Future Now* project this method of robust business models is used for conceptualising innovations in the media sector, and at the same refine the business models *and* the method (see www.mediafuturenow.nl).

The business model in context: Internal components and external behaviour

A third way of placing the business model in a context is by examining the internal components of the business model and the relationships between those components. After all, the selection of components and their dependencies determines the external behaviour of the business model: "to better understand business models, one needs to understand their component parts and their relationships" (Casadesus-Masanell & Ricart, 2010, p. 197). An obvious example of this is the long-standing confusion about the relationship between business models and earning models. Many definitions of business models incorporate the aspect of making money (Lamberts, 2006; Houtgraaf & Bekkers, 2010), and sometimes this is so dominant that the business model coincides with an earning model. Such an interpretation of a business model as an earning model then determines the functioning of the business model in its context: price mechanisms become the main focus as a result of which, for example, scenario analyses will focus on price developments and spending patterns, road mapping will focus on, for example, price elasticity, and the implementation of the business model will focus on price instruments (coupons, customer cards, auctions, etc.).

The research into business models has made it clear that a business model consists of several components, whether it is the nine components in Osterwalder's Business Model Canvas or the four components in the STOF model. The business model does not, therefore, coincide with one component, however dominant that component may be. The earning aspect is a component within the business model but does not coincide with it: "A business model refers primarily to value creation whereas a revenue model is primarily concerned with value appropriation" (Amit & Zott, 2001, p. 515). This not only applies to the earning aspects – an online community is not a business model but part of the customer relationship (Osterwalder, Pigneur & Tucci, 2005); the Tupperware model is an alternative manner of distribution (small-scale sales demonstration with low distribution costs and targeted customer groups) but it is not a complete business model.

A product or service innovation can be specifically focussed on a single component of the business model. An example of this are suppliers that do not have any shops, but sell through the Internet (Dell, Amazon, Bol), or many small businesses that serve a niche market because they cannot afford a shop. But even in these cases other components of the business model have to be looked at in order to gain a total picture of the development, introduction and exploitation of a new service or product. Such a focus on a single component does give the possibility of creating a list of where innovation in particular is sought in a specific sector such as the taxonomy based on the STOF model of innovations in the fashion retail sector (Van Vliet, 2014).

Various studies can be found that zoom in on particular components in the business model, and which describe the potential variants of such a component such as, for example, different distribution models (Houtgraaf & Bekkers, 2010), different variants in the 'free' offering of products or services (Anderson, 2009) or the working mechanisms and forms of crowdsourcing as a way of involving the customer in the value creation process (Van Vliet et al., 2013b). In a recent analysis undertaken by Grassmann, Frankenberger & Csik (2013) 55 models are presented, which are a mix of earning models, distribution models, partnership models and value creation models.

Because of the dominance of earning models in the discussion about business models we shall describe below 10 types of earning models on the basis of the views in Rappa (2004), Lamberts (2006), Anderson (2009), Houtgraaf & Bekkers (2010) and Grassmann, Frankenberger & Csik (2013). Earning models express the way in which a transaction is undertaken between the buyer and the seller - transactions such as buying a loaf of bread, where we exchange money for a product, namely the loaf of bread, or buying a train ticket with which we are buying a service: transportation from A to B. These types of transactions can be shaped in different ways.[10]

Subscription model: A familiar transaction method is that of a subscription, for example, subscription for a newspaper, home insurance or membership of a football club. A subscription is a relatively long-term agreement where the customer receives products or services from the supplier for a specific period. The benefit for the supplier is that he is assured of a precise amount of sales, often with payment being made in advance. Furthermore, the supplier has guaranteed customer lock-in for a particular period, during which he can launch further campaigns such as special offers for members, for example, members of the ANWB motoring association or subscribers to the NRC newspaper. For the customer a subscription means a guaranteed product or service delivery, which is often also less expensive that buying an individual product (a single newspaper from a newspaper stand). We are also seeing an increasing number of subscriptions for services, such as lease contracts for cars, contracts with house painters for maintenance, after-school daycare, access to online multiplayer games, etc.

Utility model: The utility model concerns transactions where the customer pays to use a particular product or service, with the amount of use being measured. In an Internet cafe you buy time for being allowed to use an Internet connection, at the self-service car wash you buy time for using the facilities, with a train ticket you buy the use of a seat in a means of transport to get from A to B, and in the meter box at home a record is kept of electricity consumption. This consumption is based on time or quantity. The utility model can easily be combined with the subscription model. For electricity consumption you have a contract with an energy supplier, however, you are charged for the actual consumption; the lease car is ‘free’ up to a certain

[10] In practice there is also often a combination of different earning models: "Flickr's multiple revenue stream business model involves collecting subscription fees, charging advertisers for contextual advertising, and receiving sponsorship and revenue-sharing fees from partnerships with retail chains and complementary photo service companies." (Teece, 2010, p. 178). Another example is the SampleLab in Tokyo: customers receive 5 items free of charge on every visit (noodles, face cream, videogame), which is made possible by: 1) membership of 13 Dollar per annum, 2) producers giving SampleLab products free of charge or even paying for shelf space; 3) selling customer feedback (Anderson, 2009).

number of kilometres, after which you have to pay an additional charge; you conclude a contract for after-school daycare but you have to pay extra for extra hours that you use, and the 'counter' really starts running when you've used up the minutes on your mobile phone subscription.

Bait and hook model: In this model a transaction is first and foremost effected by offering an appealing and relatively inexpensive basic product to the customer (the *bait)*, such as a printer, a shaver, a coffeemaker or a game console, in order to then coerce the customer into buying expensive parts that are required for that product, such as ink cartridges, razor blades, cups or video games (the *hook*). Jet engines for commercial aircraft are relatively inexpensive, however, maintenance and parts are not, and the long service life of jet engines also means a guaranteed income stream (Teece, 2010). The supplier makes his profit from the latter and achieves customer lock-in because the parts can only be bought from the supplier and are not interchangeable with other products or brands. One can, therefore, speak of a certain level of *vendor lock-in*, the situation in which it is difficult for the customer to change supplier because this is coupled with significant costs or effort. This lock-in is possible because the parts are not interchangeable or because a certain amount of convenience has to be sacrificed when switching such as, for example, keeping your account number when switching to a different bank.

Freemium model: In the freemium model a product or service is made available free of charge; however, you have to pay for additional components (hence the name f*reemium*, a contraction of *free* and *premium*). The idea behind this is that by allowing the customer to become acquainted with the product or service free of charge it makes it easier to cross the threshold of paying for a more extensive package. Examples are video games that are made available free of charge but in which you have to pay for extra levels or virtual goods; *file-sharing services* such as WeTransfer, RapidShare or Dropbox which offer a low download speed or limited storage space in the free variant and remove these barriers for a monthly amount; or services that can be upgraded to include more functionality such as Evernote, Skype, Linux and LinkedIn. The rule appears to be: 5% of the paying users support the rest, in other words 1 paying user supports 19 'free' users (Anderson, 2009).[11]

[11] For Anderson (2009) Freemium is one of the four forms of 'free'. The other three are: 1) direct cross-subsidies, comparable with the 'bait and hook model' where, as the customer, you ultimately end up paying for the free products (telephone free of charge but high cost for your text messages); 2) three-party market, comparable with the advertising model, where the person who buys the products from the advertisements is in fact paying for the 'free' product (for example, a free newspaper); and 3) nonmonetary markets, which is not further discussed here; however, see Van Vliet et al. (2013). Incidentally, Anderson's argumentation for 'free' is extremely half-hearted because he has to admit that in the end there is no such thing as a 'free lunch', but he considers that to be a 'semantic' point – it often 'feels' like 'free': "Sure, let's grant the naysayers the semantic point: Free isn't really free" (p. 219), there is always a price associated with free: "It does mean that Free is not enough. It also has to be matched with Paid. Just as King Gillette's free razors only made business sense paired with expensive blades, so will today's Web entrepreneurs have to invent not just products that people love but also those that they will pay for. Free may be the best price, but it can't be the only one." (p. 240). The only thing that Anderson makes clear is that a product is sometimes not paid or is paid very indirectly by the actual user of

Product or service bundling: In product or service bundling a popular or attractive product/service is offered together with less attractive products or services that are difficult to sell on their own. Examples of this are the collection CDs containing a few hits supplemented with a number of doubtful tracks, TV station packages with a few popular channels supplemented with channels for the 'devotees' and magazine bundles where 'old' editions or editions of less successful magazines are bundled together with a popular magazine. However, product or service bundling does not always have to have a negative character (disposing of stock, make some money from junk): for instance, McDonalds gives away 'free' Disney figures with their Happy Meals to attract more customers. When launched, a new product can be provided together with an existing product so that the market can become familiar with it. A video game can have an access code so that a beta version of a different game can be played. The 2.8 million free Prince CDs offered by the *Daily Mail* in 2007 was at a loss for the newspaper and Prince received only limited royalties but the show at the London O2 arena was sold out 21x and the Daily Mail gained a reputation of being a pioneer that attracted new advertisers. Other examples are Radiohead's free album *In Rainbows* (which resulted in the sale of 1.2 million tickets for their world tour and various number 1 positions on the hit lists when the 'physical edition' of the album was released), and the many free Monty Python film clips on the Internet which resulted in a run on the DVD box set (Anderson, 2009).

Advertising model: In the advertising model advertisements are placed for a product or service on the assumption that these advertisements will (eventually) result in purchases. By charging for this advertising space newspapers, TV stations and websites can cover their costs and they do not need to pass these on (entirely) to the customer. A 'free' newspaper is, therefore, only free because advertisers pay for space in the newspaper in the expectation that they will be able to sell more of their products as a result. The people that buy the products from the advertisers are, therefore, actually paying for the newspaper. This only works if many people see the ads because the so-called conversion rate (people who actually buy the relevant product after seeing the advertisement) is low. Alternatively, the advertisement has to focus entirely on one target group, as a result of which the conversion rate increases, for example, car advertisements in motoring magazines or the contextual advertisements that Google offers for webpages. This model has developed from the intrusive banners to advertisements prior to videos (YouTube.com), in-game ads and possibilities for 'buying off' the advertisements by taking out a service subscription (for example, in Spotify).

Brokerage model: In the brokerage model demand and supply are brought together by a third party (the *broker*) in order to facilitate transactions. The most obvious example of this are residential property websites; however, the websites that compare telephone charges, energy rates, healthcare insurance costs and all manner of products also use the brokerage model. They make their money from the transaction by demanding a commission on sales or by selling information about a customer's searching and buying patterns. In some cases the 'broker' adds extra information, which may be reviews, customer ratings, user experiences, etcetera. Good examples are holiday sites (TripAdvisor) and restaurant sites (Iens). There are also variants on this

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the product. That is a valid point, however, the marketing professionals have known that already for some time.

model such as auction sites and virtual marketplaces like Amazon.com and Bol.com which have now become a platform on which other providers can sell their products, benefit from the many visitors to these sites, and also from the logistic handling of orders. In the fashion sector, Miinto.nl is an example of a platform or broker on which many companies offer their products.

Auction model: A particular form of the brokerage model is the Auction model because the transaction takes place on the basis of a bid. In the auction model the price is determined through higher bids by bringing together demand and supply in a certain place and at a particular time. The most well-known examples are probably the flower auction in Aalsmeer and Sotheby's art auctions. There are now also various auction websites, such as eBay.com and marktplaats.nl. The organisations behind these websites ensure a secure platform on which demand and supply are brought together in a clear way and where the (financial) settlement is arranged well and in a reliable manner. Auction sites make money through a surcharge on the transactions and from advertising revenues.

Affiliate model: In this model a partner (the *affiliate*) receives a specific financial payment from the supplier when a customer visits the supplier's website via the partner's site or makes a purchase from the supplier (*pay-per-click*). In this way the suppliers can be present on a great many sites and therefore have great many touchpoints with potential customers, while the costs only kick in when there is an actual 'click through'. For the partners, it is profitable if they encourage visitors to click through because it is a source of revenue for them.

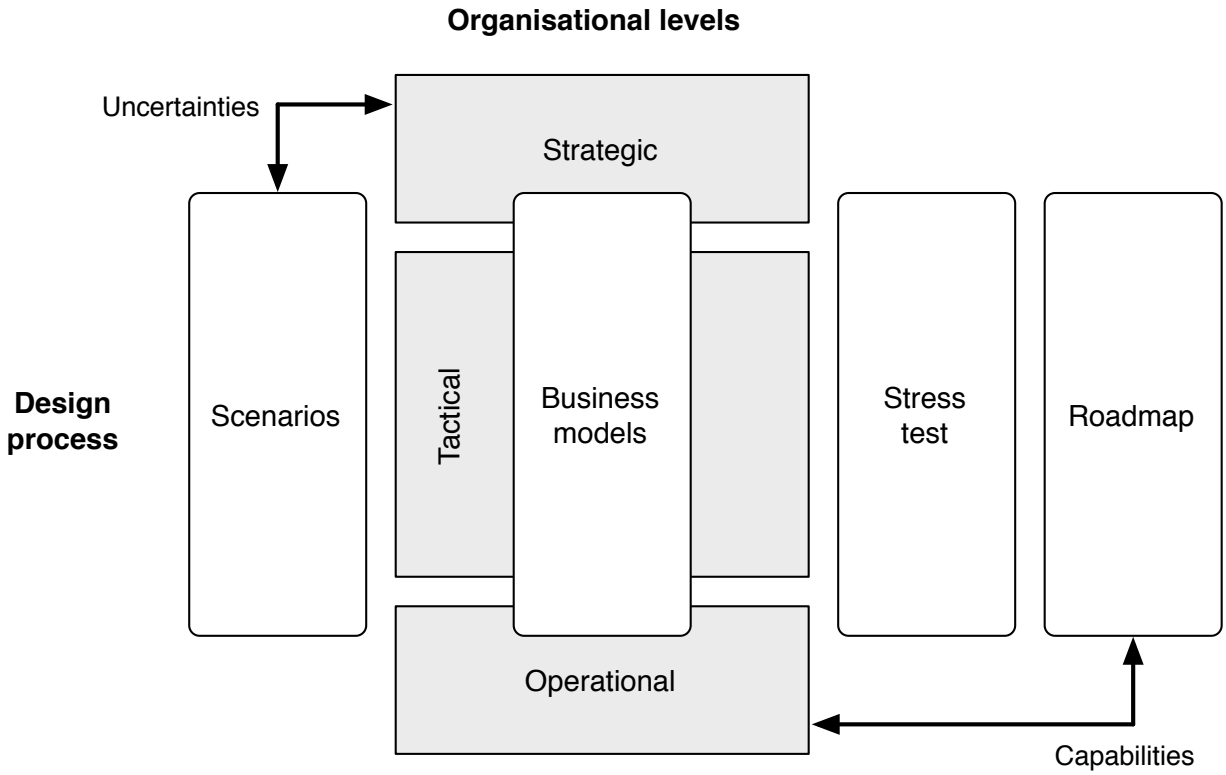
Yield management model: In this model the price is not fixed but is continuously adjusted on the basis of demand and supply and calculation rules based on past experiences. Typical examples are flight tickets and hotel reservations and sometimes also conferences and theatre performances. It is about maximising the revenues by adjusting the price: early-bird registration can be less expensive or more expensive (for people who want to be guaranteed a place), just like the last places can be sold off cheap ('last minute' offers) or sold at a higher price due to overwhelming demand.

Research framework for new services and products

Business models are introduced here as a method to be able to collect, describe, analyse and apply the added value of a product or service. These four functions are the different perspectives that can be taken on business models. Furthermore, a number of contexts can be distinguished that clarify the positioning and use of a business model. By intersecting the context of the organisation levels and the context of the design process, with the business model as the focal point, a figure emerges that shows the relationship, and which will act as a research framework (Figure 5). In the research framework, the business model is positioned between the strategic and operational levels. Whether it coincides (entirely) with it or is more between strategy and tactical is a scientific discussion that is not yet settled. It goes without saying that there are direct relationships from the business model with the strategy level (Teece, 2010) and also with the operational level (Solaimani, 2014). Relationships can also be established between both 'contexts': uncertainties at strategic level can serve as input for scenario analyses, and when delineating a roadmap for a new business model the (im)possibilities of the model at operational

level will certainly have to be taken into account. The third context component, the internal components of the business model, is mainly a choice for a particular tool, a model. Various candidates are available for this (Van Vliet et al., 2013a). We shall primarily use the STOF model because, amongst other things, it takes into account the networks or value chains in which innovations are introduced more than, for example, the Business Model Canvas.

Figure 5: Integrated research framework for business models



In order to get to grips with the sheer amount of questions involved in collecting, describing, analysing and use of a business model in its context, a structured set of questions for describing a case is being developed (Brussee et al., 2014). The advantage of working on the basis of such a set of questions is not only that the analysis can be conducted more systematically but even more importantly that it is easier to communicate about the different cases and it is easier to compare them. Such questionnaires and checklists are also available for the business model itself, such as for the Business Canvas model or the STOF model (Van Vliet et al., 2013a; Haaker, 2012). What is however striking in this approach is that there is no lack of questions to be asked, but the methodology provides few 'ready-made' answers. Perhaps every situation is unique but even so, it is fairly easy to describe the 10 or 15 most common earning models (see above). A list can also be prepared for distribution models, the most plausible technological changes, etc. This then is a plea for an approach in which designing business models becomes more of a composition from a box of ‘building bricks' of options rather than

starting from an empty canvas. This way of working does perhaps remove a certain degree of freedom ('everything is possible') but it can ensure a considerable acceleration in initial idea formation and the refining of the central proposition of the new product or service.[12]

[12] This so-called 'discrete business modelling' appears to be similar to the approach of Van Vliet et al. (2013a) for determining a media strategy game where organisational goals, instruments and results are already offered at the start of the conceptualisation phase. All energy can then be directed at creating the 'correct' combination.

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