The St. Gallen Business Model Navigator™

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BMI lab
Growth by Innovation

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1. New Products are not enough

There are many companies with excellent technological products. Especially in Europe, many firms continuously introduce innovations to their products and processes. Yet, many companies will not survive in the long term despite their product innovation capabilities. Why do prominent firms, which have been known for their innovative products for years, suddenly lose their competitive advantage? Strong players such as *AEG*, *Grundig*, *Nixdorf Computers*, *Triumph, Brockhaus, Agfa, Kodak, Quelle, Otto*, and *Schlecker* are vanishing from the business landscape one after the other. They have lost their capabilities of marketing their former innovative strengths. The answer is simple and painful: these companies have failed to adapt their business models to the changing environment. In future, competition will take place between business models, and not just between products and technologies.

New business models are often based on early weak signals: Trendsetters signal new customer requirements; regulations are discussed broadly before they are eventually approved. New entrants to the industry discuss new alliances at great length; disruptive technology developments are results of many years of research. The insolvency of *Kodak* in 2012 also has a long history. The first patents for digital cameras had already been published by *Texas Instruments* in 1972. *Kodak* realized the potential of the new technology and in the 90s initiated an alliance on digital imaging with *Microsoft* in order to conquer this new field. But – as can be observed frequently – the disruptive move was faint-hearted. When the first digital cameras entered the market in 1999, *Kodak* forecasted that ten years later digital cameras would account for only 5 % of the market, with analog cameras remaining strong at 95 %. In 2009, the reality was different: Only 5 % of the market remained analog. This misjudgment was so grave and powerful that it was too late when *Kodak* physically blew up its chemical R&D center in Rochester in order to change the corporate-dominant logic of analog imaging. Between 1988 and 2008, *Kodak* reduced the number of its employees by more than 80 %, in 2012 *Kodak* filed for bankruptcy protection.

It is often said that existing business models ´don't work anymore´. Still, the typical answers provided by R&D engineers are new products based on new technologies and more functionality. By contrast, the underlying business logic is rarely addressed despite the fact that business model innovators have been found to be more profitable by an average of 6 % compared to pure product or process innovators (BCG 2008). As a consequence, managers consider business model innovation to be more important for achieving competitive advantage than product or service innovation, and over 90 % of the CEOs surveyed in a study by IBM (2012) plan to innovate their company's business model over the next three years. But a plan is not enough.

When it comes to making the phenomenon tangible, people struggle. Very few managers are able to explain their company's business model ad-hoc, and even fewer can define what a business model actually is in general. The number of companies, which have established dedicated business model innovation units and processes is even lower. Given the importance of the topic, this lack of corporate institutionalization is surprising – however, considering the complexity and fuzziness of the topic, it is to be expected.

Before discussing how to innovate a business model, it is important to understand what it is that is to be innovated. Historically, the business model has its roots in the late 1990s when it emerged as a buzzword in the popular press. Ever since, it has raised significant attention from both practitioners and scholars and nowadays forms a distinct feature in multiple research streams. In general, the business model can be defined as a unit of analysis to describe how the business of a firm works. More specifically, the business model is often depicted as an overarching concept that takes notice of the different components a business is constituted of and puts them together as a whole (Demil and Lecocq 2010; Osterwalder and Pigneur, 2010). In other words, business models describe how the magic of a business works based on its individual bits and pieces.

Business model literature has not yet reached a common opinion as to which components exactly make up a business model. To describe the business models throughout our study, we employ a conceptualization that consists of four central dimensions: the Who, the What, the How, and the Value. Due to the reduction to four dimensions the concept is easy to use, but, at the same time, exhaustive enough to provide a clear picture of the business model architecture.

Who: Every business model serves a certain customer group (Chesbrough and Rosenbloom 2002; Hamel 2000). Thus, it should answer the question ´Who is the customer?´ (Magretta 2002). Drawing on the argument from Morris et al. (2005, p. 730) that the ´failure to adequately define the market is a key factor associated with venture failure´, we identify the definition of the target customer as one central dimension in designing a new business model.

What: The second dimension describes what is offered to the target customer, or, put differently, what the customer values. This notion is commonly referred to as the customer value proposition (Johnson et al. 2008), or, more simply, the value proposition (Teece 2010). It can be defined as a holistic view of a company's bundle of products and services that are of value to the customer (Osterwalder 2004).

How: To build and distribute the value proposition, a firm has to master several processes and activities. These processes and activities, along with the involved resources (Hedman and Kalling 2003) and capabilities (Morris et al. 2005), plus their orchestration in the focal firm's internal value chain form the third dimension within the design of a new business model.

Value: The fourth dimension explains why the business model is financially viable, thus it relates to the revenue model. In essence, it unifies aspects such as, for example, the cost structure and the applied revenue mechanisms, and points to the elementary question of any firm, namely how to make money in the business (see Fig. 1).

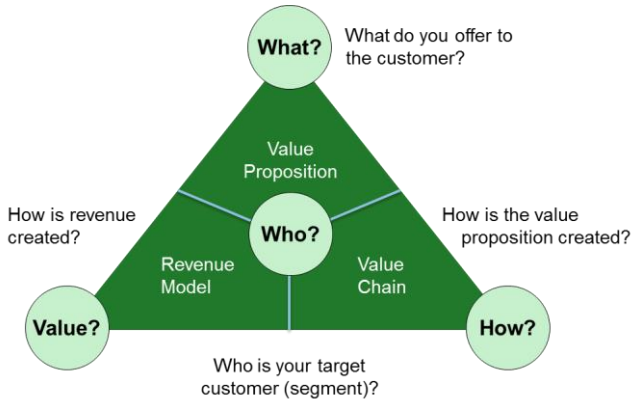

Fig. 1 Business model definition – the magic triangle

By answering the four associated questions and explicating (1) the target customer, (2) the value proposition towards the customer, (3) the value chain behind the creation of this value, and (4) the revenue model that captures the value, the business model of a company becomes tangible and a common ground for its re-thinking is achieved. A central virtue of the business model is that it allows for a holistic picture of the business by combining factors located inside and outside the firm (Teece 2010; Zott et al. 2011). For this reason, it is often referred to as a boundary-spanning concept that explains how the focal firm is embedded in, and interacts with, its surrounding ecosystem (Shafer et al. 2005; Zott and Amit 2008). The task most commonly attributed to the business model is that of explaining how the focal firm creates and captures value for itself and its various stakeholders within this ecosystem.

Considering the vast scope that is subsumed under the business model umbrella, it becomes clear that, in the real world, a firm's business model is a complex system full of interdependencies and side effects. Changing – or innovating – the business model can hence be assumed to be a major undertaking that can quickly become very challenging and complicated.

Generations of managers have been trained within Porter's five forces of industry analysis. Michael Porter taught us to analyze the industry and try to gain comparative competitive advantage due to better positioning. Kim and Mauborgne (2005) paved the way out of Porter's box. 'Beat your competitor without trying to beat your competitor' is the credo that obliges companies to leave their highly competitive own industry and create new uncontested markets in which they can prosper. It is a mantra for business innovators as we have seen in our own research and coaching of companies during the last decade. *IKEA* revolutionized the furniture business, Apple successfully re-defined industry boundaries, and *Zara* reinvented the European fashion industry with high-speed cycles. Many others revolutionized their industries in a very radical way: *Mobility car sharing*, *Car2go*, *TomTom, Wikipedia, Microinsurance, Better Place, Verizon*, and *Bombardier Flexjet* are only a few examples of companies which escaped the traditional industry logic and therefore redefined their respective industries.

So, why do not more companies just come up with a new business model and move into a 'blue ocean'? It is because thinking outside the box is hard to do – mental barriers block the road towards innovative ideas. Managers struggle to turn around the predominant logic of 'their' industry, which they have spent their entire careers understanding. First, many managers do not see why they should leave the comfort zone as long as they are still making profits. Second, it is common knowledge that the harder you try to get away from something, the closer you get to it. Bringing in outside ideas might seem promising in this case – however, the ´not invented here´ (NIH) syndrome is well known and will soon quash any outside idea before it can take off in a company.

In view of these barriers, a successful approach that leads to innovative business model ideas must master the balancing act of bringing in stimuli external to an industry to achieve novelty while, at the same time, enabling those within an industry to develop their own innovative business model ideas.

Research methodology

As business innovation research is still a young phenomenon, we used a two-step approach to analyze the basic patterns of business models.

In phase 1 we analyzed 250 business models that had been applied in different industries within the last 25 years. As a result we identified 55 patterns of business models which served as the base for new business models in the past. More than five years of research and practice in the area of business model innovation have culminated in a methodology that helps firms structure and navigate the process: the *Business Model Innovation Map*, which guides the innovator through the many opportunities a company faces (see also Gassmann et al. 2013).

In phase 2 we used that knowledge and, together with selected companies, developed a construction methodology which is based on two basic principles: First, 90 % of all new business models have recombined already existing ideas, concepts and technologies as we found in our research group. Consequently this fact has to be used for developing new business models. Second, we applied the iterative process of design thinking, which was developed at the Institute of Design at Stanford University. This action-based research approach helped us to learn more about the practical use of the design of new business models.

We applied the methodology with teams in the following companies: *BASF* (chemicals), *Bühler* (machinery), *Hilti* (construction tools), *Holcim* (cement), *Landis&Gyr* (electricity metering), *MTU* (turbines), *SAP* (software), *Sennheiser* (audio technology), *Siemens* (health care), *Swisscom* (telecom). In all companies, investments have been initiated as a result of the business model project, in some companies up to double-digit million amounts are invested. In addition we used the approach during three years of teaching Executive MBA students at the Executive School in St. Gallen and applied it in a one-day workshop for more than 50 companies. This experience has been built into the methodology as well.

2. Creative Imitation and the Power of Recombination

The phrase ´There's no need to reinvent the wheel´ describes the fact that, at a closer look, only few phenomena are really new. Often, innovations are slight variations of something that has existed elsewhere, in other industries, or in other geographical areas. We have looked at several hundred business model innovators and were not surprised to find that about 90 % of the innovations turned out to be such re-combinations of previously existing concepts. We identified 55 repetitive patterns that form the core of many new business models (see Gassmann et al. 2012; Gassmann et al. 2013). The business model innovation map (see Figure 2) depicts the 20 most popular patterns as lines, along with the companies which applied them in their new business models.

The RAZOR AND BLADE pattern, for example, goes back to *Gillette's* 1904 move to give the base product (the razor) away for a low price and earn money through higher-priced consumables (the blades). The pattern, which defines the value proposition and revenue logic of a business model, has spread across many industries since then. Examples include inkjet printers and cartridges, blood glucose meters and test stripes, or *Nespresso's* coffee machines and capsules. In the world of business models, there is really not much that is actually new – but many powerful adaptations and applications contexts and industries can be found.

What can we learn from this observation? Clearly, the patterns of business models identified can serve as an inspiration when innovations of business models are considered. If they could be adopted elsewhere, why not apply them to one's own company? This approach brings in external stimuli while, at the same time, allowing enough room to prevent the NIH syndrome. Over time, we have developed the 55 business model patterns identified into the central ideation tool of our St. Gallen Business Model Navigator™ methodology.

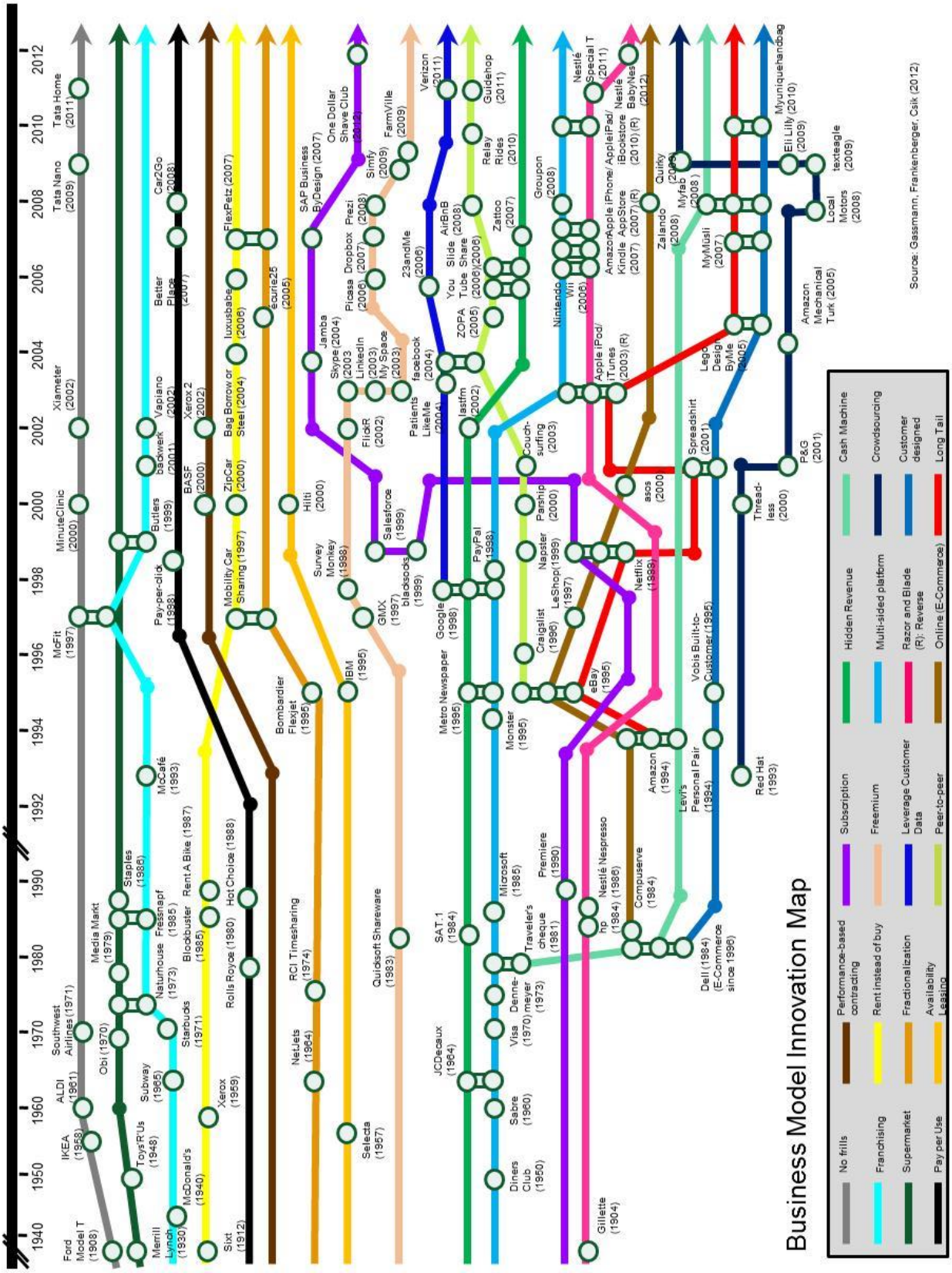
Business Model Innovation Map
No frills
Franchising
Supermarket
Pay per Use
Performance-based contracting
Rent instead of buy
Fractionalization
Availability Leasing
Subscription
Freemium
Leverage Customer Data
Peer-to-peer
Hidden Revenue
Multi-sided platform
Razor and Blade (R); Reverse
Online (E-Commerce)
Cash Machine
Crowdsourcing
Customer designed
Long Tail
Source: Gassmann, Frankenberger, Csik (2012)

Fig. 2 The business model innovation map: Every node represents a revolution of an industry.

The St. Gallen Business Model Navigator™ transforms the main concept – creating business model ideas by utilizing the power of re-combination – into a ready-to-use methodology, which has proven its usefulness in countless workshops and other formats. Three steps pave the road to a new business model:

Step 1: Initiation – preparing the journey

Before embarking on the journey towards new business models, it is important to define a starting point and rough direction. Describing the current business model, its value logic, and its interactions with the outside world is a good exercise to get into the logic of business model thinking. It also builds a common understanding of why the current business model will need an overhaul, which factors endanger its future, or which opportunities cannot be exploited due to the current way of doing business. Explicating these woes and the predominant industry logic provides a rough direction according to which the generic business model patterns should be interpreted in step 2.

Success factors:

- Involve open-minded team members from different functions; the involvement of industry outsiders supports thinking outside the box.
- Overcome the dominant industry logic: Forbidden are sentences like 'this has always worked like that in our industry'. Instead, a funeral speech for one´s own business helps to overcome the past. Why did the company die? This is a fascinating exercise, which McKinsey has often used successfully in change projects when individuals needed to overcome mental barriers.
- Use methodological support, e.g., card sets, business model innovation software (see www.bmi-lab.ch for our methodological approach and background information).

Step 2: Ideation – moving into new directions

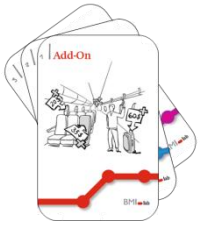

Fig. 3 Pattern card set

Re-combining existing concepts is a powerful tool to break out of the box and generate ideas for new business models. To ease this process, we have condensed the 55 patterns of successful business models into a handy set of pattern cards. Each pattern card (see Figure 3) contains the essential information that is needed to understand the concept behind the pattern: a title, a description of the general logic, and a concrete example of a company implementing the pattern in its business model. During the stage of ideation, the level of information on the card is just right to trigger the creation of innovative ideas.

The way in which we apply the cards is termed *pattern confrontation* to describe the process of adapting the pattern to one's own initial situation. Participants, typically divided into groups of three to five people, ask themselves how the pattern would change their business model if applied to their particular situation.

At first glance the cards might seem unrelated to the problem, however, the results are quite surprising. Often the stimuli, in the form of pattern cards, cause innovative ideas to emerge, which inspire discussions among the group members. In one instance, for example, the task of fitting the SUBSCRIPTION pattern to the business model of a machine manufacturer led to the idea of training sought-after plant operators and leasing them to customers. The concept was implemented and now contributes to the company's turnover while at the same time strengthening ties with customers – which had been the original reason for thinking about a new business model.

Success factors:

- Try not only the close patterns, but also confront more distant patterns. We had very surprising results when a 1st tier automotive supplier applied the question: 'How would *McDonald´*s conduct your business?'. For example, *McDonald's* front desk employees are fully productive after a 30-minute introduction. The automotive supplier had to learn that reducing complexity would lead to totally new business models and would also stimulate quick learning.
- Keep on trying. At first, it seems impossible to learn something from industry outsiders. Especially individuals with a profound background in the existing industry have difficulties in overcoming the dominant industry logic.

Step 3: Integration – completing the picture

There is no idea that is clear enough to be immediately implemented in a company. On the contrary, promising ideas need to be gradually elaborated into full-blown business models that describe all four dimensions - *Who-What-How-Value?* - and

also consider stakeholders, new partners, and consequences for the market. A set of checklists and tools, such as the value network methodology, are available in the St. Gallen Business Model Navigator™ to ease the process of quickly elaborating and explicating the business model around a promising idea. The list of example companies on each pattern card makes it possible to draw inspiration from other companies which implemented the same pattern.

Success factors:

- Be consistent. Consistency between the internal and the external world is necessary. There has to be a fit between the internal core competencies, the competitor's perspective, and the perceived customer value.
  Try hard. Developing a business model and implementing the idea in one´s own company requires a lot of work.

3. Conclusions

With the St. Gallen Business Model Navigator™ a new methodology has been developed that structures the process of innovation of a company's business model and encourages outside-the-box thinking, which is a key prerequisite for successful business models. Well-grounded in theory, it has proven its applicability in practical settings many times over.
In order to achieve successful business model innovations within a company it is important to not only acknowledge the importance of business model innovation, but to implement an effective business model innovation process within the firm. This is the most difficult, but also the most important step. Various tools have been developed to support managers during the business model innovation process[1]:

Business model innovation software

Interactive software allows users to explore the 55 business model patterns and the map interactively. The software supports the construction of a new business model based on the St. Gallen Business Model Navigator™ throughout the company on a worldwide scale.

Online learning

The online learning course is aimed at employees and in an interactive way explains the logic and importance of business model innovation and the power of recombining existing business model elements.

55 business model cards[1]

The set of 55 business model cards supports the creative ideation process during workshops.

The following managerial implications should prove valuable for practitioners using this new approach to revolutionize their business:

1. Challenge the dominant logic by using confrontation techniques. The 55 patterns of business models identified support this challenging task.
   Use an iterative approach with many loops.
2. Use haptic cards or other devices to stimulate the creative thinking process.
3. Carefully assign the role of a pivot thinker for changing the direction between divergent and convergent thinking.
4. Create a culture of openness: there are no holy cows in the room.

Given the overwhelming demand for a new business model innovation methodology, the journey of the St. Gallen Business Model Navigator™ will continue. The future race for comparative competitive advantages has shifted from pure products and services to business models. Firms need to get ready for that race. Identifying the opportunity is not enough, innovators and entrepreneurs have to capture the opportunity and start moving. Knowing the past helps in creating the future.

[1] Further information can be found on our homepage: www.bmi-lab.ch

4. The 55 business model patterns

No	Pattern name	Affected BM compo-nents	Exemplary companies	Pattern description
1	ADD-ON	What Value	Ryanair (1985), SAP (1992), Sega (1998)	The core offering is priced competitively, but there are numerous extras that drive the final price up. In the end, the costumer pays more than he or she initially assumed. Customers benefit from a variable offer, which they can adapt to their specific needs.
2	AFFILIATION	How Value	Amazon Store (1995), Cybererotica (1994), CDnow (1994), Pinterest (2010)	The focus lies in supporting others to successfully sell products and directly benefit from successful transactions. Affiliates usually profit from some kind of pay-per-sale or pay-per-display compensation. The company, on the other hand, is able to gain access to a more diverse potential customer base without additional active sales or marketing efforts.
3	AIKIDO	Who What Value	Six Flags (1961), The Body Shop (1976), Swatch (1983), Cirque du Soleil (1984), Nintendo (2006)	Aikido is a Japanese martial art in which the strength of an attacker is used against him or her. As a business model, Aikido allows a company to offer something diametrically opposed to the image and mindset of the competition. This new value proposition attracts customers who prefer ideas or concepts opposed to the mainstream.
4	AUCTION	What Value	eBay (1995), Winebid (1996), Priceline (1997), Google (1998), Elance (2006), Zopa (2005), MyHammer (2005)	Auctioning means selling a product or service to the highest bidder. The final price is achieved when a particular end time of the auction is reached or when no higher offers are received. This allows the company to sell at the highest price acceptable to the customer. The customer benefits from the opportunity to influence the price of a product.
5	BARTER	What Value	Procter & Gamble (1970), Pepsi (1972), Lufthansa (1993), Magnolia Hotels (2007), Pay with a Tweet (2010)	Barter is a method of exchange in which goods are given away to customers without the transaction of actual money. In return, they provide something of value to the sponsoring organisation. The exchange does not have to show any direct connection and is valued differently by each party.
6	CASH MACHINE	How Value	American Express (1891), Dell (1984), Amazon Store (1995), PayPal (1998), Blacksocks (1999), MyFab (2008), Groupon (2008)	In the Cash Machine concept, the customer pays upfront for the products sold to the customer before the company is able to cover the associated expenses. This results in increased liquidity which can be used to amortise debt or to fund investments in other areas.
7	CROSS SELLING	How What Value	Shell (1930), IKEA(1956), Tchibo (1973), Aldi (1986), SANIFAIR (2003)	In this model, services or products from a formerly excluded industry are added to the offerings, thus leveraging existing key skills and resources. In retail especially, companies can easily provide additional products and offerings that are not linked to the main industry on which they were previously focused. Thus, additional revenue can be generated with relatively few changes to the existing infrastructure and assets, since more potential customer needs are met.
8	CROWD-FUNDING	How Value	Marillion (1997), Cassava Films (1998), Diaspora (2010), Brainpool (2011), Pebble Technology (2012)	A product, project or entire start-up is financed by a crowd of investors who wish to support the underlying idea, typically via the Internet. If the critical mass is achieved, the idea will be realized and investors receive special benefits, usually proportionate to the amount of money they provided.

No	Pattern name	Affected BM compo-nents	Exemplary companies	Pattern description
9	CROWD-SOURCING	How Value	Threadless (2000), Procter & Gamble (2001), InnoCentive (2001), Cisco (2007), MyFab (2008)	The solution of a task or problem is adopted by an anony-mous crowd, typically via the Internet. Contributors receive a small reward or have the chance to win a prize if their solution is chosen for production or sale. Customer interac-tion and inclusion can foster a positive relationship with a company, and subsequently increase sales and revenue.
10	CUSTOMER LOYALTY	What Value	Sperry & Hutchinson (1897), American Airlines (1981), Safeway Club Card (1995), Payback (2000)	Customers are retained and loyalty assured by providing value beyond the actual product or service itself, i.e., through incentive-based programs. The goal is to increase loyalty by creating an emotional connection or simply rewarding it with special offers. Customers are voluntarily bound to the company, which protects future revenue.
11	DIGITALIZA-TION	What How	Spiegel Online (1994), WXYC (1994), Hotmail (1996), Jones Internation-al University (1996), CEWE Color (1997), SurveyMonkey (1998), Napster (1999), Wikipe-dia (2001), Facebook (2004), Dropbox (2007), Netflix (2008), Next Issue Media (2011)	This pattern relies on the ability to turn existing products or services into digital variants, and thus offer advantages over tangible products, e.g., easier and faster distribution. Ideally, the digitization of a product or service is realized without losing any aspect of the value proposition that was offered to the customer before.
12	DIRECT SELLING	What How Value	Vorwerk (1930), Tupper-ware (1946), Amway (1959), The Body Shop (1976), Dell (1984), Nestle Nespresso (1986), First Direct (1989), Nestlé Special.T (2010), Dollar Shave Club (2012), Nestlé BabyNes (2012)	Direct selling refers to a scenario whereby a company's products are not sold through intermediary channels, but are available directly from the manufacturer or service provider. In this way, the company skips the retail margin or any additional costs associated with the intermediates. These savings can be forwarded to the customer and a standardized sales experience established. Additionally, such close contact can improve customer relationships.
13	E-COMMERCE	What How Value	Dell (1984), Asos (2000), Zappos (1999), Amazon Store (1995), Flyeralarm (2002), Blacksocks (1999), Dollar Shave Club (2012), Winebid (1996), Zopa (2005)	Traditional products or services are delivered through online channels only, thus removing costs associated with running a physical branch infrastructure. Customers benefit from higher availability and conven-ience, while the company is able to integrate its sales and distribution with other internal processes.
14	EXPERIENCE SELLING	What Who Value	Harley Davidson (1903), IKEA (1956), Trader Joe's (1958), Starbucks (1971), Swatch (1983), Nestlé Nespresso (1986), Red Bull (1987), Barnes & Noble (1993), Nestlé Special.T (2010)	The value of a product or service is increased with the customer experience offered with it. This opens the door for higher customer demand and commensurate increase in prices charged. This means that the customer experience must be adapted accordingly, e.g., by attuning promotion.
15	FLAT RATE	What Value	SBB (1898), Buckaroo Buffet (1946), Sandals Resorts (1981), Netflix (1999), Next Issue Media (2011)	In this model, a single fixed fee for a product or service is charged, regardless of actual usage or time restrictions on it. The user benefits from a simple cost structure while the company benefits from a constant revenue stream.
16	FRACTION-ALIZED OWNERSHIP	What How Value	Hapimag (1963), Netjets (1964), Mobility Carshar-ing (1997), écurie25 (2005), HomeBuy (2009)	Fractional ownership describes the sharing of a certain asset class amongst a group of owners. Typically, the asset is capital intensive but only required on an occasional basis. While the customer benefits from the rights as an owner, the entire capital does not have to be provided alone.

No	Pattern name	Affected BM compo-nents	Exemplary companies	Pattern description
17	FRANCHI-SING	What How Value	Singer Sewing Machine (1860), McDonald's (1948), Marriott Interna-tional (1967), Starbucks (1971), Subway (1974), Fressnapf (1992), Naturhouse (1992), McFit (1997), BackWerk (2001)	The franchisor owns the brand name, products, and corpo-rate identity, and these are licensed to independent fran-chisees who carry the risk of local operations. Revenue is generated as part of the franchisees' revenue and orders. The franchisees benefit from the usage of well known brands, know-how, and support.
18	FREEMIUM	What Value	Hotmail (1996), Survey-Monkey (1998), LinkedIn (2003), Skype (2003), Spotify (2006), Dropbox (2007)	The basic version of an offering is given away for free in the hope of eventually persuading the customers to pay for the premium version. The free offering is able to attract the highest volume of customers possible for the company. The generally smaller volume of paying 'premium customers' generate the revenue, which also cross-finances the free offering.
19	FROM PUSH-TO-PULL	What How	Toyota (1975), Zara (1975), Dell (1984), Geberit (2000)	This pattern describes the strategy of a company to decen-tralize and thus add flexibility to the company's processes in order to be more customer focused. To quickly and flexibly respond to new customer needs, any part of the value chain - including production or even research and development - can be affected.
20	GUARAN-TEED AVAILABI-LITY	What How Value	NetJets (1964), PHH Corporation (1986), IBM (1995), Hilti (2000), MachineryLink (2000), ABB Turbo Systems (2010)	Within this model, the availability of a product or service is guaranteed, resulting in almost zero downtime. The cus-tomer can use the offering as required, which minimizes losses resulting from downtime. The company uses exper-tise and economies of scale to lower operation costs and achieve these availability levels.
21	HIDDEN REVENUE	What How Value	JCDecaux (1964), Sat.1 (1984), Metro Newspaper (1995), Google (1998), Facebook (2004), Spotify (2006), Zattoo (2007)	The logic that the user is responsible for the income of the business is abandoned. Instead, the main source of revenue comes from a third party, which cross-finances whatever free or low-priced offering attracts the users. A very com-mon case of this model is financing through advertisement, where attracted customers are of value to the advertisers who fund the offering. This concept facilitates the idea of 'separation between revenue and customer'.
22	INGREDIENT BRANDING	What How Value	DuPont Teflon (1964), W.L. Gore & Associates (1976), Intel (1991), Carl Zeiss (1995), Shimano (1995), Bosch(2000)	Ingredient branding describes the specific selection of an ingredient, component, and brand originating from a specif-ic supplier, which will be included in another product. This product is then additionally branded and advertised with the ingredient product, collectively adding value for the cus-tomer. This projects the positive brand associations and properties on the product, and can increase the attractive-ness of the end product.
23	INTEGRATOR	What How	Carnegie Steel (1870), Ford (1908), Zara (1975), Exxon Mobil (1999), BYD Auto (1995)	An integrator is in command of the bulk of the steps in a value-adding process. The control of all resources and capabilities in terms of value creation lies with the compa-ny. Efficiency gains, economies of scope, and lower de-pendencies from suppliers result in a decrease in costs and can increase the stability of value creation.

No	Pattern name	Affected BM compo-nents	Exemplary companies	Pattern description
24	LAYER PLAYER	How Value	Dennemeyer (1962), Wipro Technologies (1980), TRUSTe (1997), PayPal (1998), Amazon Web Services (2002)	A layer player is a specialized company limited to the provision of one value-adding step for different value chains. This step is typically offered within a variety of independent markets and industries. The company benefits from economies of scale and often produces more efficiently. Further, the established special expertise can result in a higher quality process.
25	LEVERAGE CUSTOMER DATA	What How	Amazon Store (1995), Google (1998), Payback (2000), Facebook (2004), PatientsLikeMe (2004), 23andMe (2006), Twitter (2006), Verizon Communications (2011)	New value is created by collecting customer data and preparing it in beneficial ways for internal usage or interested third-parties. Revenues are generated by either selling this data directly to others or leveraging it for own purposes, i.e., to increase the effectiveness of advertising.
26	LICENSE	How Value	BUSCH (1870), IBM (1920), DIC 2 (1973), ARM (1989), Duales System Deutschland (1991), Max Havelaar (1992)	Efforts are focused on developing intellectual property that can be licensed to other manufacturers. This model, therefore, relies not on the realization and utilization of knowledge in the form of products, but attempts to transform these intangible goods into money. This allows a company to focus on research and development. It also allows the provision of knowledge, which would otherwise be left unused and potentially be valuable to third parties.
27	LOCK-IN	What How Value	Gillette(1904), Lego (1949), Microsoft (1975), Hewlett-Packard (1984), Nestlé Nespresso (1986), Nestlé BabyNes (2012), Nestlé Special.T (2010)	Customers are locked into a vendor's world of products and services. Using another vendor is impossible without incurring substantial switching costs, and thus protecting the company from losing customers. This lock-in is either generated by technological mechanisms or substantial interdependencies of products or services.
28	LONG TAIL	How Value	Amazon Store (1995), eBay (1995), Netflix (1999), Apple iPod/iTunes (2003), YouTube (2005),	Instead of concentrating on blockbusters, the main bulk of revenues is generated through a 'long tail' of niche products. Individually, these neither demand high volumes, nor allow for a high margin. If a vast variety of these products are offered in sufficient amounts, the profits from resultant small sales can add up to a significant amount.
29	MAKE MORE OF IT	Who What How Value	Porsche (1931), Festo Didactic (1970), BASF (1998), Amazon Web Services (2002), Sennheiser Sound Academy (2009)	Know-how and other available assets existing in the company are not only used to build own products, but also offered to other companies. Slack resources, therefore, can be used to create additional revenue besides those generated directly from the core value proposition of the company.
30	MASS CUSTOMIZATION	What Value	Dell (1984), Levi's (1990), Miadidas (2000), PersonalNOVEL (2003), Factory121 (2006), mymuesli (2007), My Unique Bag (2010)	Customizing products through mass production once seemed to be an impossible endeavor. The approach of modular products and production systems has enabled the efficient individualization of products. As a consequence, individual customer needs can be met within mass production circumstances and at competitive prices.
31	NO FRILLS	How What Value	Ford (1908), Aldi (1913), McDonald's (1948), Southwest Airlines (1971), Aravind Eye care System (1976), Accor (1985), McFit (1997), Dow Corning (2002)	Value creation focuses on what is necessary to deliver the core value proposition of a product or service, typically as basic as possible. Cost savings are shared with the customer, usually resulting in a customer base with lower purchasing power or purchasing willingness.

No	Pattern name	Affected BM compo-nents	Exemplary companies	Pattern description
32	OPEN BUSI-NESS MODEL	What Who Value	Valve Corporation (1998), Abril (2008)	In open business models, collaboration with partners in the ecosystem becomes a central source of value creation. Companies pursuing an open business model actively search for novel ways of working together with suppliers, customers, or complementors to open and extend their business.
33	OPEN SOURCE	Who What How Value	IBM (1955), Mozilla (1992), Red Hat (1993), mondoBIOTECH (2000), Wikipedia (2001), Local Motors (2008)	In software engineering, the source code of a software product is not kept proprietary, but is freely accessible for anyone. Generally, this could be applied to any technology details of any product. Others can contribute to the product, but also use it free as a sole user. Money is typically earned with services that are complimentary to the product, such as consulting and support.
34	ORCHEST-RATOR	How Value	Procter & Gamble (1970), Li & Fung (1971), Nike (1978), Bharti Airtel (1995)	Within this model, the company's focus is on the core competencies in the value chain. The other value chain segments are outsourced and actively coordinated. This allows the company to reduce costs and benefit from the suppliers' economies of scale. Furthermore, the focus on core competencies can increase performance.
35	PAY PER USE	What How Value	Hot Choice (1988), Google (1998), Ally Financial (2004), Better Place (2007), Car2Go (2008)	In this model, the actual usage of a service or product is metered. The customer pays on the basis of what he or she effectively consumes. The company is able to attract customers who wish to benefit from the additional flexibility, which might be priced higher.
36	PAY WHAT YOU WANT	How Value	One World Everbody Eats (2003), NoiseTrade (2006), Radiohead (2007), Humble Bundle (2010), Panera Bread Bakery (2010)	The buyer pays any desired amount for a given commodity, sometimes even zero. In some cases, a minimum floor price may be set, and/or a suggested price may be indicated as guidance for the buyer. The customer is allowed to influence the price, while the seller benefits from higher numbers of attracted customers, since individuals' willingness to pay is met. Based on the existence of social norms and morals, this is only rarely exploited, which makes it suitable to attract new customers.
37	PEER-TO-PEER	What Value	eBay (1995), Craigslist (1996), Napster (1999), Couchsurfing (2003), LinkedIn (2003), Skype (2003), Zopa (2005), SlideShare (2006), Twitter (2006), Dropbox (2007), Airbnb (2008), TaskRabbit (2008), RelayRides (2010), Gidsy (2011)	This model is based on a cooperation that specializes in mediating between individuals belonging to an homogeneous group. It is often abbreviated as P2P. The company offers a meeting point, i.e., an online database and communication service that connects these individuals (these could include offering personal objects for rent, providing certain products or services, or the sharing of information and experiences).
38	PERFOR-MANCE-BASED CONTRAC-TING	What Value	Rolls-Royce (1980), Smartville (1997), BASF (1998), Xerox (2002)	A product's price is not based upon the physical value, but on the performance or valuable outcome it delivers in the form of a service. Performance based contractors are often strongly integrated into the value creation process of their customers. Special expertise and economies of scale result in lower production and maintenance costs of a product, which can be forwarded to the customer. Extreme variants of this model are represented by different operation schemes in which the product remains the property of the company and is operated by it.

No	Pattern name	Affected BM compo-nents	Exemplary companies	Pattern description
39	RAZOR AND BLADE	What How Who	Standard Oil Company (1880), Gillette (1904), Hewlett-Packard (1984), Nestlé Nespresso (1986), Apple iPod/iTunes (2003), Amazon Kindle (2007), Better Place (2007), Nestlé Special.T (2010), Nestlé BabyNes (2012)	The basic product is cheap or given away for free. The consumables that are needed to use or operate it, on the other hand, are expensive and sold at high margins. The initial product's price lowers customers' barriers to purchase, while the subsequent recurring sales cross-finance it. Usually, these products are technologically bound to each other to further enhance this effect.
40	RENT INSTEAD OF BUY	What How Value	Saunders System (1916), Xerox (1959), Blockbuster (1985), Rent a Bike (1987), Mobility Carsharing (1997), MachineryLink (2000), CWS-boco (2001), Luxusbabe (2006), Flexpetz (2007), Car2Go(2008)	The customer does not buy a product, but instead rents it. This lowers the capital typically needed to gain access to the product. The company itself benefits from higher profits on each product, as it is paid for the duration of the rental period. Both parties benefit from higher efficiency in product utilization as time of non-usage, which unnecessarily binds capital, is reduced on each product.
41	REVENUE SHARING	What How Value	CDnow (1994), HubPages(2006), Apple iPhone/AppStore(2008), Groupon (2008)	Revenue sharing refers to firms' practice of sharing revenues with their stakeholders, such as complementors or even rivals. Thus, in this business model, advantageous properties are merged to create symbiotic effects in which additional profits are shared with partners participating in the extended value creation. One party is able to obtain a share of revenue from another that benefits from increased value for its customer base.
42	REVERSE ENGINEERING	What Value	Bayer (1897), Pelikan (1994), Brilliance China Auto (2003), Denner (2010)	This pattern refers to obtaining a competitor's product, taking it apart, and using this information to produce a similar or compatible product. Because no huge investment in research or development is necessary, these products can be offered at a lower price than the original product.
43	REVERSE INNOVATION	What Value	Logitech (1981), Haier (1999), Nokia (2003), Renault (2004), General Electric (2007)	Simple and inexpensive products, that were developed within and for emerging markets, are also sold in industrial countries. The term 'reverse' refers to the process by which new products are typically developed in industrial countries and then adapted to fit emerging market needs.
44	ROBIN HOOD	How What	Aravind Eye Care System (1976), One Laptop per Child (2005), TOMS Shoes (2006), Warby Parker (2008)	The same product or service is provided to 'the rich' at a much higher price than to 'the poor'. Thus, the main bulk of profits are generated from the wealthy customer base. Serving 'the poor' is not profitable per se, but creates economies of scale, which other providers cannot achieve. Additionally, it has a positive effect on the company's image.
45	SELF-SERVICE	What How	McDonald's (1948), IKEA (1956), Accor (1985), Mobility Carsharing (1997), BackWerk (2001), Car2Go (2008)	A part of the value creation is relegated to the customer in exchange for a lower price of the service or product. This is particularly suited for process steps that add relatively little perceived value for the customer, but incur high costs. Customers benefit from efficiency and time savings, while putting in their own effort. This can also increase efficiency, since in some cases, the customer can execute a value-adding step more quickly and in a more target-oriented manner than the company.

No	Pattern name	Affected BM compo-nents	Exemplary companies	Pattern description
46	SHOP-IN-SHOP	Who Value	Tim Hortons (1964), Tchibo (1987), Deutsche Post (1995), Bosch (2000), MinuteClinic (2000)	Instead of opening new branches, a partner is chosen whose branches can profit from integrating the company's offer-ings in a way that imitates a small shop within another shop (a win-win situation). The hosting store can benefit from more attracted customers and is able to gain constant reve-nue from the hosted shop in the form of rent. The hosted company gains access to cheaper resources such as space, location, or workforce.
47	SOLUTION PROVIDER	What How	Lantal Textiles (1954), Heidelberger Druckmaschinen (1980), Tetra Pak (1993), Geek Squad (1994), CWS-boco (2001), Apple iPod/iTunes (2003), 3M Services (2010)	A full service provider offers total coverage of products and services in a particular domain, consolidated via a single point of contact. Special know-how is given to the customer in order to increase his or her efficiency and performance. By becoming a full service provider, a com-pany can prevent revenue losses by extending their service and adding it to the product. Additionally, close contact with the customer allows great insight into customer habits and needs which can be used to improve the products and services.
48	SUBSCRIPTI-ON	How What	Blacksocks (1999), Net-flix (1999), Salesforce (1999), Jamba (2004), Spotify (2006), Next Issue Media (2011), Dollar Shave Club (2012)	The customer pays a regular fee, typically on a monthly or an annual basis, in order to gain access to a product or service. While customers mostly benefit from lower usage costs and general service availability, the company gener-ates a more steady income stream.
49	SUPERMAR-KET	What Value	King Kullen Grocery Company (1930), Merrill Lynch (1930), Toys“R”Us (1948), The Home Depot (1978), Best Buy (1983), Fressnapf (1985), Staples (1986)	A company sells a large variety of readily available prod-ucts and accessories under one roof. Generally, the assort-ment of products is large but the prices are kept low. More customers are attracted due to the great range on offer, while economies of scope yield advantages for the compa-ny.
50	TARGET THE POOR	What How Value	Grameen Bank (1983), Arvind Mills (1995), Bharti Airtel (1995), Hindustan Unilever (2000), Tata Nano (2009), Walmart (2012)	The product or service offering does not target the premium customer, but rather, the customer positioned at the base of the pyramid. Customers with lower purchasing power benefit from affordable products. The company generates small profits with each product sold, but benefits from the higher sales numbers that usually come with the scale of the customer base.
51	TRASH-TO-CASH	Who What How Value	Duales System Deutsch-land (1991), Freitag lab.ag (1993), Greenwire (2001), Emeco (2010), H&M (2012)	Used products are collected and either sold in other parts of the world or transformed into new products. The profit scheme is essentially based on low-to-no purchase prices. Resource costs for the company are practically eliminated, whilst the supplier's waste disposal is either provided, or associated costs are reduced. This also addresses custo-mers’ potential environmental awareness ideals.
52	TWO-SIDED MARKET	What How Value	Diners Club (1950), JCDecaux (1964), Sat.1 (1984), Amazon Store (1995), eBay (1995), Metro Newspaper (1995), Priceline (1997), Google (1998), Facebook (2004),	A two-sided market facilitates interactions between multi-ple interdependent groups of customers. The value of the platform increases as more groups or as more individual members of each group are using it. The two sides usually come from disparate groups, e.g., businesses and private interest groups.

No	Pattern name	Affected BM compo-nents	Exemplary companies	Pattern description
			MyHammer(2005), Elance (2006), Zattoo (2007), Groupon (2008)	
53	ULTIMATE LUXURY	What Value	Lamborghini (1962), Jumeirah Group (1994), MirCorp (2000), The World (2002), Abbot Downing (2011)	This pattern describes the strategy of a company to focus on the upper side of society's pyramid. This allows a company to distinguish its products or services greatly from others. High standards of quality or exclusive privileges are the main focus to attract these kinds of customers. The necessary investments for these differentiations are met by the relatively high prices that can be achieved - which usually allow for very high margins.
54	USER DESIGNED	What How Value	Spreadshirt (2001), Lulu (2002), Lego Factory (2005), Amazon Kindle (2007), Ponoko (2007), Apple iPhone/AppStore (2008), Createmytattoo (2009), Quirky (2009)	Within user manufacturing, a customer is both the manufacturer and the consumer. As an example, an online platform provides the customer with the necessary support in order to design and merchandise the product, e.g., product design software, manufacturing services, or an online shop to sell the product. Thus, the company only supports the customers in their undertakings and benefits from their creativity. The customer benefits from the potential to realize entrepreneurial ideas without having to provide the required infrastructure. Revenue is then generated as part of the actual sales.
55	WHITE LABEL	What How	Foxconn (1974), Richelieu Foods (1994), Printing-In-A-Box (2005)	A white label producer allows other companies to distribute its goods under their brands, so that it appears as if they are made by them. The same product or service is often sold by multiple marketers and under different brands. This way, various customer segments can be satisfied with the same product.

More information on research and implementation of business model innovation is available on http://www.bmi-lab.ch, your partner in business model innovation! Action based learning - seminar with implementation in your company leading to concrete results, inspiring ideas, and concepts for business model innovation!
Research and practice partners:

The St. Gallen Business Model Navigator™ has been applied successfully in numerous enterprises. The following are testimonials from individuals who have worked with our methodology:

"For Bosch it will become increasingly important to not only develop excellent products, but to also exploit new business models. The 55 business model types that are enumerated and presented here are an excellent tool kit with which to develop our own business models, especially in regards to the Internet of things and services."

Dr. Heinz Derenbach, CEO of Bosch Software Innovations GmbH

"These patterns are a very powerful creativity method and a great tool to generate a ‚business model thinking' attitude."

Dr. Angela Beckenbauer, Corporate Innovation Manager, Hilti

"The St. Gallen Business Model Navigator™ provides a structured approach to the fuzzy field of business model innovation. The 55 patterns make it easy to think about alternative ways of running your business."

Dr. Michael Daiber, Innovation Agent, ABB Turbo Systems

"Reducing the world to 55 business models? At first it seems impossible, but on closer inspection these models are a great source of inspiration; they allow us to innovate our own business model and to bring it into the future. The book is a must-read!"

Bernhard Klein, Director of Brand, Vienna Tourist Board

"We leverage the Business Model Navigator™ for our Business Model Innovation approach and discovered that it is a great methodology with high practical relevance."

Dr. Ulrich Eisert, Research Manager, SAP (Schweiz)

„Working with the St. Gallen Business Model Navigator™ not only helped us to structure our internal approaches better, it also drove us to analyze and understand our competitors' business models and therefore their and our position in the market space."

Dr. Reiner Fageth, Management Board, CEWE Color

"These Business Model Patterns are an important source for inspiration and best practice to create and implement radical innovations."

Daniel Ledermann, Head of Incubation and Portfolio, Swisscom

"Applying the St. Gallen Business Model Navigator™ helps in challenging today's business logic, opening up the solution space and creating a new mindest. We see this as a prerequisite for future success."

Dr. Christoph Meister, Corporate Innovation Manager, Holcim

"How would Amazon's CEO run my company? Which new customer segments would Robin Hood try to acquire if he were in my position? The St. Gallen Business Model Navigator™ allows you to break free from your own industry mindset and thus enables a veritable explosion of new ideas."

Wolfgang Rieder, Managing Partner, Head of Advisory Switzerland, PricewaterhouseCoopers

"We have applied the Business Model Navigator™ in a 3-day workshop format with a key customer. Apart from jointly developing a promising business model option, the common experience has also strengthened the bonds inbetween for future intensive cooperation."

Dr. Susanne Schröder, Innovation Manager, Siemens Energy Sector

"Working with the Business Model Navigator™ provides you a broad portfolio of ideas and structures for business models. It helps you to create new and individual solutions for your specific business challenge."

Stefan Strauss, Director Business Development Service, MTU Friedrichshafen

"The St. Gallen Business Model Navigator™ offers a great opportunity to challenge our habitual thinking concerning business models and revenue generation. Challenging discussions with the project teams and staff are thought provoking and trigger collaborative development."

Dr. Ian Roberts, CTO, Bühler

"An aspiring field such as New Space really benefits from the St. Gallen Business Model Navigator™ because the market will be defined by a variety of innovative business models – going through all the possibilities is a real competitive advantage!"

Dr. Henning Roedel, NASA Ames Research Center

"The Business Model Navigator™ demonstrates impressively that sustainable innovation is not created by inspiration alone, but can and should be approached systematically building on shared experience and based on data. Identifying patterns in the fast changing environment and dynamically adapting your company's business model to them will be crucial for success in any industry."

Dr. Ralf Schneider, Group CIO, Allianz

Thanks to the Business Model Navigator™ we are able to understand our business model as a whole and to work on the entire system. The methodology developed in St. Gallen doesn't just yield results, it expands your mindset."

Daniel Sennheiser, President Strategy and Finance, Sennheiser

"The Business Model Navigator™ with its tools, strategy, and visualizations are a perfect compliment to the 'Foresight and Innovation by Design' philosophy at Stanford. They work in practice and in theory."

Professor Dr. Larry Leifer, Founding Director of the Stanford Center for Design Research

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