Management for Professionals

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Digital Business Leadership

Digital Transformation, Business Model Innovation, Agile Organization, Change Management

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Preface

Dear Reader,

This work about Digital Business Leadership shows the *opportunities for renewal of competitive advantages* due to digitization. Thereby, these opportunities can occur within disruptive breaks of entire sectors, while the management of this digitization processes can lead to significant efforts for established companies. New process models have to be learned, proven patterns of thinking have to be broken, and not least innovation activities have to be understood and used as a continuous challenge.

- But how can necessary changes be done?
- What new concepts must be learned and which traditional principles should be thrown overboard?
- What is Digital Business Leadership and how is it achieved?

These questions have raised our concern in teaching, research, and practice and therefore motivated us to write this book. We would like to offer you, dear readers, *scientific models* coupled with *practice-relevant methods* illustrated on the basis of concrete *business case examples*. Our objective is to show current developments and future challenges. Especially the exponential change dynamics of this dynamic subject area have been a special challenge. On the one hand, we have encountered them by reducing the creative process of this work to a minimum by using the digital solutions available to us. On the other hand, we concentrated on methods and models whose validity is secured over a longer period.

In this work, we lead you first to the *need for developing a digital business leadership* whose driver is the increasing digitization of entire value chains. Doing so, we describe the essential foundations of the digitization and its associated business opportunities and risks. We will embed these in a framework of classic and new management methods.

We have systematically developed eight main *areas of action for the construction of a Digital Business Leadership*. Each of these key factors is described by means of a compact analysis and transferred into concrete recommendations. At the same time, the relevant process models, management principles, and methods are being discussed based on comprehensible examples. Their transfer into the everyday life of a company is supported by a dedicated chapter on change management.

In order to illustrate the fields of action based on concrete companies, we provide detailed *case studies of Digital Business Leaders* in the fourth chapter of this work. For being able to deliver these insights, we would like to warmly thank our partners. In particular, we would like to thank *Timm Richter*, CPO of *XING; Sonja May,* Senior PR Manager, and *Sabrina Brauer,* Senior User Experience Researcher of *Immobilienscout24; John Burr,* Head of Personnel Marketing and Change Management at *Axl Springer;* as well as Dr. *Nico Jaspers,* CEO of *Dalia Research,* for their willingness to openly share their stories with us and our readers.

We would not have finished this project without the valuable help of the lecturers of the *Springer Gabler* Verlag, *Barbara Roscher* and *Angela Meffert*, who outstandingly supported us with regard to editorial questions.

Regarding the design of the book´s graphics, we explicitly thank *Mario Holzner* for his creative input and perseverance in the professional finalization of each figure.

Finally, we would not have been able to devote our time to this book without the support and understanding of our families. Thank you!

We hope that as students and practitioners, as professionals and executives, we can provide you with a clear and at the same time *workable structure of theoretical models and concrete recommendations for action* to meet an increasingly digitally shaped business world and to be successful in the long term. We hope this has been achieved.

If you are interested in contacting us, write us an e-mail or use this book's website at www.digital-business-leadership.de.

We are looking forward to receiving your suggestions.

Berlin
April 2018

Ralf T. Kreutzer
Tim Neugebauer
Annette Pattloch

Contents

About the Authors

Ralf Kreutzer Since 2005, Prof. Dr. Ralf T. Kreutzer has been a Professor of Marketing at the Berlin School of Economics and Law. In addition, he works as a marketing and management consultant, trainer, and coach. He previously worked for 15 years in various management positions at Bertelsmann, Volkswagen, and Deutsche Post.

Through regular publications and presentations, Professor Kreutzer has spread considerable impulses concerning various topics related to marketing, dialogue marketing, CRM/loyalty programs, database marketing, online marketing, digital Darwinism, and strategic and international marketing. He advised a variety of enterprises nationally and abroad in these fields and trained/coached managers at middle and top management level. Professor Kreutzer is a frequent keynote speaker at national and international conferences.

His recent book publications include *Kundenclubs and More* (2004), *Marketing Excellence* (2007), *Die neue Macht des Marketing* (2008), *Praxisorientiertes Dialog-Marketing* (2009), *Praxisorientiertes Marketing* (4th Edition, 2013), *Praxisorientiertes Online Marketing* (2. Auflage, 2014), *Digital Darwinism* (2014, together with Karl-Heinz Land), *B2B-Online-Marketing und Social Media* (2015, together with Andrea Rumler and Benjamin Wille-Baumkauff), *Dematerialisierung—Die Neuverteilung der Welt* (2015, together with Karl-Heinz Land), *Digitaler Darwinismus—Der stille Angriff auf Ihr Geschäftsmodell und Ihre Marke* (2nd Edition, 2016, together with Karl-Heinz Land), and *Kundenbeziehungsmanagement in digitalen Zeitalter* (2016).

Tim Neugebauer is co-founder and CEO of DMK E-BUSINESS GmbH. He is a business graduate and is responsible for managing the areas of strategy, consulting, and marketing/sales. As senior digital business consultant, he also leads the digital consulting unit DMK INNOVATIONS, where he is actively involved in the digital management and strategy consulting for group companies, public institutions, and SMEs. The main topics are digital transformation, digital business leadership, agility, user centralization, and questions concerning dual organizational principles.

Since 2012, Tim Neugebauer has also been spokesman of the forum "Digital Business" in association with SIBB eV–ICT and Digital Business Association of Berlin-Brandenburg, pushing issues of digitization in the capital region. At the Beuth University of Applied Sciences Berlin, he has been a lecturer in the areas of service marketing and innovation management. At the University of Applied Sciences Potsdam, Tim Neugebauer advises on the establishment of an entrepreneurship and management lab.

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Prof. Dr. Annette Pattloch has been a Professor of Marketing at the Beuth University of Applied Sciences Berlin since 2005. After studying Information Science at the University of the Saarland and at Rutgers University in the USA, she has been working in the industry for more than 10 years, most recently in a consulting firm as department manager for customer relationship management systems at the Volkswagen subsidiary gedas. Her focus in research and teaching lies on brand management and services marketing.

Background and the Necessity to Build a Digital Business Leadership

1

Exceptions are not always confirming the old rule. They can also be a precursor of a new rule.

Marie von Ebner Eschenbach

The term *digital transformation* can be found in the business titles everyday—online and offline. It basically means the realignment of products, services, processes, and business models of established companies to the conditions of an increasingly growing digital world. And although this digital transition has already caused significant efforts, it is still not enough. It is much more necessary to clearly define what the result of the transformation process should be: a *Digital Business Leadership*.

The biggest challenge is *time*. Its biggest enemy is the organizational and individual indolence, which can be found particularly in medium and large size companies and which are blocking necessary change processes. But reactions to changes need to be quick, because the *strategic window of opportunity* is only open for a limited amount of time. That is why it is necessary—especially in so-called established companies—*to replace indolence by momentum*, to build digital-centric corporate visions, to question business models, and to proactively shape the resulting change processes with courage and optimism. Because particularly in the established companies, there are a variety of resources available for the active participation in necessary change: In addition to qualified employees and financial resources, there is also process and project know-how to transform creative ideas into marketable, long-term, and value-creating solutions. Those are convincing success factors. Additionally, to increase the own entrepreneurial potential, innovators and their business ideas can be purchased through acquisitions. Also, in many areas ideas can be developed via networks and be integrated into the own development—much better than a few years ago.

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1.1 Digital Darwinism and the Redistribution of the World

So far, primarily US companies have established themselves successfully in the digital market and have created dominant market positions. Here we think of *Facebook*, *Apple*, *Alphabet* (new for *Google*), *Amazon*, *Airbnb*, *Uber*, and others. In the following, we will refer to these companies as the *FAAAAUs* in order to describe this special kind of companies. For these companies a first focus has been recognized in the *B2C market*. Currently it has been shown that many of these companies starting to use their growing revenues and their assembled brain power to create technology boosts increasingly in the *B2B market*, as well. An example for this would be the development of cloud-based solutions. However, especially in the B2B market of today, German companies—be it the big companies or the hidden champions—own globally relevant solutions. Therefore, there is a chance that *Germany* is not only becoming *the think tank of an integrated world* but that it will also cover a large *part of the digital value creation*.

To achieve this we need to use our technological expertise and our comprehensive management capacity. At the same time, it is important to overcome the disadvantages that we are still facing in terms of networks and platforms in comparison to the dominant US companies. We also need to think about *building a digital European internal market* across national borders in order to be able to create dominant designs that convince the world market. That is why it is also necessary to ward off the often-emerging demand for the de-integration of Europe. Only this way we can remain relevant in a world where Europe's share of global value creation and global population is becoming smaller and smaller. A trend we cannot stop. In Germany, we have already set quality standards at an early stage—and we have to do so even more intensively today. But not for its own sake. Quality must always be defined in the eyes of the applicant, the user, and the customer. Given the increasing integration, we must at the same time focus more on cooperative networks and the development of value-added platforms in order to generate a big share of the by digitization accelerated *redistribution of world*.

This is because the current redistribution will postpone the weights for the next 50 years in a massive and irretrievable way. The redistribution of the world is taking place now. Every company has a realistic chance to profit from this redistribution and to secure its share, in case it is getting active now. Because the world is not waiting for us. Followers will be on the losing side. To act now is not just a *corporate task* but also an *economic challenge*, in order to secure wealth for everyone in the future—as a valued and respected partner everywhere in the world (see Kreutzer and Land 2015).

When addressing these tasks, it is mainly about the *existence in the process of digital Darwinism*. What does that mean—and why is the good old *Darwin* bothered? Darwinism refers to the selection process, which takes place automatically when, in this case, companies, but also industrial branches and entire nations, do not adapt quickly to the changed framework conditions and therefore are "sorted out" by the market. Within this work, it is about how the existing market power can be used to build a *Digital Business Leadership*. Both as a country and a company! It is not

Fig. 1.1 Products, admission control, receiving channels, and content become software through digitization

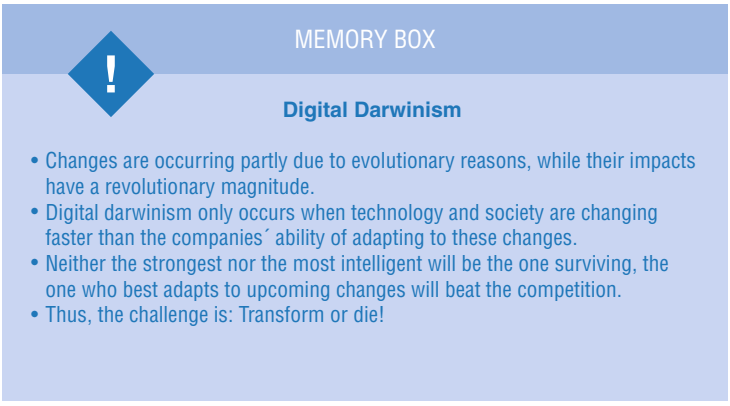
enough just to follow digital changes. Rather it is required to become *active shapers of the changes*. This is the only way to achieve a leadership that ensures the long-term success of companies and the success of whole economies. This can be achieved by start-ups and hidden champions as well as by well-established corporations, which start a sweeping path of change. Thus, it can be also achieved by the countries that create the necessary framework conditions for this.

But what is the core behind the process of digital Darwinism? The observed changes are based on the fact that digitalization is becoming more and more widespread. Texts, music, photos, videos, car keys, maps, and many other physical objects are digitized and dematerialized (see Fig. 1.1). This transfer into zeros and ones causes more and more objects to lose their physical appearance while being processed on computers. This not only changes individual products and services but also entire value chains and industries. The result is a comprehensive dematerialization, which allows more and more offers to become a software. The slogan for this says: Software eats the world. As a result, more and more companies are forced to join software providers. In the not-too-distant future, cars will be hardware platforms that use different software. And maybe its functionality will be more important than the basic use of the hardware!

In all of these developments, digital Darwinism always begins when technologies and society change faster than the ability of companies to adapt to these changes (see Kreutzer and Land 2016). Those changes are partly evolutionary, while their impact is revolutionary. The reference to *Charles Darwin* was made because he has worked out an important point in his major works: Neither, it is the strongest of a kind that survives, nor the most intelligent. Rather, it will be the ones who can best adapt to change. The result of this is that digital Darwinism is forcing more and more companies and industries to survive. Only those who accept the challenge early have the chance to survive. However, the fact is that a large number of companies still do not internalize the threat of digital change.

The results of the *Global CEO Survey* conducted by PWC (2015) show an alarming result for Germany: Only 16% of business leaders assume that digital

technologies create changes for their own production. The consequences, which are linked to the trends of cloud computing, to the increasing dematerialization, to the possibilities of big data, and to the entry of completely new competitors, are still underestimated by the majority of CEOs. Especially in the field of "interconnecting," Germany is technologically well positioned, but the power of innovation now has to develop from products to production systems and entire business models (Ludowig 2015, p. 13), not just in the industrial sector.



In our view, the term *Industry 4.0* and the relating transformation process are too much limited to the industrial sector. Not only classic "industrial companies" can and must profit from the possibilities of dematerialization and from the networked value chains but all companies and thus the entire economy. That is why we consistently speak of the *Economy 4.0* in order to align the perspective towards all relevant sectors. Therefore, it is not possible for entire industries to hide, thinking this development seems to have nothing to do with them!

The question arises why the term "Industry 4.0" or "better Economy 4.0" is used for this development at all.

- The *first industrial revolution* was caused by the invention and use of the steam engine in the middle to late eighteenth century. The steam engine was used to drive mechanical devices, for example, looms (see Fig. 1.2). Where did the corresponding production plants settle? At the place where the first steam engines were installed.
- The *second industrial revolution* was driven by the invention of electricity and the related electrification in the late nineteenth and the early twentieth century. This made it possible to mass-produce using assembly belts and thereby involving specialized production processes. The settlement took place where electricity (at a low price) was available.
- The *third industrial revolution* began in the 1970s of the last century and was caused by the ubiquitous computerization that led to further automation of the

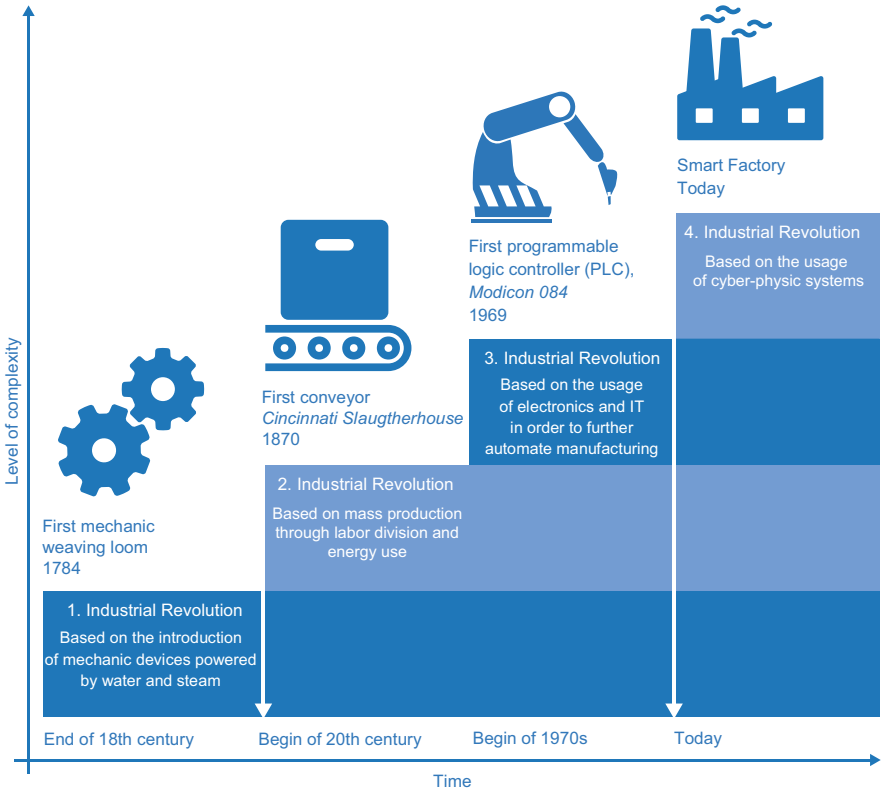


Fig. 1.2 From Industry 1.0 to Industry 4.0

production processes through the use of electronics and IT. The industrial clusters were established where qualified personnel, reliable conditions, and the necessary additional resources were available.

- Now we are facing the *fourth industrial revolution*: the interconnection of value creation processes beyond the boundaries of individual companies. This is exactly what is called Industry 4.0 or, in the described sense, Economy 4.0! Which location factors are relevant here? Above all, powerful Internet access must be available!

We should bear in mind that there are no more nondigital companies. All companies are digital—varying in their intensity! Be it only that bills are no longer sent in paper form, but digitally. Or that appointments are assigned online and no longer through a call center. Therefore, the subject *Economy 4.0* is of great importance to all companies. At the same time, the conceptual extension to Economy 4.0 emphasizes that integration should not stop at the company borders, but also can *involve* the *customer*—be it as an information provider, an idea generator, a co-developer, or a

coproducer (prosumer; see Sect. 2.5). In addition, another limit should be overcome, which this time is located in the minds of involved people: To a much greater extent than in the past economic dynamics lead to the necessity of *collaborations*, *even between strategic competitors* in order to achieve sufficient force to tackle the challenges that are ahead.

An example for this is the approach of *BMW*, *Audi*, and *Daimler*. They have jointly acquired the mapping and navigation service from *Nokia Here* for 2.8 billion euros (Sokolow 2015). The highly accurate *digital road maps* offered by *Here* are a crucial prerequisite for autonomous driving. Building such a database on its own would have required a high investment for each individual company without being able to differentiate itself from the competition. Collaboration in nonvisible components and technologies is already a daily occurrence in the automotive industry and can be pursued usefully to address the challenges created by digitization.

Another example for the collaboration of strategic competitors represents the cooperation between a large number of German banks in order to develop an own *online payment system* in Germany, which was introduced in late 2015 under the name *Pay Direct* (see O.V. 2015). However, we could ask ourselves why such a competitor to *PayPal*, *Google Wallet*, and others was not launched until 2015. It remains to be seen what success this offer will have on the market. But in this case, the companies definitely have not started too early!

In the *automotive industry*, where the established global corporations were strongly hit by the project of self-driving cars of *Google/Alphabet*, new partnerships are emerging. For example, in the future *Ford* will cooperate with *Google/Alphabet* in the development of autonomous vehicles. While the *Google* software is to be used for control, the vehicle itself is produced by *Ford* (O.V. 2015, p. 7).

Many companies have already perished in the struggle for surviving the *digital Darwinism*. Thus, print products such as the *Financial Times Germany* and the *Frankfurter Rundschau* were sorted out by the market or were massively reduced in their importance. Universal senders such as *Quelle* and *Neckermann* have died already. The multichannel business *Weltbild* was also hit heavily by the online challenge while being shaken to its foundations. Since 2012 there is no English-printed encyclopedia anymore because the *Encyclopedia Britannica* has ceased publication, followed by the German *Brockhaus*, whose success was terminated after 200 years of existence in 2013. What did the fitting comment say? "The Brockhaus publishing house missed it—even before it landed at Bertelsmann—to adapt to this consumer behavior. The conditions were there but a too hesitant publishing company led to missing the train" (Giersberg 2013, p. 16). And the winner is *Wikipedia*. What remains left from the *Brockhaus* publishing house could be seen on its booth at the *Frankfurt Book Fair* 2015: nothing!

Other *business models*—such as retail—see themselves heavily threatened by online trading and are massively under pressure. The bookselling group *Thalia* is set in a dramatic remodeling process. *Goertz* and *His Masters Voice* already had to close many stationary shops. *Media Markt* has entered the online sales much too late and still lags behind the success of e-commerce. Although it has been recently

announced that until 2020 the *Media-Saturn Group* will become "Europe's leading CE Digital Commerce Company" (see Hell 2015), it appears that the ship towards Digital Business Leadership has sailed. How successfully *Karstadt* can organize its repositioning with regard to the online challenge remains to be seen. Also, the survival of video rental shops, travel agencies, and ticket shops is going into the last round. At the same time, in 2015 *Amazon* has opened its first stationary shop in Seattle. It needs to be said once again: retail is in the change!

Even companies such as *American Express* have to reduce worldwide staff because purchases shift from retailers to the Internet and thus less stationary sales need to be processed. In addition, the *United States Postal Service* is threatened in its foundations, because the daily mail volumes decrease dramatically. In the USA, it is now being discussed in new construction areas whether letter boxes for private households are even necessary or whether they can be replaced by collective mailboxes for larger housing estates, since e-mails do not need mailboxes! The selection process of digital Darwinism continues unchecked. In the beginning of 2015, the US retailer *RadioShack*, owning 2400 stores, reported for bankruptcy. What did the fitting press release say: "RadioShack, which posted losses in 11 consecutive quarters after failing to transform itself into a destination for mobile phone buyers . . ." (Brown 2015).

In addition, the *impact on employees* will reach to a dramatic extent. Reliable scientists assume that by 2025, 50% of today's employment will be lost (see Awford 2014). This will have a drastic impact on society (deepening Kreutzer and Land 2015).

1.2 Drivers of Digital Change

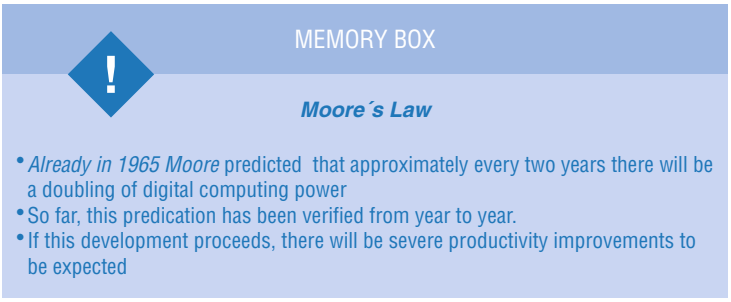
Why does the process of digitization enable such sustainable *selection processes?* And why is the time now to strive for a digital leadership position? First, we need to remember that the need for adjustment is becoming more and more comprehensive and faster, while a next phase of acceleration is right ahead. The *drivers of the change* can be characterized as follows (also Brynjolfsson and McAfee 2014):

- We are experiencing an exponential development of the performance of available technologies and systems.
- *Digitization* covers more and more areas of value creation.
- The *combinatorics* of different lines of development and the increasing linking of objects and living beings through the Internet of Everything leads to quantum leaps in solutions and concepts.

Especially the linking of these driver marks the *tipping point* which we have just arrived to. To illustrate the *impact of exponential growth*, you just need to confront yourself with the following problem: How many meters does a person walk, who takes 30 analog steps? Approximately 30 m. How many meters does a person walk, who takes 30 exponential steps, in which the step size doubled from step to step?

What do you think? Many thousands? A hundred thousand? More? When a man takes his 31st exponential step, he has walked more than a billion meters. That is how *exponentiality* works. A dynamic that is often not visible to the human being.

Why is the knowledge about the effects of exponentiality so important? The dynamic is described by *Moore's law* in the IT industry. According to this principle, which is based on empirical observations, *Moore* predicted in 1965 that there will be a *doubling of digital computing power* every 2 years. The impact will be even more dramatic in the coming years, because we are now moving on the *second half of the digital chessboard* since we have already brought more than 32 doubling cycles behind us. Thus, a key driver of the digital revolution is becoming obvious: the current *doubling of computing power*. Computers will have a more and more increasing impact on our lives.



Today, there is a clear *power of algorithms*. They not only determine who gets a loan at what terms, which partners are suggested on partnership websites, which books are recommended, and which online banners are displayed. Many of this happens in real-time! In the future, algorithms will also take over the entire control of the residential climate (including lighting) and become a consultant for diagnosis and therapy, until a (partial) substitution may be occurs. Perhaps this development helps to overcome the shortfall of doctors in the rural area.

The fact that we are already moving on the second half of the chessboard with its *unimaginable quantum leaps forward* explains the progress that has been made in recent years. If we ask ourselves why it was not possible for us to develop a self-driving car in 2004, it was because we were still moving in the first half of this chessboard. At this time, the services doubled, too, but still at a low level. That was also the reason why it was not possible for computer *Watson* to defeat the human spirit in open quizzes like *Jeopardy* before 2011. Let us go back a few more years—to the first fields of the chessboard. It becomes understandable that the computers that enabled the moon landing in July 1960 possessed a significantly lower processing power than the *iPhone 4*, but still about US$100 million had to be paid for the hardware (see Vodafone 2012), a bit more than today's price of a no-longer-up-to-date smartphone model like the *iPhone 4*!

In the beginning of 2016, a computer cracked another long thought to be unbeatable Bastion: the *Go game*. The South Korean *Lee Sedol*, the greatest living

champion of the *Go game*, lost in March 2016 against the software *AlphaGo* from *Google/Alphabet* for the first time—but then in several of the games played. The game is about mastering special challenges, which are much more complex than in the game of chess. The variety of possible positions and moves is so comprehensive that a calculation of alternative solutions would even overwhelm supercomputers. Therefore, the response of the *Google* engineers was trendsetting: There are no programmed instructions, but the machine is able—in addition to the knowledge of millions of already played games—to gain experience, as input for intuition. To build this, deeply staggered layers of artificial neural networks were used, which digitally simulate the elementary processes of human nervous systems. Thus, *AlphaGo* is no longer an algorithm, but a self-learning system with its own personality. In fact, a European *Go game* professional, who competed in October against *AlphaGo* (and lost), reported he had the feeling that behind the moves of his opponent a real person would hide (Rauchhaupt 2016, p. 71). The race of man and machine goes on dynamically!

What else has been achieved so far? Prices for computers, for example, have fallen by 99.9% since 1980 according to the *US Bureau of Economic Analysis*. For example, while in 1982 a 1 GB hard drive from *Control Data* cost 50,000 DM, the *iPhone 6* has a memory of 128 GB and costs only 40 €. Even software costs only 0.7% of what had to be paid for a comparable performance in 1980. Similarly, fees for mobile telephony have declined significantly by more than 50% since 1990 (see Schäfer 2015, p. 26). If the same technology boosts would be applied to the *VW Beetle*, the *Beetle* from 1971 would reach today a speed of 480,000 km h^{-1}, while its price would have fallen to 4 cents (see Hohensee 2015). These are the consequences of exponential development.

Have we already reached the end of the flagpole? We assume that today we are only on the front third of the second part of the digital checkerboard. Think, for example, about field 37 of 64. The real serious *technology and performance gains*, which will outstrip all of the previous ones, are therefore still to come. And each of them will be twice as comprehensive in its possibilities as before.

If we add the *effects of exponential growth* to those below described *possibilities of digitalization* and "multiply" them with the *implications of combinatorics*, the *pace of change* is made clear. And we are now at the beginning of this change. The initially mentioned combinatorial approach is promoted by the continuous growth of the networks. *Google/Alphabet*, *Facebook*, and others are investing billions of US$ in drones, balloons, and satellites in order to provide as many people as possible with (affordable) access to the Internet (see Fuest and Kaiser 2014). With the free online service *internet.org*, *Facebook* founder *Mark Zuckerberg* wants to win the next billion people to the Internet (see Heuzeroth 2015, p. 27). At the same time, hardware manufacturers try to allow millions of people access to the Internet with inexpensive offers of computers, tablets, and smartphones, especially to people who could not afford the necessary devices due to lack of purchasing power (see O.V. 2014). In this way, the Internet will continue to increase over the next few years.

At the same time, a phenomenon reverses into its opposite. Once it was said "simple technology, complex operation." Just think of the first writing and

calculation programs for *IBM computers*. Now it says "most complex technology, easy operation." And users will love it! And therefore accept it! And therefore require it!

The *implications of combinatorics* are also visible when considering the trend towards more and more simplified interfaces for controlling and accessing computers. The increasing *use of sensors* contributes to this in the long term. Sensors, connected via the *Internet of Everything* and coupled with powerful algorithms for pattern recognition, drive the digitization of processes, products, and services. Here, it is already spoken about *deep learning* as a special kind of machine learning, in which computers achieve learning processes increasingly by themselves. Just as *AlphaGo* succeeded!

In addition, the use of sensors is going to increasingly extend towards animals and humans (e.g., as a patient). Because especially for monitoring tasks, computers are ideally suited, as they never sleep, they are never tired, and there is no human bias in the evaluation. Thus, we are at the beginning of the *development of a sensor economy*, whose effects currently only emerge hazy. The declining cost of digital sensors connected to low energy solutions will continue to drive this trend.

An additional accelerator of digitization and automation are the more and more smart *user interfaces*, for example, *voice control* and *gesture control*. By these interfaces it is made more and more easier for computers to react to a whole spectrum of human desires. Systems such as *Apple Siri*, *Google Now*, and *Amazon Echo* use natural user interfaces. They recognize the spoken word, interpret its meaning, and act accordingly. Thus, entirely new application fields are emerging, as the keyboard or tablet are eliminated as entry media. At the same time computer systems get increasingly human and can also show different emotions. The computer becomes more and more similar to people. In Japan, such robots are already used for the check-in in hotels.

There are no limits for the *combinatorics of different applications*. The digitized available data can be evaluated as needed in real time in order to optimize products, services, and processes—potentially also in real time. An example of this is the combination of *Google Maps* with a navigation system, which receives traffic data in real time and offers dynamic congestion avoidance. Depending on the already achieved travel time, the driver, who is possibly tracked via a wearable concerning his body functions, can at the same time receive a restaurant recommendation on the alternate route. This restaurant is selected based on customer reviews that correspond to the profile of the driver and therefore are considered relevant. In addition, restaurant preferences, which the driver expressed on *Facebook*, *Google+*, or *Yelp*, can be taken into account. For some this might be a nightmare—for the others simply convenience and relevance!

But how do companies deal with the *space of the new possibilities*? In Fig. 1.3, first the exponential growth of *change potential* is identified, which results from the developments mentioned before. With regard to the exhaustion of accompanied *design opportunities for businesses*, we must be clear at one point: Corporate leaders and companies are often only willing to change when crises have already occurred. These are identified by *break points*. But even then, *change potential* is often

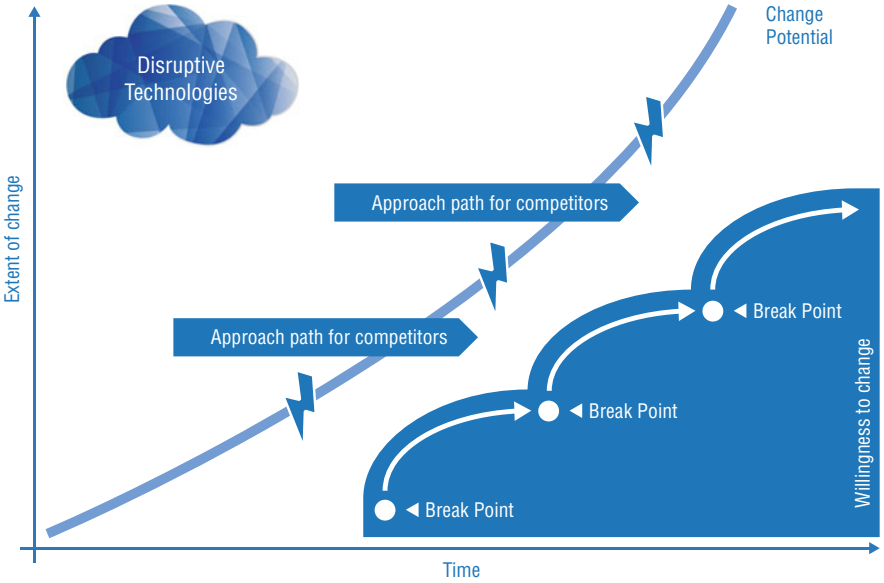


Fig. 1.3 How big is the willingness to change within our company?

exploited only partially, due to board changes or a strategic realignment of the company.

What is the consequence of such a behavior? The gap that opens up between the willingness to change in a company and the actual capabilities of the industry is the entering path for (new) competitors. They align their business model optimally to the new possibilities for action. They are often able to realize opportunities unrestrained because they are a start-up or because they do not have to face any restriction by specific history of the industry. Here, neither old IT structures nor inherited hierarchical organizations stand in the way of innovative marketing. And even if it goes wrong, new opportunities invite for business engagement.

This means that established competitors of various industries allow other companies to enter into their own bastions through their tentative behavior (industry unfamiliarity). At the same time, the so-called disruptive technologies, which destroy previously known development cycles, can abruptly move the opportunities for action within the companies. Especially here, it is shown that new companies tend to have a much easier time with its use than the top dogs.

MEMORY BOX

Disruptive

The term „disruptive“ expresses the possibility of a so called innovation – be it a technology, a product, a service, a business model – collapsing existing offers. The danger of these developments, as they are not coming from us, lies in the fact that they are often developed by start-ups or other companies, which are not from the same industry and which consequently have not been monitored before.

The disruptive offers first seem inferior to the established options or only interesting for niche markets. That is why they are often not taken seriously by challenged competitors in the beginning. But as soon as they have become successful, they unfold their almost unstoppable disruptive powers on the total market.

Therefore we should protect ourselves from euphemistically translating „disruptive“ into „interruptive“, as it is often done in lectures and publications. „Destructive“ expresses the power of these technologies more clearly.

From today's perspective, it is interesting to realize that *cash dispensers* have represented such a disruptive technology. They made it possible to withdraw and deposit money without the need for staff. The conditions for self-service were created. It took many decades for the technology, which first developed only in a niche, to put the business model of banks and their branches into danger. But today the slogan is: *We need banking*, *but no banks*. Additionally, more and more FinTechs—a term created from finances and technology—bump into the gap that established providers have left.

These developments go hand in hand with another phenomenon, the scope of which can hardly be overestimated: the *theory of zero marginal cost* (Rifkin 2014). We all have once learned the importance of marginal cost to the entrepreneurial calculation. *Marginal costs* are costs associated with the production of one additional unit of a product or service. To illustrate the *importance of marginal cost*, the following example will help. Let us assume that for the manufacturing of a product, initially 200,000 € are fixed costs (e.g., for R&D, patent fees, personnel costs, rent for the research laboratory, preparation of the production equipment and the production halls). These costs are already incurred even before a single product gets actually manufactured. With this infrastructure built, 10,000 units can be produced. The variable cost of the production amounts to, e.g., 10 € (for material and energy costs, labor costs in manufacturing, etc.). If only a single piece is produced, costs amount to 200,010 €. With two produced units, the total cost amounts to 200,020 €. In this simple example, the marginal costs are 10 €.

In the course of production, *efficiency reserves* can often be mobilized. This is achieved for example by volume discounts when purchasing raw materials, by increasing the produced amount per personnel hour, etc., which overall is referred to as *economies of scale*, a driver for why companies seek revenue growth for the same products and services. Through economies of scale, *marginal costs* can *fall*, in our example at approximately 9.50 or 9 €. This is an important goal in the area of production. When demand increases beyond the created production capacity, after hours may have to be arranged (with corresponding surcharges), additional maintenance on the machine may have to be performed and/or external capacities may have to be involved in higher costs. Then can *marginal costs rise* again.

What would be the consequences if the marginal cost would lean towards "zero"—without the need for special efforts? In fact, it can be found in many areas of the economy that digitization and dematerialization of products and services have led to marginal costs of "0." An example for this is *book production*. Writing a book can be still paper-based and classically done with a typewriter. However, photos of such a "production process" can be rather found of our established, older writers, often in black and white, which underlines the timeliness of these photos! Usually, the creation of text-based content by authors is instead already digitized. But let us put the focus only on the reproduction of a book. Today, the author provides his text with the corresponding figures in a digitized form to the publisher. This "form of delivery" as a Word file is part of any classical author contract. The publisher then takes care of the important stages of the final editing, formatting, production, and sales.

If the book created is a printed copy, the marginal cost calculation above can be used. For each printed book, corresponding marginal costs occur, even if—as partly already implemented—a print on demand is used. On top of the production costs, additional costs for packaging and shipping to the customers—be it the end customer at its own online store or a sales partner—are occurring. But how does it work for an e-book? After the file is created once, an extra copy of the work can be created virtually at "zero marginal cost." Here we can see the *elimination of marginal costs in production*. In the media business, the term *First-Copy-Cost effect* was created for this. Because in media products the total cost of production (production of the first copy) is marked at high fixed costs. Regardless of how many people read a book later, visit an opera production, or watch a movie, the biggest costs have already occurred for the initial creation (in the *James Bond movie Spectre*, e.g., US$650 million). In contrast, the variable costs for the distribution of media products tend to be low or may be even entirely neglected.

Because Internet services are often charged as a flat rate, the (online) delivery to the purchaser is also possible at no extra cost. This means that the creation and even the distribution of additional books—even worldwide—come along with marginal costs of "zero." For digital products an *elimination of delivery costs* is even given.

In the case of e-books, *costs* to achieve the zero marginal cost situation are being shifted from the publisher *to the buyers*. The buyers must gain a corresponding hardware as a prerequisite for reading an e-book. In case the user wants to print parts of such a book—as far as this is even possible—the associated costs are transferred

to the buyer. Here, too, it is obvious that the foundations of the economy are attacked by digitization and dematerialization (Kreutzer and Land 2015).

MEMORY BOX

Zero-marginal-cost-theory

- In digitalized and thus dematerialized products (texts, photos, videos, music, keys, software) the marginal costs tend to be "zero". This means that large investments are no longer necessary for the multiplication of performance. Whether a service is offered once or a thousand times has no longer a huge impact on costs.
- However, many value creating work steps and, consequently, the associated jobs are also eliminated. Work itself is dematerialized, as well.
- The digitalized and dematerialized products can often be provided free of charge over the internet. A device for accessing the internet is sufficient.
- This also dematerializes logistical tasks because it no longer requires a deliverer for the delivery of an e-book.

Through an industry analysis, the implications, which come along with a hesitant or missing willingness of companies to change towards these challenges, become clear. For this, the newspaper industry has been investigated. In Fig. 1.4, it can be seen that the *Financial Times Germany* and the *Frankfurter Rundschau* did not

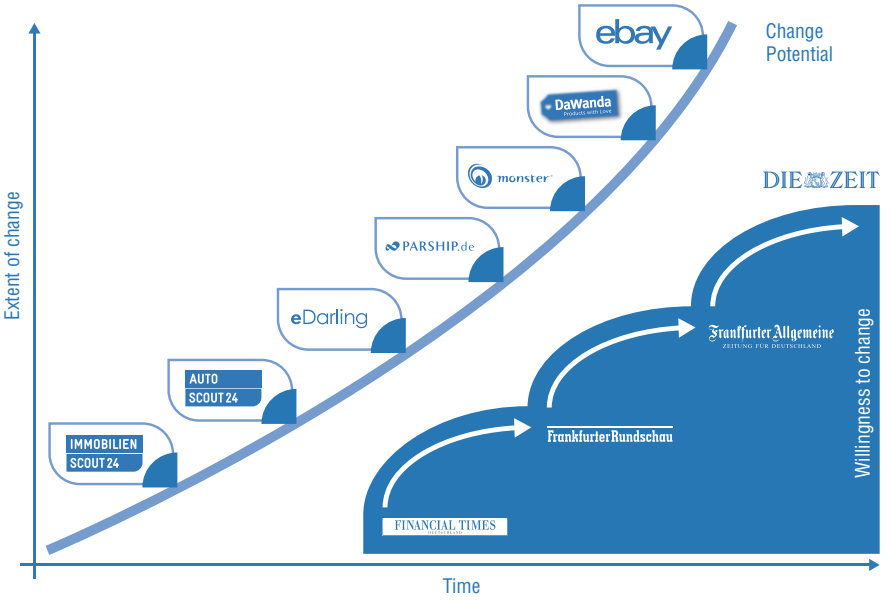


Fig. 1.4 What challenges did the digitization cause for newspaper publishers?

recognize the change need and take action early enough. While the *Financial Times Germany* has disappeared from the market, the *Frankfurter Rundschau* could be rescued only under the umbrella of the *Frankfurter Allgemeine Zeitung*. The only daily newspaper that has reached a relatively stable circulation volume in recent year is *Die Zeit*. It has succeeded at an early stage to make necessary—also regional—adaptations to maintain a high relevance in the target group.

The traditional newspaper publishers had described their business model as a "presentation of information on paper." Therefore, the Internet as an information channel was excluded, because it would have endangered their own (paper-based) business model. Consequently, the publishers have neglected the new technological opportunities for many years. As Fig. 1.4 shows, the gaps have been recognized and filled with innovative digital business ideas by new suppliers, such as *ImmobilienScout24*, *AutoScout24*, *eDarling*, *PARSHIP.de*, *monster*, *DaWanda*, and *eBay*.

For example, what has been left to the *Frankfurter Allgemeine Sonntagszeitung* from the partnership ads is a small text display with the information on the online services of *PARSHIP.de*, which can be seen in Fig. 1.4. Even real estate ads, job ads, and classifieds for cars as well as all other sorts of products have mostly migrated irretrievably to the online world. Thus, an (for survival) important income source of newspaper publishers got lost. It will not come back!

Online platforms such as the *Apple Newsstand*, which is pre-installed on any *iPhone*, provide online access to print media. However, a high proportion of the value creation is then realized in the USA, even for German media. Therefore, solutions, such as the *Tolino Alliance* of the major German booksellers *Thalia*, *Weltbild*, *Hugendubel*, *Bertelsmann*, and *Deutsche Telekom* as technology and innovation partner, gain in importance (*tolino.de*). With such—German—solutions, the value creation remains on this side of the Atlantic.

At the same time, new threats are emerging in the newspaper world. There is not only the *Huffington Post* that attracts new generations of readers. With *Google News* and *Facebook Instant Articles*, new deals break in the race, which will again bring a shift in the balance of weights. In *Facebook Instant Articles*, an article can be read directly from the newsfeed, without uploading the content first. Videos run automatically, the author can have their say, and images unfold their beauty in full width—simply by tilting the smartphone. Beautiful, new, digital world! At the same time, the quality of journalism is disrupted in its foundations. Who is still willing to pay a couple of 100 € per year for a newspaper or magazine subscription when seemingly "all" information is available online and often free? A study of BITKOM (2015) shows that 22% of Internet users inform themselves about the latest news on social networks (*Facebook*, *XING*, or *Twitter*). The survey of 1042 Internet users shows that the social networks have evolved for many users to an important information source for daily news. There are, however, dramatic differences in different age groups. Thirty-two percent of 14- to 29-year-olds read or watch the news on social networks; but only 2% of the 65+ generation does so.

What are the consequences of the established companies missing to occupy new business fields? The *digital Darwinism* will not spare the previously successful

players, even though they have been operating successfully for many decades in the market. There is—outside the financial sector—no *too big to fail*. However, there is also no *too small to succeed* and that should give hope to many companies (Solis 2012). The digital Darwinism sorts out former world leaders such as *Nokia* and *Kodak*, *BlackBerry* is facing its limits, and the worldwide most important English-language guide, the legendary *Encyclopedia Britannica*, has—as already mentioned—finished its publication in 2012.

Particularly interesting in this regard is the example of *Kodak*. The company ultimately failed at digital photography, which *Kodak* actually developed itself! The potential of this new technology was only seen as a threat to their own business model, as a cannibalization of film production and the laboratory operations, but not as a chance. Thus, the potential of this digital technology remained unused. Here, too, the reluctant attitude of *Kodak* enabled the chance for other companies (e.g., *Fuji*) to fill the "digital" gap, which finally led to the end of the originally successful company *Kodak*. After the invention of the digital camera at *Kodak* in 1986, its first digital strategy followed in 2003, exactly 17 years later. This is clearly too long (see Fig. 1.5)!

MEMORY BOX

The lesson derived from this:

Rather self-cannibalize than leaving the field to others.

Even *eBay*, a rising star in recent years—but always in connection with *PayPal*—seems to have exceeded its zenith, as specialist suppliers serve more and more e-commerce sectors (better). The (digital) competition can be merciless and hard.

MEMORY BOX

Applying for all sectors:

If we don´t create the thing that kills us – someone else will!

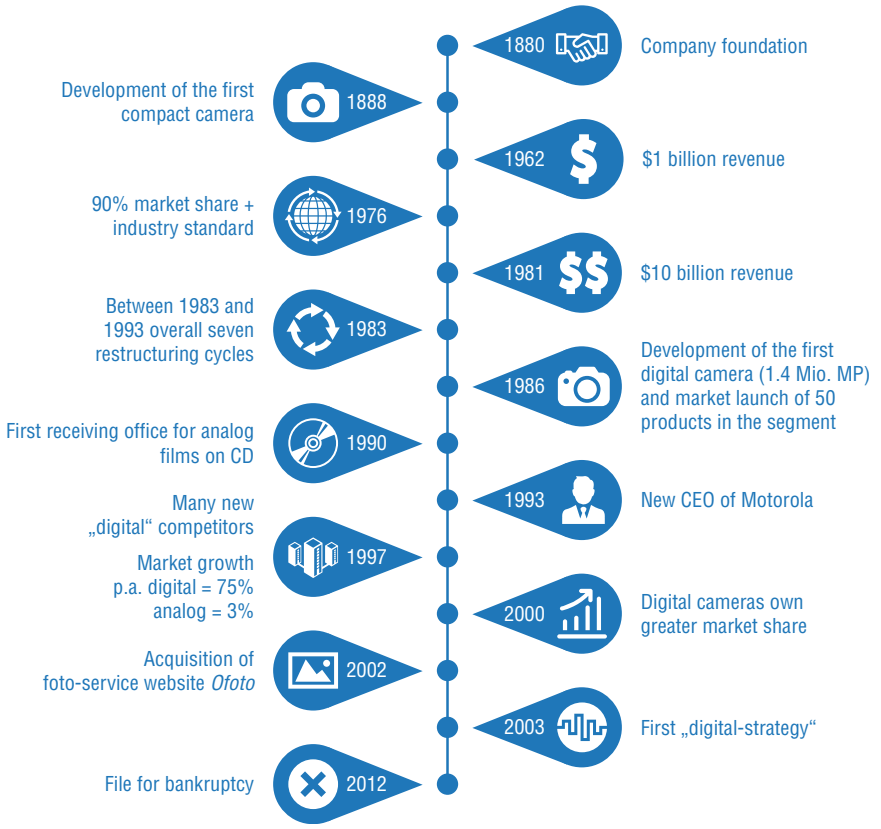


Fig. 1.5 The failure of Kodak in the digital transformation. Source: According to Peyman et al. (2014, p. 17) and Lucas and Goh (2009)

THINK BOX

Questions:

- Which threats are my company and my industry exposed to?
- Who is responsible for the broad competition monitoring in my company ?
- How is my company reacting to challenges?
- Does my company have a "digital strategy" that deserves its name and is not just alibi?
- On which hierarchical level lies the responsibility for the digital strategy - if there is such a thing at all?
- Are employees in my company being rewarded or punished if they develop ideas that could endanger our business model?
- Does my company have any technologies or business ideas whose use has not been furthered due to the risk of cannibalization?
- What kind of incentives do we offer in my company in order to meet the digital challenge?

The forces of the digital shift allow start-ups to compete with a new business model at *low entry barriers*. Often the initial testing of a new idea requires only a computer and Internet access. Through the networks accessible over the Internet, compelling ideas can be spread at high speed. Within the increasingly recognizable *platform economy*, the *network effects* contribute to the fast reach of a critical mass. Thus, start-ups can grow extremely rapidly in a short time and therefore become a central threat to established companies. Current examples include *Airbnb* and *Uber*.

Airbnb is basically about the online imparting of accommodations of private persons. *Uber* is an online imparting service of rental cars with drivers as well as private drivers to carry passengers. Even regular taxis can be arranged. In both cases, the exchange itself takes place via a digitized smartphone app or a website. Thus, *Airbnb* and *Uber* have established a business model apart from the established structures and in many countries apart from the legal norms. In the case of *Uber*, the challenged taxi companies are taking legal actions to prevent the competition—with limited success. This has not stopped the company *Uber* to be rated with an enterprise value of US$50 billion at end of 2015 (NU 2015a, b, c, d). A considerable company size of a company that owns no single private vehicle.

MEMORY BOX

Network Effects

- A positive network effect appears when the benefit of a service increases with the increasing number of users.
- Such effects can be observed among a variety of online platforms because the number of users increases the value of the platform. The users are an integral part of the platform success due to their participation and especially the data gained by it.
- With each additional Facebook user, the relevance of the platform increases both for the advertising industry and the Facebook users themselves. Similar effects can be seen at eDarling, ImmoScout24, ebay etc.
  Negative network effects arise when the benefit decreases with an increasing
- number of users. This can be triggered, for example, by an overloading of the communication networks when too many persons want to use a particular service at the same time.
  gleichzeitig einen bestimmten Service in Anspruch nehmen möchten.

Thus, the following *challenges* come along that should be considered when *building a Digital Business Leadership*:

- The knowledge gained in recent years is massively devalued in many areas. This also means that the *success stories* and *best cases of the past* not necessarily last in the future.
- The *experience currency* is systematically inflated by new developments and thus depreciated. That is why many companies show high resistance to the upcoming changes. Because trained comfort zones need to be left!
- In many areas, there is yet no comprehensive *measurement and metrics* to make economic results measurable. However, this must not lead to not responding to new challenges.
- In addition, there is a shift of classical and learned industry boundaries.

Here the following applies: The *first wave of digitization* was the *domain of start-ups*, which were free of conventions, established structures, and processes while being innovative without great cost pressures. Now the *great chance of the established corporations and businesses* can come, who have recognized the relevance of the changes and now take the necessary steps and use existing expertise, experience, capital resources, and proven process knowledge to develop a strong strategy. However, it should be noted that the majority of *disruptive business models* was developed by start-ups.

THINK BOX

Questions:

- **What do we have to counter these developments as an "established" company?**
- **How do we take into account that today 80% of the innovations take place in the service sector?**
- **What does our personal entrepreneurial service innovation look**
- **like?**
  What incentives do we offer in our company to stimulate - even
- **disruptive - innovations?**

1.3 From Classic Nondigital Business to Digital Ecosystems in the Internet of Everything

For companies, technologies provide both opportunities and risks. Companies can rely on these technologies to develop, e.g., new products or services. Alternatively, the business organization itself and its processes can be adapted to the new possibilities. However, technology can also embody threatening risks when companies do not recognize their relevance to the user and not back on the corresponding technologies quickly enough.

But on what technologies should the focus be aligned and which ones can be ignored? An important guidance for companies provides the annually updated hype cycle for new technologies by *Gartner*. It shows at what stage of their life cycle relevant technologies across all sectors are located. These technological life stages are defined based on the various technologies expectations. Here can be seen which technologies are possibly still overvalued and which have already become an established tool (see Fig. 1.6).

With regard to the expectations towards new technologies, *Gartner defined five different phases* that shed light on the status of market acceptance of these new technologies:

- *Innovation Trigger*
  In this phase, the first success stories of new technologies will be published and embraced by the media. Whether these technologies will find a sustainable use is at this early stage not clear yet. One example is bioacoustic sensing.
- *Peak of Inflated Expectations*
  During this period, success stories are being published that further rise the expectations towards a new technology. At the same time, first failures in the use of the technology are visible, which lets the expectations reach their limits. The technological use remains limited to a few companies. A convincing example is the self-propelled automobile.

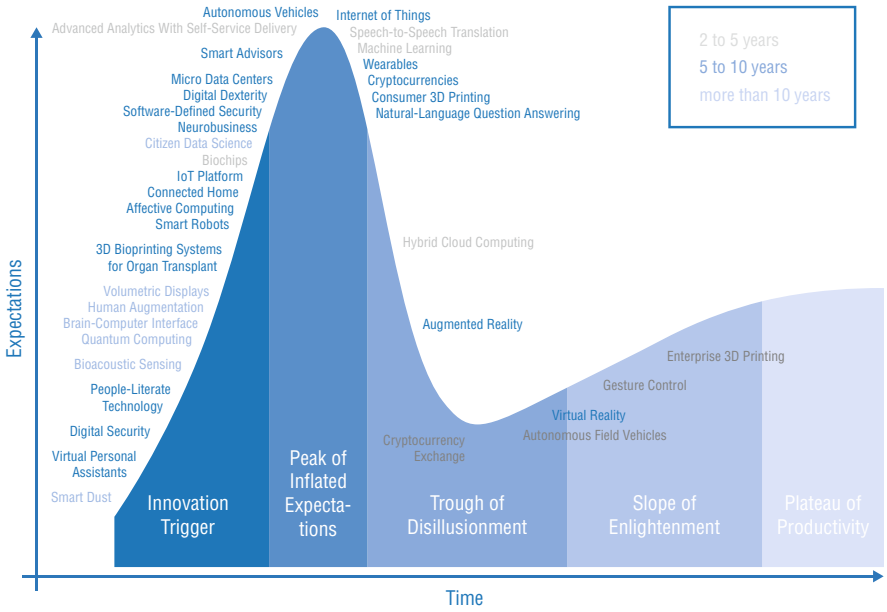


Fig. 1.6 Gartner's hype cycle for new technologies. Source: Based on Gartner (2015)

- *Trough of Disillusionment*
  This down point in the technological life cycle is based on realizing that many expectations of new "wonder weapons" were not met. At this stage, only the technology provider, who can sustainably convince early adopters of the benefits of their technology, survive. The other players are eliminated from the competition.
- *Slope of Enlightenment*
  Here it is getting increasingly visible how a technology can be put to good use. Technological developments in the second and third generation of the initial technology are available and increasingly considered and integrated by innovation open companies.
- *Plateau of Productivity*
  The technology is now widely used because its benefits are not only visible, but they also pay off comprehensively. Its use as a mainstream technology is prepared. It is only a matter of time until the technology is used in more and more companies and application areas. Solutions like virtual reality and 3-D printing concepts are located in this phase.

In addition, *Gartner* presents in her hype cycle a forecast of when the productivity plateau will be reached. In Fig. 1.6, this can be seen by the different brightnesses and symbols of the individual technologies. In the context of the topic of the present work, the focus will be put on selected technological developments. According to *Gartner*, innovation trigger includes connected home and quantum computing. The

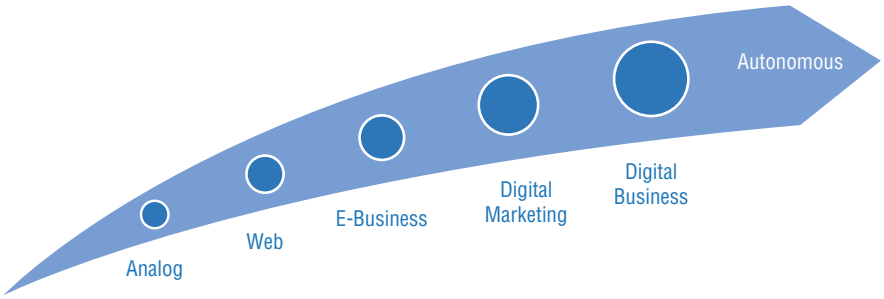


Fig. 1.7 Development stages towards a digital business. Source: Based on Gartner (2014)

NSA currently primarily occupies the latter. Until this technology has reached the productivity level, more than 10 years will pass according to this forecast. Smart Robots have already made some more progress on the way to the peak of the exaggerated expectations. They will reach the productivity level already within the next 5–10 years.

The Internet of Things has already reached its expected peak; it will still take about 5–10 years before this concept will reach the productivity plateau. Wearable user interfaces and consumer 3-D printing have already exceeded their expected peak. Cloud computing will reach the productivity level within the next 2 years. The large number of applications and the commitment of major suppliers are sustainably fueling this development.

In the center of the 2014 *hype cycles*, *digital business* was stated. According *to Gartner*, companies use new technologies in order to develop into a digital business. First, however, companies need to find out how far they have already progressed on the path towards a digital business. Afterward, it is important to determine how many changes are still ahead of them and which combination of technologies can thereby be pushed forward best. Gartner divides the *development into a digital business* into six stages (see Fig. 1.7).

Analog business models are so far not using web-based applications (Gartner 2014). Such business models today almost exclusively survive at the weekly market only—although the corresponding presence and the reason why it is worth visiting should be communicated via the internet. *Web-based applications* primarily use the possibility of communicating over the Internet, without further development of the business model. This only takes place in the context of *e-business*. Here, the opportunities that provide procurement and sales via the Internet are comprehensively exploited. The step towards *digital marketing* is completed when the digitization runs through the entire marketing and a comprehensive online and offline customer experience is created. Ideally, it is no longer a distinction between online and offline, but it is spoken of "noline." Because the user, who is going through in stationary retail while performing a price comparison with the smartphone or examining the availability of a product at the competitor, is also not separating his behavior into an online and an offline part any longer. In total, marketing assists the *user*

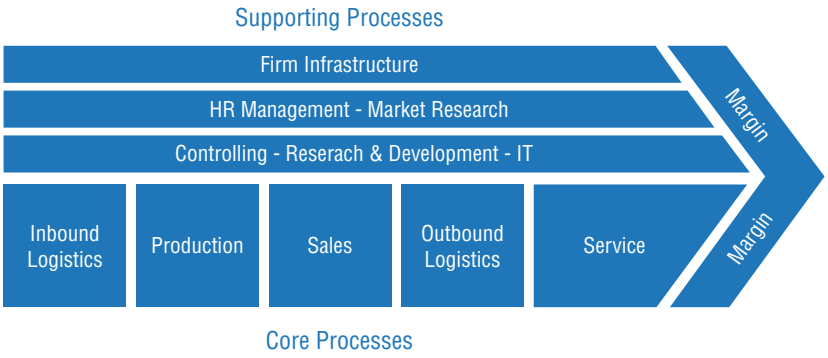


Fig. 1.8 Basic concept of a value chain. Source: Based on Kreutzer (2013, p. 107)

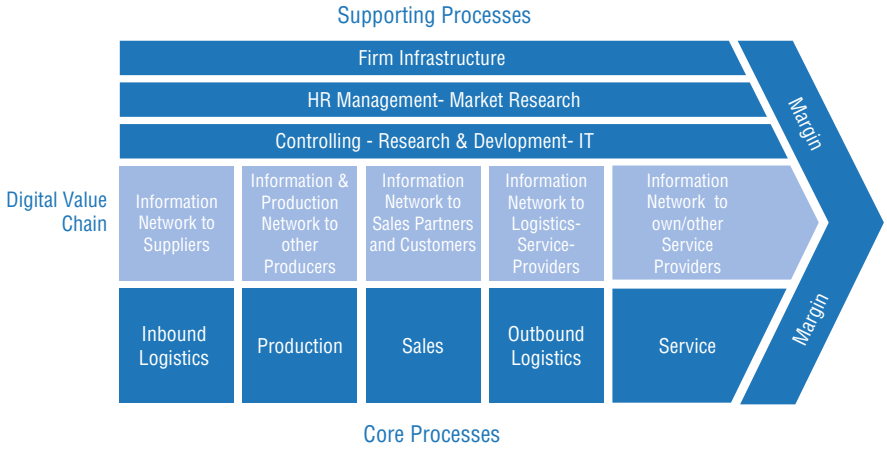


Fig. 1.9 Physical and digital value chain

regardless of whether it is mobile and/or on social networks. At the same time, consumers have a higher impact on the company and their brands because through social media they can communicate on an equal footing with the companies.

The step towards *digital business* is completed when the digitization runs through the entire business model and does not remain focused on marketing alone. Here, a further convergence of people, things, and processes is happening. The domain of digitization can be found here that, e.g., takes place in the penetration of the traditional value chain by a digital value chain. Only at this stage the goal of a *Digital Business Leadership* can be achieved.

In Fig. 1.8 the *classic value chain* based on *Michael Porter* is displayed. It shows how the core processes and the accompanying processes in a company can be designed to create value for customers, thereby making a profit (Kreutzer 2013).

Digitization makes it possible—as in many cases necessary—to complete the classic value chain by a *digital (informational) value chain*. Figure 1.9 shows how

this completion can take place. The physical value chain is penetrated and enriched by a digital value chain. In this way, a variety of efficiency and effectiveness reserves can be realized in the value chain because an integration with upstream and downstream service partners takes place (Hollensen 2014).

The existing data silos should be replaced by a corporate *data-eco-system*. At the same time, in terms of an outside-in process, a variety of information from the corporate environment should be integrated. Thus, a company can react much more quickly and comprehensively to necessary changes. The digital value chain thereby is based on an *informational supply chain* that connects internal and external information flows. One particularly successful example of this is the fashion group *Zara*. The company was able to establish a closed information loop. This makes it possible to offer the latest fashion trends from the catwalks of the world already 14 days later as purchasable fashion in the shops of *Zara*.

For companies the challenge therefore is to set up *end-to-end data solutions instead of data silos* in order to provide more customer value and generate cost savings. The prerequisite for this are IT systems that can structure and process a variety of data streams in a way that supports value-creating decisions. If the enriched value chains of different companies are being interconnected, so-called *systems of integrated value chains* (also called value systems) originate. The value chain of the own company is linked to the value chain of suppliers on the one hand and to customers on the other hand. This crosslinking can include both direct and indirect suppliers and customers (see Fig. 1.10). Through this informational networking, more efficiency and effectiveness reserves can be exploited—both on the supplier and on the customer side. In Germany, a special name for this stage of development has been introduced: *Industry 4.0*.

The core of *Industry 4.0* is the *informatization of manufacturing technologies*. The aim is to develop a so-called smart factory. This development should be characterized on the one hand by the ability to more easily adapt to accelerating change processes. On the other hand, the efficiency and effectiveness of service delivery should be increased through an *informational integration of suppliers and customers*, as illustrated in Fig. 1.10 in the system of value chains. These developments clearly mark the difference between digital marketing and digital business, which shows the different stages of business development (see Fig. 1.7).

In Fig. 1.7, it is referred to as an *autonomous business model*, when companies use humanlike technologies or have applications that completely replace the human being. Examples include autonomous vehicles for people and things as well as cognitive systems to write lyrics, compose music, paint works of art, and answer customer requests without human involvement. Here, the final stage of digitization and dematerialization is reached (Kreutzer and Land 2015).

One technology should be especially emphasized here because of its special importance: the Internet of Things (IOT) (Chui et al. 2010). Today, it is already comprehensively called Internet of products, services, and processes or directly the Internet of Everything (IOE), because people are also increasingly interconnected via smart devices. But what exactly is meant by this “Internet of Everything”? In

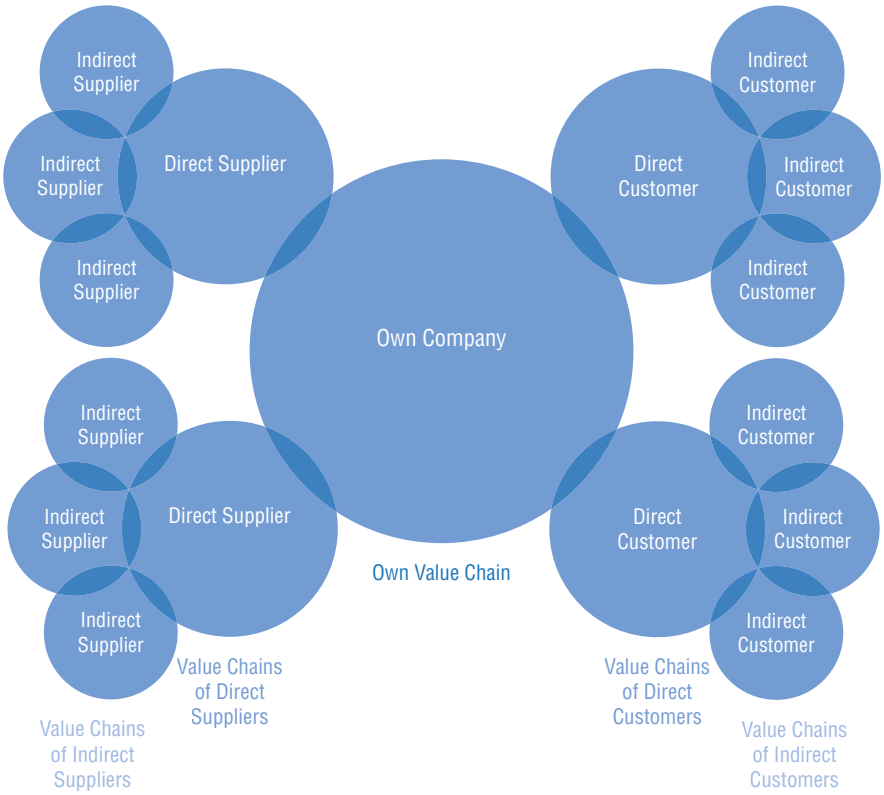


Fig. 1.10 System of value chains

order to explain the Internet of Everything, we should precisely talk about the Internet of people, processes, services, data, and things.

- *People*

  Today, we have the opportunity to be permanently online via laptops, smartphones, tablets, smart glasses, smart watches, and other so-called wearables (portable devices with Internet connection). Thus, not only our information, communication, and learning behavior changed but also our customer journeys. Equipment for the so-called quantified self—the "self-measurement"—like, e.g., *Fitbit* or *Nike Fuel band*, allow us not only to monitor our own body functions such as the heart rate but also the quality of our sleep. At the same time, we can "benchmark" our values with those of relevant peer groups and enter into a global competition for fitness.

  These wearables can forward data to our health insurance, which in return—at correspondingly healthy living rates—gives us premium benefits. It is already foreseeable that not only our cars will register independently for the next inspection, but also we do for the next fitness check. Linked to our schedule, a machine-

to-machine communication identifies the best dates for a doctor visit and automatically enters one into our online calendar. Expectant mothers will carry "smart tattoos" to monitor the health and activity of their babies. In an emergency, automatic messages are sent to the doctor and help is requested (Evans 2014). Especially these wearable technologies will change our lives in a so far hardly imaginable scale.

- *Processes and services*

  The way in which the Internet is transforming the industry and the whole economy has already been referred to as the Industry 4.0 or more comprehensively the Economy 4.0. The Internet of Everything will not only link the value chains of various suppliers and production stages to one another, but will also increasingly incorporate the end user, as it has been already shown in Fig. 1.10 in the system of value chains. Today, companies are invited to think and act upstream and downstream to a much greater extent than before! Upstream refers to the procedural and informational penetration of preceded production steps. Downstream refers to this process in the direction of the end user. In this way, ecosystems in production and marketing can be created, which provide value-added offerings for the, respectively, involved partners—at a higher speed, accuracy, and relevance.

  For Example, *Cisco* operates with major retailers to evaluate a networking of data gained through sensors and video records using specific analytical methods. In this way, both the space productivity in retail and the customer experience should be improved. Therefore, cameras and sensors in the parking lot capture the number of incoming vehicles and people. Combined with sensors on the shopping cart and an analysis of the movement patterns in the store itself, the number of necessary cashiers can be forecasted and presented in real time. Thus, employee productivity is increased and longer waiting times at the checkout can be avoided. By analyzing the pattern of movement in the store itself, additional insights for the store design can be obtained (Evans 2014). Here it becomes obvious that the increasing cross-linking of processes will lead to improved existing services but also to the creation of new services. The extent to which such developments will face acceptance of surveillance sensitive customers—especially in Germany—remains to be seen.

- *Dates*

  Through the use of sensors in all areas of human life and all stages of value creation, not only the sheer quantity of data but also their quality will increase. However, this requires so-called big data analytics in order to avoid an information tsunami. What we need is the creation of smart data, which are indispensable for making decisions.

- *Things*

  Today "only" about 25 billion things are connected to the Internet. This number is expected to double within the next 5 years to more than 50 billion. Assuming a world population of about 7.7 billion in 2020, everyone will have on average of about 6.5 connected devices (see Fig. 1.11). From there the connection

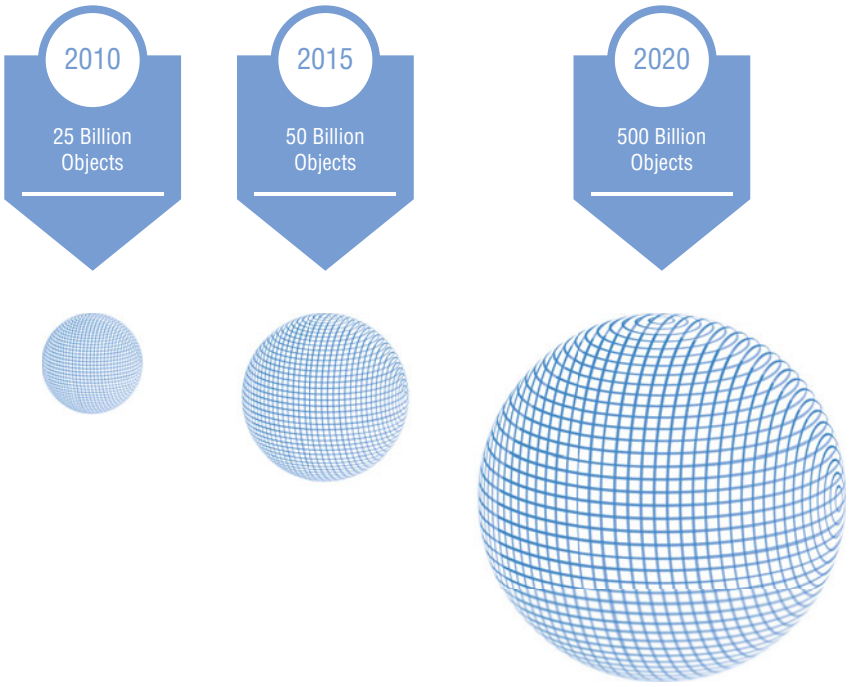


Fig. 1.11 How will the "networking intensity" develop? Source: According to Robbins (2015)

process is just starting: by 2030, the number of connected objects will be 10 times higher, according to the forecast from *Cisco* (Robbins 2015).

But the big growth potential does not lie in the networking of things that we know today, such as computers, phones, and tablet PCs. The disruptive developments will come from the things, whose networking we cannot even imagine today. These include, for example, urban water supply systems that autonomously detect and turn off leaky pipes and dripping taps, whereby the water consumption can be significantly reduced. Intelligent buildings ("smart buildings") will manage heating, cooling, electricity, and water supply themselves. The elevator system automatically calls the service technician when the replacing of one part or the maintenance is due. In addition, usage cycles of elevators are analyzed and characterized, which increases availability. Cows are monitored by sensors with regard to their health and fatality as well as to their moisture to always act in the best possible time. The goal: more efficiency and less waste (Evans 2014.).

Overall, *Cisco* believes that by the year 2022, due to its network, the Internet of Everything will achieve *profits* and *savings* worldwide in the following magnitudes (Cisco 2014; Evans 2011):

- US$2.5 trillion by better *equipment utilization*
- US$2.5 trillion by increased *employee productivity*
- US$2.7 trillion by improvements in the *supply chain*
- US$3.7 trillion by optimized *customer experiences*
- US$3.0 trillion by *innovation*

This corresponds to total effects of US$14.4 trillion. *Increasing corporate profits* of up to 21% are associated with this development (Evans 2011). Even if it is hard to trust the numbers, they nevertheless show the potential that is behind the network development. Especially within the networking of the various areas of the Internet of Everything, the disruptive force of these developments can be found. The drivers behind new versions of value are therefore connections between people, processes, products/services, and companies. Thereby a whole new source of competitive advantage is gaining relevance.

The large number of information which can be generated by the Internet of Everything will further strengthen the trend towards big data. Data from various sources, both mobile and stationary generated, are increasingly integrated via common protocols (especially the Internet protocol IP). In this way data is becoming available to analyze which previously was unknown at this quantity and quality. The combination of such comprehensive data streams with intelligent analysis tools—used in real time—allows, for example, highly individual customer communications. Within customer communication it is, e.g., about the presentation of specific offers that fit not only to the profile of one user. Up to this point, a good CRM system—which means customer relationship management—was already able to do that. The actual chance which results from these additional data streams is based on the immediate adaption of communicated content to the particular context of the user—within time, space, and preferences (Kreutzer 2016).

It is important to consider that information change their value with time and space—and hence with the respective context. Against this background, one term is gaining in importance: *context marketing*. Compared to contextual targeting for the distribution of online advertising, context marketing tries to determine the respective living and action environment of the customer much more comprehensively. This includes not only the analysis of online usage behavior and the commitment in social media but also, for example, the integration of offline activities. This preferably comprehensive informational picture of the customer shall enable the possibility to approach them much more targeted and therefore more effectively. These incentives can be direct buying impulses—or other contents to prepare a purchase process. All this should be ideally done in real time through the respective information channels that the user prefers.

However, today many business models are still based on static information structures, since the dynamization of data occurs only in longer time intervals. For this purpose, information is collected, stored in databases, and, yearly or never (as seen in large customer projects), updated. Also, the existing opportunity to differentiate themselves from the competition by providing access to dynamic information structures while offers can be presented in an unreachable one-to-one

precision is so far only partially used. Available information about prospects and customers is not only increasing but also becoming more and more precise. This is happening at a previously considered impossible pace that allows for real-time marketing (informational). At this point, we should think of *Facebook*, the world's biggest and best (daily) maintained preference database (Kreutzer and Land 2016).

The entirety of the previously and following discussed digital developments leads to a cross-industry *redefinition of business fields*. *Online retailers* are becoming *hardware manufacturers*, in order to cover larger shares of the (digital) value chain by building their own ecosystems. For example, *Amazon* provides the e-book reader *kindle* at a price below production cost in order to make sales from digital products. In addition, the hardware offer of *Amazon* is complemented by the *Fire tablets*, *Fire TV*, and *Fire-Phone*. At the same time, *Amazon* provides *cloud drive*, an online platform for storing photos, and therefore is becoming a provider of *cloud services*. Other *online service providers* are becoming *software vendors* (e.g., *Google* with *Android*) and partly also *hardware vendors* (e.g., *Google* with *Nexus* in the smartphone and tablet PC market). At the same time, *Google* is entering the *market of self-driving cars* and *smart homes*. Simultaneously, *hardware manufacturers are becoming portal providers*, such as *Apple* with *iTunes*. Finally, *streaming providers* such as *Netflix* are becoming *content providers* (e.g., with the TV series *House of Cards*). Even online retailers like *Amazon* rely on content production by contracting its own authors are. Finally, existing *digital pure players* such as *eBay*, *Amazon*, and *Zalando* are developing into multichannel businesses by opening up (partly temporary) shops.

The presented developments illustrate how *business models* which previously functioned undisturbed side by side are now competing with each other. *YouTube*, for example, will become a competitor of the classic TV—especially through the newly launched special-interest channels. Hardware vendors like *Apple* are becoming content providers through *Apple Music* and *Apple TV*. TV program providers themselves are developing more and more into the domain of publishers and start cannibalizing there, which is especially supported by social networks. This step has already taken place especially due to the extensive media libraries of the public broadcasters for example. With *Amazon Instant Video*, the former retailer *Amazon* enters the TV and film market. In addition, the competition between existing competitors will become more intensive. A classic mail order company which does not integrate its online offerings with social TV elegantly will fall even further behind the innovative online stores.

The challenge is called *seamless integration*. It refers to the "seamless" integration of different applications whose shared usage by the customer could so far only be achieved by overcoming different complex interfaces. Ideally, this leads to the creation of an *ecosystem*. It is a self-contained system that the user does not have to leave if he wants to start different applications. For example, *Apple* provides direct user benefits by offering *iTunes* (with integrated cloud applications) and new *Apple* products without integration effort. Within this cocoon the mentioned offers of *Apple Music* and *Apple TV* are also integrated. Thus, the user should stay as long

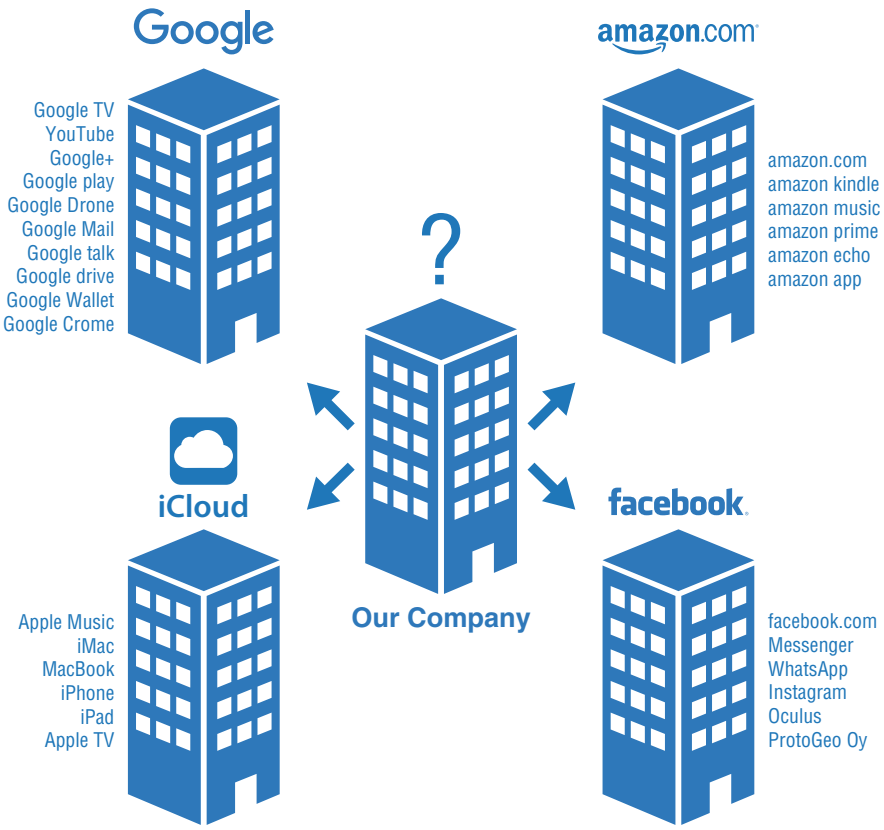


Fig. 1.12 Selected ecosystems

and undisturbed as possible in the *Apple* world, so that no touchpoints to other brands and companies are in need (see Fig. 1.12).

Also *Google* is expanding its ecosystem consistently (see Fig. 1.12). The central data source for this is based on the approximately 100 billion *searches* that are being made worldwide per month. In addition, through the *advertising offers AdWords* and *AdSense*, exciting information about the acceptance of promotional offers is generated—either based on people or at least based on IP addresses. The appreciation of additional *content* can be determined through the evaluation of hits on the *Google*-owned video platform *YouTube*. In addition, over 80% of the worldwide smartphones in use the *Google operating system Android*. Furthermore, watches are being offered, which also use *Android*. Thus, the cornerstones of a *Google*-owned ecosystem are already set. These are supplemented for the Internet infrastructure by own satellites and access to private homes via the service provider *Nest*, which, for example, can monitor and control the home environment. Thus, a *Google-owned platform* is created, which fills the *smart landscape* with a variety of own developments: the comprehensive networking of vehicles (smart cars), houses

(smart homes), administrations (smart government), factories (smart factories), and offers of noncash transactions (smart cash) and, of course most of all, *smart advertising*—so intensively tailor-made for individuals that competitors and privacy advocates are scared.

Amazon and *Facebook* are also committed to and successful in building advanced ecosystems (Shontell 2014). The bandwidth of offers includes product offerings (hardware and software) as well as a range of services. These range from traditional logistics tasks to payment functions or to cloud services. At the same time, the mentioned corporations steadily develop towards media companies, as they not only distribute content but potentially enter the content production more and more (Oremus 2015).

An end to the offerings is not yet in sight. For customers, these ecosystems offer a decisive advantage: *convenience*. Because the services that are offered by the companies within their own ecosystems are highly interconnected with each other and, thus, offer the mentioned "seamless integration." For the providing companies, these systems are associated with even two crucial advantages. A strong *customer loyalty* is created, since an eco-system increases *barriers to change* dramatically. At the same time, this also leads to effective *entry barriers for alternative providers*. If companies are being convincing with their services permanently, something is created that is emphasized with good reason as the new currency: *Trust*! This also further builds the entry barriers for third parties.

We are recognizing a development towards a *platform economy*. The platform operator takes on the position of the spider in the web. The operator has access to the customer—unfiltered, direct, data-based, and context-oriented. In contrast, traditional distribution channels become less important, if they are not enriched by data as well. Thus, the boundaries between previously separated industries are disappearing more and more comprehensively. Consequently, there is a convergence of markets and offerings. Competitors of the present and the future no longer belong to the group of "known" challengers of its own industry. The *surveillance radar for new developments* must be realigned.

The question we should ask ourselves is: How can we apply *information to create value for customer* in this digital environment, to that the customer in return generates an even greater *value for our company*? The challenge is *in search of relevance!* Without the establishment of relevance—in the eyes of our customers—we cannot reach a Digital Business Leadership.

THINK BOX

Questions:

- **What technologies represent the biggest challenges for my company and my industry?**
- **Are they more likely to be opportunities or risks?**
- **Where does my company stand in terms of the development towards digital business?**
- **What distance have we already passed - which is still ahead of**
- **us?**
- **What goals have we defined for my company?**
- **How strongly is our value chain already digitally penetrated?**
- **Where do we see the biggest fields of action?**
  What additional competitive advantages can we achieve
- **through a system of value chains?**
- **What success have we already achieved here?**
- **What is the meaning of the "Internet of Everything" for us?**
- **What are the opportunities for my company?**
  Which third-party eco-systems are interfering with our customer
- **relationships?**
  What chance do we have of building up an eco-system or
- **integrating ourselves into an existing value-adding system?**
  Who is working on these issues in my company?

A first orientation in answering the question of how each company would like to respond to these developments is provided by the *strategic game board* (see Fig. 1.13). It first raises the question whether the company is operating in a market of *new or known rules*. The new rules represent the phenomena, which are now increasingly described as disruptive developments.

In addition, in the strategic game board, it is asked whether the *overall market* or a *niche* is going to be served. As already mentioned, disruptive developments are often found first in the niche and are therefore largely ignored. Based on the *strategic game board*, it is important for every company to constantly monitor which (so far perhaps unknown) players are occurring that could challenge or even destroy existing business models through their concepts.

It is important to consider that currently the entire *entrepreneurial playing field* is changing severely (Kreutzer and Land 2016):

- The *playing field is becoming bigger* as physical boundaries lose in importance in terms of offer generation, communication, and performance demand (in particular through the further spread of the Internet and the overarching trend towards dematerialization) (Kreutzer and Land 2015).
- At the same time *new rules* are gaining validity because entry barriers reduce significantly and start-ups increasingly appear and attack established competitors continuously. At the same time, many investors are getting ready in hope for

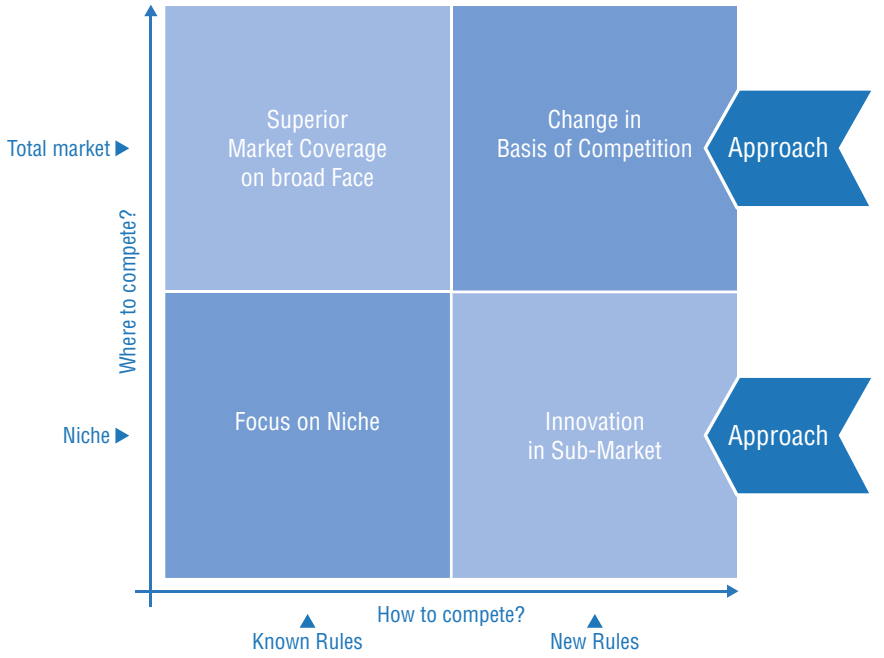


Fig. 1.13 Strategic game board—can we change the rules of the market?

finding the next unicorn ("the next big thing"). "Unicorn" refers to those new companies, reaching a market capitalization of more than US$1 billion.

- Additionally, *new play equipment* is constantly introduced, as social networks show (e.g., *Facebook*, *Twitter*, and *Pinterest*). Also, communication platforms such as *WhatsApp*, *Skype*, and *Instagram* or evaluation platforms such as *Yelp* and others change their communication behavior constantly. This also includes platforms like *Uber*, *Wimdu*, *Zilok*, or *car2Go*, which directly compete with established business models.
- In addition, *millions of additional players* are pushing into the playing field, because almost every Internet user is now allowed to participate in all forms of communication with questions or own content, while it is constantly worked on ensuring Internet access for more and more people around the world. Today more people have access to the Internet than to clean water!
- At the same time, a *playing field extension into the third dimension* takes place, because information provision—based on big data—allows for a three-dimensional customer communication. Thus, many providers are able to consider place, time, and preferences simultaneously when addressing customers. They provide offers not only just in time and just in place but also according to preferences. Consequently, the step towards context marketing is carried out.
- In addition, when entering into business relations, "confidence" is becoming increasingly important, particularly in terms of data provision. If this was

considered another actionable component, a *playing field extension into the fourth dimension* would be the result.

- In addition, the *game speed* increases dramatically because information is not only available in an unprecedented density, but also its changes are often available in real time. Therefore, customers will wait more and more impatiently for reactions of their companies and thus force them to also significantly increase their response speed.

This totality of change results in a real *state of shock* in some companies which is not really a strategy for success in mastering digital transformation! In the past there was the belief: "Who moves, has lost." Today we say, "Who does not move today, has already lost today, or at the latest tomorrow!" But when do we want to move as a company? Do we see ourselves as *first mover* or *fast mover* by tackling trends early and actively? Or does our company rather belong to the group of *late movers* who like to put others first? The risk of late movers becoming *first losers* is increasing when considering the pace of change.

THINK BOX

Questions:

- Are we rather active with "established rules" in the market?
- Or do we also use "new rules" to actively shape our future development?
- What new players enter the field of my company?
- Which "playing devices" are used?
- What is the significance of Big Data in the development of competitive advantages?
- What is the value of "trust" in my industry?
- What are the "trust elements"?
- Is my company able to meet the market's expectations with respect to ever fastenning response time?
- Who is responsible for answering all these questions within my organization?

1.4 Position and Fields of Action of the German Economy on the Digital Map

A large-scale study by the Federal Ministry of Economy and Energy (BMWt 2015) has determined the position of Germany in the field of relevant "digital" competitors. According to this study, Germany is ranked 6—after the USA, South Korea, Britain, China, and Japan. Germany cannot really be proud of this rank because it shows that Germany has not sufficiently used its resources yet to shape the digital agenda globally. In 2015, Germany had to watch China outpace, which has made a

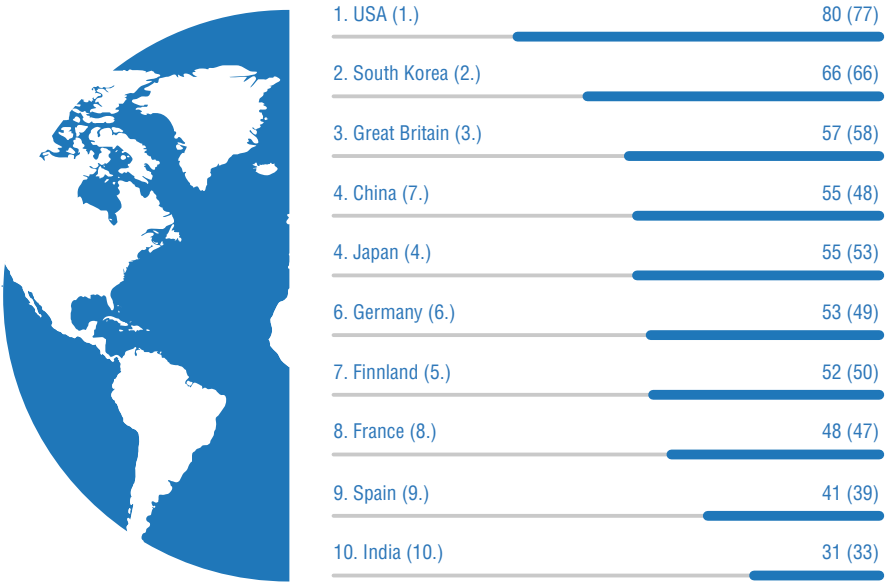


Fig. 1.14 Location index DIGITAL: global performance in 2015 (previous year's figures in brackets). Source: Based on BMWT (2015, p. 21)

significant leap forward (see Fig. 1.14). The three leading industrial nations, the USA, South Korea, and the UK, however, were able to defend their leading position.

In this analysis, three *pillars of the digital economy* are analyzed (BMW 2015):

- Position in world markets
- Infrastructural requirements for digital progress
- Use of digital technologies and services

A detailed analysis shows the following findings (BMWT 2015): The greatest strength within international comparison is Germany's *ability for innovation*. Also, the *market access*, meaning to be able to market products and services nationally and internationally, is considered as a location advantage of Germany. Also the *networking of the ICT sector* (information and communication technology) is positively rated. In this field, only Finland and Japan exceed the position of Germany. Additionally, *legal frameworks* represent another advantage within international comparison. Here, Finland and the UK have even better conditions. An only moderate locational advantage is seen in the criterion *time to market*. Here, South Korea, the USA, and Spain are succeeding in developing marketable ideas in less time. The *exploitation of new business fields* is achieved faster in the UK and China. It is also noted that China, South Korea, the UK, and India are better positioned in terms of *investment frameworks*.

The biggest weakness of Germany lies in the *availability of skilled labor* (see Fig. 1.15). Also, the *network infrastructure* is considered one of the weaknesses of

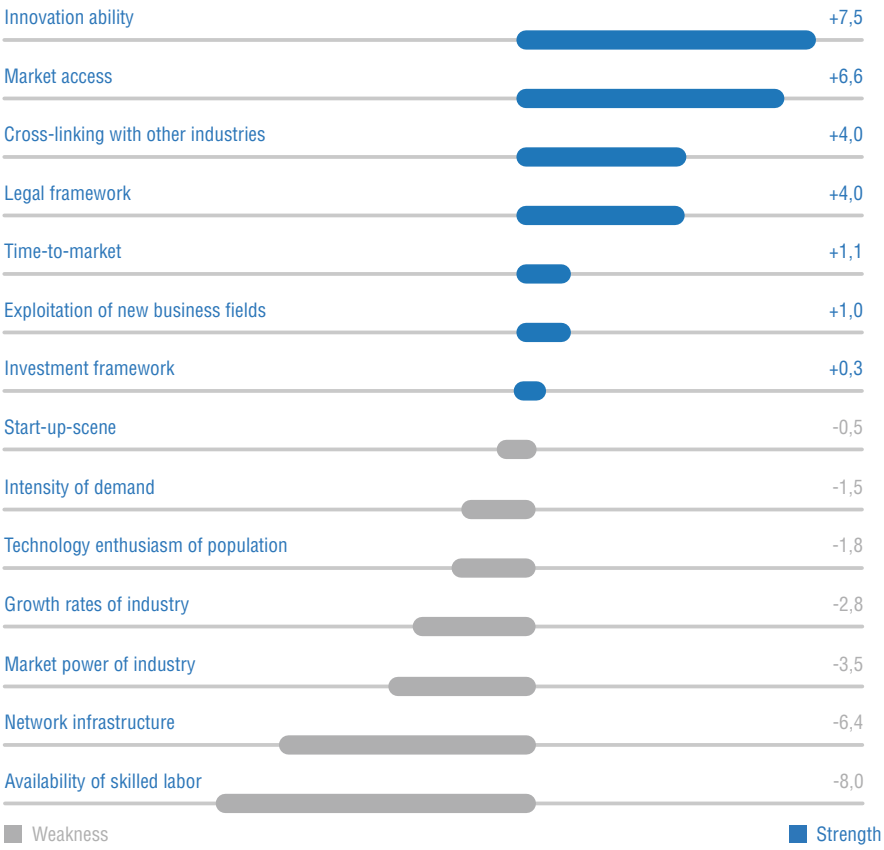


Fig. 1.15 Relative strengths and weaknesses of Germany—in % (Question: Please tell us which of the following factors are strengths or weaknesses of your subsector in your country: relative strengths/weaknesses, deviations from the statistically expected value; particular weakness, deviation between −4 and −8%; moderate weakness, 3.9% or less; special strength deviation between +4 and +8%; moderate strength, 3.9% or below). Source: Based on BMWT (2015, p. 70)

the digital economy in Germany. Here, the greatest strength is owned by Japan. Similarly, *market power* in Germany is seen rather critical because there are only limited possibilities to influence the relevant market developments. Limited weaknesses are also seen in the *growth of the ICT sector*, in the *intensity of demand*, as well as in the *start-up growth*.

Based on this study, it becomes evident that a change process is not only required in companies but in all sectors and countries.

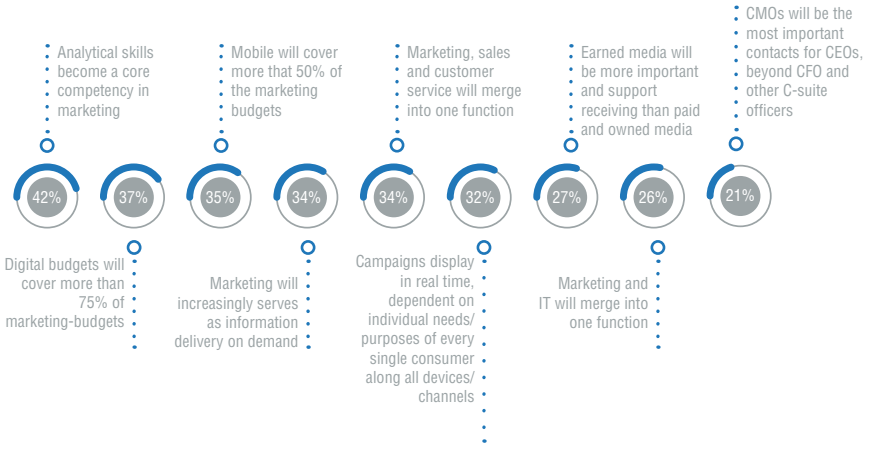
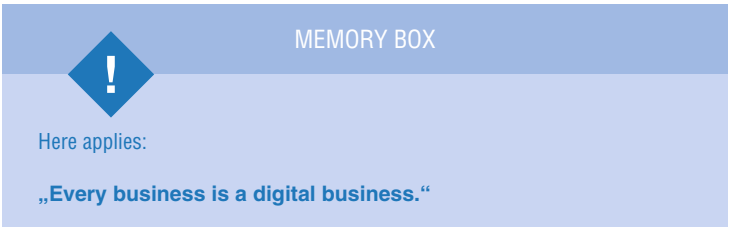


Fig. 1.16 Key challenges for marketing from the perspective of CMOs in the next 5 years—in %. Source: Based on Accenture (2014b, p. 4)



Source: Accenture (2014a, p. 3)

In a varying extent, each company will have to develop into a software company. It is important that the *conditions in Germany* develop into a direction that strongly supports the development of a Digital Business Leadership of companies.

Therefore, the question is not whether we need a change management. The challenge rather is to carry out this change process and its basic conditions fast, comprehensively, and sustainably within the company and in society. The *fields of action of change management* are addressed in Chap. 3.

In what direction will marketing need to develop in this context?

From the chief marketing officer (CMO) perspective, what are significant changes in marketing that need to be tackled by the company within the coming years? To answer this question, Accenture (2014b) surveyed 581 senior marketers in 11 countries and 10 different industries. The main results are shown in Fig. 1.16. Here it becomes visible that analysis capabilities in marketing come first with 42%. In second place stands the shift to "digital budget" with 37%, followed by the statement that mobile marketing will account for almost 50% of the marketing budget. Marketing—according to the estimate of 34% of CMOs—is becoming more an on-demand function. It is also interesting that the CMOs themselves assume that marketing, sales, and customer service will merge into one function. At the same

time, at least about one third of CMOs assumes that marketing campaigns are more likely to develop in real-time, while earned media is becoming increasingly important and marketing and IT will also merge.

The mentioned study shows interesting results in terms of *responsibility for the digital transformation*. According to those results, 35% of C-managers say that the CEO is responsible for this. 23 and 22% assign responsibility to the chief technology officer and the chief information officer. Only 1% assign responsibility for this to the CMO (Accenture 2014b).

Therefore, one of the key questions now is which of the indicated aspects are at least already anchored in the *agenda of CMOs*. In the course of the study of CMO Perspectives (2014, p. 8 f., 17), 339 marketing decision-makers were asked about the central marketing challenges in Germany. The following four main challenges became visible:

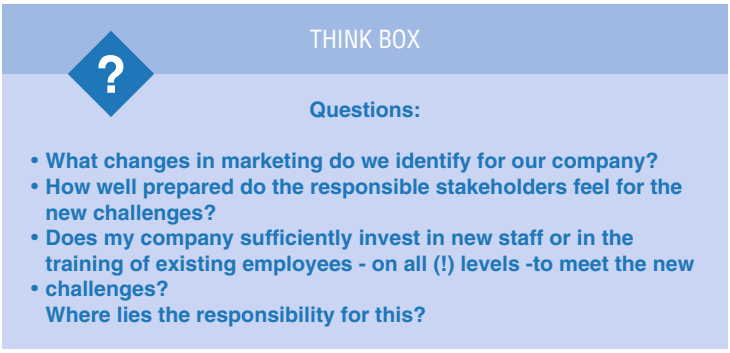
- 61%: Industry 4.0
- 45.1%: Innovation management
- 33.9%: Strengthen customer satisfaction
- 33.5%: Growing number of communication channels and devices
- 32.4%: Changes in consumer behavior

It is a good sign that these issues have landed on the *agenda of the CMOs*. But how well prepared do CMOs feel about these challenges (CMO Perspectives 2014)? Here, unfortunately, a sad, albeit honest, picture emerges:

- *50%* of surveyed CMOs see themselves partly or completely ill-informed in terms of *Industry 4.0*. Thus, every second CMO cannot be a compelling driver for the upcoming transformation process.
- *45.6%* of CMOs feel very good and well prepared with regard to the design of *innovation management*. Consequently, the majority does not, although innovation management is a central driver of the in many cases necessary digital transformation.
- *40.6%* are very well or well prepared in terms of *strengthening customer satisfaction*. It is surprising that not even CMOs perceive good preparation in a topic, which has been in the focus for over many decades. Almost 60% see themselves not well positioned in this core issue of marketing.
- *34.3%* indicate that they feel very well or well prepared in terms of the *changes in consumer behavior*. Knowing the changed expectations and shifts in the behavior of consumers themselves represents a necessary condition for mastering this challenge. However, it is also about deriving and implementing the right measures.
- *33.4%* feel very well or well prepared in terms of the *growing number of communication channels and devices*. Here, it becomes clear that creating a compelling customer experience across all relevant customer touchpoints still represents a major challenge. For two-thirds of the surveyed companies!

But how can necessary corporate *change processes* be triggered when the top representatives—here the CMOs—do not feel well prepared in the issue? Especially in the mentioned *biggest challenges*, CMOs see their *largest deficits*. In our view, this is an *honest* but also a *frightening finding*. This finding applies to the same or in some cases even greater extent also for medium and small businesses, according to the experience of the authors. There is a call for solutions, for ideas, for information, in order to stand on the winning side in the forthcoming or already longer ongoing selectional fight. Because a Digital Business Leadership cannot be achieved if the in-house expertise is not existent. In order to convey this expertise, this work was designed.

One thing we should be aware of: The market and therefore the customers and competitors are not waiting for companies to qualify their executives and other acting persons for digital challenges. Rather, it is like this: In many industries, especially the customers are a lot more digitally driven than the provider. Especially this digital gap needs to be filled quickly before it is filled by a competitor! However, without a convincing commitment of management, the necessary breakup should not start (see Chap. 3)!



It became clear that the digitization creates radical social and economic opportunities and risks. Especially on the second part of the game board, their impact cannot be fully grasped because of their exponentiality. Regardless of this it can be said: Even in times of special change and high uncertainty, *concepts and patterns* can be determined, which can increase the probability of own success. Therefore, we have worked out eight fields of action, which are the most important in our view. These are presented detailed and practically in the second chapter. It will become visible what measures and actions are necessary to build a Digital Business Leadership.

Take the time to read our recommendations, reflect using the *Think boxes*, and eventually become even active yourself by establishing the contents of the *Act boxes* in your company.

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Eight Areas of Action to Build a Digital Business Leadership

2

Life is like a bicycle. You have to move forward to maintain balance.

Albert Einstein

2.1 Guidelines for Developing a Vision for the Digital Age

The introductory chapter has shown that from a business perspective, we can perform digital transformation at different levels of intensity (see Fig. 1.7). The step towards a *digital business*, however, is only complete when the *digitization covers the entire business model*—indeed the entire company—and does not stop at the design of digital marketing activities. Only in this all-digital stage, the aim of *establishing a Digital Business Leadership* can be achieved. This requires the company to have a central idea about how the organization should look like in a fully digital world.

Well-known and already often implemented in the vast majority of companies is the realization of the fact that the goal of any business activity is about aligning the organization in a sustainable, successful, and meaningful way. This credo applies of course also for a successful digital management. Therefore, a central starting point for all further considerations must be to deviate a *corporate vision* that integrates existing knowledge about opportunities and risks of digitization into successful action. This vision represents the *guiding principle of entrepreneurial activity* (Hungenberg 2014). It forms the context of describing the future company development visually, credible and attractive, while it creates a meaningful, motivating, and action-guiding frame for the entire organization (Vahs and Brem 2013). In the course of the digital transformation of companies as well as on the way to

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creating a Digital Business Leadership, a special significance is aligned to this guiding principle (Westerman et al. 2014). Because what would be a better orientation for employees, investors, and other stakeholders in an environment of specific change dynamics than a clearly understandable picture of the digital future of the company?

2.1.1 Managerial Visions in the Digital Age

But as so often, practice necessity and actual reality are still far apart. *Capgemini Consulting* examined the *digital maturity of organizations* in various industries and ordered it into four categories (see Fig. 2.1). The bandwidth ranges from "beginners" over "fashionistas" and "conservatives" to the category named "digiratis." Interesting for the field of Digital Business Leadership are the so-called digiratis (Capgemini Consulting 2015). These are companies that understand very well how to draw economic value out of the digital transformation. Moreover, they combine a transformative vision with entrepreneurial commitment and create a digital culture which contributes to the realization and implementation of future changes. As Fig. 2.1 shows, there are relevant differences among the various sectors regarding the distribution of each category. Digitally mature industries, such as the high-tech sector, have a significantly greater proportion of digiratis than the traditional areas such as the pharmaceutical industry and the manufacturing sectors.

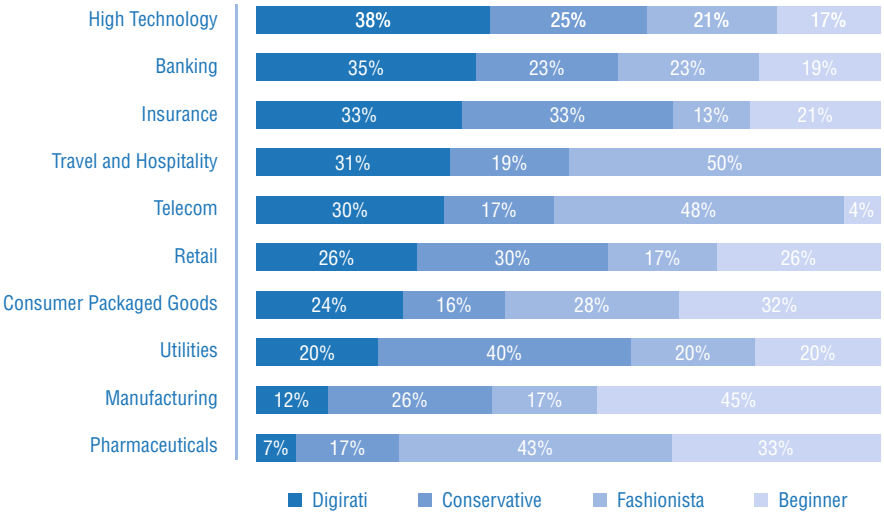


Fig. 2.1 Digital maturity in various industries. Source: Based on Capgemini Consulting (2015, p. 10)

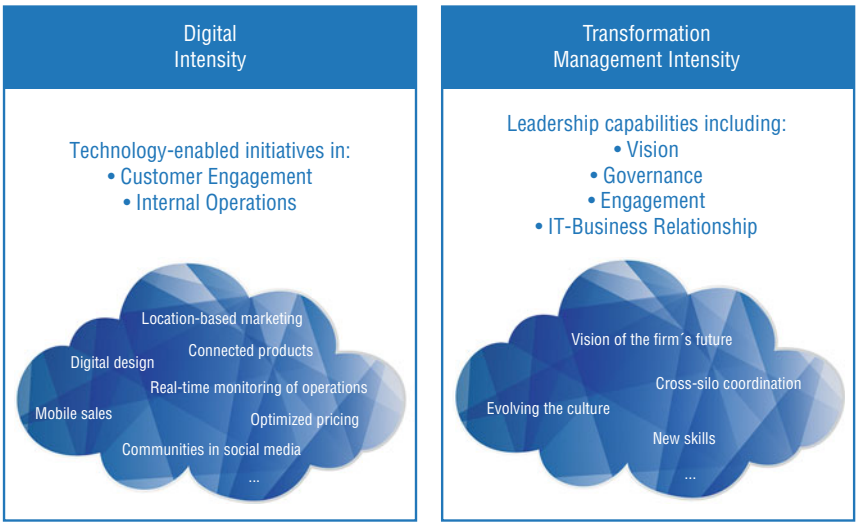


Fig. 2.2 The "what" (digital intensity) and the "how" (transformation management intensity) of the digital transformation. Source: Capgemini Consulting (2015, p. 3)

The *entrepreneurial vision* is of particular importance in this study. Because it is an essential element of the answer to the question: "How can we substantively manage digital transformation?" Digiratis answer this question much clearer than their followers and are particularly able, among other factors, to present a digital vision of entrepreneurial future in a credible and comprehensible way. This creates the transformative power and the necessary intensity that drive the digital transformation in the company (see Fig. 2.2). The study by *Capgemini Consulting* specifies not only the "what" (digital intensity) of the digital transformation, which refers to the content of the transformation efforts, but also the question of "how" (transformation management intensity). Here, the vision, as an idea of the future of the company, is at the top of central leadership.

These results are not surprising, since the entrepreneurial vision is regularly attributed by the following action-guiding functions (Hungenberg 2014):

- *Identity function*: The vision should include trendsetting goals that serve as an orientation for employees of an organization for an extended period of time.
- *Identification function*: The vision shall show the organization's employees the deeper meaning and purpose of their own actions, thereby strengthening the sense of belonging to the company.
- *Mobilizing function*: The vision shall encourage them to pursue the objective future picture of the company together as a goal.

The described framework applies as well to digital-centric visions. They do not initially differ from their "nondigital" counterparts. In terms of the *transformation of established organizations in the digital world* as well as in the *creation of a Digital Business Leadership*, however, the vision owns a prominent importance. Visions of digital leaders not only have a special substantive consequence. They are also often driven by a particular purpose and a compact imagination of the digital future. Let us take, for example, the vision "A computer on every desk" that *Bill Gates* stated already 40 years ago with regard to the development of *Microsoft* and which he repeated in a letter to the employees in 2015 (Sottek 2015):

> . . . Early on, Paul Allen and I set the goal of a computer on every desk and in every home. It was a bold idea and a lot of people thought we were out of our minds to imagine it was possible. It is amazing to think about how far computing has come since then, and we can all be proud of the role Microsoft played in that revolution. [. . .]

Although the ravages of digital time also have their impact on *Microsoft*, the just mentioned vision continues to be an excellent example of a (relatively early) digital vision that has brought a lot of clarity and aspiration since its formation (Inter alia Hungenberg 2014). Back in the 1970s and 1980s, this vision was forward looking for the at-the-time development of the home computer industry, created identity among employees, and mobilized the company significantly. Forty years later, we know that this *bold idea* was a relatively reliable prediction of the technical and social future.

In this digital-centric mode, other examples of plausible but challenging visions of the future can be found. Here, one could think of *Amazon* with its focus on customer centricity and online trade (Hull 2012): "Our vision is to be earth's most customer centric company; to build a place where people can come to find and discover anything they might want to buy online." Also, the German e-commerce *Zalando* represents an example with its industry-focused perspective which is aligned with multichannel trading (Kolbrück 2015): "Connecting Fashion and People."

Digital leaders are not only able to anticipate future technological developments and changes within the traditional spheres to a certain extent, but they also succeed in conveying this knowledge internally and externally by a meaningful vision. Often these statements go far beyond the currently known commercial behavior in the respective industry. Digital leaders are able to integrate overall social phenomena in their business model. In addition, they often strive for an even higher purpose in their objective. For the *formulation of visionary goals*, digital leaders do not use long, content-poor, or generalized statements. They also do not focus superficially on purely financial goals. On the contrary, they produce highly individual and very vivid descriptions of future states which link them to a higher corporate purpose.

2.1.2 Anchoring Vision Design in Strategic Management

The *formation and design of a corporate vision* is anchored in the traditional sense of strategic management and part of a complex hierarchy of objectives (see Fig. 2.3).

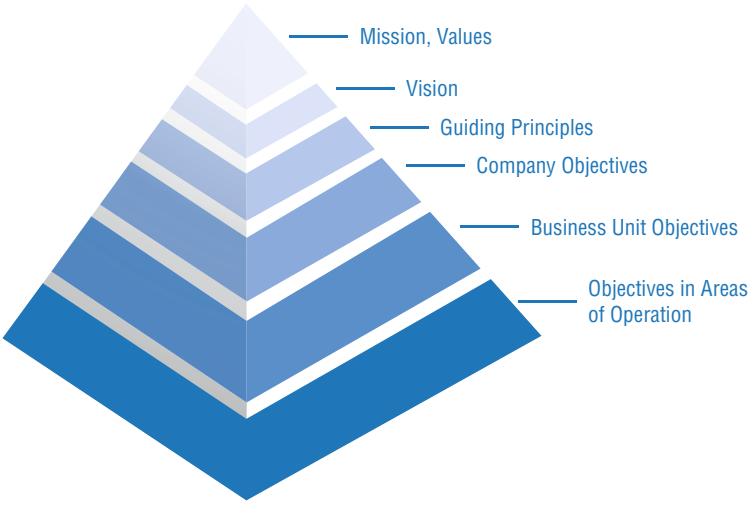


Fig. 2.3 Strategic target hierarchy. Source: Based on Reisinger et al. (2013, p. 135)

While the company's policy answers the question about the higher *corporate purpose (mission)* and the *values of the organization*, the *vision* is rather forward looking and describes an idea of what the company wants to be and what it aims for (Reisinger et al. 2013). Thus, the vision is to be seen in the context of organization-wide strategic objectives and forms the basis of the current and future business activities.

Especially in times of significant structural changes, it is of central importance to use these *functions of the entrepreneurial vision* in combination with the purpose of the organization while exploiting it in terms of a Digital Business Leadership. For this, the question remains how *strategic processes in times of digitization* are designed in general and how appropriate digital visions result from such action.

From the *content perspective*, digital visions deal regularly with the realignment of the customer experience and therefore the value proposition of the business offering. In addition, the reorganization of operational processes and the combination of both aspects, in terms of changing business models, are being focused (Westerman et al. 2014). They are driven by the technological possibilities of digitization and characterized by a strong-changing moment that makes different types of convergences available. We will examine these aspects, among others, in detail in Sect. 2.2 with regard to the resulting tasks for creating and renewal of business models.

From *a structural perspective*, digital visions are connected complex enterprise-wide processes of setting objectives that are fed by different strategic schools. It can be stated that we have to differ between two opposing views when it comes to the development of business strategies and goals: the *planning model* on the one hand and the *incremental model* on the other hand (Hungenberg 2014). Furthermore, entrepreneurial visions as well as corresponding strategic approaches can be derived

from the known *strategy perspectives of Mintzberg* (Mintzberg et al. 1998; Hungenberg 2014):

- *Plan*: The business strategy represents a plan in terms of a "target state" for the future of the company as well as an intended amount of steps along a path in pursuing this plan and achieving a strategic objective.
- *Pattern*: The strategy represents a bundle of individual decisions to achieve the objectives. It is not mandatory for all individual decisions to be premeditated according to the "strategy as a plan," but they may arise in the course of time.
- *Position*: The strategy represents the most possible accurate definition of a business position in the market and the corresponding steps to achieve this goal.
- *Perspective*: The strategy is to be seen as the parent establishment of a reason and perspective for business development. A target is used in the sense of a corporate vision.
- *Ploy*: The strategy must be seen as an element of "game" or a "scam" to "trick" the competition.

Digitization now creates specific environmental conditions, so that digital leaders have to expect a substantial and also continuous change for both today's and for future action. Complexity and dynamism are characteristics of modern digitized markets, leading to the so-called hypercompetition (Hungenberg 2014). Existing competitive advantages are therefore only valid for a limited time. Companies have to deal with only *temporary competitive advantages* (McGrath 2013). For this reason, McGrath proposes to consider competitive advantages in a life cycle continuum which consists of "launch," "ramp up," "exploit," "reconfigure," and "disengage" (see Fig. 2.4). These competitive advantages are no longer made "for eternity" but must be renewed regularly.

While all five strategic overviews of Mintzberg can unfold their possible specifications also within a digitized world, the *aspects of the incremental model* or the *strategy as a*

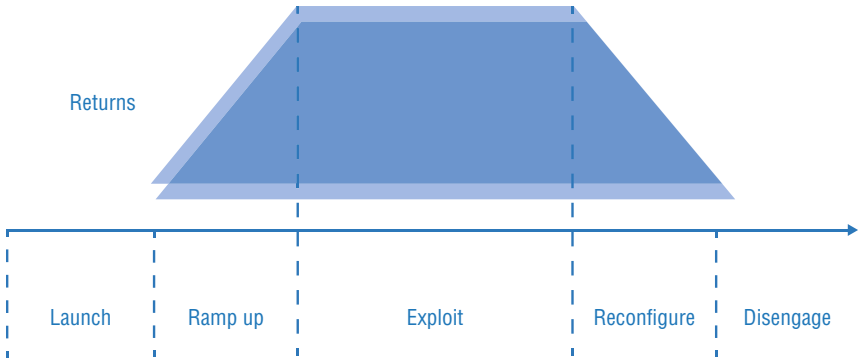


Fig. 2.4 Temporary competitive advantages as normality of digital markets. Source: According to McGrath (2013, p. 13)

pattern and *strategy as a perspective* are particularly relevant for an observation according to Digital Business Leadership. In contrast, today's still dominant planning model will become less important in building a Digital Business Leadership. Rather, skills have to be developed for a more flexible strategy development and implementation. These can be found less in the *plan* itself but rather in the *pattern* and *perspective thinking*. The *strategy as a pattern* thereby is closely related to the following closely described "learning school," which characterized the "strategy as a perspective," as well as to the "entrepreneurial school" of strategic management (Mintzberg et al. 1998). Both views are intensively using aspects of an incremental approach. Because the pure planning model, as it is often still found in established companies today, seems to increasingly reach its limits (Inter alia Ismail et al. 2014). In times of digitized markets with increasing convergence of media, channels, etc. as well as the already described exponentiality of the change pace, strategic intentions cannot be planned in detail in cycles of 5 or more years any longer, while also the planning and budgeting in a top-down process is not possible anymore. Consequently, a new *strategic mindset* is required.

The "learning school" of strategic management focuses on *incremental learning of individuals and collectives*. The findings which arise from these learning effects are the basis of the gradual formulation of goals (Mintzberg et al. 1998). Thereby, goal-setting processes in organizations are obtaining an evolutionary character. Companies are exposed to a complex and ever-changing environment, which they must face with an own versatility in order to avoid becoming a victim of the digital Darwinism. Finally, the strategy represents the sum of individual actions which in retrospect create a most consistent pattern in the meaning of "strategy as a pattern."

For many existing "nondigital" companies, the digital change represents a major challenge which can only be tackled through continuous learning and incremental adjustment. The, for this, necessary gradual approach was clearly described through the *stages of development for digital business* of *Gartner* in Fig. 1.7. Digital aspects are successively inserted into the target pyramid of the company until they eventually (supposedly) have arrived in the overall vision. The central questions are the following:

- Is enough importance given to digitization?
- Or does the digital transformation of the organization remains stuck, for example, at the level of process optimization and digital marketing?

While this learning perspective thus bears general value for the start of a digital transformation, it also leads to considerable risks from a strategic perspective, at least with regard to the goal of achieving a Digital Business Leadership. For example, in organizations it may lack in far-reaching (more radical) commitment to future digital targets. In addition, strategic objectives in learning can lose its own sake or develop into the wrong strategic direction in regard to the digital future (Mintzberg et al. 1998). Therefore, it is useful to look at entrepreneurial activities with regard to the

desired Digital Business Leadership, particularly from the perspective of the "entrepreneurial school" and the *strategy as a perspective* (Mintzberg et al. 1998):

> The most central concept of this school is vision: a mental representation of strategy, created or at least expressed in the head of the leader. That vision serves as both an inspiration and a sense of what needs to be done—a guiding idea, if you like.

Here the (digital) leader is positioned in the center of the strategy formation process. His imagination of the future will manifest itself in a vision and will serve other people in the company as an inspiration and goal. According to *Schumpeter* and his *principle of the creative power of destruction*, it is this entrepreneur, with his personality and his willingness to take risks, who makes new inventions economically viable and therefore drives the actions of the company and in the economy as a whole (Vahs and Brem 2013). According to today's thinking, this person can be both a founder and an owner in the meaning of an *entrepreneur* or an *intrapreneur*, which describes a person who operates at different functional levels within an established company (Inter alia Mintzberg et al. 1998). Consequently, the described personality traits are crucial and not where the person is operating.

The necessary visionary process, however, is not the same as the conventional strategic planning. The *vision of the digital leader* complements the imagination of the company's future with continuously resulting and previously unplanned strategy aspects. This completely goes hand in hand with the incremental idea. Strategies of the *entrepreneurial school* are therefore always planned. But they can also reemerge over time and be integrated in the visionary process after checking on suitability (Mintzberg et al. 1998). It becomes clear: the required visionary process is not only characterized by an active search for new business opportunities. There is also the absolute will to drive dramatic changes in environments of high uncertainty while setting a strong focus on growth. Let us think of the visionaries and high-profile heads of the following companies, which we have summarized by the term *FAAAAU* (see Sect. 1.1): *Mark Zuckerberg* at *Facebook*; *Jeff Bezos* at *Amazon*; *Larry Page* and *Sergey Brin* at *Alphabet (Google)*; *Steve Jobs* and now *Tim Cook* at *Apple*; *Joe Gebbia*, Brian Chesky, and Nathan Blecharczyk at *Airbnb*; and *Garrett Camp* and *Travis Kalanick* at *Uber*. All of them share the described *entrepreneurial mindset* and thus the *will to massively change the world*.

It is interesting that visions caused by the significant force of the digitization often not primarily correspond with the classical shareholder model, but rather follow the approach of stakeholder value which includes higher (nonfinancial) purposes. A good example is the project *Internet.org* of *Facebook* (Internet.org 2015). "Internet.org" is on initiative led by *Facebook*, which brings together technology leaders as well as charitable and local communities in order to connect the two thirds of the world population, which currently do not have Internet access, to the Internet. The project, which first of all deals only partly with the actual business of social networks, allows for recognizing a comprehensive perspective, which comes along with the vision and the purpose of the company *Facebook* (Farfan 2015):

> People use Facebook to stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them.
>
> Facebook's mission is to give people the power to share and make the world more open and connected.

As simple and as equally convincing is the vision of *Uber* (2015). Here, too, the customer benefit and the benefit of society are in the center:

> Uber is evolving the way the world moves. By seamlessly connecting riders to drivers through our apps, we make cities more accessible, opening up more possibilities for riders and more business for drivers.

It was similar when the founders of *Wikipedia—Jimmy Wales* and *Larry Sanger*—formulated their vision for an online dictionary. This vision was as simple and as equally convincing (Budras 2015, p. 23):

> The goal is to make the entire human knowledge freely available to each person.

We have also seen similar activities of *Google*. Of course, all these efforts pursue calculated economic purposes in the long term. It is called "business ideas" for a reason. And that is why founders are looking worldwide for unicorn ideas that achieve a market capitalization of more than US$1 billion. The focus, however, often asks for the meaning of the organization and its associated higher purpose, which should be fulfilled. Only out of these higher purposes meaningful organizations can develop and pursue ambitious digital visions which finally lead to monetary results.

2.1.3 From Corporate Purpose to a Vision

Digital leaders think beyond the incremental optimization of the status quo and set (large) digital goals which they link to a *higher purpose of the organization*. *Think big* is *part of the DNA of digital leaders*. Especially in existing organizations, it might be even needed to question the purpose of the organization and to realign it with respect to the digital transformation.

A fitting example provides the German *automotive industry*. For a long time, an irrefutable law applied within the automotive sector: The purpose of the corporation lies in the production and sale of vehicles. This view has changed significantly, not least because of the possibilities of digitization. Thus, *Daimler* boss *Dieter Zetsche* came to the following conclusion in his keynote speech at the world's biggest motor show *IAA* in 2015: "We are not a car manufacturer anymore" (Dahlmann 2015). It becomes clear: Even in the automotive industry, not only the strategic goals have changed dramatically but the purpose of the enterprise as a whole. Who would have expected that 5 years ago?

Let us put ourselves in the situation of this industry: the construction of high-quality vehicles has changed considerably. In addition to classic hardware know-how in metals and mechanics, a comprehensive electronics and computer science expertise has joined already. Today's vehicles are complex and electronically controlled systems, enriched by elaborate security, entertainment, and monitoring functions. But while the automobile manufacture still shows continuous developments, radical changes for the future are already foreseeable. In the traditional field of vehicle manufacture, new competitors open up the field for alternative drive technologies. Let us consider, for example, the premium vehicles of *Tesla* with pure electric drive. One step ahead are the already mentioned projects for self-propelled vehicles by *Google* (Google 2015) and *Apple* (Eilhard 2015). The emerging developments in this field provide a blueprint for the technology and vendor convergence recognized also in many other areas. Hereby new mobility concepts and disruptive business models develop parallel, which challenge the established providers through car-sharing and new web-based networking models for driving services such as *Uber*, *myTaxi*, and *Qixxit*.

Development shows the diversity, and at the same time, the change force established companies, such as *Daimler*, have to spend to make the digital transformation successful. Without a *realignment* or at least a comprehensive *development of the company's DNA*, this will not succeed. This is emphasized by *Zetsche* with the following statement of the already quoted *IAA* keynote: "This digital transformation is in full progress in our company. Mercedes-Benz is changing from a car manufacturer to a networked mobility provider, where the person—as a customer and employee—always takes center stage. That is how we consistently develop the company and secure our future viability" (Dahlmann 2015). And one thing is certain: the automotive industry is not the only industry facing substantial breaks. The already quoted FinTech start-ups challenge the *financial sector* and question the established banking business model; food delivery services want to enter the market of large *chain stores*, and the German *industry* has to face the challenges of "economy4.0."

- But how can existing corporate purposes be effectively renewed in the sense of Digital Business Leadership?
- What framework is to be considered in order to create inspiring businesses in the digital environment?

The basis for all change is to *deal deeply with the individual opportunities and risks of digitization* and the consequent *changes of the corporate purpose*. Digitally launched companies see themselves often as change drivers within the industry as well as within the whole society. Their corporate purposes go beyond purely economic aspects. When it comes to start-ups, they often ignore economic aspects totally in the early stages in order to make the idea great first. In addition, start-ups do not have to take care of existing structures, processes, employees, and customers—because they do not have a history. This clears the head and the heart to think impetuously and largely.

For the entrepreneurial concern of the particularly consistent operating companies exists an appropriate term: a *massive transformative purpose* (MTP) (Inter alia Ismail et al. 2014). A *MTP* goes far beyond the existing capabilities of today but binds strategic values in a way that makes these purposes seem reasonable and possible. Connected to a corresponding vision, the MTP creates a motivating effect inside and outside the organization (Ismail et al. 2014). Radical change is the focus of attention. Here are some particularly striking examples:

- The massive transformative purpose of the Singularity University, a private school located in Mountain View, California, says: "Positively impact one trillion people" (Ismail et al. 2014). It becomes clear that this is not about small-scale formation of a few hundred students, but the generation of technology-driven projects will have an impact on a billion people.
- The company *SpaceX*, launched in 2002 by *Tesla* founder *Elon Musk*, has formulated the following massive transformative purpose in order to achieve a settlement of other planets: "The company was founded in 2002 to revolutionize space technology, with the ultimate goal of enabling people to live on other planets" (vgl. SpaceX 2015).
- The American e-commerce company *Zappos*, which belongs *to Amazon* since 2009 but operates independently, owns a massive transformative purpose with an almost transcendent statement: "Zappos is about delivering Happiness to the World" (Hsieh 2010).

All cited examples unite a corporate purpose, which is the *will for a massive change of the world*. A view that *Simon Sinek* visually describes the process as a from the inside to the outside directed question of "why" in *Start With Why* (Sinek 2009) while drawing the following conclusion:

- Great companies act and communicate based on the "whys."
- They appeal to a deeper emotional level of the people, thereby creating a motivating link between the corporate purpose—the answer to the "Why?"—and the conventional "What?" and "How?" of the organization (see Fig. 2.5).

This deeper, meaningful core of business activity is also shared by representatives of recent organizational models. In Sect. 2.3, we will come back in detail to *integral and evolutionary organizational models*. What unites them with the field of *massive transformative purpose* is the view on corporate purpose. According to this view, companies should have their own purpose, just as a person has an individual character, which is to be collectively sensed and tracked (Laloux 2015).

Typical Computer Manufacturer	Level	Apple	Level
- - - - - -	- - - -	Everything we do, we believe in challenging the Status quo. We believe in thinking differently.	Why?
We make great computers.	What?	The way we challenge the Status quo is by making our products beautifully designed, simple to use and user-friendly.	How?
They´re beautifully designed, simple to use and user-friendly. Wanna buy one?	How?	And we happen to make great computers. Wanna buy one?	What?
Communication "from the outside to the inside", from "What?" to "How?". The "What?" serves as justification for the company´s uniqueness		Communication "from the inside to the outside", from "Why?" via "How?" to "What?". A deeper and meaningful "Why?" serves as justification for the company´s uniqueness	

Fig. 2.5 Comparison of the company description of Apple and other computer manufacturers with a focus on the "why" as the purpose of the organization. Source: Based on Sinek (2009, p. 40 ff.)

MEMORY BOX

"It's us humans that can tune into the organization's evolutionary purpose; but the key is about separating identity and figuring out "What is this organization's calling?" Not "What do we want to use this organization to do, as property?" but rather "What is this life, this living system's creative potential?"

Source: Robertson (2015), quoted from Laloux (2015, p. 200)

Ultimately, it is the *task of digital leaders* to recognize and to formulate the purpose and to finally use it for generating a long-term viable and easy-to-understand digital vision. In addition, it is important to communicate it internally and externally.

ACT BOX

Workshop on development of the company's purpose

Recognize the meaning of your organization: with this workshop format on the way to a collectively shared corporate purpose.

Scope:
About 4-6 hours

Participants:
Interdisciplinary team of specialists and executives from different organizational areas; Small businesses should include all employees

Procedure:

- **Use the examples presented here to show why the creation and / or questioning of the company's purpose is an important starting point on the way to digital business leadership.**
- **Break down the total number of workshop participants into groups of maximum of 5-7 people.**
- **Now use the LEGO® SERIOUS PLAY® method: Each group gets the same set of LEGO® building blocks and is animated to use it as a tool for metaphorically building LEGO® models. Let each group in three consecutive rounds of 30 minutes answer the following questions using the group-wide creation of LEGO® models**

Round 1: If your group were a form of transportation, what would it look like in LEGO® style? What would be its name? What features would it have?

Round 2: Imagine the current organization as a machine. What is the main task of this machine? What does it look like as a LEGO® model?

Round 3: How do you see the organization in the future? Build any LEGO® model (such as a vehicle, machine, character, city,
- **or similar) and describe it according to its characteristics, goals, and purposes!**
-

After each round, have each group briefly present the respective models and discuss the aspects that came up in relation to the underlying task. Finally,
- summarize the essential aspects with using Metaplan cards or notes on a whiteboard underneath the headline "The purpose of our company". Finally, discuss this selection and adjust it as necessary.
-
- **Resources required:**
- **Workshop room and about 4-6 hours of time from all**
- **participants**

Sufficient LEGO® building blocks
Whiteboard or free wall surface for attaching notes
Sticky notes in different colors as well as highlighters

Tools:
LEGO® SERIOUS PLAY® building blocks (at least one window exploration bag for each team, additional connection and landscape variants for round 3)
http://shop.lego.com/en-US/Serious-Play-NotThemenwelt

Textbook "Building a Better Business Using the Lego Serious Play Method": http://www.amazon.de/Building-Better-Business-Serious-Metho-d/dp/1118832450

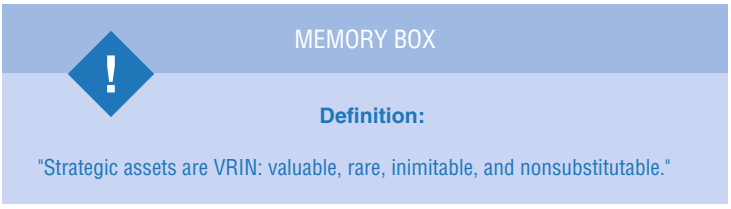
2.1.4 Creating a Viable Digital Vision

To be digitally successful, you do not have to necessarily match with the intentions of the digital *Moon Shots* of *Google*, *Amazon*, *etc*. or follow *massive transformative purposes* as *SpaceX* or *Singularity University* does. But Digital Business Leadership requires a very bold and daring approach towards the future development of the own organization. There is a reason why in his management bestseller *Built to Last Jim Collins* calls these corporate goals *BHAG—Big Hairy Audacious Goals* (Collins and Porras 1994):

> A BHAG engages people—it reaches out and grabs them in the gut. It is tangible, energizing, highly focused. People "get it" right away, it takes little or no explanation.

After the *purpose of the company* is demonstrated, it is about forming such a *BHAG* as a viable *digital vision*. Here, two perspectives of responsibility have been established:

- First, there is the individual *charismatic leader* with a special digital and entrepreneurial spirit. We have already described this type of person. We can find those in the known digital pioneers *Google*, *Apple*, *Facebook*, and *Amazon*. It is this leader who sets the direction of "his" company and who aligns the employees and other stakeholders towards one vision.
- Second, a *group of people* can act and therefore successively shape the corporate purpose or sense it in terms of evolutionary self-guiding systems. Out of this base—obtained from a deep and shared conviction—the action-guiding digital vision is created.



Source: Westerman et al. (2014, p. 107)

THINK BOX

Questions:

- What specific (technical and / or immaterial) "assets" does my company have in order to play off digital chances and / or neutralize weaknesses?
- Are these "assets" rare and unavailable for most competitors of my competitors?
- Are they unique and strategic assets that are difficult to copy or imitate, even under the conditions of digitalization?
- Are these "assets" substitutable by assets of certain (digital) competitors?
- Who is working on these issues in my company?

So in the question of how a viable digital vision is to be produced and who bears the ultimate responsibility for it depends completely on the initial conditions of the company. In the first case, the decisive weight usually lies on the founder and/or the responsible top manager of the company. This is a form of *individual Digital Business Leadership*. This person is responsible and owns contextual power in terms of finding and shaping the digital vision. It is this person who makes the (right) decisions, thanks to the power of special intellectual imagination and innovation capabilities, while also shaping the overall digital business goal. But it is also their job to align the company's internal processes to the implementation of the vision.

In the second and oftentimes much more realistic case—especially in established organizations—the responsibility does not rest with a single individual. Here, rather a group of people is becoming active in terms of a *collective Digital Business Leadership*. When Digital Business Leadership does not occur individually but as a group of people of different organizational levels, the company's leading personnel must be willing to give up their individual design power (temporarily) to the group (Laloux 2015). It is then the task of the—probably also open—group to generate a corresponding vision based on the purpose of the organization.

With regard to the *content of the vision*, digital leaders should first look at the company's own strengths and examine whether the associated *strategic values* remain strategically valuable in the digital future (Westerman et al. 2014). Here, they should not only think of physical values such as production lines, factories, or retail outlets in a particular geographical area but also of the intangible skills such as a special technology expertise combined with specific experience and customer knowledge of the employees. Also, special cultural and branding aspects of the business, which need to be handled newly or in a different way in times of digitization, are equally to be considered (Westerman et al. 2014).

It is therefore not sufficient to enrich the existing nondigital vision and present it in a charismatic way. It is rather necessary to deeply *deal with the own "assets" with regard to digitization*. Therefore, digital leader must get to the bottom of things.

Especially in the case of a collective vision finding within the company, it is important to create a climate of listening and appreciation.

Finally, as an example, the HEDGEHOG concept (Collins 2001) forms a possible framework for a further content-related strategic analysis of the company's future digital vision. Management consultant *Jim Collins* therefore describes a strategic perspective, which refers to a conceivable image consisting of fox and hedgehog. Let us a think about a hedgehog and a fox. Basically, the fox appears to be the superior animal in almost every respect. Nevertheless, it is impossible for the fox to harm the hedgehog. Because as soon as there is imminent danger, the hedgehog curls up. Third parties only see spines everywhere. The hedgehog seems almost invulnerable. The key point is: In relation to the fox, the hedgehog can do just this one thing really well. But exactly therein lies its strength.

Collins now proposes to apply this principle to the corporate world and therefore consolidates vision-building to three question areas (see Fig. 2.6).

At the interface of the individual answers to these three questions results now the possibility to *derivate a high-performance (digital) vision*, which ultimately is the basis for a Digital Business Leadership. Certainly no easy task, but a task whose solution is based on a successful future.

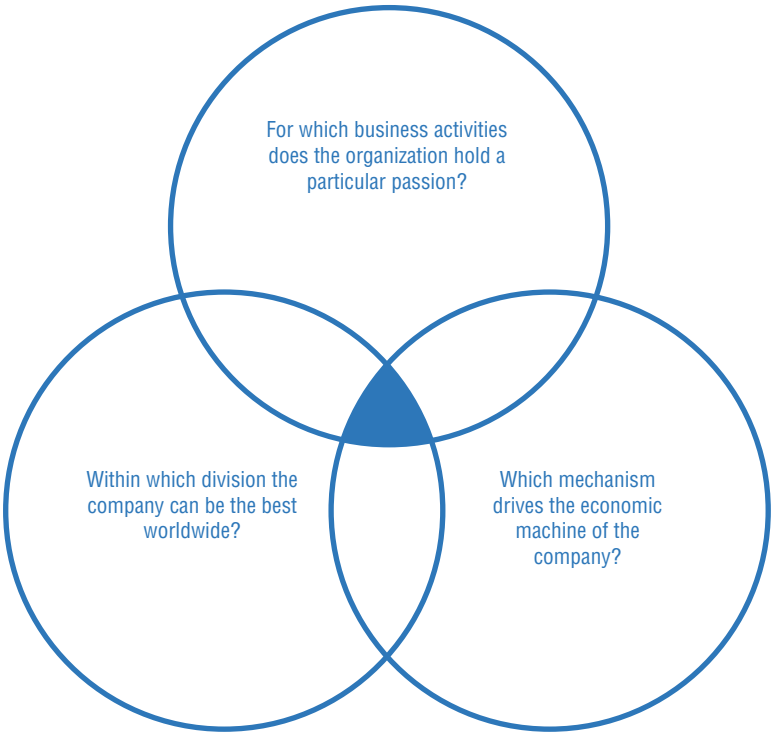


Fig. 2.6 The three circles of the HEDGEHOG concept by Collins. Source: According to Collins (2001, p. 96)

The publishing house *Axel Springer* has answered its digital vision exemplary, concisely, and competently (Axel Springer 2015a):

> We want to become the leading digital publishing house.

This defined goal is not only easy to communicate but also easy to understand. Surely it still misses a piece of higher purpose, as we know from the revolutionary start-ups in Silicon Valley. But in its essence, passion, skills, and economic perspective are corresponding. The focus on digital leadership puts a desired state at the center, for which great and daring steps have to be made within the corporational development. The vision drives the company and communicates, internally and externally, a robust will to further develop an established large company. In Sect. 2.3 and in the case study in Sect. 4.1, we will describe a few other aspects of the digital transformation of *Axel Springer* that show that the vision is well-working as a stimulating moment.

THINK BOX

Questions:

- What is the guiding principle of entrepreneurial activity in my company?
- What are the BHAG - Big Hairy Audacious Goals - for my company?
- How could these read?
- What is our Massive Transformative Purpose (MTP)?
- How should the MTP be defined for our company?
- Where in the context of my company are passion, skills and economic components are uniquely united?
- Who is responsible for answering these forward-looking questions?
- Am I the (future) digital leader, who can and should give the central impetus here?

2.2 Concepts for the Development of Business Model Innovations

One of the essential skills of digital leaders is to visualize existing business purposes and innovation initiatives within business models, to communicate them, to iteratively test them, and consequently to verify their economic value. In the age of digitization, innovative offers are usually connected to *new business models*, which change the existing and dominant logic of the industry or create entirely new markets. For this, prominent examples can be cited: The already mentioned driving and logistics service *Uber* does not own a private fleet, but represents one of the fastest-

growing and with more than US$50 billion most highly valued companies within its class (Lindner 2015). *Facebook* lets its users fully produce the content published on its social media platform but is one of the largest content platforms on the Internet and has recently replaced *Google* as the largest traffic supplier (Inter alia Morrison 2015). *Airbnb* is currently the world's largest mediator of private accommodations but does not use a single owned property for that purpose, while at the same time offering more than 1.5 million listings for homes, apartments, houses, and villas in more than 190 countries around the world (Airbnb 2015).

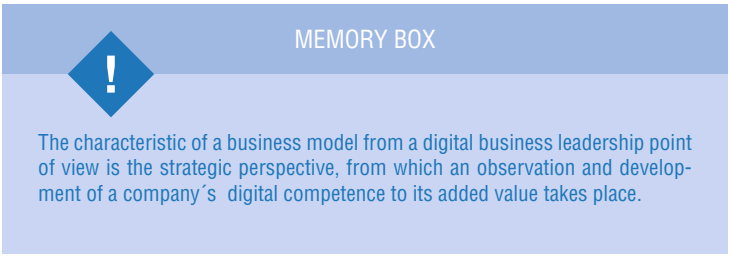
Besides the pure service and platform relation of the abovementioned examples, the aspects of the business model of these companies and other digital pioneers are of particular relevance when looking at Digital Business Leadership. Because the one who is able to understand the *mechanisms of the digital economy* and to convert them into business models, whether they are existing but digitally optimized logics or completely new digital models, is able to better use the opportunities offered by the digital transformation in the future and can finally benefit from them better.

2.2.1 Business Models and Their Perspectives

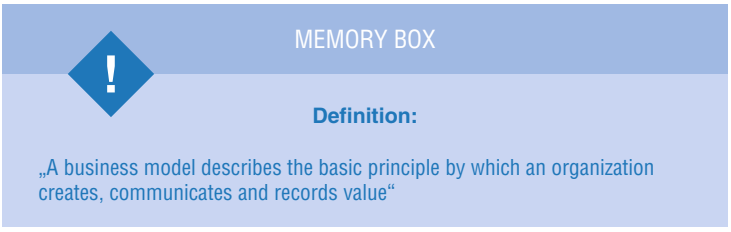
Business models themselves are as a concept closely linked to the new economy. Already in the 1970s, the field of business informatics first used the term in connection with business and system modeling (Wirtz 2011). Today, this term is used in a much broader sense. Thus, at least three types of business models can be distinguished (according to Wirtz 2011, p. 23):

- *Process and system models* for documentation, analysis, and design of corporate processes in information technology
- *Organizational models* that serve the purpose of representing a company's structures in an abstract way as an enterprise architecture
- *Strategic business models* that aim for a holistic description of the entrepreneurial activity in an aggregate form

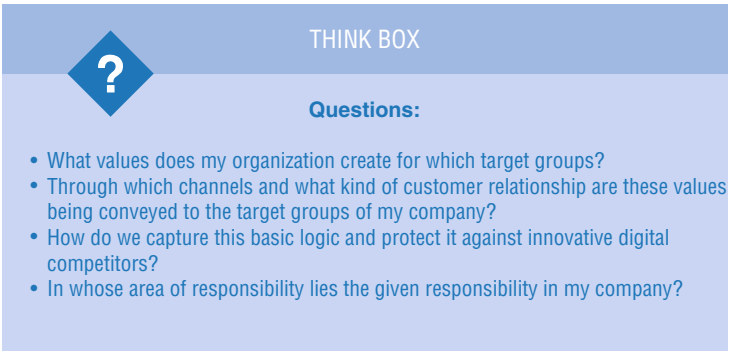
From the perspective of Digital Business Leadership, a business model corresponds in its character to a strategic business model. It provides the basic logic of a (digital) company, describing what benefit is provided in which way to customers and partners, while also making statements about how these benefits shall be generated (Schallmo 2013). Such strategic models aim to translate the vision into a concrete business logic. Thus, they shall enable differentiation from competitors, force the strengthening of customer relations, and contribute to the achievement of (digitally induced) competitive advantages.



The *strategic business model* shortens the entrepreneurial reality towards a desired consideration aspect and thus represents only a limited portrayal of reality, as well as other model types do. The overall aim is to visualize the—from a strategic perspective—relevant elements of the business logic. Only in the second step further considerations on individual partial models are to be developed, which illustrate the character and processes of specific areas. These are often the precursor of concrete implementation in software and other operational implementation initiatives.



Source: Osterwalder and Pigneur (2011, p. 18)



Strategic business models can be mapped both on the corporate and business levels and on the functional level. In addition, multiple consideration moments can be distinguished. Therefore, especially in complex organizations, the *cascading of business models* can be helpful, which is based on the hierarchical organizational structure of the company. Furthermore, a close *link between the vision and the strategy* of the

company is necessary. While the strategy covers the context of competition between different companies and dynamically unfolds a planned package of measures including the necessary resource allocation (Kreutzer 2013), the business model is in its nature rather abstract and forms the central aspects of this strategy in terms of the basic logic of the related activities at a given time (Alberti 2011).

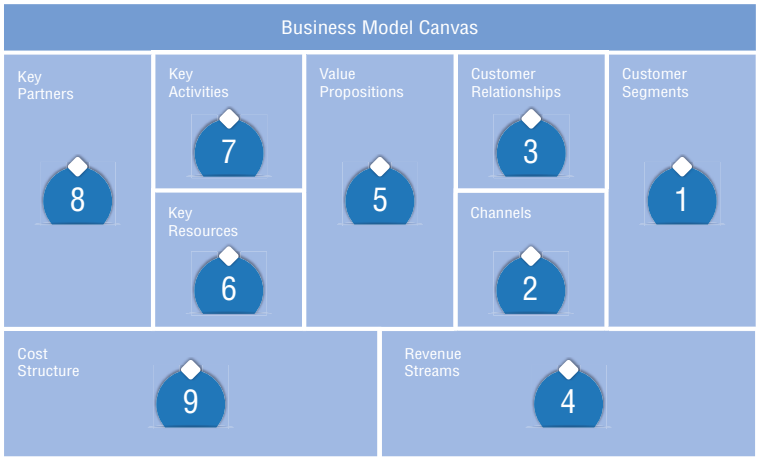
Therefore, digital leaders must be able to understand business models contentwise, convey its purpose in the company and in communication to external stakeholders, and act strategically based on business model options. Therefore, it makes sense within a company to work intensively with the *Business Model Canvas* (Osterwalder and Pigneur 2011). The model has established itself as a standard of strategic business model management that provides a sound set of elements and can be well complemented by traditional management techniques. With over five *million* downloads and more than one million copy units sold of the corresponding reference book *Business Model Generation*, it is widely spread both within established organizations of any size and in higher education. It represents an important foundation for improved communication on strategic business issues (Inter alia Amarsy 2015). Especially in digital start-ups, the Business Model Canvas—or its offspring the Lean Canvas—has already replaced the traditional business plan to the greatest possible extent.

Printed in screen size, the canvas is the foundation for a goal-oriented *description*, *analysis*, *and evaluation of strategic business models*. Unlike a traditional strategic analysis or the traditional business plan in which the basic logic as well as success factors of a business model are textually described very detailed, the Business Model Canvas aims for *visualizing the main aspects of the business model* on some sort of a "road map." This approach makes it possible to clearly outline the business model, to develop the team, and to generate completely new approaches to realize business model innovations through creatively dealing with the model. Another advantage of the Business Model Canvas is the *provision of a common language* between all involved decision-makers.

Cores of the Business Model Canvas are nine specifically arranged components (see Fig. 2.7). By the type and arrangement of these blocks, the canvas integrates both the *resource-based view on a company* (left side of the Business Model Canvas) and the *market-oriented view on the business logic* (right side of the Business Model Canvas). This aims for achieving a balance between both points of view in terms of so-called balance-based views.

2.2.2 Basic Types and Patterns of Business Models

Mapping business models in a clear manner includes the advantage of detecting similarities and differences between individual business models and allows for identifying recurring patterns. Osterwalder and Pigneur refer to these similarities as *business model patterns*. With this classification they aim to transfer general business concepts into standardized formats in order to thus encourage the invention of new business models (Osterwalder and Pigneur 2011). The formation of such pattern occurs in two steps (Hoffmeister 2013). First, organizations are rather unintentionally and

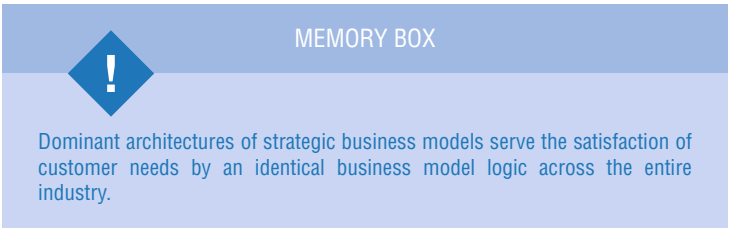


Components	Overview of central questions	View
1. Customer Segments	• For whom do we create value? • Who are our most important customers?	Market-based View
2. Channels	• Through which channels do our customer segments want to be reached? • How to we reach them today? • How are our channels integrated? • Which of them work best/represent the most cost efficient?	
3. Customer Relationships	• What kind of relationship does every customer segment expect? • Which have we implemented? • How are they integrated into our remaining business model?	
4. Revenue Streams	• For what value are our customers willing to pay? • For what are they paying now? • How do they pay/would they like to pay?	
5. Value Propositions	• What value are we delivering to our customers? • What product and service packages are we offering every customer segment? • Which customer needs are we satisfying?	
6. Key Resources	• Which key resources are required by our value proposition/ distribution channels/customer relationships/revenue streams?	Resource-based View
7. Key Activities	• Which key activities are required by our value proposition/ distribution channels/customer relationships/revenue streams?	
8. Key Partners	• Who are our key partners/key suppliers? • Which key resources are we purchasing from partners • Which key activities are carried out by partners?	
9. Cost Structure	• Which are the most important costs connected to our model? • Which key activities/key resources are the most expensive?	

Fig. 2.7 The nine components of the business model canvas and its corresponding questions. Source: Based on Osterwalder and Pigneur (2011, p. 24 ff.)

gradually forming standardized regulations by their reoccurring operating activities, which define binding instructions to employees of the company for increasing business success. Once this business logic has been recognized as being promising within the entire industry, however, competitors try to translate the model's success rules into imitation-capable patterns while also trying to successively replicate them. This is how out of a unique business model architecture develops a *dominant industry logic*.

Such *leading model architectures* can be found in almost every industry. For example, *consulting firms* usually work in a similar pattern: skills and knowledge are being conveyed to the target groups by specially trained consultants as well as personal consultation procedures in a project-related way. The model is relatively poorly scalable and dependent on personal experiences and contacts. Also the *distribution of music* has worked according to a dominant business model logic for many decades: artists committed themselves to a particular label, which organized the production of the music and its distribution through retail stores. Artists looked for so-called major labels to build awareness quickly and widely. Often the labels also decided what kind of music an artist should focus on and how he should position himself! Even *taxi companies* worked for a long time in a similar way. The owner of a local taxi concession—as part of a cooperative taxi association—benefited from the central (but only regionally active) marketing and provision of taxi rides through the taxi office of the association.



Source: Hoffmeister (2013, p. 6)

These examples show that there are certain design characteristics that make up for the *success of a specific business logic* for a company or an entire industry. A comprehensive classification of such business model designs exists, for example, through the *business model navigator* of the *University of St. Gallen* which lists a total of 55 model types (Gassmann et al. 2013). From the Digital Business Leadership perspective, especially the *digital-centric business model types* are of high relevance.

At this point it is therefore important to ask yourself which business models can be used by yourself or your (new) challengers to operate in the market. In the age of the Internet, the following *online business models* are distinguished, some of which are also used in combination:

- *Advertising-Based Model*

  Many online businesses initially started with the business model of financing the provided content and/or services purely on *advertising revenue*. The classic

billing concepts for this model are cost per mille (CPM) and cost per click (CPC). A payment occurs either for just displaying the advertising (CPM) or only when the user clicks on a banner ad (CPC; for other models see Kreutzer 2014, S. 185f). However, it is only a few companies that have succeeded in making this model profitable (such as *Google* or *Facebook*). Many companies that started with an advertising-based business model have changed over time to either of the below described models or have complemented the ad-based model by additional concepts. In many cases, for example, subscription options are offered parallel to an advertising-based model.

- *Membership/Subscription Model*

  A membership/subscription model intends to receive a regular payment of membership fees from users or to win them for a subscription. This model is, e.g., used in the premium versions of *xing.com*, *elitepartner.de*, *flickr.com*, and *Spotify* which each complement the ad-based models. Comparable models are also used in many online services, for example, at *Brand24*, to use a tool for social media monitoring.
- *Payment Model for Content*

  Many publishers and other content providers complement their original free (advertising-based) offers by paywalls. Whoever wants to get access to additional content must pay per demand or per download (such as in the trade magazine *Der Betriebswirt*). Other publishers use the already described subscription model (as in the offers of *BILDplus*, *The Wall Street Journal*, and *The New York Times*). Thus, there is an overlap to the described subscriber models.
- *Transaction-Based Model*

  In a transaction-based online business model, the user has to pay when he or she performs transactions. The originally purely ad-based business model of *eBay* has developed into this direction since the advertising revenues were not sufficient enough to finance the business model. This model is also used at the marketing platform of *Amazon* for third parties (*Amazon Seller Central*). Here, suppliers of products pay for the successful execution of purchase transactions and consequently for the delivered services. Also at *Uber* and *Airbnb*, the provided services are paid in this way.
- *e-Commerce Model*

  Another variation is the e-commerce model. It includes the transfer of an offline business model to the Internet. Here, remuneration is based on the margins coming from the sale of the products themselves. Therein lies the crucial difference compared to the transaction-oriented model because the margin is not generated by the transaction as such, but by the purchased goods. This model is used at the main business of *Amazon*, at *Zalando*, at the *iTunes* store of *Apple*, and at an almost infinite number of online retailers.
- *Donation Model*

  Some online business models are dependent on donations from users in order to survive. This model is, for example, used by *Wikipedia*. When accessing this information platform, users will be regularly asked for a donation.

- *Data-Based Model*
  A specific online business model stipulates the provision of data in exchange for accessing content and/or services. Within this approach one should consider that such a seemingly "free" online service is not free. Because after all, who uses the service is not the customer but becomes the product itself! This should be thought of when reading the registration page of Facebook (2015) saying "Facebook is and will remain free." Many users have not recognized yet the fact that *Facebook* users themselves are becoming the product.

Furthermore, as part of the content marketing, many companies require an opt-in of the user in order to obtain further information by e-mail or telephone before access to studies or white papers is granted. This is used, for example, when accessing content of the *Boston Consulting Group* or the online service *marketo.com*. Here, the payment is quite explicitly and obviously carried out through the currency of "data." This type of payment is also used with *Google Analytics*, which is offered by *Google* to analyze the traffic on your website. In addition, there is a fee-based service called *Google Analytics Premium*.

At the moment, these basic business models can be attributed to all relevant providers. Often, the used business models also combine several of the described concepts.

Hoffmeister (2013, p. 204 ff.) systematizes digital business model principles according to certain logics, which display *business-relevant algorithms* in a specific manner using software programs. For this he identifies four major types.

- *One-algorithm models* are digital business logics that arise around a central business algorithm displayed by software. As an example, the music analysis service *Shazam* can be named, whose business model is built around the analysis and detection of a variety of different music types and its integration into third-party platforms, such as streaming services.
- The next step is taken by *networked digital agent models* which not only display various business processes web-based in algorithms but also connect them intensively on digital platforms. *Google* and its variety of algorithms (*Google AdWords*, *Google Analytics*, *Gmail*, *Google+*, etc.) and the close connection between these services, which thereby establishes an own ecosystem, can serve as a blueprint.
- So-called digital hub models connect the world of algorithms with haptic offers. As part of the "Internet of Things," central digital platforms are being connected with technical equipment, clothing, or other real goods that are advanced by computing power. Perfect examples represent the smart thermostats of the already mentioned company *Nest*. Additionally to mention are the special running socks of the company *Sensoria*, in which sensors are woven into. In this way, additional data—besides the number of steps and speed—can be collected and sent to associated digital platforms.
- Finally, *agent-optimized business models* are used to optimize existing product and service offerings. Examples for this are price search engines, algorithms for

product range optimization in commerce, or software in order to improve customer segmentation and personalized customer communication.

Depending on the specific design, these mentioned model types represent the *basis of digital considerations*. Osterwalder and Pigneur (2011, p. 60 ff.) additionally distinguish five generic architecture patterns, of which at least the following three are of relevance in the digital economy, as well:

- *Model of a multi-sided platform*: connecting at least two independent customer groups on a platform by using *network effects* (e.g., *Google*, *eBay*)
- *Free as a business model*: providing a permanently free offer for at least one customer segment while using network effects and the *First-Copy-Cost effect* (e.g., *Skype*, certain features of *Google*, various open-source software offerings; Sjurts 2015)
- *Long-tail model*: providing a relatively wide range of goods for various niche markets by using the *long-tail principle* (e.g., *Lulu*, *YouTube*, *DaWanda*, *Etsy*)

A classic digital example to explain the two—for our discussion—most relevant model types of Osterwalder and Pigneur, the platform model and the freemium model, is presented by *Google* with its core business of website search and the closely connected advertising system AdWords and AdSense (see Fig. 2.8). Via the platform

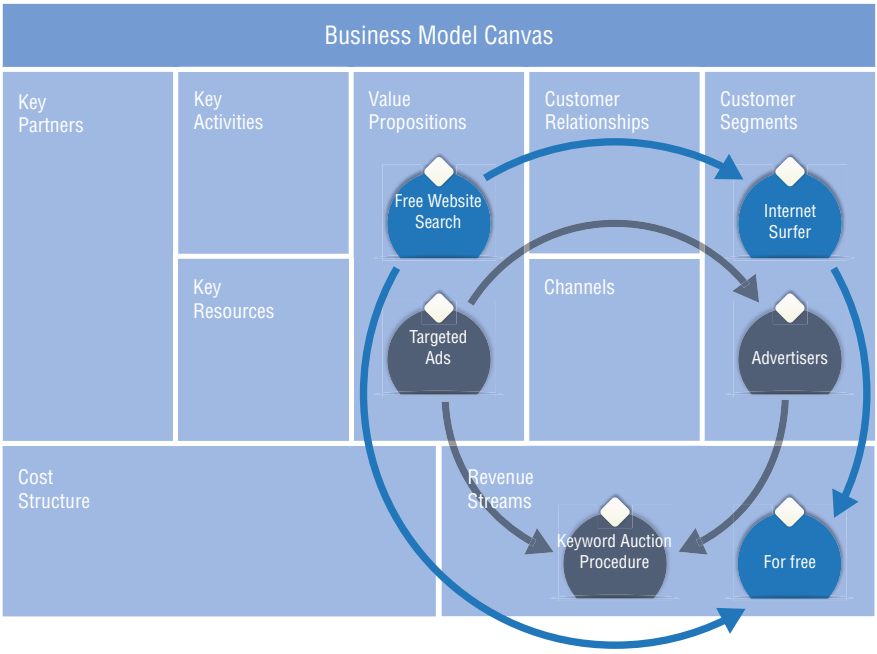


Fig. 2.8 Simplified representation of the market-oriented view of the platform pattern and the freemium pattern of Google. Source: Based on Osterwalder and Pigneur (2011, p. 85)

Google.com, *Google* offers a powerful search feature to all Internet surfers at permanently free use (*freemium principle*). At the same time, the company refinances this offer by offering ads through the own *AdWords* system with a pay-per-click auction process to advertising-willing companies. This model only works as long as both target groups can be successfully served via the platform (*platform principle*). The value of the offer increases with the rising user number of both user groups (*network effects*). Additionally, this business model works according to the pattern of a *networked digital agent model*. The website search is offered software-based with a unique search algorithm, while the advertising system is only realized through a proprietary and highly automated algorithm-based software solution. The illustrated business area of *Google* is to be seen as a hybrid overall logic at the interfaces of the *advertising-based model* and the *data-based model*.

Another typical principle of the digital age can be found in the business model of the self-publishing platform *Lulu.com*. The company is one of the leading providers of publishing solutions focusing on book publications that are produced and distributed in an author's edition. By cutting off the publishers as essential players in the classic publishing and bookselling model, *Lulu.com* succeeds in providing a much wider offer range and can therefore serve almost every niche inexpensively. This niche model is also called *long-tail principle*, which was shaped by Anderson (2007) in his classic *The Long Tail*. At the same time, *Lulu.com* offers an innovative digital production, ensuring that only at the time of purchase a copy of the book is actually produced and delivered (*print on demand*). Since its foundation in 2002, the company has produced about two million publications of authors from over 225 countries with this procedure, thus massively changing the traditional publishing model. In addition, *Lulu.com* is a digital platform provider as the restocked niche offerings are sold via the integrated e-commerce platform as well as *Amazon* (*platform principle*). Thus, *Lulu.com* joins publication-willing authors and interested readers in new ways.

Established companies should invest quickly into their own *digital business model transformation* before the dominant logic of their industry is changed by new digital business model patterns. Otherwise, the digital Darwinism strikes again (see Chap. 1). It is therefore important to question the traditional logic and to break new ground. Only the companies which continuously develop their business models on several levels can be successful as digital leaders. For this, a thorough understanding of the own company's business models and the related mechanisms, patterns, and content is required. Before business model innovations can be generated, a solid foundation must be created within the company by first critically analyzing and understanding the own business model in depth. Often, this kind of *meta-analysis of the own business model* is still missing when dealing with digital transformation. But only those who have recognized their entrepreneurial roots and their own DNA in depth can manage a successful transformation.

Digital leaders may use, for example, our below mentioned *business model workshop* as a basis of their own activities for transforming the company's business model. Additionally, this model is suitable to support the continuous management of the own business model. In both areas it is important to pay attention to *recurring patterns and model designs* during implementing the workshop.

ACT BOX

Business model workshop

Become a business model expert in your company by designing, moderating and documenting your first business model workshop.

Scope:
About 3-4 hours

Participants:
Interdisciplinary team of specialists and executives from various organizational areas

Procedure:

- Introduce yourself and the other people participating in the workshop.
- Use generic introductory examples of digitization to generate an active motivation among the workshop participants.
- Show why business models within the meaning of Digital Business Leadership are relevant and how the concept of Business Model Canvas is useful in the structuring and renewal of business logic.
- Explain the nine building blocks of the Business Model Canvas and provide some business model patterns with illustrative examples.
- Have the workshop participants map a first version of the company's existing business model in group work.
- Present and discuss the results together and refine the resulting business model.

Resources required:

- **Workshop room and about 3-4 hours of time from all participants**
- **Business Model Canvas in A0 poster format**
- **Whiteboard or free wall surface for attaching the Business Model**
- **Canvas Sticky notes in different colors as well as text highlighters**

Tools:
Management bestseller "Business Model Generation" http://businessmodelgeneration.com/book?_ga=1.87859740.52250493.1395650278

Business Model Canvas in printable resolution: http://www.businessmodelgeneration.com/downloads/business_model_canvas_poster.pdf

Video „Rita McGrath on The End of Competitive Advantage“
https://www.youtube.com/watch?v=h3KVpah5sxY
v
Video „The Business Model Canvas in 2 minutes“
https://youtu.be/QoAOzMTLP5s

2.2.3 From the Existing Business Model to Business Model Innovation

Business models—once developed—are not meant to last forever. This is shown by many examples. Especially in times of changing conditions, as it is given by digitization, particular change needs are being created. Let us think of well-known examples such as *AEG*, *Agfa*, *Kodak*, or *Quelle*. All of them no longer exist because their business leaders were not able to adapt the companies to a *rapidly changing environment*, which means they were not able to innovate. They all fell victim to the digital Darwinism due to doing nothing or not enough! Respective reasons and conditions have been already explained in detail in the introductory part. But how can established and active companies use the concepts and tools of *business model thinking* in order to accomplish a self-renewal?

Innovations can appear in the form of process improvements or product / service improvements. Therefore it is spoken of process innovations and / or of product / service innovations. It is important that they are clearly different from the previous level of knowledge and action.

First, it needs to be recognized that innovations can have diverse characters and thus business model innovations incorporate into a *landscape of innovation types*. Science distinguishes between *process* and *product/service innovations*. While the change of processes rather refers to the innovating company and aims for increased efficiency, product or service innovations are always associated with the market implementation of the innovation and an increase in effectiveness (Hauschildt and Salomo 2011). However, not every circumstance that we perceive to be new is to be called an innovation. Innovative processes, products, or services only occur when a first actual *commercial implementation* (*exploitation*) results from a *conceptual idea or technical innovation* (*invention*) (Vahs and Brem 2013). This principle applies equally to the business model innovation, regardless of its detailed degree of novelty.

The traditional distinction between product/service and process innovation is particularly in terms of Digital Business Leadership increasingly questionable. Because there are intensive *dependencies between business model innovations and new products*, *services*, *and/or processes*. Other types of business models include regularly changing value propositions and often also require a profound transformation of value-added processes. At the same time, traditional forms of innovation represent drivers of business model innovations. Therefore, according to Wirtz (2011, p. 206), the following can be noticed in terms of *business model innovation*:

> Business model innovation describes the design process of creating a widely new business model in the market, which comes along with an adjustment of the value proposition and/or the value constellation while aiming for generating or securing a sustainable competitive advantage.

Let us think of *Apple iTunes* and the *iPod* or—as a result—the *iPhone* and the *iPad*. Here, process, product, service, and business model innovation coincide particularly intensively with each other. Until the 1990s, *Apple*—once a great player in the personal computer market—had to watch a decline of its market share from 20% to less than 3% (Johnson 2010). After *Steve Jobs* took the company management back and created some product innovations in the traditional field, the company enabled a change of the market in 2001. Not only led the market launch of the *iPod* to the need of establishing completely different production processes compared to the at that time known production of desktop systems. The *iPod* and the resulting *iPhone* and *iPad* were strong product innovations themselves. Particularly in relation to other MP3 players, the *iPod* represented no stand-alone offering. With *iTunes*, *Apple* created a closed ecosystem of hardware and software. With this completely new and integrated business model, the entire industry structures were changed. At the same time, a previously unprecedented convergence of hardware, software, and content has been driven forward. In the following years, this business model innovation (see Fig. 2.9) caused a strong growth in sales and earnings as well as an exponential development of the company.

As the example of *Apple* has shown, *business model innovations* often bring a *radical or disruptive character* along with the innovating companies. This disruptive character often affects the entire industry, as well. Thus, an existing *dominant business model logic* of a sector or industry is modified, or completely new sectors with their own logics are being created (see Fig. 2.10).

The abovementioned example demonstrates also that the digitization creates various *convergences* (Hoffmeister 2013):

- The Internet as a basic technology creates a *technological convergence*. Previously separate technologies are combining in a new basic technology. For example, radio, TV, and telecommunications converge into an integrated technical component of Internet technology.
- This technical novelty makes it possible to generate modified solutions on the provider side. The example of *Apple* shows how an additional *supplier convergence* is created based on the technological convergence of the Internet. With the *iPhone*, *Apple* provided a sum of offerings for which consumers previously needed multiple devices and providers.
- Finally, also a *convergence of customer needs* results from the abovementioned *convergences*. Triggered by a new diversity of offers, customer expectations are being changed, and market segments are being merged in order to meet these

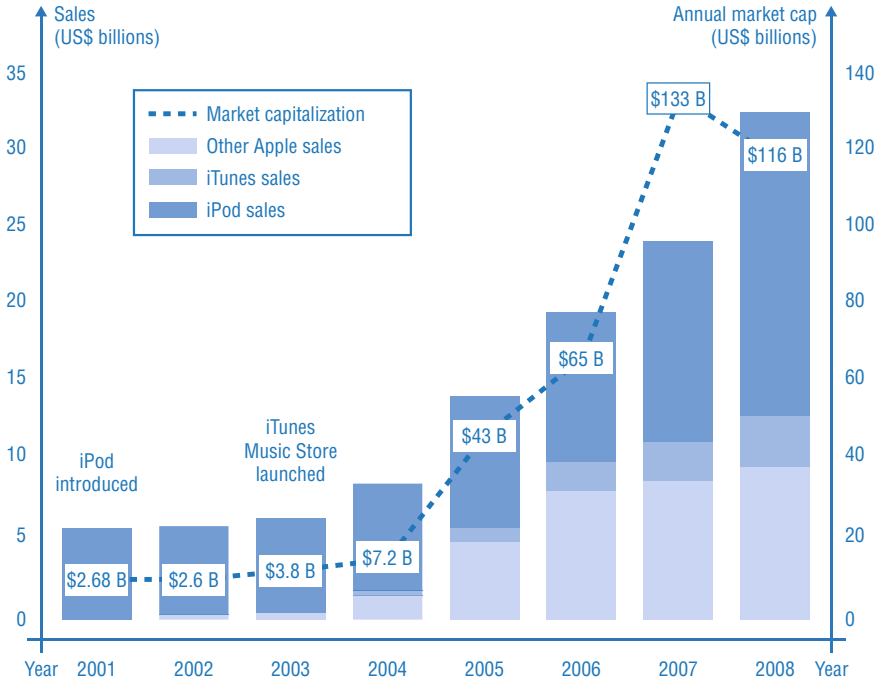


Fig. 2.9 The influence of iPod/iTunes on the growth of Apple. Source: Based on Johnson (2010, p. 15)

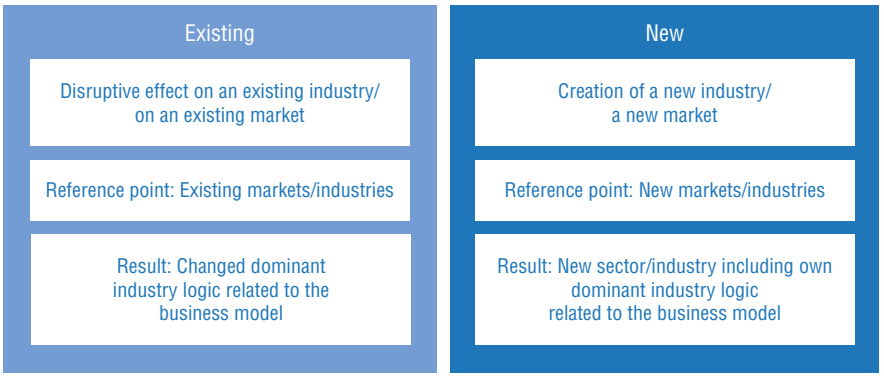


Fig. 2.10 Effects of business model innovations on existing or new markets. Source: Based on Wirtz (2011, p. 206)

expectations. Today, hardly any customer would be still willing to use three separate devices for making calls, listening to music, and accessing the Internet. Smartphones, tablets, and other devices are firmly anchored in our need structures.

Also the camera, the flashlight, the alarm clock, the date calendar, and many more features are expected from and actually covered by one device (see Fig. 1.1).

In return, these convergence mechanisms are generating *strategic requirements* on the corporate side. Convergence leads to a change in well-known industry structures. Suppliers of previously separate markets are competing now on joint (new) markets, while start-ups are entering and changing existing industry structures or are able to establish new industries (Hoffmeister 2013). What results from this is a *strategic window* (*strategic window of opportunity*) to exploit new digital market opportunities and market needs, which can be used by established suppliers that do not want to be surprised by digital newcomers. Therefore, opportunities must be addressed against the also present risks. Consequently, strategic business model alternatives are to be built by an appropriate *business model management* with an integrated innovation cycle. Digital leaders need to understand that they have to manage business models at different levels. According to the *three-horizon model*, which is helpful for mental structuring, the following observation horizons can be distinguished (Baghai et al. 2000; Blank 2015):

- *Horizon 1 Business Models*
  They describe the status quo of a company. The existing business model is displayed and executed. The resulting income and cash flows are at the center of this observation. They are also a prerequisite for innovation activities to be possible at all. This core business is to be expanded and, if necessary, defended. Within these mature business models, incremental improvements in processes, products, and/or services are needed to maintain growth and ensure profitability.
- *Horizon 2 Business Models*
  These business models develop options of business model innovations in relation to relevant markets of existing Horizon 1 business models. New, emerging business model initiatives are often built through significant investments. And although their best times are still 4–5 years in the future, they are already generating initial returns and attention from investors.
- *Horizon 3 Business Models*
  This category of business models is highly innovative (often disruptive) and represents approaches to completely new business logics. They deal with individual skills or customer groups of the today's existing company or potential new ventures. Strategic options for disruptive changes are being explored and ideas are translated into concrete models (Fig. 2.11).

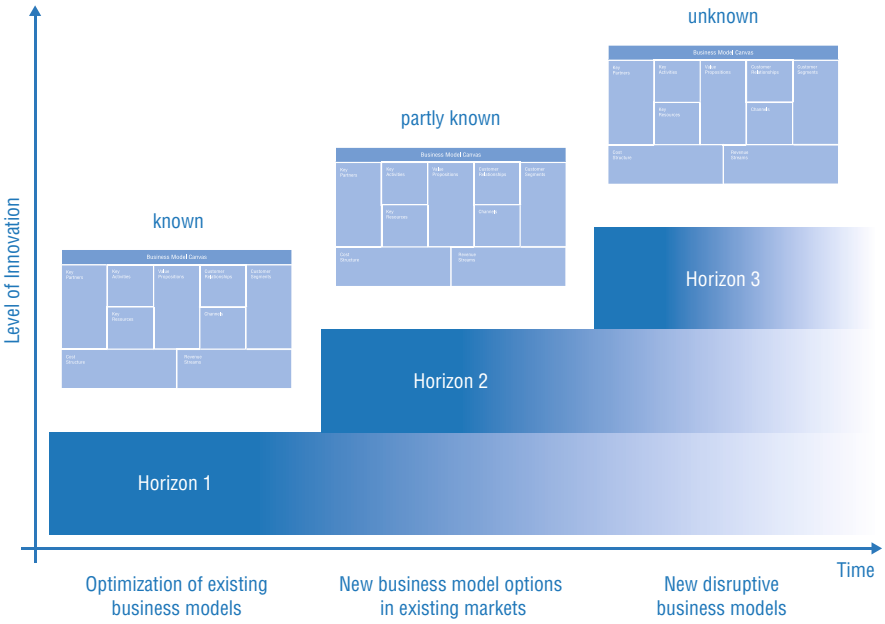


Fig. 2.11 Overview of the three-horizon model. Source: Based on Baghai et al. (2000, p. 5; Blank 2015)

THINK BOX

Questions:

- **What does the Horizon 1 business model of my company look like?**
- **Have we understood this business model in depth? What incremental digital optimizations have we already made on this business model?**
- **Have we already thought about horizon 2 or horizon 3 business models? If so, how were these options presented regarding their content? Who in my company deals comprehensively with this thinking in business model horizons?**

From this model of business model horizons now arise *different ranges of business model innovations*. Horizon 1 business models represent the existing business logics of the company. Here only an incremental (digital) optimization is needed. Let us think, for example, of an improvement in customer service through a reinforcement of the service team, or the introduction of a customer relationship management system within the customer support of an e-commerce company, or the linking of data from quantitative market research studies to qualitative feedback that

comes from comments on the product details sites of the company's web shop. The level of innovation remains relatively low. The existing (digital) business model is only improved in some areas; existing competitive advantages are slightly optimized.

In terms of Digital Business Leadership, the focus can be put only temporarily and not primarily on this first level of business model development. Such a focus is only acceptable as long as existing business models are not endangered by disruptions or innovations from other market participants. Much more important for the *creation*, *maintenance*, *and expansion of a Digital Business Leadership* are Horizon 2 and Horizon 3 business models. In these cases, either nondigital Horizon 1 business models are being transferred to a digital world for the first time or digital business logics of the first level are being reconsidered with regard to new options, thus causing continuous and discontinuous changes themselves.

To this end, let us imagine the three-horizon model within the example of *Amazon* and its business logic levels. For a long time the company was regarded as a pure e-commerce player which took its competitive advantage from a broad range of products and market-leading logistics. Surely, *Amazon* was not only innovating at the process level, but still innovated intensively here. For example, the focus was put on procedural algorithms and logistics optimization. In addition, extending from books, the range of offered products was continuously supplemented by all sorts of other products and services. However, from the perspective of building a Digital Business Leadership, it is much more interesting how the company at the same time was thinking in future business models—and still does so today. Even before other providers could become dangerous to *Amazon*, they expanded the basic e-commerce model (Horizon 1) into a market space called *Amazon Marketplace*. It allowed a large number of mostly small sellers to use the powerful company-owned platform as a new sales channel, which allowed them automatically to reach millions of potential customers (Horizon 2). Thus, *Amazon* expanded its range of offers considerably and migrated from a pure commerce model to a platform model, bringing together buyers and sellers of all kinds of goods. At the same time, *Amazon* recognized the value lying in their own infrastructure and additionally built an entirely new market by offering the cloud services *Amazon Elastic Compute Cloud* and *Amazon Web Services* (Horizon 3). Doing so, *Amazon* not only expanded the field of action massively but also created new conditions in using powerful web infrastructure for developers and software companies worldwide.

MEMORY BOX

Building a Digital Business Leadership requires the continuous and parallel development of business models at different levels of innovation. The 3-horizon model provides an important orientation.

As you can see from this example, *thinking in future business model options* is an essential *skill of digital leaders* (Baghai et al. 2000):

> The goal of managing the three horizons [. . .] is to develop many businesses in parallel without regard to their stage of maturity. The three horizons must be managed concurrently, not sequentially.

It should be noted that on each of the described horizons, several possible business models arise, which must be tested and verified with regard to their business value. While the success-relevance of logic changes at the first horizon level can be measured by means of classic business-relevant metrics, such as revenue changes, customer satisfaction indices, or the number of newly acquired customers, these parameters should not be used alone or not immediately for Horizon 2 and Horizon 3 models. Here it mostly is rather about the *generation of general learning effects* about basic model-relevant hypotheses which arise from iterative testing and the incremental development of new offerings (see Sect. 2.8).

2.2.4 Incremental Digital Optimization of Existing Business Models

Regarding the existing business logic, managers in established organizations should be aware of the risk that competitors will use digital technologies in ways that could seriously damage their own business model and create superior digital platforms or ecosystems. Key questions can provide support in *identifying warning signs* for acute threats to the Horizon 1 model (Westerman et al. 2014):

- Do you notice a gradual decline in traditional sources of revenue or a continuous decrease of margins?
- Do new competitors from unexpected environments or completely unknown industries enter "your" playing field?
- Do better or cheaper digital alternatives erode your competitive advantage?
- Do (digital) opportunities evolve for competitors to break through existing market entry barriers?

Achieving a digital business leadership requires an offensive handling of these scenarios. Therefore, digital pioneers not only need a good overview of their current business model but also of the environment in which this logic is located. Only with such an environmental analysis threats for existing but also opportunities for new models can be recognized and addressed on all horizons. The *business model environment* can be examined by using a simplified analysis, as Osterwalder and Pigneur (2011, p. 204 ff.) suggest. In addition, we recommend an extended strength–weakness/opportunity-risk analysis (SWOT analysis) (Kreutzer 2013). Besides generating an internal strength–weakness profile, it is in terms of centralized digital transitions particularly important to look intensively at external opportunities and risks, for which two classic management tools have become established.

Fig. 2.12 Porter's five forces analysis. Source: Based on Kreutzer (2013, p. 91)

At the *microlevel* of an industry, the relevant influencing factors are to be determined by using the five drivers of competition according to *Porter* (also known as *Porter's Five Forces* Analysis). It includes a look at existing competitors, the potential bargaining power of customers and suppliers, the threats of substitutes, and the potential new entrants into the market (see Fig. 2.12).

Further to consider at the *macrolevel* is the assessment of which overarching factors are being relevant for future developments (see Fig. 2.13).

Only with this comprehensive examination, digital leaders gain a good starting point for *process improvements* of existing models on the Horizon 1 level as well as for further considerations about *continuous or discontinuous (disruptive) business model innovations* on the Horizon 2 and Horizon 3 level. When conducting the analysis, use both internal company data and such material which is available from external sources.

Dealing with existing business models at the level of the Horizon 1 innovations generally raises questions about process optimization. These are incremental and require a *continuous will for improvement* within the company.

In practice, with regard to the digitization of Horizon 1 activities, own logics as well as various objectives and projects can be found. Often, subsections of entrepreneurial value creation are being optimized by transforming previously manual process steps digitally into software. As an example, one can think of electronic procurement processes (e-procurement), electronic document exchange, or software-based control of production quantities and product configurations. On the customer side, we recognize incremental improvements especially in digital marketing. Formerly print-centric marketing campaigns are now cross-medial. Also digital advertising opportunities in social media are being optimized, while the "findability" of companies and their offers are being optimized by search engine optimization and

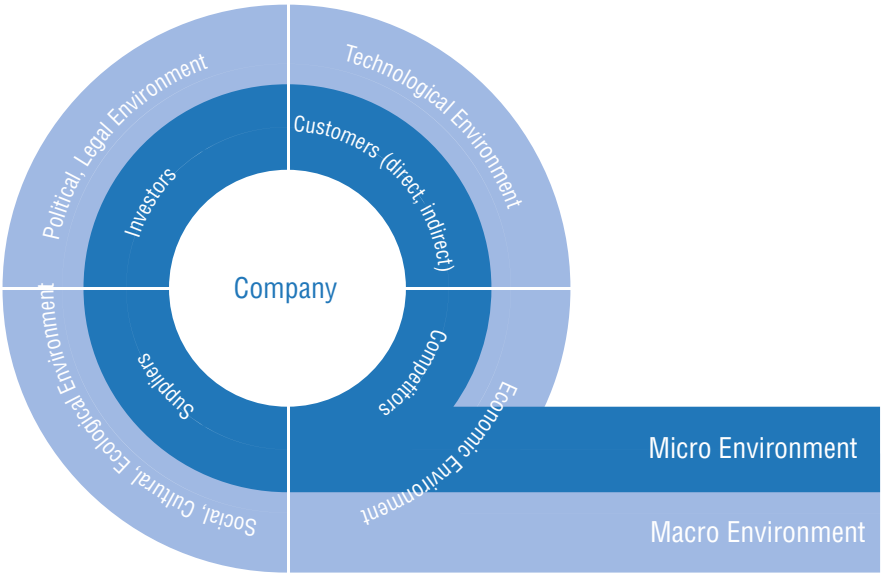


Fig. 2.13 Factors influencing the macro- and microenvironment at a glance. Source: In line with Kreutzer (2013, p. 5)

search engine advertising. Customers can use a variety of online tools to provide faster and more direct feedback, thus stimulating the development of existing business models (Kreutzer 2014).

MEMORY BOX

In order to build a Digital Business Leadership, incremental business model innovations are not enough. Continuous initiatives at the horizon 2 and horizon 3 level to create radical (or disruptive) business model innovations are necessary to establish a digital leadership.

In order to meet the call for digital change, such incremental improvements in existing companies are very popular. However, they entail considerable organizational efforts to build up competences and processes. This, however, must not

hide the fact that continued efforts to build a Digital Business Leadership are indispensable.

Related findings have been examined in a recent study by *Commerzbank* in collaboration with *TNS Infratest*, which questioned more than 4000 executives in the German medium-sized sector on aspects of digitization between November 2014 and January 2015 (see Fig. 2.14). Among other aspects of change, *business model innovations* are in fact of medium to high relevance. However, to the interviewees they are mainly important in terms of future market opportunities. The authors of the study write (Commerzbank 2015, p. 25):

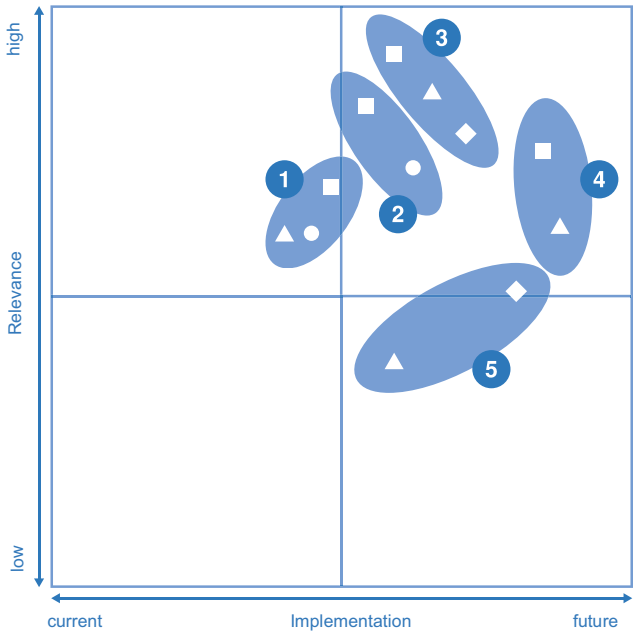
> On the other hand, completely new products, distribution channels, sales forms or markets are still dreams of the future for many companies. Companies believe that digitization will allow really new business models only in the distant future. Disruptive innovations, such as new business models and new products, are fundamentally conceivable, but are more of a concern for the agenda of the day after tomorrow.

At the same time, according to the study, only a minority of 15% of companies already benefit from digitization today (Commerzbank 2015, p. 26):

> These pioneers are often using new digital technologies in almost every area of action. They link their value chains, digitize their production and develop new business models. Digital innovators react to narrow markets and new niche providers by a clear commitment to innovation. Based on this approach, these companies often develop a clear growth strategy.

Interestingly, among these *digital pioneers* are particularly often companies whose environment is characterized by a strong cutthroat competition, short product life cycles, and the entry of innovative niche players (see Fig. 2.15). The strategic response of these companies to this situation is highly innovation oriented. The development of (digital) innovations, the opening of new distribution channels, and an aggressive growth strategy are much more pronounced compared to the medium-sized average (see Fig. 2.15). These results also make conceptual sense: when strong competition and high uncertainty are not only to be experienced, but also to be actively shaped, it needs to be reacted with (business model) innovations. In turn, these innovations ensure the need to additionally open up new markets and distribution channels. Ultimately, successful innovation projects generally provide inspiration for a substantial growth of the entire company.

The development towards a Digital Business Leadership sets right here. To achieve a digital pioneering role, it is not enough to continually develop existing Horizon 1 business models. Even though this is a necessary precondition, the (digital) focus of the entrepreneurial future lies on Horizon 2 and Horizon 3 level. Continuous innovation, an active search for new markets, and resulting growth impulses are the requirements of digital change.



1 Administrative Optimization
- ▲ Transition to flexible working (homeoffice, teams across locations)
- ● Trimming of administration, interconnection of locations
- ■ Improvement of service und maintenance (online-support)

2 New Forms of Production (Industry 4.0)
- ● Production of customized products or services
- ■ Automatization and steering of production (only processing industry)*

3 Interconnection within Value Chain
- ▲ Efficient collaboration with suppliers, contractors or buyers
- ■ Improved understanding of market and customers (through data analysis, feedback)
- ◆ Targeted marketing and sales activities

4 New business models
- ■ Development of completely new products or services
- ▲ Development of new distribution channels, sales forms or markets

5 Additional Efficiency Potentials
- ◆ Increase of efficiency of raw material and energy
- ▲ Outsourcing of administrative processes

Fig. 2.14 Answers by executives of the German medium-sized sector to the question "What benefits can current digital developments have—and when?" Source: Based on Commerzbank (2015, p. 24)

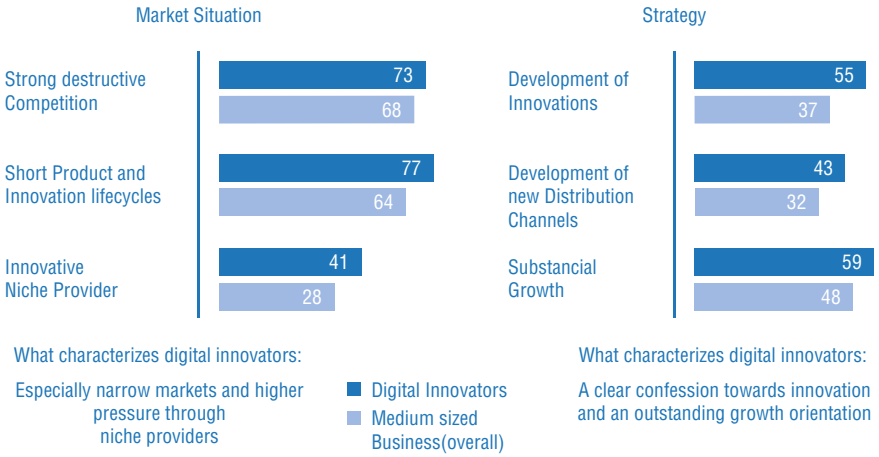


Fig. 2.15 Strategic position and orientation of digital pioneers in the German mid-sized sector. Source: Based on Commerzbank (2015, p. 27)

2.2.5 Realizing Business Model Innovations with Considerable Innovation Levels

Business model innovations with a considerable amount of innovation, as demonstrated by the digital pioneers of the abovementioned study, do not fall from the sky. They are the result of hard work. These innovations focus on the change in *value chain structures (value constellation)* of the innovating company and/or in the *value proposition* for the customer (Wirtz 2011). The associated idea generation and iterative model design represent strategic activities for which a sufficient *top management involvement* is required (Westerman et al. 2014; see also Chap. 3).

Concerning the ideation of new business model options on Horizon 2 and Horizon 3 level, various forms of idea generation are to be considered (see Fig. 2.2). *Ideation* is to be understood as the creative process of generating, developing, and communicating new ideas. In order to achieve a Digital Business Leadership, innovative approaches at Horizon 2 and Horizon 3 level are used for generating and structuring new ideas. Here, common business model vocabulary based on the Business Model Canvas and *design-oriented approaches* to work in *cross-functional teams* are used. Familiar *creativity methods* (such as brainstorming, 635 method, morphology, etc.) as well as advanced methods such as *expert workshops* and *exploratory discussions* with existing clients of the organization and also noncustomers are part of the choice (see Fig. 2.16) (Kreutzer 2013; Lipinski 2015).

In many cases it makes additional sense to supplement the *ideation phase* by further design- and user-oriented methods, in order to widen the views on the company's own resources and on the industry towards the customer's actual problem. A good example is provided by *design thinking* (see Sect. 2.4.5). It is a well-documented and systematic method of innovation, which is used to solve a variety of entrepreneurial problems and to develop creative and often surprising solutions

Sources and Methods of Idea Generation				
++ High Relevance + Relevance - No Relevance			Idea Generation	
			Idea Collection	Idea Creation
Sources of Information	external	• Publications	++	-
		• Patents and Protection Rights	++	+
		• Competitor Analyses (Benchmarks)	++	+
		• Suppliers	++	++
		• Customers	++	+
	internal	• Employees	+	++
		• Business Documents (Strategy and Position Records)	++	-
Creativity Methods		• Brain Storming	-	++
		• Brain Writing	-	++
		• Morphology	+	++
		• Synectics	+	++
Additional Methods		• Market Research	++	+
		• Expert Workshops	++	++
		• Explorative Interviews	++	+
		• Suggestion System/Idea Competition	+	+
		• Document Research	++	-

Fig. 2.16 Overview of sources and methods of generating ideas. Source: Based on Vahs and Brem (2013, p. 256)

(Plattner et al. 2009; Brown 2008). The objective of this phase remains the same: it is to build a variety *of valuable business model ideas* that each are displayed in the Business Model Canvas in a structured way.

THINK BOX

Questions:

- How strong is my company characterized by its own skills?
- Do we regularly involve the costumer´s points of view into our thinking on innovation initiatives?
- How systematically is this process designed?
- What creative methods do we use?
- Do we master a set of proven creative methods that can be used in a case-by-case scenario?
- Where lies the responsibility for this - cross-company – creativity in my organization?

Only after a comprehensive creative process, a *reflection* and *prioritization* take place in the team. They are followed by further development of individual value-bearing model options. For further evaluation, business success criteria are taken into account. These include, for example, questions concerning the *scalability of the model* or the *generation of lock-in effects*, in order to bind customer product and/or service related to the company in the long run. In addition, there is the question of how *the model idea* can be transferred *into familiar model patterns*. Among others, the *platform model* relates to this. In this model, the classic supplier-demand relationship is abandoned with regard to a market-like concept. The former provider becomes the manager of a platform, on which the relevant business partners interact, while the platform can be scaled almost indefinitely (see Sect. 2.2.2). In a *freemium model*—another popular method of digital business concepts—a basic service is offered for "free." If you want to use the more powerful version ("premium"), you will be asked to pay. Such pricing strategies are used, for example, at *XING* and *LinkedIn*.

By a supplementing link of other management tools, additional strategic elements can be incorporated into the ideation and structuring process. Two methods are particularly worth mentioning:

- *Blue Ocean Strategy* (Inter alia Osterwalder and Pigneur 2011; Kim and Mauborgne 2005). This is a strategic way of thinking that wants to break out from existing market and competitive relations (so-called Red Oceans*)* by redesigning relevant purchase factors, in order to create new competitive space that is at least temporarily without competition (so-called Blue Oceans*)*.
- *Jobs-to-be-Done Concept* in connection with the *Value Proposition Design*

  Here, the value promise of a company is explicitly viewed from a consumer perspective and is considered with regard to the question of which "jobs" should be dealt with on the customer side by this offer. A distinction is made between functional, emotional, and social jobs (Broda et al. 2015).

Concerning the entire process of generating business model ideas on Horizon 2 and Horizon 3 level, it can be stated: All findings eventually lead to the *Business Model Canvas* and enrich existing knowledge with new ideas or even replace existing concepts. However, as long as no business-specific testing of the identified business models is carried out, they merely remain assumptions (see Fig. 2.17).

The task is now to convert these assumptions, developed in the creative process, into a *set of hypotheses*, which are to be tested through an *iterative close-to-market testing*. From all the assumptions of the Business Model Canvas, two key aspects of the value promise are to be examined with the highest priority—the benefit and growth hypothesis (Ries 2011):

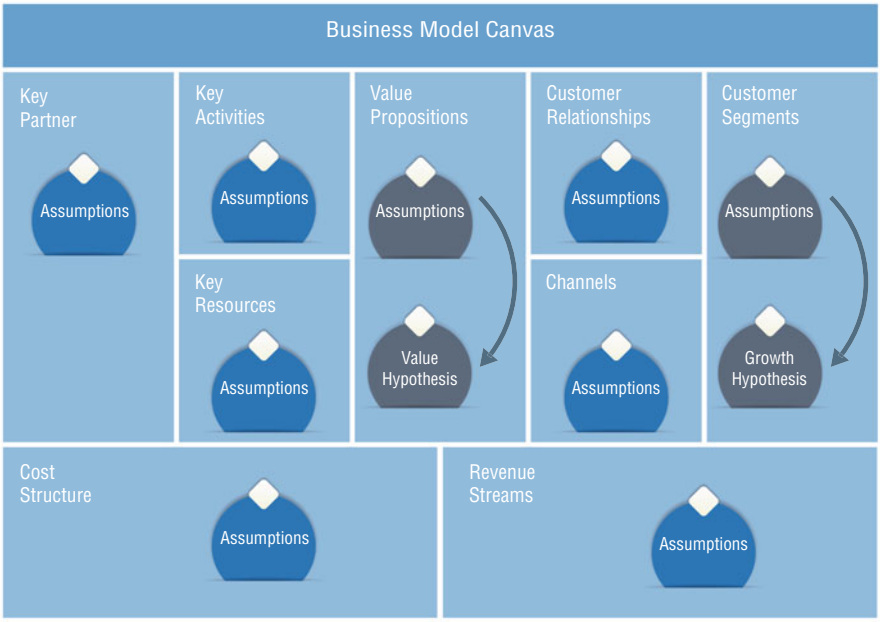


Fig. 2.17 Business model ideas as a set of assumptions. Source: Based on Osterwalder and Pigneur (2011, p. 85)

- *Benefit hypothesis*
  Based on the assumptions of the "Value Proposition" field of the Business Model Canvas, a benefit hypothesis can be derived. It raises two central questions:
  - What is the value created for the customers?
  - How shall the value proposition be precisely developed for that?
- *Growth hypothesis*
  Based on the assumptions made in the Business Model Canvas within the "Customer Segments" field, the growth hypothesis of the business model initiative can be derived. Here, four key questions are raised:
  - Which target groups the offer should address in order to achieve growth?
  - By which means of communication can a particularly high growth be achieved?
  - Which channels should be used to communicate and distribute the performance?
  - How are customer relationships to be designed?

Depending on the specific design of the respective business model innovation, aspects of the *business model's value creation structure* are also to be checked in practice in one of the first cycles. Often there are special dependencies on partners or the need to build up special digital skills and activities.

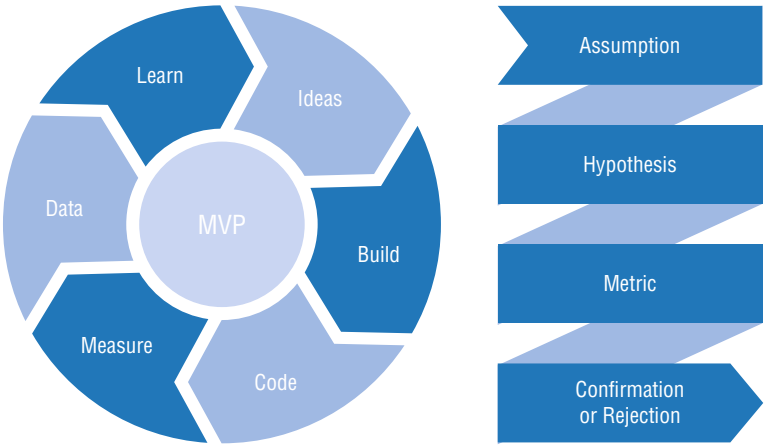


Fig. 2.18 Lean Start-up process. Source: Based on Ries (2011, p. 73)

Finally, the *testing of the hypotheses* is based on the *Lean Start-up method*. Within this method, a building-measurement-learning cycle is used as often as possible. The aim is to test the most highly prioritized hypotheses in the respective cycle in a way that is close to the market. Therefore, these hypotheses are derived from the described characteristics of business model assumptions. To do so, a *minimum viable product* (MVP) is, respectively, generated, which is the basis of market-related testing and starting point for further iterative development steps (see Fig. 2.18).

MEMORY BOX

The Minimum Viable Product (MVP) is the product version which enables a full run through the build-measure-learn-cycle with minimal effort and development time. First of all it refers to the development of a prototype – yet in a minimal version. Oftentimes the approach of „Rapid Prototyping" is being pursued.

In the digital environment, possible MVPs are typically landing pages or simple form requests in existing websites, which are made extensively prominent to the relevant target groups in a short time by means of search engine marketing, thus enabling a first run of the building-measurement-learning cycle.

ACT BOX

Business Model Innovation Workshop

From the existing business model to the business model for a digital business leadership: our proposal for your own Business Model Innovation Workshop

Scope:
About 8 Days

Participants:
Interdisciplinary team of specialists and executives from various organizational areas

Procedure:

- **Recap the business model developed in the first workshop in the team.**
- **Use an analysis of strengths and weaknesses as well as opportunities and risks (SWOT analysis) to capture your**
- **Business Model environment.**
  Discuss possible options for new business models at Horizon 2
- **and Horizon 3 level.**
  Use a creativity technique and create a large number of innovati-
- **ve business model approaches in the team.**
  Discuss the resulting approaches and prioritize them according
- **to estimated business relevance.**
  Perform a Business Model assessment and try to refine your
- **model approaches using generic business model patterns.**
  Derive hypotheses from the model elements and adopt them into an iterative check using Lean Start-up.

- **Resources required:**
- **Workshop room and about 8 hours of time from all participants**
- **Business Model Canvas in A0 poster format**
- **Business model results of the first workshop in A0 poster format**
- **Whiteboard or free wall surface for attaching the Business Model Canvas**
  Sticky notes in different colors as well as text markers

Tools:
Management Literature „The Lean Start-up“ und „Value Proposition Design“ http://theleanStart-up.com/book bzw. https://strategyzer.com/books/value-proposition-design

Video „Competing on Business Models“
https://www.youtube.com/watch?v=J1_IJnAg1DY

Business Model Innovation Software
http://app.toolkit.builders

2.3 How to Design a Digital Organization

How organizations are to be optimally designed so that they function as successfully as possible in the long term is one of the core questions of business management theory. As a result, there are an immense number of concepts and schools of thought. But how does digitization change this field? What needs to be done to transform existing companies into powerful and fulfilling digital organizations? And what form of organizational design can support best the achievement of a Digital Business Leadership? Even to achieve such leadership, the legendary statement from Chandler (1962) applies: *structure follows strategy!* And one strategy component can be made clear: the pursuit of ongoing innovation.

2.3.1 Understanding Digital Change as a Task of Innovation Management

Let us start with the world's biggest automotive manufacturer *Volkswagen*. Shaken up by a scandal concerning *VW* diesel engines, the new *Volkswagen* boss *Matthias Müller* makes the following statement in front of about 20,000 employees shortly after taking office in October 2015 during one of the most serious crises of the corporation (October 6, 2015):

> New competitors are pushing into our business: If the rumors are true, Apple will introduce the iCar to the market in 2019 [. . .] We have to be slimmer and faster [. . .] I will not accept, for example, that dozens of experts have to sit in control circuits or stand around at acceptance runnings while at home the work remains.

Group companies are usually made of unique organizational constructs. Particularly *Volkswagen* is a very large man-made economic institution, with its nearly 600,000 employees. Still, wherever one is looking in the context of digital transformation, digitization not only demands for *technical innovations*. In this field especially the German industry is at the forefront. But in addition to technical innovation, digitization requires far-reaching *organizational changes*. This is primarily about a higher decision-making speed and more flexible forms of working together within the company and beyond (see Fig. 1.11). In addition, more innovative entrepreneurial action is one of the indispensable drivers of a digitally leading organization. Because a convincing digital vision, mature digital strategies, and value-adding business model initiatives all represent only the indispensable starting points for establishing a Digital Business Leadership. However, they can only show their full effect, if they are transferable into concrete actions, while being well coordinated internally and deeply anchored in the company in the long term.

MEMORY BOX

Life experience – in a private as well as in a professional context – repeatedly shows: The implementation represents the strategic bottleneck – not the generation of brilliant ideas!

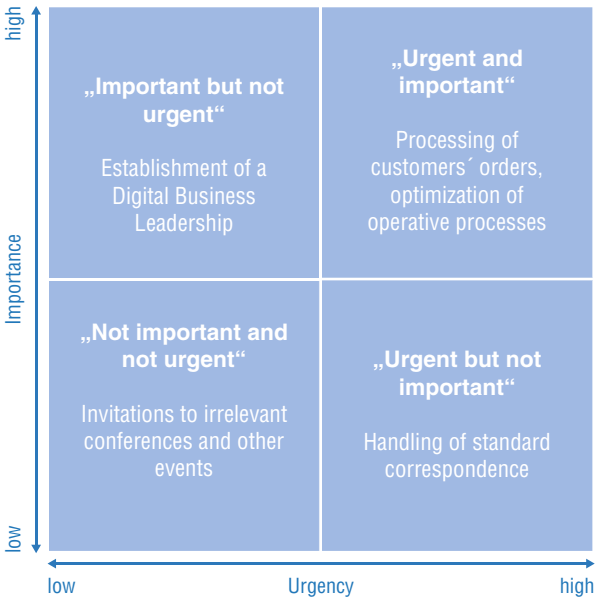


Fig. 2.19 Eisenhower matrix to classify tasks

However, the "tiring" daily business is all too often an obstacle to the necessity of implementing convincing concepts. The present dilemma can be explained by the *Eisenhower principle* in the *Eisenhower matrix* (see Fig. 2.19). To do so we need to classify our tasks according to the criteria of *urgency* and *importance:*

- *Category "not important and not urgent"*
  Tasks in this category are irrelevant to the business objectives. They should be recognized as such without being led to processing. These tasks are real "energy eaters" without contributing to the entrepreneurial value creation. Examples are invitations to conferences or other events, which in the widest sense have nothing to do with company's objectives.
- *Category "urgent but not important"*
  Tasks in this category are to be dealt with promptly. They can, however, be subordinated to the urgent and important tasks. The company ideally has areas in

which these day-to-day tasks are competently handled. This includes, for example, the processing of standard correspondence.

- *Category "urgent and important"*
  These tasks are of most importance for the—oftentimes short-term—goal fulfillment. Their processing must be done immediately. These include, for example, critical production times, which must be adhered to in order to serve customer orders on a timely basis. The optimization of operational processes also falls into this category. In this category, core tasks that are required to achieve the company's current goals are often found.
- *Category "important but not urgent"*
  These tasks are also very important for the general goal achievement of the company. However, the completion is not a matter of urgency, so that it can be postponed again and again without detecting the consequences of this "nonprocessing" quickly. The development towards a Digital Business Leadership belongs to this type of task: important to survival in the long term—but not urgent yet! At least as long as the company is not threatened in its existence!

The *Eisenhower prioritization* represents one of the basics of time management and makes a vital contribution to strategic management in order to set the right priorities. Because *thinking in future developments* is at least temporarily overshadowed by the "today" and often completely curbed. In addition to the dominant daily business, complex decision-making, multi-level hierarchies, business-politically motivated actions of many players, and the fear of making mistakes additionally complicate the digital transformation. But what at first glance appears to be a feature of the digital transformation is not new in its core. When understanding the requirements associated with digitization as a task of innovation—and change management as a whole—it can be said that digitization initiatives have to struggle with well-known organizational strategic challenges. At its core, it is always about the *organizational dilemma* between the *operational today* and the *strategic tomorrow* (Inter alia Hauschildt and Salomo 2011).

MEMORY BOX

The organizational dilemma describes the dualism between the hierarchic-mechanistic structured management system of today's operative actions and an enhanced evolutionary and network-dependent organized structure which is indispensable for successful innovation activities.

The *initiation of relevant digitization projects* with significant levels of innovation is, however, in almost all industries the order of the day. But the required activities differ

largely from regular routine processes. The existing business model is well-known, while being based on acquired competitive advantage. The focus is often put on quality, time, and cost optimization. The structure of the necessary digital innovation processes is completely different. They are characterized by high degrees of *uncertainty and complexity*. At the same time, they require financial, material, and human resources to a considerable extent. Also, their success can only be actually estimated in the distant future (Inter alia Vahs and Brem 2013). This contrast is obviously responsible for considerable resistance within a company against many digital projects. Choosing the primacy of a secure and familiar daily business with clear objectives and comprehensible approaches (both "urgent and important") over the insecure and unknown digital tomorrow (only "important" but not "urgent") with various options, uncertainties, and unclear economic output can be seen as a very human reaction.

But exactly at this point, a certain problem can be identified that should not be underestimated: especially German companies with their high standards of process quality, efficiency, and product quality have significant difficulties to capture the far-reaching *opportunities of digital innovations*. While the operational strength significantly promotes the current action through the existing organizational structure, the same structure often hinders a bold entry into new digital fields. The digital transformation is perceived very limited in its relevance for the entire company, as a study by Roland Berger among 300 German top managers shows (see Fig. 2.20) (BDI 2015). Forty-three percent of surveyed managers degrade the *digital transformation* to a *cost-cutting initiative*, while 10% rely on an *increase in sales of existing products*. Only about one in three companies (32%) defines the objective of the digital transformation as *increased sales with new products*. Other modest 14% define the aim as a *combination of revenue growth and cost reduction*. One thing this study makes perfectly clear: If the digital transformation is limited to the issue of "cost reduction" already in the formulation of goals, it is not able to exert any great effects in the corporate context. The digital transformation gets limited to a "more of

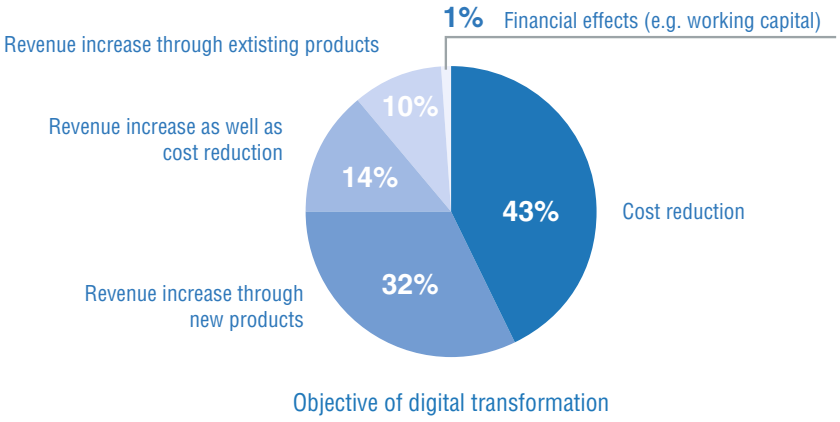


Fig. 2.20 Digital change in the tension of radical and incremental innovation. Source: Based on Roland Berger quoted by BDI (2015, p. 31)

the same" and "more of the known." Cost reduction initiatives certainly have not been lacking in recent decades. With cost reductions alone, one will not be able to exist in the digitized competition, which many of the previously mentioned examples have already shown. How the motif structures behind these formulated objectives can be detected and broken is explained in Chap. 3.

But this *organizational dualism*—day business here, areas of innovation there—is in absolute need to be dissolved in digital leading organizations. For this, the two views are to be integrated into a holistic perspective. Short-term targets of everyday operations have to be met as the basis of the regular today; however, at the same time, long-term strategic priorities have to be set, and digital and innovative future fields have to be empowered in a visionary way. Therefore it is not enough to degrade digital activities as a mere complement to the tasks of an individual executing level or as a temporary project to reduce costs. If digitization is conceived like this, a Digital Business Leadership cannot be achieved.

THINK BOX

Questions:

- **What value do innovations in companies have in general?**
- **How may their value be estimated in my company?**
- **Do we celebrate innovative products and new ideas for services or process innovations?**
- **Or does innovation happen secretly – and we much rather celebrate the failure of new ideas and let innovative employees drop?**
- **What do we do in specific to encourage the innovative flow within the company?**
- **How open minded are we regarding innovations brought to us by the market or other partners?**
- **Did we build fortresses against innovations?**
- **Do we reward or punish innovative employees?**
- **Did the rewarding component make its way into our compensation structure?**
- **Are innovation contests in our company „mickey-mouse-events" or do they get management attention from the top-level?**
- **What innovation value do the pursued innovation projects have?**
- **Do we rather focus on cost reduction?**
- **Or do innovations dominate – maybe even radical types – on a product, service and process level?**
- **Does my company also allow radical and/or disruptive innovation projects to grow?**
- **Or does a defense mechanism against change arise again and again – to prevent the change?**
- **How regularly do we check the internal climate for innovations?**
- **What do we do to give our innovations a chance?**

Now we could take the easy way, with only praising an *innovation-promoting corporate culture*. We could call for a new digital mindset of employees and create organizational freedom and structural flexibility through new working time models. Thus, surely, important potentials can be raised, coming from incremental innovations and digital initiatives that are close to the current business model and more likely located on the Horizon 1 level.

However, the construction of a Digital Business Leadership generally requires radical, groundbreaking approaches. *Convincing digital visions* cannot be implemented with an incremental optimization of the status quo. Horizon 2 and particularly Horizon 3 business models cannot exclusively be implemented within the existing organization. Here, the creative search for comprehensive approaches is to be understood as an essential part of the solution process. It requires creative potential and intellectual work that is different from what we know from daily operations. In contrast to the well-known approach of operational activities, various possible alternatives are to be tested parallel. While the "operational" puts accuracy at the center of action with reward, errors are indispensable and inevitable in radically innovative or even disruptive projects. They even represent a central part of the learning and solving process.

MEMORY BOX

"Experience is the total of all committed mistakes!" Graham Greene

It is not difficult to understand that a particular risk of *organizational resistance* in existing corporate structures is resulting from this. Meeting this risk and transferring it into individual solution scenarios is a central task of change management, which is part of building a Digital Business Leadership. Therefore, digital leaders need to realize that there is no unified organizational structure that optimally serves both the smooth handling of the core business and the generation of (radical or disruptive) digital innovations. It will never exist! The groundbreaking *creative renewal* of products, services, and business models requires not only a strategic anchor in top management and digital knowledge throughout the organization but also an additional framework in order to achieve success. The truly groundbreaking "new" is neither created at the touch of a button by the top management nor by simple work instructions of a superior hierarchy level. Also, it will not automatically adjust after having conducted a reorganization of the strategic business fields. Neither the "new" is created by its sheer necessity. For this, Govindarajan and Trimble (2010, pp. 10 et seqq.) develop a memorable image in their work *The Other Side of Innovation*, as can be summarized in the following:

- Generally, an existing organization is not (or only very limited) designed for innovation projects. Rather, it is comparable to a *performance engine*. It corresponds to a motor, the purpose of which is to reliably and routinely perform familiar and recurring activities with highest possible efficiency. As an example, we can think of the assembly lines of *Volkswagen* and *Audi* but also the production lines at *Henkel*, *Unilever*, and *BASF*. Stability, predictability, routine, and zero defect tolerance are the dominant factors for success.
- Because of this very purpose, activities that are contrary to the known pattern and thus create insecurity and inefficiency are being hampered or completely shut down. In the context of a *performance engine*, therein lies no wrongdoing—quite the opposite. It is the fundamental task and the stated objective to implement special *safety mechanisms* for maintaining the target state.

Following this line of thought, the existing organization with its diverse operations appears to be completely counterproductive for digital transformation activities. Rather, other external paths need to be found from the shareholders' perspective in order to create that digital tomorrow. The establishment of (or investment in) *independent digital businesses* is actually a possible strategic consequence. The essential task of the present daily business, and thus the primary task of the existing organization, is the continuous procurement of financial resources to enable the innovation process for successfully shaping the future. The result could be a *portfolio of mostly independent digital start-ups*. First, they would only be loosely linked to the current organization. The link between the corresponding investments would therefore consist primarily on corporate law level. This is a success principle, which, for example, *Axel Springer* is following for almost 10 years besides other organic innovation projects.

However, limiting oneself to such *investment opportunities in the digital start-up market* when building a Digital Business Leadership is not enough. Because at the same time, established companies own unique advantages due to their history and their performance engines. These must be used for innovation activities through their *diverse resources* and the *deep industry knowledge*. Therefore, the digital business success at *Axel Springer* can only partially be explained by singular acquisitions and detached external investments. Only through the *combination of own skills with the flexibility and innovation of digital investments* and a deep *integration of the deals* among themselves success becomes possible. Porter (1996) stated this in his seminal article *What is Strategy?*: "It's competitive advantage comes from the way its activities fit and reinforce one another."

What has been achieved? At the beginning of the millennium, *Axel Springer* was perceived as quite underdeveloped in terms of digital activities. Today, the company is regarded as a German model example of a successful and also certainly radical digital transformation: the digital services of the group contribute to about three quarters of the company's EBITDA. At the same time, the digital business continues to show steady growth (Axel Springer 2015b). As part of this transformation

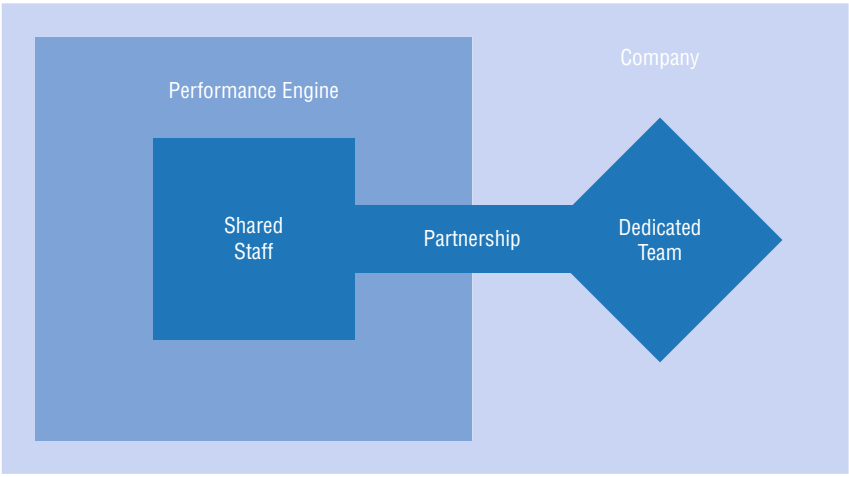


Fig. 2.21 Innovation projects as a trusting partnership between shared staff of the performance engine and a dedicated innovation team. Source: Based on Govindarajan and Trimble (2010, p. 28)

process, *Axel Springer* even has partially separated from its roots, when in 2013 a large print product package was sold to the *Funke Media Group*—including traditional products such as *HÖRZU* and *Hamburger Abendblatt*.

Successful digital innovation activities with a significant degree of novelty ideally occur in a *trusting partnership* between *experts from the performance engine*, who are temporarily and not necessarily involved full time, and an *innovation team*, which is decidedly built for the respective projects and which typically requires new staff or a completely independent external organization. While the actual innovation team is compiled individually for the innovation initiative and defines own goals and rules, the temporarily involved employees of the performance engine remain in their existing areas of responsibility (see Fig. 2.21). They are involved according to clear rules and economically verifiable costs into digital projects. Clear expectations and problem-solving mechanisms for the functioning of the *team partnership between shared and dedicated staff* are to be implemented.

With this model, a digital leading company can solve the organizational dilemma of innovation management. If constant change is a feature of modern markets, digital leaders will exchange the traditional organizational model not only temporarily but also in the long term with a *dual organization*, which consists of the following two organizational parts (Kotter 2014):

- *Hierarchically structured organization part*
  This part of the company is operated according to the classic pattern of a well-ordered organizational structure. It is responsible for the execution of the existing

operations and designed to achieve reliability and efficiency. Digital innovation activity is limited and only occurs within the boundaries of manageable incremental changes for continuous digital optimization of the status quo.

Metaphor: Performance engine

Examples:

- Complementation of the brand communication by a social media channel
- Introduction of a company-wide content management system for maintenance of the corporate website
- Implementation of a CRM system

- *Network-oriented organization part*

  This part of the company acts much more quickly and is more responsive to environmental changes. Here, innovative digital projects with radical and/or disruptive character are implemented. System openness, fault tolerance, and the search for future strategically valuable business opportunities determine the actions.

  Metaphor: Innovation engine

  Examples:

  - Creation of a digital platform for the realization of a new business model for a new audience
  - Development of a "smart" and cross-linked product with deep roots in digital applications
  - Conception of "digital" versions of previously distributed products and services from the analog domain
  - Construction of ecosystems with strategic performance partners from the direct competitive environment

The *link between the two parts of the system* is realized as much as necessary according to the already mentioned *principle of partnership*. This partnership can only succeed, however, if basic knowledge on digital principles and technologies also exists in the traditional part of the organization and the *division of responsibilities between performance* and *innovation engine* has been clearly communicated. Both parts of the system need to understand that a cooperative coexistence is necessary to grow into a digitally leading company in the long term. Thus, on the one hand, innovative business ideas arise from the specific market knowledge of internal experts, and new fields are based on the recombination of existing business logics. On the other hand, the structure and financial resources of the operating entity are necessary, in order to stimulate innovation activities to a considerable extent. It is the continuous and cooperative exchange between the two parts of the organization that needs to be optimally designed and regularly maintained by digital leaders.

Finally not every prospective project within the network organization must arise from an internal initiative. Quite the opposite, the network responsible for innovation is to be designed much more openly to the outside. It integrates external expertise

Table 2.1 Examples of digital initiatives according to the network principle of established companies in Germany, as of March 2016

Designation	Affiliation	Link
Axel Springer Plug & Play Accelerator	Axel Springer	http://www.axelspringerplugandplay.com
Coca-Cola Founders	Coca-Cola	http://coca-colafounders.com
Collins	Otto	http://www.ottogroup.com/de/die-otto-group/konzernfirmen/collins.php
Deutsche Bank Labs	Deutsche Bank	https://www.deutsche-bank.de/medien/de/content/5060_5196.htm
Digital Accelerator	Allianz	http://www.digital-accelerator.com
ERGO Direkt "external lab"	ERGO Direkt	https://blog.ergodirekt.de/2014/09/04/was-ist-das-externe-lab-von-ergo-direkt/
Grants4Apps	Bayer HealthCare	https://www.grants4apps.com
Hubraum	Deutsche Telekom	http://www.hubraum.com
Liquid Labs	Otto	http://www.liquidlabs.de/#home
Lufthansa Innovation Hub	Lufthansa	http://hub.lh.com
Microsoft Ventures	Microsoft	http://www.microsoftventures.com
ProSiebenSat.1 Accelerator	ProSiebenSat.1	http://www.p7s1accelerator.com
SAP Co-Innovation Lab	SAP	http://coil.sap.com
Techstars METRO Accelerator	Metro	http://www.techstarsmetro.com
Wayra	Telefónica	http://wayra.co
You Is Now	Scout24	http://accelerator.youisnow.com

faster, commits to collaborations without a problem, and invests directly in promising start-ups—if interested (see Table 2.1). In each case, several *constellations of partnership* between the two parts of the company as well as between the network organization and third parties are feasible and necessary. The following are examples of the activities at *Axel Springer*:

- *Internal digital development of their own news and information offerings*, for example, through consistent cross-media integration of *BILD* and *BILD Digital* (Axel Springer 2013) as well as through adding new service concepts, such as the *BILD Photo-upload Community* (Axel Springer 2013)
- *Development of new services and business areas through their own innovation lab* called *Axel Springer Ideas*, such as the shopping platform *iconist* or shopping app *Shop-Now* (Axel Springer 2013)

- *Partnership with venture capitalist and incubator Project A Ventures* for investing in a great number of promising start-ups with fully digital and nonjournalistic business models (Axel Springer 2013)
- *Singular purchases of digital services*, such as the digital news platform Business Insider (Axel Springer 2015c)

Typically, according to a dual organizational design, the following *options for developing and expanding the digital network organization* can be found. In the context of creating a Digital Business Leadership, the focus should be on the following fields depending on individual needs:

- *Innovation Manager/Innovation Team*
  A single person or a whole group of people decidedly deals with innovative digital projects within the company. The persons responsible are usually fully associated with the generation of innovative ideas and the coordination of innovation projects. Projects are implemented either by temporary purchase of external resources or through the own internal capacity of the hierarchical organization part. If successful, an integration into the existing corporate and product structure usually takes place. New concepts and solutions are integrated directly and without offset.
- *Internal Innovation Lab/Innovation Center*
  In the network-oriented organization part, an internal innovation lab is established. Here, new business areas are being worked on according to the latest creative and innovative methods (e.g., design thinking, Lean Start-up). A specially authorized personnel controls the entire innovation process with own budget responsibility. Employees of the hierarchical organization part are regularly involved in the innovation process, in which workshops or even longer-lasting formats are being held in order to generate customer insights and specific ideas or to evaluate and further develop already generated solutions. External knowledge is harnessed within the organization by temporarily employed experts or by a regular exchange with related start-ups. Promising projects are developed as innovation projects in the existing company. If successful, they are transferred either into the existing portfolio of the company or passed by a spin-off of its own corporate structure.
- *Accelerators*
  Accelerators are independent and structured programs that are generally operated and repeated at regular intervals by subsidiaries established especially for this purpose. With fixed time and financial program targets, start-ups are attracted by innovative projects which are fitting to the industry focus of the accelerator while being at an early stage of corporate development. In exchange for a fixed minority interest of less than 10% and in a fixed program period of a few months, the company's future development is to be accelerated. A structured selection and support process ensures quality within the portfolio. The assigned

personnel of the network organization designs the accelerator, and mentors guide the development of the portfolio companies.

Each innovation project remains an independent young company, which, in turn, employs its own staff. An exchange with the hierarchical organization part is limited and usually only takes place because of prior agreements. The transfer of intellectual property, proprietary technology, or restricted access to the customer base of the parent company should lead to a more rapid business development of the start-ups. Promising companies of the accelerator will continue to operate as independent organizations or will be integrated through acquisition in case of interest from the founding team's side.

- *Incubators*

  Incubators are independent programs or subsidiaries founded to this end that focus on founder teams with promising ideas or existing start-ups. In general, larger investments in a smaller number of portfolio companies are made, larger than in the case of accelerators. The companies are selected according to the own investment strategy. The start-ups initially remain without time limitation in the incubator, which often actually exists, while providing the founding team with, for example, working space and managerial support.

  In this case, too, all innovation projects remain as independent companies, which in turn also use their own employees. An exchange with the hierarchical organization of the corporate parent takes place according to individual needs and with regard to the utilization of business synergies for a faster growth of the start-up. Promising companies of the incubator will continue to operate as independent organizations or be integrated by acquiring remaining shares.

- *Unstructured Participation*

  The network-oriented organization part is seen as an investment vehicle. After a thorough examination, promising established companies or start-ups are incorporated either completely at once or partially by a significant investment. All varieties of integration or independent operation are possible. Exchange with the hierarchical organization part of the parent company takes place only on the basis of regular service relationships, but generally does not take place at all.

Within the mentioned forms, diverse varieties and overlaps exist. *Powerful digital network organizations* make individual use of several or even all these principles and proactively manage their digital opportunities and risks within these activities.

ACT BOX

Workshop: Developing Digital Innovations in an agile and user-centric way

Use this workshop to provide basic skills in the agile and user-centric development of radical (disruptive) digital innovations.

Scope:
About 2 Days

Participants:
Interdisciplinary team consisting of innovation experts from the network organization as well as additional innovation-oriented specialists and managers of various organizational areas of the operating company

- **Procedure:**
  Enter the topic "digital innovation management" using the
- **information of the previous chapter.**
  The participants of the workshop are divided into groups of at
- **least 3 and a maximum of 5 people.**
  Explain to the teams a current radical (disruptive) business idea
- **as structured as possible using the Business Model Canvas (see chapter 2.2).**
- **Give each team a Scrum Starter Kit and work out the steps described there successively by referring to the presented idea. After completing the steps of the Scrum Starter Kit, summarize the results of the individual teams and lead to the Build-Measu-**
- **re-Learning-cycle according to Lean Start-up, to check Scrum-Product increments iteratively and in the market. Use in addition the board game "Playing Lean" to get a playful insight into the Lean Start-up principle.**
-
- **Resources required:**
- **Workshop room and two days of time from all participants**
- **A Scrum Starter Kit and a playing game "Playing Lean" for every team**
  Whiteboard or free wall surface for attaching sticky notes
  Sticky notes in different colors as well as text markers

Tools:
Teaching and learning material Scrum Starter Kit
http://toolkit.builders

Board game „Playing Lean“
http://www.playinglean.com

Textbook „Scrum: The Art of Doing Twice the Work in Half the Time“
http://www.amazon.de/Scrum-Doing-Twice-Work-Half/dp/038534645X

Textbook „Lean Start-up: Schnell, risikolos und erfolgreich Unternehmen gründen“
http://www.amazon.de/Lean-Start-up-risikolos-erfolgreich-Unternehmen/dp/3868813330

2.3.2 Anchoring the Network Organization in Top Management

Under the condition of a *dual operating system of a leading digital organization*, the question arises as to which person is responsible for the network-oriented and innovation-related part in its development and leads it in the long term. The company's central management and strategy decision-making power is traditionally anchored at the top of the organizational pyramid, i.e., on the C-level. As a result, the CEO would be the ultimate responsibility for the success of the company as a driver of digital change and as a continuous innovator in Digital Business Leadership. It would also be incumbent on him to provide both companies with at least the same importance.

However, the experience shows a different reality: the position of the CEO all too often refers to the "execution" in terms of executive violence in the hierarchical operating part. At the very least, it is only to be explained that German companies were very limited in the first half of the digital chessboard (see Chap. 1), i.e., at the level of digital innovations in the B2C markets. The necessities of the day business usually overlay other activities at the top of the company that a *continuous and evenly divided management* of two system parts, which are very different in their basic structures, cannot be considered.

On the other hand, the *development of a digital innovation engine* requires special attention. A powerful network organization does not come about overnight. It must be able to develop. The network is formed in successive steps, through organic growth and over a longer period of time (Kotter 2014). Where first successes were celebrated with a small innovation team, a larger and more structured portfolio may emerge in the medium term. This can be fed from internally generated digital innovations as well as enriched by participation in external start-ups. For this, a *protected room* is required to start, which can only be provided by top management. Even in the long term, without any regular support from the performance level, all initial effort would be useless.

MEMORY BOX

A digital innovation engine needs regular and steady support on top-management-level as well as a secure space for its development. This kind of management-support is provided by the **Chief Entrepreneur.**

If a leadership of the dual organization is to be distributed among several people in the company, which strives for a digital business leadership, a suitable organizational form of division must be found, under realistic consideration of the current understanding of the roles. Osterwalder (2015) proposes a new position in the company, the chief entrepreneur:

> We believe CEOs did need a partner for innovation inside Their companies, someone who wants to create and defend processes, incentives, and metrics did encourage radical ideas and find new areas for growth. It's an executive who can help large companies to reinvent Themselves while they're quite successful. And this new role needs to sit in the C-suite. You could call this person the Chief Entrepreneur (CE)—someone who can lead the future of the company while the CEO takes cares of running the existing business.

In this model, the CEO directs the operative (hierarchically structured) part of the company with a focus on today's business, while the CE is responsible for the network organization at an equitable level and thus has the task to generate the relevant innovations for the future. For this purpose, suitable CEs are equipped with a special mindset: they act highly strategically according, feel at home in high-uncertainty environments, and face these challenges with a team-oriented and agile style. The chief entrepreneur does not work below the CEO or other roles on the C-level (e.g., CTO, CIO, CFO). He acts as an *independent leader alongside the CEO* (Osterwalder 2015). The successful *dual digital organization* thus receives a shared digital business leadership at the highest corporate management level.

THINK BOX

Questions:

- **Who is in charge of the digital transformation in my company?**
- **Is there a responsible person or an equivalent team?**
- **Did we already identify the crucial distinction between Performance Engine and Innovation Engine?**
- **If applicable, how did we implement this identification?**
- **Are we able to implement an equal management of a dual organization on an executive level in my company?**
- **Or is a joint digital business leadership of CEO and CE**
- **realistic?**
  What can I contribute to establish the position of a chief digital officer (CDO) as a preliminary stage of a dual digital leadership?

Perhaps the solution of a dual organization with equal CEO and CE is still far off. It would then be understood as the target of the forthcoming development process of digital transformation towards digital business leadership. Due to the high complexity that companies are faced with by digitization, another role has emerged in the meantime—the *chief digital officer* (CDO). The CDO is the top digitalization officer of a company and responsible for the guidelines of digital change (Schmidt 2015). Through its function, new digital business models are developed, innovative technologies are introduced, and networking is promoted within the company. The CDO acts as the interface between chief information officer (CIO) and chief marketing officer (CMO) and is directly subordinated to the CEO. He needs to act as a "disruptor", who is entrepreneurial and strategic in accordance with the network

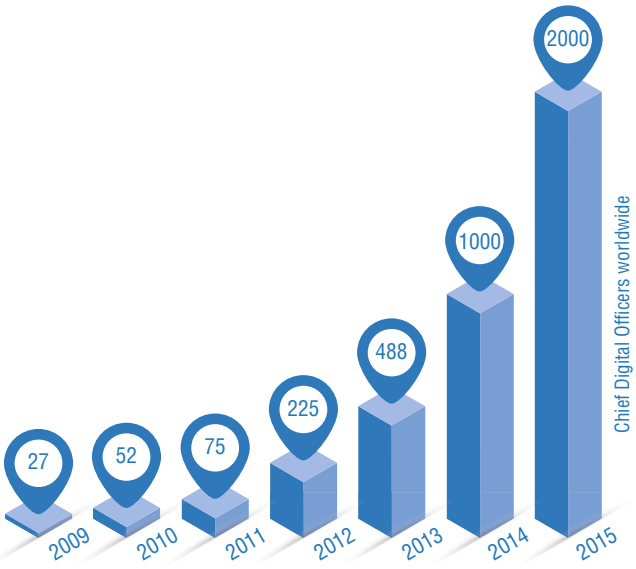


Fig. 2.22 Number of chief digital officers worldwide. Source: Based on CDO Club, quoted by Lubkowitz (2015)

organization, who penetrates new industries, and who turns existing market standards upside down. In addition, he is the first point of contact for the operative digitization of existing business areas and the mediator of digital competencies throughout the hierarchically shaped company. This role requires considerable diplomatic skill and can be a possible starting point towards a dual organization.

The current *CDO Club figures*, the first professional association of the chief digital officers, founded in New York in 2011 (see Fig. 2.22), show that the CDO model is at least a suitable strategy for digital transformation in the context of large corporate structures. As a result, the number of global CDOs has increased exponentially since 2009, albeit in absolute terms at a comparatively low overall level. According to the results of a study by the personnel consultancy *Heidrick and Struggles* in this context, Germany does not appear to be in the forefront of structural change: only 5%, meaning 4 of the 80 German companies listed in the DAX 30 and MDAX 50, have thus created a corresponding position in their ranks (Lubkowitz 2015).

Examples of German companies that currently have implemented the *position of CDOs* are *TUI Germany*, *Bayer AG*, *ProSiebenSat.1 Group*, *L'Oréal Germany*, and the *Deutsche Bank*.

From the perspective of digital business leadership, the role of the CDO remains a two-edged sword. On the one hand, it appears as an at least temporary option to guide the change towards a digital organization as directly as possible from a suitable position and to achieve it successfully along a time-critical target mark. On the other hand, one should ask oneself: Should the CDO be a regular member of the C-level, or rather a temporary phenomenon, which will disappear at the latest in the company

after a first successful innovation step because the CEO is held responsible for the new success? It is questionable, however, whether the upcoming transformation processes will ever be over!

Companies with significant digital ambitions can therefore only be advised again the contrary: in the sense of the dual organization, a chief entrepreneur must be installed in an equal position with digital leaders, sooner or later, alongside the CEO. If appropriate, the CDO can then migrate in this direction.

2.3.3 Digitally Aligning the Entire Organization

It goes without saying that *employees of the network-oriented part* of the company must have a considerable digital knowledge from the start, in addition to strategic expertise. After all, they should be able to successfully manage radical and disruptive digital innovation projects. At the forefront of the digital future, proven experts must be in order to compete with competing institutions. Not only must they have experience of their own, but they must also be very well networked within the digital and start-up scene in order to be able to participate in new developments.

To restrict *digital know-how* alone to the innovation-proven staff of the network organization, however, is not a strategy. Even if employees in the hierarchical line primarily have to address their operational challenges, in accordance with digital transformation and especially in the realization of a long-term Digital Business Leadership, they must also build up considerable digital competence. On the one hand, the existing offers must also be complemented by digital aspects. On the other hand, sooner or later a promising digital innovation with a certain degree of maturity will be transferred from the innovation engine to the performance engine. Or at least intensive cooperation and exchange of power between the two are to be established. This can only be achieved if a common digital competence base exists and future viable organizational concepts are applied.

This knowledge transfer of digital know-how can take place via regular further *training programs*, e.g., "digital" experienced external trainers discussing specific topics of the digitization or with the multiple seminar offers of professional service providers. In this way, at least theoretical digital know-how is successively anchored in the company. This is then also applicable in its own context. In addition to conventional image formats, original approaches are also possible, as the example of Bosch shows (Müller 2014): Digital experienced and mostly younger employees provide experienced managers with digital basic competences according to the principle of *reverse mentoring*—in 2013 mentorings for 150 managers took place this way. Another interesting option is the so-called meetups. Here, interested people organize themselves through a digital platform, in order to regularly exchange on specific topics in real meetings. A large range of digital-centered offers is thus found for almost every region. The respective *meetup communities* are usually open to the outside and thus enable fast and direct networking with relevant experts. Because of the digital display of all offers on www.meetup.com, you can quickly search for

current dates, interesting personalities, and the desired support and networking conditions.

Once the sources of knowledge are tapped, the focus is on the thematic main points. Digital competences are all too often limited to purely technical knowledge. However, digital leaders do not focus solely on the development of knowledge in technological aspects, but are concerned with the entire range of digitalization. According to a study by Forrester (Forrester Research 2015, cited according to Pütter 2015), at least five fields of work and subjects are to be covered, which are covered by the digital leader or by the digital teams (see Fig. 2.23):

- *Product ownership*

  The role of the product owner is connected to the innovation and product development method "Scrum." Scrum is a popular agile process model. The product owner is responsible for the development of products and services.

  They direct the internal resources for the iterative advancement of the digital solutions they are responsible for, integrate feedback into their concepts, and are ultimately responsible for the success of the digital product or service.
- *Customer-centric design*

  A user-centered way of thinking is to take in all development processes, whether incremental further developments or radical innovations.

  This means that the company's view of the (further) development of digital offers must be supplemented. Identifying relevant customer needs iteratively and

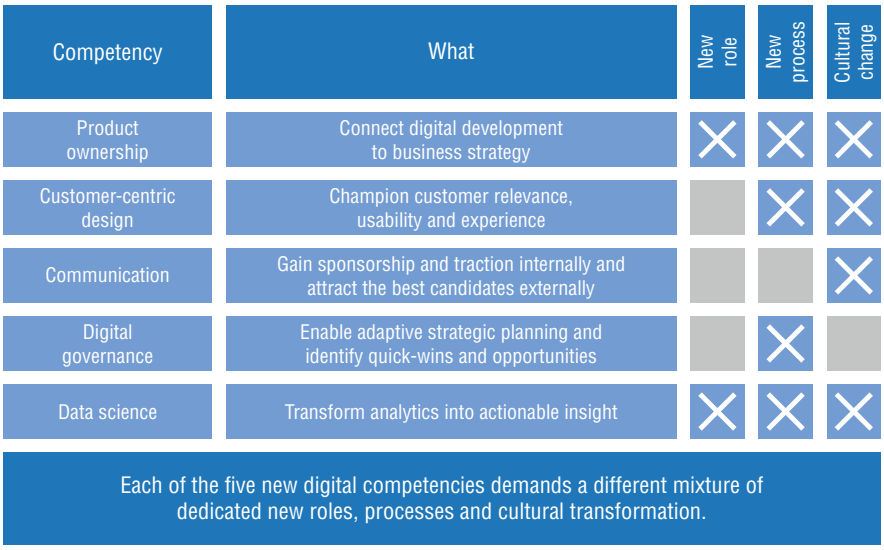


Fig. 2.23 Digital leader or digital teams must occupy five key areas of competence. Source: According to Forrester Research in (2015), quoted from Pütter (2015)

continuously, as well as transforming them into excellently usable solutions, is a core task of digitally centered teams.

- *Communication*
  Successes on the path of digital transformation and in the context of digital leadership are to be communicated internally and externally. Digital change means that it is important to control significant change processes within the organization. In addition to a number of other aspects, which will be discussed in detail in Chap. 3, transparency in the process of change and the publication of digital success are essential success factors. Digital talents can only be acquired from the outside, if the digitization has a considerable presence.
- *Digital governance*
  The importance of the strategic control of digitization projects has already been discussed in detail in the previous section and in Sect. 2.1. Without a strategically oriented management and significant top management support, a digital leadership position for the company cannot be realized. This leadership know-how and competences in all other aspects mentioned above are to be acquired.
- *Data science*
  In digital organizations, relevant data—typically—is regularly recorded at all customer touchpoints. They are also integrated into comprehensive views with the aim that data scientists can draw conclusions from the development of digital services. The insights gained in this way will be integrated into a new product/service version at the latest iteration stage by the product owner (see also Kreutzer 2016a).

If these areas cannot be filled by internal staff, appropriate new employees must be found who promote the digital competence acquisition from the outside. Even if the acquisition of digital experts seems to be a particular challenge, one thing is indispensable: the digital leaders must set up their organization in such a way that such experts are ready to participate. Furthermore, in this context, it can be useful to implement certain thematic aspects in several organizational roles and, in particular, over the existing functional areas. Digitally mature companies can finally be recognized by *integrated teams* and digitally focused employee roles.

In addition to new digital tasks, *requirements for the digital organization* must continue to be posed. These focus on the areas of team orientation, agility, and user centrality:

- Successful digital companies need a coherent collaboration in cross-functional teams. The new networking possibilities of digitization not only change the solution offered by every company. They also influence the division of labor between the regular company functions. In particular, project-related collaboration beyond previous organizational department boundaries becomes a key success factor. Experts in operational business in the respective areas must be able to contribute their knowledge to the digital development process at any time, whether for

incremental improvement of existing offers or in (temporary) cooperation with actors of the network organization in the design of pioneering innovations.

- Digitized companies continue to use *digitally centered approach models*, agile methods such as Scrum, Kanban, or Lean Start-up. The advantages of such transparent, iterative work processes lie in a shortened time to market and more efficient organizational processes. Agile development frameworks address the realities of the digital world with an empirical approach: development teams are empowered to respond flexibly and quickly to new requirements of the customer. In regular intervals new increments of operating and potentially market-driven subsystems are created. Problems are recognized at an early stage, and changes can be flexibly integrated into the product. High transparency and direct influence on the development work are further advantages, which can be played out in the more operationally focused company part as well as in the network organization.
- With the help of current digital tools, companies can provide their customers with targeted information along the entire customer journey, i.e., the consumer's point of contact with the offer. Successful digital products, services, and business models therefore align their own offerings with the requirements of the users in accordance with a strong user-centered focus. The quality and sequence of the touchpoints have to be designed in such a way that an integrated, appealing, and useful experience is created for the customer (see Sect. 2.6).

Agile (digital) organizations not only require profound changes in the distribution of work and roles within the hierarchically shaped enterprise. Agile teams are also characterized by *interdisciplinarity* and *self-responsibility*. Knowledge must be shared between both system parts and work must be done on products together. Goals are defined and pursued together. Each member is understood as a relevant part of a unit and receives direct responsibility for the result of his action. A prerequisite for this is a *change in corporate culture*—the concrete behavior of the employees in the organization and the shared values, standards, and attitudes underlying them. Or as *Evernote* CEO *Phil Libin* summed up in 2013 against the online magazine *Fast Company* (Baer 2013):

> The product is the product, the culture is the next hundred products.

THINK BOX

Questions:

- What role does innovative strength play in my company's corporate culture? What is the idea of man in my company?
- And how is my company dealing with new trends?
- What elements are to be integrated into our corporate culture in order to achieve
- the next innovation boost? What would help us at that?
- What steps are necessary for that?
- What could I start today towards this direction?
- What hinders me?
- How could I remove possible obstacles in order to start today?
- Wie könnte ich mögliche Hindernisse beseitigen, um heute noch zu starten?

These views are also shared by other digital leaders, for example, *Google* (Schmidt and Rosenberg 2014) or *Zappos* (Hsieh 2010). But also German digital companies are aware to pay special attention to the development of an individual corporate culture that is firmly established in the organization. In these examples, *culture* is perceived as *a key success factor*, especially to attract and retain talent (Schmidt and Rosenberg 2014):

> Smart creatives [. . .] place culture at the top of the list. To be effective, They need to care about the place They work. This is why [. . .] culture is the most important thing to consider.

Because digital leaders specifically need this cultural component to be attractive to *smart creatives*, new perspectives, values, and norms are constantly being brought to the forefront in the equitable analysis of cultural aspects of the company. It is necessary to constantly question the company internally and to integrate it into the concrete action in the event of a correspondence with the company's "big picture" and finally to communicate internally and externally.

Constant change is a central factor, and innovations in order to adapt to new environmental conditions are no longer a temporary activity, but must rather be carried out continuously. Against this backdrop, *corporate culture is the cornerstone and anchor of the entire organization*. This foundation is essential for digital leaders to consolidate their digital competitiveness on the basis of shared and practiced values, norms, and attitudes.

The range of the concrete *structure of corporate culture* could hardly be broader (see Table 2.2). If it is valued as a strategic asset, highly individual solutions are to be created for comprehensible reasons. However, digital leaders usually share a basic understanding of the underlying human image. In simplified terms, they are increasingly building up organizations that follow a human image of *Theory Y* according to McGregor, a model that is highly abstracted, but which allows a well-understood counter-narrative (see Fig. 2.24).

Table 2.2 Overview of the values of the companies *Google*, *Zappos*, and *Zalando*, as of March 2016

Google	Zappos	Zalando
The user comes first, everything else follows	Deliver WOW through service	Always put yourself in our customers' shoes
It is best to do one thing really well	Embrace and drive change	Think big and act fast
Fast is better than slow	Create fun and a little weirdness	Find a solution
Democracy on the web works	Be adventurous, creative, and open-minded	Play for the team
You do not always sit at the desk if you need an answer	Pursue growth and learning	Treat every day as your first day
Making money without harming someone with it	Build open and honest relationships with communication	Fly high and dive deep
There is always more information	Build a positive team and family spirit	What you cannot measure does not exist
Information is needed across all borders	Do more with less	Be creative—it is the key to our success
Reputable without wearing a suit	Be passionate and determined	Put purpose first, ego second
Good is not good enough	Be humble	Wear sneakers, not ties

Sources: Google (2016), Zappos (2014), Zalando (n.d.)

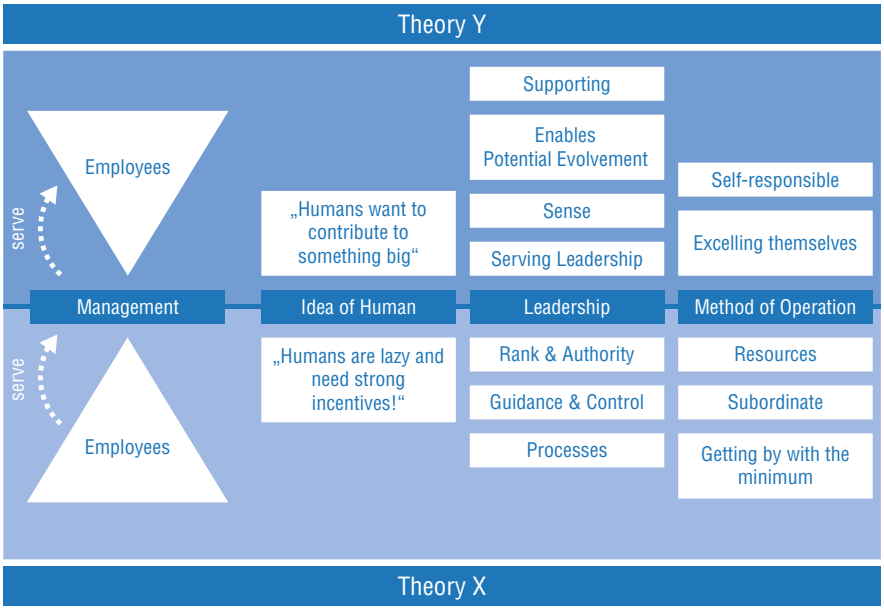


Fig. 2.24 Overview of Theory X and Theory Y of Douglas McGregor. Source: Based on Brandes et al. (2014, p. 22)

Digital leaders who primarily work according to the principles of *Theory Y* and not the *Theory X* assume that people have a strong intrinsic motivation and want to make valuable contributions to the (real) digital vision. Self-responsibility, meaningfulness, and self-determination are the criteria on which it is based. These are principles which are the basis of various agile practices and, last but not least, better suited to the world picture of young *digital natives*.

2.3.4 New Organizational Concepts for a New, Digital-Centered World

Digital leaders are not satisfied with the developments mentioned above. They actively question whether today's models of collaboration—be it a classically hierarchically structured system or a dual operating system—cannot be fundamentally radically transformed. The goal is then not incremental optimization of the status quo, but rather a radical change in the way organizations should work.

The basis for this consideration is, for example, a *model of the integral evolutionary organization*, i.e., by *Frederic Laloux* in *Reinventing Organizations* (Laloux 2015). In his opinion, the *development of organizational paradigms* is accompanied by the development of human consciousness:

> Throughout history, mankind has several times reinvented the way in which people come together to work together. And every time people have created a superior organizational model.

According to him, the human being and consequently also the forms of organization created by them do not develop continuously, but in stages (see Fig. 2.25). Discreet, model-like *steps* can be understood as an increase in *knowledge and consciousness*. Each successive paradigm includes the findings of the previous level. At a higher stage of development, the human being is able to temporarily (or completely) act from one of the earlier existing paradigms, with the help of certain environmental influences (Laloux 2015).

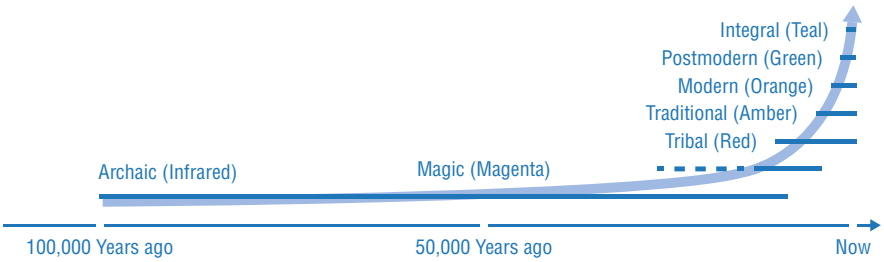


Fig. 2.25 Stages of consciousness of people and their organizational forms over time. Source: Based on Laloux (2015, p. 35)

The widely prevalent modern performance-oriented organization is questioned by Laloux (2015, p. 43 ff.) by a new organizational paradigm. In this stage (also known as the Teal Organization), he manifests the following view. Organizations are no longer regarded as machines with the highest possible efficiency, as is the case with the modern performance-oriented paradigm, or as a family to be developed (post-modern view). They are now understood as a living organism or ecosystem with its own right to exist. Here, no one should be the "boss," because hierarchy is not powerful enough to counter the complexity. The focus is on self-management, holistic approaches, and an evolutionary sense. These ideas fit only too well to the image of digital Darwinism, continuous digital change, constant innovation, and a fully networked world.

According to Laloux (2015, p. 54 ff.), three significant breakthroughs can be seen in this *integral evolutionary form of organization*:

- The *principle of self-management*: Evolutionary organizations operate entirely without hierarchy and make use of the natural workings of complex adaptive systems.
- The search for *entirety*: People in evolutionary systems are called out to act by themselves and with their full self. Social masks are to be reduced by specific practices; humans are to be viewed in their entirety.
- Listening to the *evolutionary sense*: Future developments and goals are not specified, but arise from the self-purpose of the organization. It is important to successively perceive this evolutionary sense of an organization and to pursue and develop it integrally.

Digital pioneers are ready to evaluate these far-reaching proposals for action in the organization, as well as the principles for the organization itself and to question existing practices. They are based on the experience of other pioneers. For an overview of the *possibilities for a concrete development of an integral evolutionary organization form*, see Fig. 2.26. Subject to the industry and size of the company, various possibilities of the integral evolutionary organization can be realized, from a small, self-governing company to multiple structured teams in industries with short value chains to complex scaling mechanisms and networks in larger business contexts.

Valve Software, an American game manufacturer and technology developer, is such a digital pioneer who has been working on self-organizing principles and a hierarchical approach for many years. The company is well-known for its particularly consistent implementation of integral evolutionary practices, which are extensively documented in a separate manual (Valve 2015). Self-organization is not a cultural accessory or merely a heading in the company's description but common practice, a principle which was not detrimental to economic success, at least until today.

Another example is *Zappos*. *Tony Hsieh's* co-founding company, which is still managed by him, has been one of the largest test labs for integral evolutionary enterprises since 2014 on the way to becoming a Teal Organization (Denning 2014)

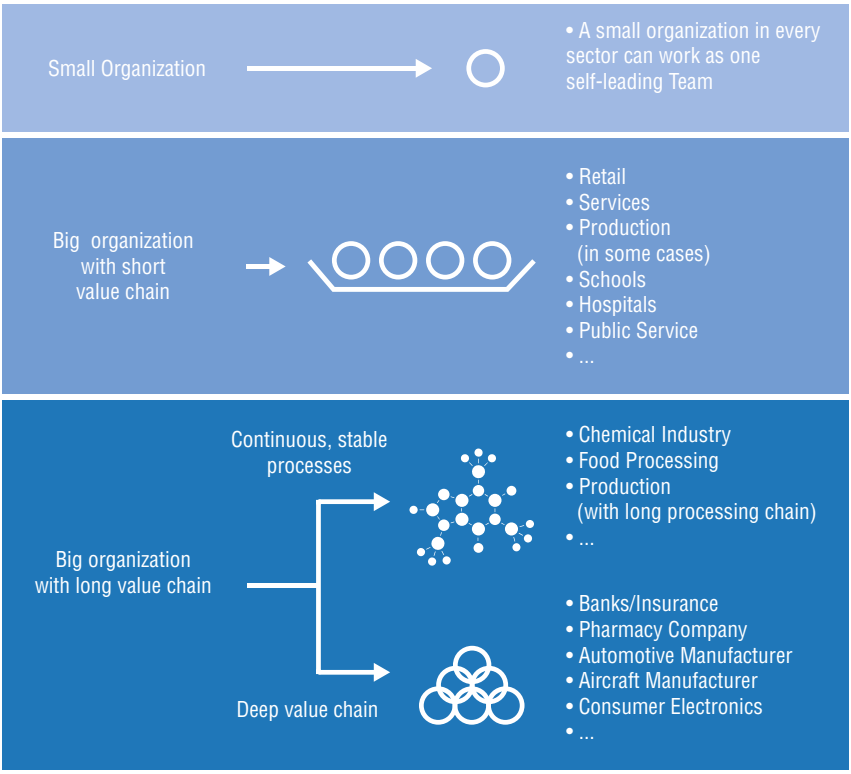


Fig. 2.26 Structures of evolutionary organizations. Source: Based on Laloux (2015, p. 317)

with around 1500 employees. *Zappos* is implementing a special form of self-organization, the management method *Holacracy* (Robertson 2015). Holacracy—in terms of a rule of completeness—is a process in which decision-making processes across all levels are accompanied by a very high degree of transparency and participation. This approach is currently very popular in American digital start-ups, but overall, due to its high degree of formalization, it is not uncontroversial. And even if the change to such a radically different form of cooperation cannot take place without obstacles, the path seems clear for *Zappos* CEO *Tony Hsieh* (Greenfield 2015):

> Our main objective is not just to do Holacracy well, but to make Zappos a fully self-organized, self-managed organization by combining a variety of different tools and processes.

The streaming service *Spotify*—especially known for its disruptive business model in the context of Digital Business Leadership (see Sect. 2.2)—is also experimenting with a new agile form of cooperation, which is consistent with the principles of self-organization, and is intended to serve as a final example in this context. In contrast to *Valve* and *Zappos*, whose integral positioning immediately captures the entire

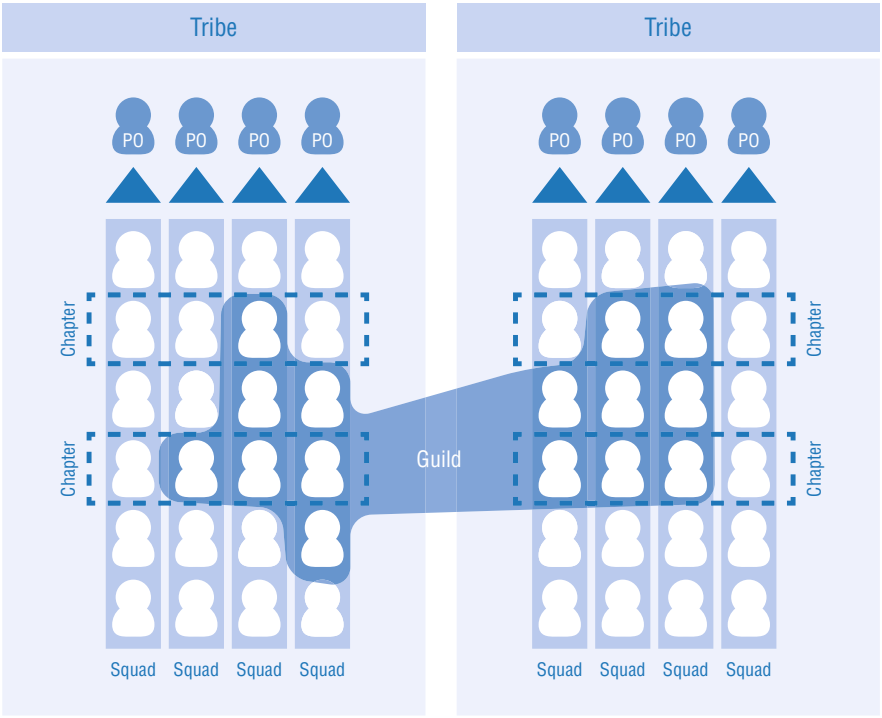


Fig. 2.27 Agile scaling with Spotify. Source: Based on Kniberg and Ivarsson (2012)

company, *Spotify* is initially limited to the agile scaling of product development. More than 30 teams at 3 locations work according to agile practices and their own structure in order to be successful beyond the actual project team. To this end, new structures have been created (see Fig. 2.27) (Kniberg and Ivarsson 2012):

- *Squads*, which correspond to the original setup of an agile project team
- *Tribes*, a consortium of squads that operate in related fields
- *Chapters*, a sum of employees with comparable areas of responsibility and skills
- *Guilds*, representing the general "communities of interests"

However the specific model may be designed: digital leaders need to challenge their own organizational solutions. They will implement agile product development concepts with the goal of scaling these agile principles across several teams. They do not restrict their activities to traditional hierarchical organizational forms, but actively seek new ways to reconcile the vision, business model, innovation aspirations, corporate culture, and operational requirements.

MEMORY BOX

Digital Business Leadership calls for a consistent further development of the conventional hierarchical organizational forms. Without a consistent change process within the company, there will be no outstanding success on the outside!

Finally, it must be noted that when digital change captures corporate goals and objectives, its own business models, as well as its products and services, traditional organizational structures must grow and adapt to the digital age and its players (e.g., new employees). Digital Business Leadership therefore calls for a consistent organizational development (see Chap. 3).

2.4 From Product to Process: The Relevance of Services

The boundaries between physical products and intangible services are fluent through digitization: manufacturers of hardware are also providers of services, as already mentioned in the success story of the Apple iPod with the iTunes store. The entrepreneurial attitude on the way to a digital business leadership does not focus on the physical product or the intangible service, but puts the *development of usability* at the center of entrepreneurial activity. This marketing orientation, in economic activity, is not new. But the technical options and expectations of the customers not only make this possible but to an ever greater extent simply necessary: "smart devices," which are mobile, networked, and equipped with sensors, offer future-oriented solutions. In Digital Business Leadership, the goal is to *overcome the dichotomy of product and service*, to think primarily about the benefits it offers, to shape it from the customers' point of view, and to use the technological megatrends: *Think about the product as a service*!

2.4.1 Introductory Remarks on the Growing Importance of Services

Until now, the relevance of services has always been measured with a major contribution to the gross domestic product (GDP) of an economy. In Germany, the tertiary sector (also called the service sector) accounted for 68% of GDP in 2014 (Statista 2015b). However, the area of use for services is even broader with digitalization: the Internet is not only a digital distribution channel but also triggers completely new business models. Internet-based technologies allow for the dissolution of company boundaries to more integration of partners and involve not only suppliers but also more intensively the customers (B2B and B2C) of services (see Fig. 1.11). The resulting changes in business models, working environment,

and data security will present new challenges in the future. With the so-called service transformation, the company's competitiveness in the high-wage location in Germany is to be sustained.

2.4.2 Smart Services as Digitized Services

In the current discussion on digitization, the concept of *smart services* is being dealt with in terms of services. These are individually configurable *bundles of services and products* through digital platforms that bring together multiple providers—also industry-wide—to form a *digital ecosystem* to create *specific customer solutions*.

The *origin of smart services* is the trend towards *industry 4.0 and business 4.0* (see Fig. 1.2). Industry 4.0 first touches all functional areas of the industrial operation, along with the Internet of Everything and the shared economy. Innovative services offer strategic options: "The focus is no longer on the ownership of products and resources, but on access to the services they provide" (Scheer 2015, p. 448). Industrial enterprises can develop into service providers that provide accompanying services (maintenance, training, financing, etc.) in connection with their products—up to being a complete service provider in a build-own-operate (BOO) approach. Providing a smart service is a "wake-up call to German industry: Good products are not enough in the long term. Smart services are the new products and are part of the Digital Agenda" (BMWI 2014). In this case, the transition to the broader concept of the economy 4.0 is to be carried out.

As part of the "digital agenda" of the federal government (BMWI 2015), smart services are to expand the industry 4.0 or better the economy 4.0 by intelligent services that generate Internet-based value in all economically relevant applicable areas. The following objectives can be achieved (Smart Service Welt 2015, p. 11ff.):

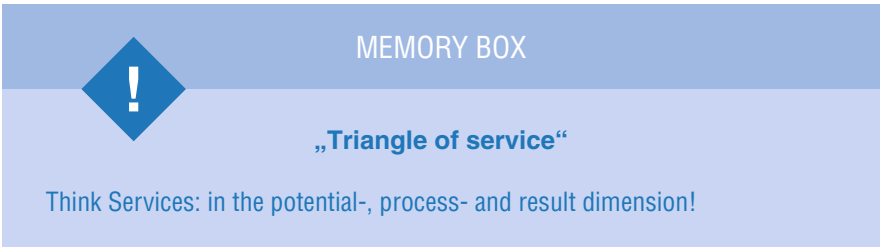
- *Control of cross-company value on the basis of widely available data*: On fully automated marketplaces, factories—partly autonomous—and service providers are brought together.
- *Self-optimization of value-added processes*: The elimination of problems takes place "remotely" and, in particular, before their appearance. The bases for this are analysis data, diagnoses, and recommendations, which are generated automatically.
- *Development of new business models*: The extensive availability of production- and demand-driven data—for example, through performance contracting and crowded communities—is used for product and business model innovations.
- *Enforcement of intelligent service concepts, such as financing and insurance offers*: Through the transparency, as well as the online availability of entire business processes, models such as "Everything as a Service" and "Pay per Use" can be established. This leads, for example, to individualized insurance contracts.

An example of smart services is the "digital network from the field to the stable," which should make farming management easier, more productive, and more environmentally friendly (Claas 2015): in the cooperation between *Claas* (agricultural engineering), *GEA Farm Technologies* (milk production solutions), and *Amazon* (manufacturer of land and municipal machines) with *365FarmNet* (software), an integrated power bundle was created for farmers. This supports their processes based on weather and satellite data from sowing to fertilization and harvesting to feeding with the help of networked machines. In the field, machine settings are optimized in such a way that the seed is applied for the best possible growth and plants are appropriately fertilized after examination by a plant sensor. In the stable, for example, the data on the dairy performance and health of a cow can be used in real time to plan their food and, if necessary, their medication.

2.4.3 The Theoretical Foundation of Services

Services are intangible assets, which are not available as a "finished product." Rather, they require the cooperation of service providers and customers. This "uno actu" principle is a constituent for services. In order to be successful in the digital business, a basic understanding of the nature of services is important.

Meffert et al. (2015a, p. 14) define services as "independent, marketable services linked to the provision (e.g. insurance services) and/or the use of capacities (e.g. hairdressing services). This link is called *potential orientation*. Internal factors (e.g. business premises, personnel, equipment) and external factors (i.e. those which are not within the sphere of influence of the service provider) are combined in the context of the creation process (*process orientation*). The service provider's factor combination is used with the aim of achieving beneficial effects (e.g. inspection by the car) on the external factors, on people (e.g. customers) and their objects (e.g. car of the customer), the so-called *result orientation*."



Source: Meffert et al. (2015a, p. 14)

THINK BOX

Questions:

- What is the importance of services in our business model?
- What contribution to earnings do we generate in our company through services?
- How do we differentiate us from our competitors with regard to the potential-, process- or result dimension?
- What resources must be available when, where, how and in which quality, in order to achieve a convincing service quality for the customer?
- How well do we already manage this today?
- What services can we offer in the course of digitization - as a core service or as an accompanying service - in my company?
- What opportunities and risks does the Internet of Everything provide for us?
- What complementary services can we gather through third-party partners for a convincing service generation?
- How successful are our classic competitors in that already?
- Which start-ups are able to penetrate our traditional business areas with their concepts?
- What beneficial offers does the customer expect from us today?
- What other beneficial offers do customers want from us or from providers who are more innovative than us?
- Which meaningful and valuable approaches are there to integrate our customers into the processes of generating ideas, production and / or marketing?
- What skills and motivation can the customer possibly contribute within his/her engagement?
- What does the customer expect from us in return?
-

Implications for management services emerge from the *triad of potential*, *process*, *and results orientation* (Meffert et al. 2015a, p. 30 ff.). Thus, in the consideration of *potential orientation*, the necessary resources for the performance of the service provider must be maintained and coordinated. In addition, their competence must be documented externally. In the *process orientation*, the integration of the external factors (customer) and the parallelism of service provision and utilization are correspondingly important. Finally, with regard to the *result orientation*, it must be taken into account that a service cannot be stored and transported. These characteristics must be managed through capacity adjustments and control of demand.

The relevance of services is fueled in the scientific discourse by the concept of *service-dominant logic* by the American authors Vargo and Lusch (2004). They demand that a *change of perspective be carried out from the exchange of goods to the exchange of services*. They also postulate that economies are service economies, companies only supply the promise of utility, value is subjective, and the customer continues the value-added process by using the goods (Meffert et al. 2015a). The team of authors defines services as the application of specialized competencies

(knowledge and skills) in the form of instruments, processes, and services to the benefit of another unit or the unit itself (Vargo and Lusch 2004). The aim of the service-dominant logic is a customer-specific offer, which recognizes that the customer is always also a co-producer and that maximum customer integration serves the creation of value. The tangible goods are merely a means of providing services (Vargo and Lusch 2004, Drengner et al. 2013). In the service-dominant logic, for example, Volkswagen would not sell cars, but the "mobility" service associated with cars—the car is merely the materialized application of specialized competences in automotive production and thus aids for the provision of mobility.

The service-dominant logic has been widely observed in scientific discussions and has been further developed over the last few years (Vargo 2015). Service is often understood as an "accessory" to the tangible product; however the service-dominant logic is exactly the opposite: *The product is only a tool for the service*.

The development documented here underscores why classic, product-oriented business models are to be further developed. A first important approach is that the *fifth P* has been included in the marketing mix for staff (Kreutzer 2013). In this way it is taken into account that the "product experience" is characterized to a great extent by the way the personnel acts—be it at the POS, on the telephone, or in e-communication. As already indicated, *services* can be understood as the application of skills and knowledge of company or its employees in order to contribute to the added value of the buyer or the demander. It is already clear that service is not to be understood as an end in itself, but is intended to generate additional value for the buyer or user as well as for the company. The extent to which such value can be generated is also influenced by the context of usage.

The *importance of service provision* within the respective business models depends on the service intensity of the individual products and services. Figure 2.31 makes clear in which areas a product or a service dominance is present. This shows that there are still many areas where service is less important. It must also be taken into consideration that selected service offers (especially in social media) are to be found in product offerings which have a strong product dominance (here soft drinks and toothpaste). In sum, it is clear that the overall performance of a company is also characterized to a large extent by activities in the sphere of the customer (Kreutzer and Land 2016b).

It is also necessary to consider a special feature. The positioning of offers shown in Fig. 2.28 focuses on the services provided with the acquisition of products and services. Today, however, many people have the opportunity to get in contact with companies and brands without having acquired or used the respective offers themselves. Thus, the clear majority of the approximately nine million *Porsche* fans on *Facebook* today can neither drive a *Porsche* nor buy it in many years. This means that service expectations are also available to nonbuyers. And every company is well advised to determine whether this applies to one's own company.

A second important aspect of the *service-dominant logic* is that the image of the company and its various offers are characterized by the *interaction of third parties with the brand* to a large extent. These include, for example, critical reports which attempt to identify quality deficiencies in the case of well-known brands, in order to

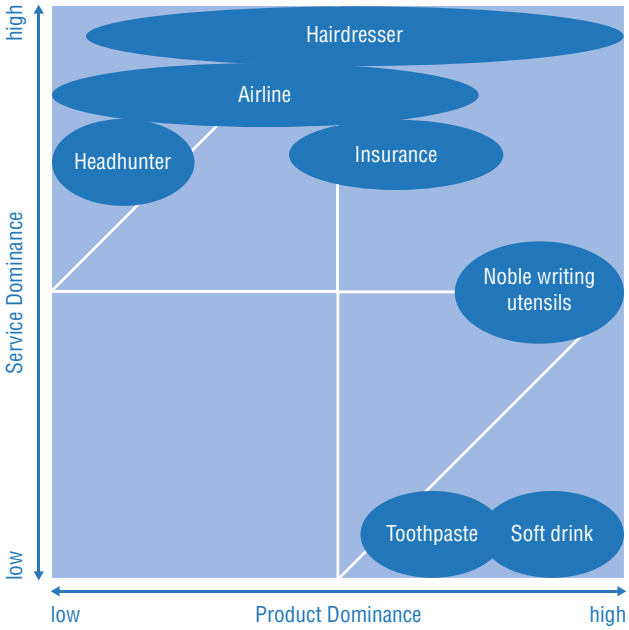


Fig. 2.28 Portfolio "product versus service dominance". Source: Based on Kreutzer (2016b, p. 35)

make them publicly effective. These include formats such as the ARD's *brand check* and also reports from *Team Wallraff* at *RTL*. If reports are then broadcast under the headline *Undercover at Burger King: Disgusting Conditions and Exploitation*, a shitstorm is pre-programmed in social media. The agenda for today's reports: one is concerned about child labor and inhuman working conditions in textile production in Bangladesh, another one with large-scale recall campaigns by automobile manufacturers, suicides in Chinese production cities of entertainment electronics, etc. Such events, which are not staged by the company itself, can today have a worldwide impact on their image.

The following *aspects of the service-dominant logic* are to be considered when building a Digital Business Leadership (Drengner 2014):

- *Customers* are not only seen as buyers and users but *as value-added partners*, who can be integrated case by case into the process of value creation (see Sect. 2.5).
- Companies have *no overall control* over the factors that affect the corporate image or the brand image.
- *Additional stakeholders* have to be integrated into different processes of the company (e.g., digital opinion leaders; see Sect. 2.8).

- *Employees* need to understand themselves as a brand ambassador much more strongly than before, because their behavior in many areas has a lasting effect on brand image and brand value (see Chap. 3).

2.4.4 Service Transformation: From Product Manufacturers to Service Providers

The increased importance of services is recognized not only in the scientific discussion but also leads to new entrepreneurial principles in practice. In addition to smart services and service-dominant logic, *service transformation* has become a key concept. This refers to the development from a product manufacturer to a service provider. Bruhn et al. (2015) develop a matrix for the typologization of business model approaches (see Fig. 2.29) which are based on the following constitutive features of the concept of service (see Sect. 2.4.1):

- *Individuality of the service offer*: from standardization to individual customer orientation (customization)
- *Immateriality of the performance result:* from operational processes (e.g., maintenance) to business processes (e.g., operation of plants)

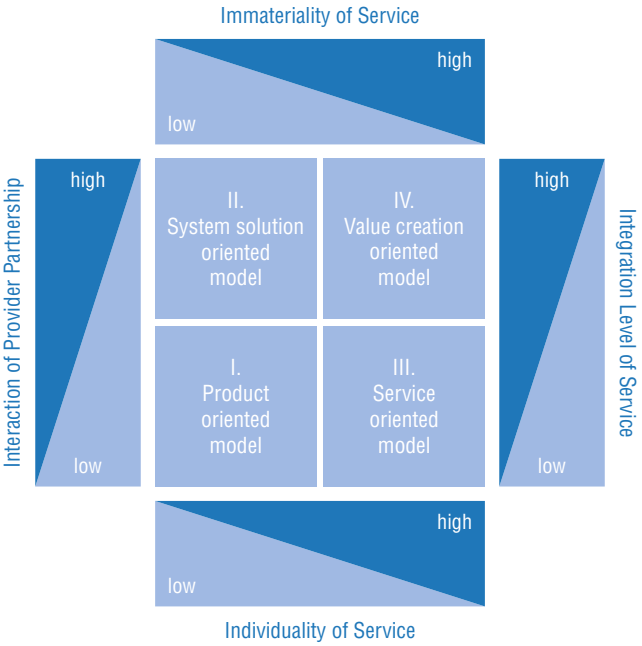
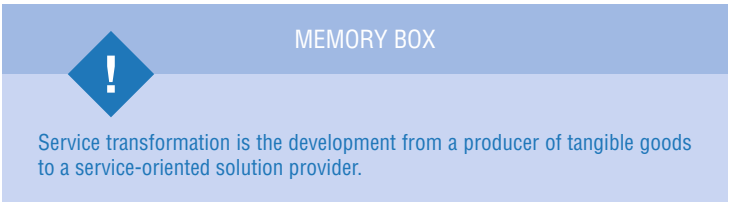


Fig. 2.29 Business model approaches to service transformation. Source: Based on Bruhn et al. (2015, p. 139)

- *Interaction of the supplier partnership*: degree of cooperation between solution providers
- *Degree of integration of the service offer*: customer-driven assessment of supplementary additional service to holistic solution

The characteristics of the different *business models of service transformation* are as follows (Bruhn et al. 2015, p. 141 ff.):

- The *product-oriented business model* primarily markets product-accompanying services. These include the following forms:
  - Pure product manufacturer
  - Product manufacturer with compulsory service (e.g., required by law)
  - Product manufacturer with product-accompanying service
  - Product manufacturer with product service bundle
- The *system solution-oriented business model* is aimed at the marketing of power bundles and includes:
  - System solution provider with primary attention to the product
  - System solution provider with primary attention to the service
- The *service-oriented business model* offers services aimed at the business processes of the customers. Differentiation can be made between:
  - Service provider and customer integration
  - Service provider and solution development together with customers
  - Service providers and industrial networking of customers
- The *value-added business model* markets operator models and unifies the product-, system solution-, and service-oriented business model. The form of expression here is that of the value-adding partner.



From the abovementioned explanations, valuable approaches to the design of service concepts can be derived in practice. The examples outlined here are intended to represent a spectrum of sectors with different service focuses: from the automotive manufacturer to commerce up to the start-up of a variety of different orientations.

- *BMW—a car manufacturer as system solution provider*

  The location for the presentation of a vehicle was rather unusual: a trade fair for digital marketing and advertising. The product, however, is very fitting: a

"connected car." *BMW* presented the completely connected *BMW 7 Series* on the *dmexco* in September 2015. In times of news about the development of an *Apple iCar* and driverless cars from *Google*, a service-driven solution for a strong brand is a strategic option: drivers need navigation and entertainment and want to find their home safe, bright, and warm after driving their car. *BMW* is bundling the solutions developed with their partners for the network of driver, car, and environment in the *BMW ConnectedDrive* (BMW 2015): functions of networked houses with apps from *Deutsche Telekom* and *Samsung*, integration of *Apple iOS* and *Android* smartphone apps, *NTV* app, as well as mounting systems for *GoPro* cameras for video and photo recordings during the car journey.

BMW thinks of its product as a service: mobility. In addition to the offer of car sharing, *BMW* also offers "intermodal routing" in the form of a navigation to alternative means of transport. The range extends from networking with *Deutsche Bahn* to navigation to the Park & Ride car park and the display of timetables.

- *Collins and Otto shipping—the digital ecosystem integrates partners and customers*

  Digital transformation is the vision of the company *Otto Versand*: "We make digital future" (otto.de). Otto generates 80% of the total turnover through their online shop, which celebrated its 20th anniversary in 2015. *Otto's* "idea forge" is the e-commerce start-up *Collins*, a 100% subsidiary of *Otto*. With an open-commerce approach and technically advanced personalization, *Collins*, which was founded in 2013, plans to build a digital ecosystem (Fuchs 2015). In line with *Apple*'s ecosystem, *Collins* opens its platform for exclusive content. This approach is well illustrated by *Collins about you*: the online store is based on its "inspiration area," presenting the latest looks from brand manufacturers or outfits of bloggers, which can then be purchased by the customers. The click and purchase behavior feeds the database, which stores the respective customer preferences and personalizes their offers. Not only *Otto* or *Collins*' own products are sold. *About you* offers third-party developers, an open-commerce platform for stand-alone appearances: using third-party software development kits provided by *Collins* at the developer center, third-party apps can be developed and then commuted through sales commissions app.

  Collins is a solution provider that connects manufacturers and service providers through a digital ecosystem. In October 2015 *Collins* opened the first stationary shop in Hamburg. This extends the ecosystem and promotes the integration of on- and offline, because ultimately it is necessary to design the customer's purchasing process.

MEMORY BOX

Digital business leaders are not limited to the „digital" in the ecosystem, but they use its advantages to create customer value.

- *Shippies—Crowd delivery solution with complete service orientation*

  The Frankfurt-based company *Shippies* is a *local delivery service platform*, a delivery service of all for all. After the registration, the so-called Shippie Buddies will be able to pick up the goods and bring them to the customer. The idea is that a customer can choose a local retailer and a registered Shippie Buddy who is nearby, receives the transport order, and the customer gets his goods the same day. What are the advantages? First, dealers can reach new target groups, couriers increase their utilization, Shippies pursue a sideline, and customers save time, money, and energy.

  This start-up was awarded the "2015 Smarter Service Award" (see Steimel et al. 2015). Through an intelligent *platform*, *Shippies* connects the crowd to the stationary trade. This could lead to a clever and environmentally friendly solution. The long-term success of such a solution depends on network effects and the social acceptance of the idea.

2.4.5 Development of Services with Service Design and Design Thinking

Through innovative services, companies can not only strengthen their competitive position but also open up new business areas in the long term. But how can new viable *service concepts* be developed? Good service concepts start with listening! The already described areas of digitization offer options that arise from the variety of data (buzzword: big data) which companies actively have to transform into relevant information (buzzword: smart data). Through web-based communication channels, companies can carry out *ethnographic studies* and determine which key words are currently receiving attention in communication. Customers can report on their preferences—in real time: whether as a service request, as a complaint directly to providers, or indirectly through appropriate platforms such as portals or communities.

But the machines themselves have also become able to communicate and report downtimes, repair requirements, and provide basic data on their capacity. This makes clear that *machine-to-machine communication* also provides important impulses for the development of service concepts. This broad network of customers, applications, and companies increases the complexity that companies need to manage, while also however offering the opportunity to develop new business models. This can be found where providers consider themselves as problem-solvers. The separation between physical product and incomprehensible service loses relevance.

This changed approach to the market should be understood as a further developed *service philosophy*. Change processes therefore affect all areas of the company. Not only the company management but all employees in the development and production up to sales must think of solutions. This entails an education and training program that not only addresses the "classic service areas" but also covers all areas that are confronted with service (Van Husen 2015). These tasks must also be addressed within the framework of the change management process (see Chap. 3).

Once again, this makes clear that the goal-oriented design is based on customer requirements. It does not always have to be "the huge success." Innovations can also

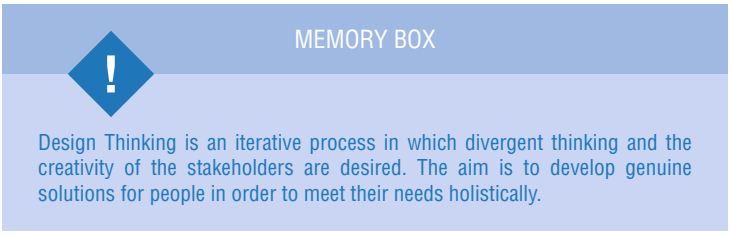
be the optimization of existing services, which positively influence customer satisfaction and thus also increase customer loyalty. This is a so-called Horizon 1 innovation. Such an optimization is, for example, the integration of a mobile order-and-pay (MOP) function into the Starbucks app. Customers can now place their Starbucks order via smartphone and can pick it up without waiting in the café. Additional features are the navigation to the closest Starbucks, including the corresponding timings. With this expansion, Starbucks is able to serve the convenience of the customers, allowing them to continue with the range of possible choices (8000 different combinations), ensuring that the order has been correctly understood, which can sometimes be difficult in busy Starbucks.

One option to continuously develop service innovation—so-called Horizon 2/3 innovations—is the concept of service design. The aim is to create the function and form of services that are "useful, usable and desirable from the customers point of view and that are effective, efficient and different from the vendor's point of view" (Mager und Gais 2009, p. 42). As in the case of a tangible product, "the criteria for the design of a service can be based on meaningfulness, functionality, ergonomics, environmental compatibility, economic viability and aesthetic maturity" (1997, p. 87). The approach is phase-oriented and iterative—the focus is always on the customer. This presupposes *a holistic understanding of needs and desires of people* based on direct observation, which is met very appropriately with the term *design thinking*. Tim Brown (2008, p. 86), one of the forerunners of design thinking, defines this as a discipline that uses the sensibility and methods of a designer and combines it with the needs of people with the technical possibilities to create value from a business point of view. Thus, innovations are not strokes of genius, but result in process that is characterized by the following five principles (Stickdorn and Schneider 2010, p. 34 ff.):

- *User-Centered*: Design thinking starts with consumer insights. Diverse methods provide data over the needs, realities, and understanding of the world of the customers.
- *Co-creative*: Involvement of all stakeholders in the design, provision, and use of services. Thus, customers and employees with direct and indirect customer contact as well as any people involved in the service in a broader sense.
- *Sequencing*: The rhythm of a service must be made. Here, the analogy of a movie helps: it is all about the drama. In service design touchpoints and interactions are considered in phases: before, during, and after using the service.
- *Evidencing*: Service evidence are "materialization of services," i.e., things like certificates, souvenirs, signs, etc. make a service "tangible."
- *Holistic*: The design of services should be holistic. The physical elements, which are perceptible with all senses, such as the space of the service, the equipment of the tools, and the clothing of the service providers, are relevant.

Design thinking has established its own tools. A well-known and used model is that of the agency *IDEO*, whose founder and CEO *David Kelley* has coined the term "design thinking." The *IDEO* model consists of a system of overlapping "spaces." Iterative loops are possible between the same spaces and make the design process

seem a bit chaotic. These spaces however are inspiration, ideation, and implementation (Brown 2008). The *inspiration* conceives the problem or chance that motivates a search for a solution. The "real life" is to be analyzed in order to generate genuine ideas. *Ideation* is the already mentioned process of generating, developing, and testing ideas. *Divergent thinking*, which can best be done by interdisciplinary teams, is present. *Implementation* ultimately is the way from the project into the lives of people: prototyping and realizing product ideas.



In order to make user orientation more "comprehensible," one can use the *persona concept*. Personas are fictitious archetypes that represent the target group and give them "a face." They are described as a real person. They have a life history, hobbies, life philosophy, i.e., a name and a picture. In the design-thinking process, these personas can always be referred to in order to answer very specific questions:

- Would they use the product?
- How much they would be willing to pay?
- What features are the most useful?
- Where would they buy it?
- On which media platform would they find out about the offer?

The processual development of a persona is practically described in Pruitt and Adlin (2006, p. 48 ff.).

- *Family planning*
  Firstly, a core team has to collect data within and outside the organization in order to identify problems and needs. The results of this phase are raw data for further persona development.
- *Pregnancy*
  After the initial planning phase, it has to be decided how many personas are to be developed, in which level of detail, as well as the timetable for their introduction into the organization. Then the heart of the pregnancy is the development of the personas with all relevant descriptions, which should be summarized in a founding document (see Table 2.3).

Table 2.3 Persona founding document

Feature	Characteristic
Identifying details	
Surname	Typical name—Warning: There are very popular names for different age groups, which describe the target audience best. An Internet search helps to find the appropriate name (e.g., as German Language Society under http://gfds.de)
Age	Typical age
Tag line	Slogan. For example, philosophy of life, frequently made statement
Quote (concerning the product)	Special statement concerning the product, for which this persona is created. It can be about quality, use, or special characteristics of the offer
Family	Family origin: parents, siblings, possibly more people associated with her "community" who have a decisive influence
Marital status	Own family situation, e.g., living in partnership, married, divorced, single
Place of residence	Current geographical residence
Roles and responsibilities	
Companies	Name of the employer or independent work
Position	Role in the workplace, for example, the hierarchical classification
Typical activities	Activities and work carried out by the persona on a regular basis or in a particular style and which may be relevant to the product or service to be developed
Important atypical activities	Activities, occupations, and work that the persona would not be "trusted" with at first, for example, rare hobbies, extreme sports, unexpected social or political engagement
Challenges, pain points	The special problems that the persona has to face in his/her profession or in his/her daily life
Responsibilities	Responsibilities in business and everyday life
Interaction with other personas, systems, and products/services	Contacts with other (developed) personas in the context of professional activity or everyday life, which may have a particular significance for the product. Description of systems and products/services which are important for the role of the persona
Goals	
Life goals short, medium, long term	Aspired materialistic and intellectual goals, if necessary, sorted by time
Objectives relating to the product or service	The specific conditions which should be reached with the product/service to be developed
Work-related goals	Aspired goals in their professional lives
Ground ätzliche life goals, aspirations	Fundamental desired goals, desires, hopes

(continued)

Table 2.3 (continued)

Feature	Characteristic
Skills and knowledge	
General computer skills and Internet usage	Expertise and intensity of use of hardware and software
Area of expertise	Expertise in one or more fields
Frequently used products/services	Products in use or demanded services for work and everyday life
Special skills	Special knowledge, e.g., in relation to the profession or in their private life
Knowledge about competitors	Knowledge of alternatives to the products or services at issue here
Context	
Equipment	Equipment, e.g., professional or private relevant technology, material, and instruments
"A day in the life" description	Representation of a typical day of the persona. This "typical day" does not correspond to reality in its entirety, but includes relevant, frequently recurring activities, contacts, activities, etc.
Specific places where product is used	Places where the product is used
Household and leisure activities	The typical activities that do not belong to work, but are relevant for their private life
Relations with other personas	Naming of personas that do not belong to the professional life, but are relevant for their private life
Psychological and personal details	
Characteristics	Description of the personality with "human traits"
Values and attitudes (political and religious)	Beliefs regarding politics and religion
Fears, obstacles, annoyances	Emotional states which shape the personas' thoughts and feelings
Personal artifacts (car, gadgets)	Description of all items which have a particular importance to the persona, in relation to the future product or service

Source: Based on and translation by Pruitt and Adlin (2006, pp. 230 et seq)

- *Birth and maturity*

  When the personas are released into the organization, a measure of communication should be implemented for their introduction and use so that they are understood, honored, and also used.
- *Adult life*

  The adult life is the range of use of the persona in the organization.

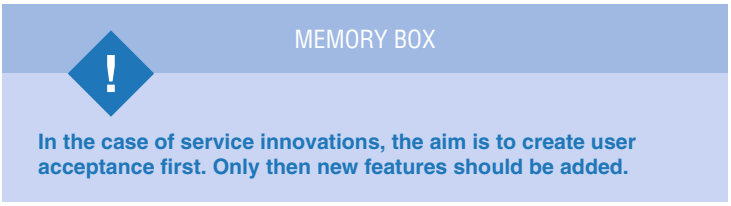
  In this case, the persona should fulfill the intended purposes by, for example, having the developer team repeatedly ask themselves test questions: "Would Persona Marc use this feature?" or "Where would Seda now look?" What is decisive is that once they are released into the organization, no more modifications (e.g., by product development teams) should be made to the personas!

- *Pension*
  If the persona has fulfilled its life, meaning the organization has provided the necessary visualization and projection, it can "retire." In conclusion, it can be evaluated: Was the persona effective? What lessons were learned for the next persona project? Should these personas be used again for the next product or further development?

The "founding document," which we have developed further, is to be presented here, which fully describes the personas and which should facilitate communication within the organization and in the design team (see Table 2.3).

When organizations rethink their service offerings from the product to the service, they are often confronted with resistance: internal acceptance problems and fears, which emerge, for example, because major changes in the service offer also affect employees personally. As already stated, the *staff in service providers* are of great importance. The technical and personal competences are different in service packages than they are in primary manufacturing companies. Brown and Martin (2015) therefore recommend that the implementation process of the service innovation itself be designed with design tools: the idea here is that *of intervention management*, which of course results from the iterative approach of design thinking. Thus, the company should implement the new service internally and iteratively and remain open for the feedback of its own employees. Digital business leaders understand that GoLive is only *one step* in this transition from product to service and that some modifications do not just "happen" but are desired. Ultimately, it is about the commitment of all stakeholders!

In addition to the active participation of employees in service design, time is a critical success factor. Brown and Martin (2015) mention the statement by *Bill Buxton* that the *Apple iPod* was an "overnight" success—which lasted 3 years—because after its release, customer-induced changes to product design were carried out again and again.



We should also bear in mind that in this respect, a development is to be found, in which the range of services is increasingly developed in the direction of service. The development stages are shown in Fig. 2.30. Initially, *pure product offerings* dominated many sectors. In the course of time, *products were supplemented by services*. Now we can find that *product offers are penetrated by services*—and often a product can only

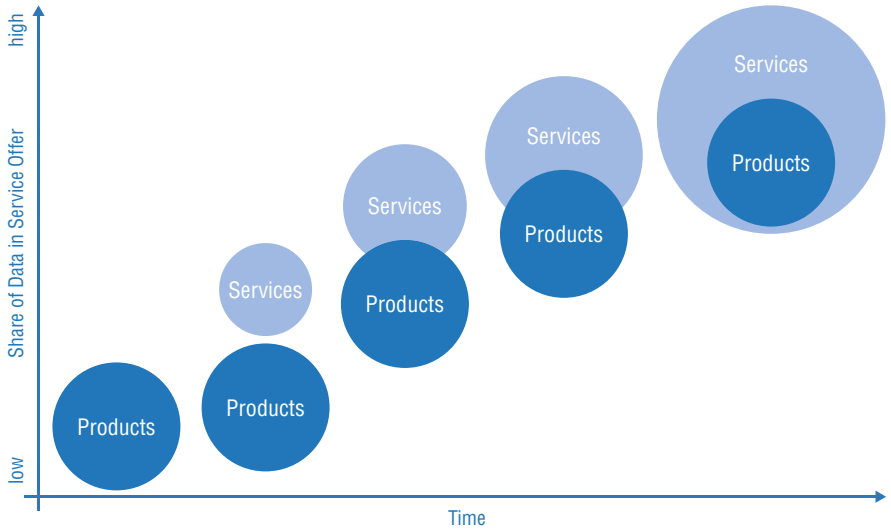


Fig. 2.30 From product to service

reach its entire application depth through the accompanying services. At the same time, more and more business models are being made visible, whose core is services.

The use of digitalization not only brings gains in efficiency but also innovation advantages. These can be found where providers consider themselves as problem-solvers. The separation between the physical product and the intangible service is then a theoretical one. This change in approach to the market is a key feature of the digital business leader: to think of the service offer from the customers' point of view. It does not matter whether it is a tangible product, intangible services, or a combination of both.

MEMORY BOX

In the case of innovations and, in particular, service innovations, the aim is to use digital and analogue resources to create a superior benefit for relevant target groups.

THINK BOX

Designing
relevant services.

Questions:

- How well do I know the current needs of my customers?
- How can I continuously generate, evaluate and communicate feedback from direct customer interaction?
- Where lies the responsibility for the "customer opinion" in my company?
- Do we create relevant benefit offers or are we stuck in our (so far, well-functioning) product view?
- How open are we to change: Can we iteratively adapt our service offer to the market? Are the relevant stakeholders involved?

2.5 Open Innovation: How Customers Are Integrated into Innovation Processes

2.5.1 Backdrop for Open Innovation Concepts

In order to make use of the *company's innovative potential*—especially among its own prospects and customers—companies are increasingly integrating customers into the innovation processes. The relevance for this is the fact that for each customer, a new product always involves a change in behavior. As a result, a new product often entails *psychological costs*, in addition to *monetary costs* for the purchase, because learned behavioral patterns are depreciated and new skills have to be acquired (e.g., when they are trained in a new software release). This often leads to the phenomenon that customer products that they already own and use are rated better than others.

Consequently, the *decision about the acceptance of innovation* is accompanied by an emotional and rational consideration process: the subjective advantages of the innovations are compared with the subjective disadvantages. Thus, an electric vehicle not only contributes to a cleaner environment but also makes the tank operation more complex. The still low acceptance of electric cars underlines this aspect. A winemaker will appreciate the longer shelf life of a wine with the help of screw caps; on the other hand, he will miss the classic way of opening bottles. Further innovations are shown in Table 2.4 with their advantages and disadvantages from the customer's point of view.

This makes it clear that innovations often equally have advantages and disadvantages for customers. If the advantages of an innovation are not convincing enough, they will not be accepted. If one takes into account that the share of unsuccessful product launches—the so-called flop ratio—reaches a value of 70–90% in many industries,

Table 2.4 Subjective assessment of the advantages and disadvantages of innovations

Innovation	What customers gain by purchasing	What customers lose by purchasing
Electric cars	Clean environment	Easy refueling at a variety of petrol stations
Car navigation system	Quickly finding the destination	Orientation in an unfamiliar surrounding
Online grocery shopping	Home delivery	Possibility to choose the freshest product
Cell phone music download	Music can be purchased anywhere mobile	Using the existing home entertainment
Wine bottles with screw/ synthetic corks	Durability	A sensual experience when opening the bottle

Source: Kreutzer (2013, p. 228)

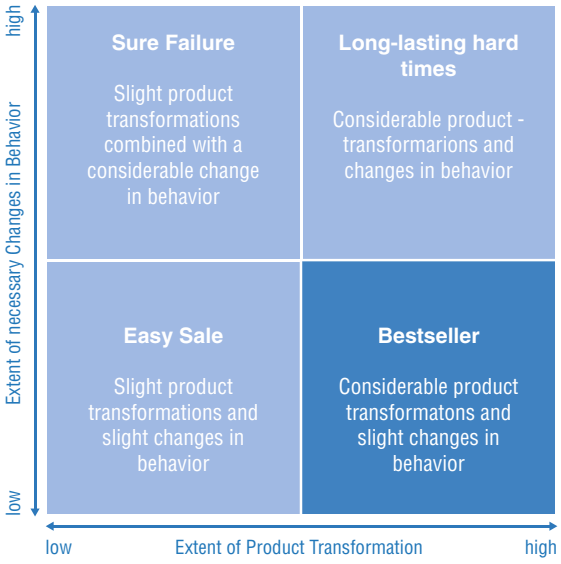
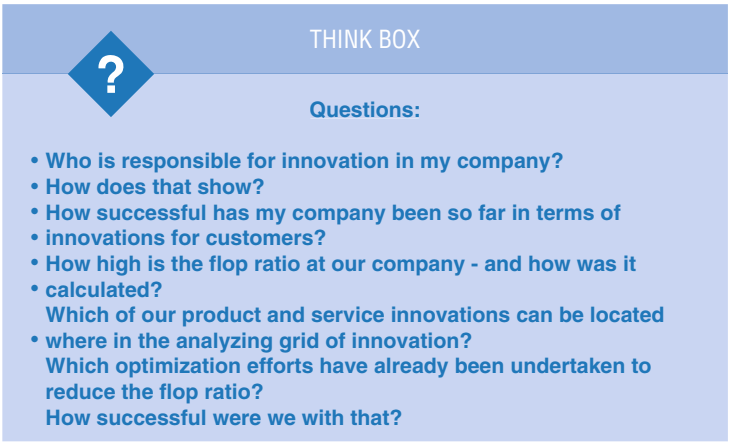


Fig. 2.31 Analyzer for innovations. Source: In line with Gourville (2006, p. 54)

the consequences for the success-oriented innovations are comprehensible. *Causes for unsuccessful market* launches can be a lack of customer orientation. This can be an unsatisfactory degree of innovation or overpromising (i.e., making more promises than you can keep) and/or the absence of a coherent price-performance ratio. Figure 2.35 shows an *analyzer for innovations* which shows what will be expected of certain innovations on the market. If a product is very extensively changed and therefore has a high degree of innovation, it has a higher potential for success. However, the behavioral changes to be carried out on the part of the customer, and thus the resistance to innovation, are also significantly greater. As a result, the introduction of the product will be accompanied by a *long dry spell* (see Fig. 2.31).

According to Fig. 2.31, the products which exhibit only minor changes but which show a considerable change in behavior will suffer a *certain failure*. This phenomenon can be observed again and again in new versions of operating systems whose advantages are not accessible to the user—but have a completely new user interface. On the other hand, one might be able to sell if one develops smaller innovations which result in minimal behavioral changes. However, from the customers' point of view, it is questionable in this case why a product change should be carried out at all.



2.5.2 Fundamentals of Open Innovation Concepts

These aspects, which are often underestimated when evaluating innovations, suggest a more comprehensive integration of those who decide on the success of an innovation: the customers. Such *customer integration into the innovation process* requires overcoming the widely used *closed innovation model* (see Fig. 2.32). In doing so, companies primarily develop and market the ideas that have been gained in the company itself (especially in R&D or marketing sector). In addition to the internally gained impulses for innovation, the *open innovation model* also incorporates foreign innovations and integrates external development partners (customers but also suppliers or universities) into their own processes in order to expand their own innovative potential. In this way, the innovation process is configured as an open and distributed system and promotes intensive interaction with these (Grundig Reichwald and Piller 2006). This *outside-in process* integrates external knowledge into the company's internal innovation process, in order to accelerate it, to enrich it, and—as far as customers are involved—to align itself to (future) customer requirements at an early stage.

Often, innovation-oriented *networks* outside the company's boundaries are primarily linked to suppliers. Finally, the supplying companies have recognized the

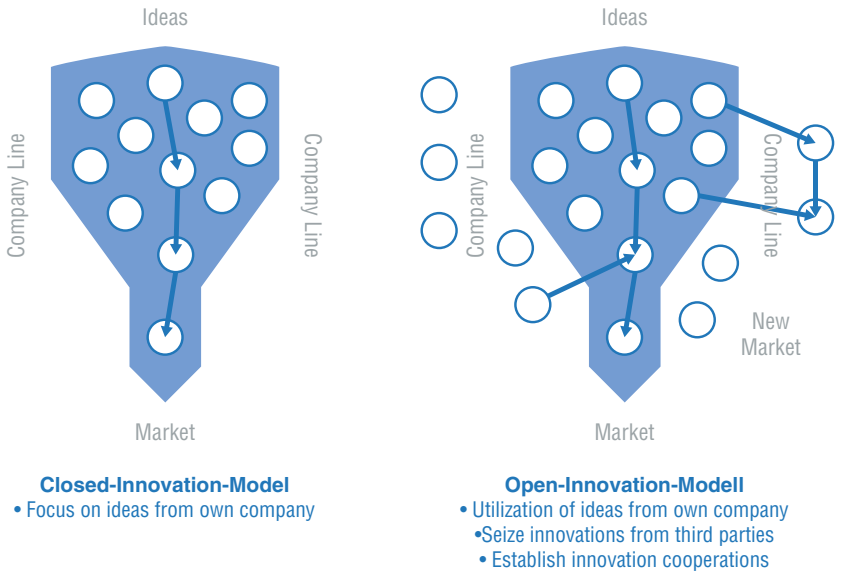


Fig. 2.32 Customer-oriented further development of the classic innovation concept. Source: In reference to Reichwald and Piller (2006, p. 119)

opportunities associated with more comprehensive customer integration in the B2B market. At the same time, the often required consistent customer orientation is implemented by optimally coordinating the value chains of the supplier and the purchasing company (see Fig. 1.11). Customers are now increasingly integrated into the B2C market. By early integration of end users, the weaknesses of classical market research can be overcome, which raises customer expectations and judgments in the search and purchase phase as well as during the usage process. Customer integration is no longer simply a source of information, but can initiate or develop new solutions through different types of participation in the innovation process.

The *integration of customers, as a development partner in the innovation process*, can take different shapes (see Fig. 2.33).

- *The first stage "listening"* compiles information about the customers from different sources. These are basis for the *development of customers*; this is the classic form of customer integration.
- *The second stage "questions"* integrates the customers much more extensively through different approaches—for example, through customer panels or customer workshops. In this way, a *development with customers* is achieved.
- Finally, in *the third stage*, *"participation,"* customers become genuine development partners, that is, the *development by customers*. This can be achieved, for example, in so-called lead user workshops, online communities, as well as within social media (Kreutzer 2014).

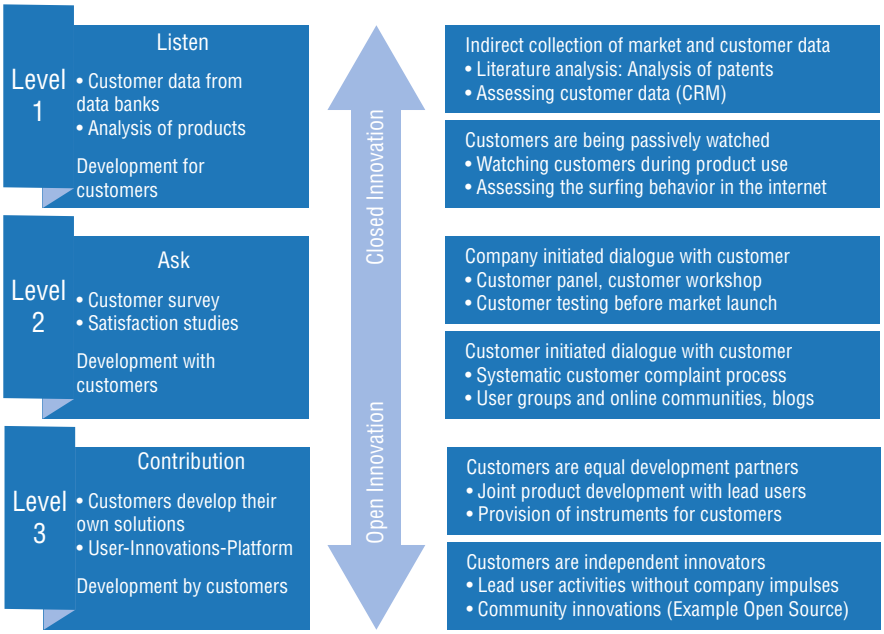


Fig. 2.33 Company-customer interaction in the innovation process. Source: Based on Dahan and Hauser (2002, p. 347)

These *different types of customer integration* solve common learning processes between customers and companies. Through different approaches, the different starting points and experiences of the participants and their previous patterns of thought and actions can be broken through, and new paths can be taken. At the same time, more customer-oriented results are introduced, because the impulses, expectations, fears, and perhaps even longings of the customers flow into the process at an early stage. It is often the case that customers like to be involved in such development processes, without a monetary return being expected at the same time. The value estimation expressed through the integration of customers is often a central motive for cooperation. Making the customer an "employee," as a matter of course, is a goal-oriented method to leave the emerging paths of innovation management and almost inexhaustible sources of the creativity.

It is necessary to allow an "us" to emerge from the dichotomy of "we" and "you" (see Fig. 2.34). Against this background, the term *crowdsourcing* should be understood. This includes *the integration of external intelligence and the workforce of the* "*broad mass*," for example, in the search for new product ideas. The resources to be integrated are not restricted to the Internet, but can also be implemented offline—for example, in the form of idea contests. This type of cooperation does not have to be restricted to the customer, but can also integrate competitors.

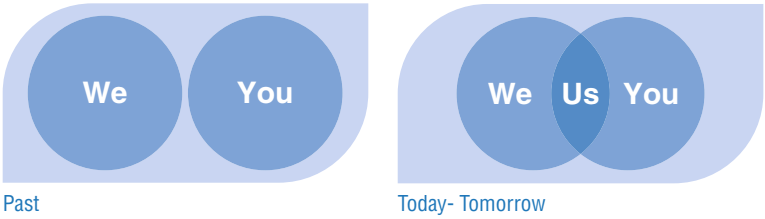


Fig. 2.34 Enhanced cooperation between companies and customers

THINK BOX

Questions:

- To what extent is a closed- innovation concept still in use in my
- company?
- Are we still at the first stage of "listening"?
  Or do we - based on the second stage of "questioning" - involve
- the customer through different approaches?
  Or have we already reached the 3rd stage of "participation" and
- make customers real development partners?
  What is the reason why we are still predominantly create
- innovations from our own resources?
  What ideas are there at our company to open up the innovation
- process to external impulses?
  Who owns the overall responsibility for that?

2.5.3 Fields of Action for Open Innovation Concepts

The following is an analysis of how *user involvement can be integrated into the innovation process*. These can relate to the development of product innovations, the selection of product ideas, the development and selection of advertising slogans, and the (co-)design of the entire communication campaigns. The use of the so-called participative web can involve a large number of users, which have so far hardly been activated, to be more comprehensive in business processes. This is the case, for example, with *crowdsourcing*—the motto is "The mass makes it!" In this process, people—not necessarily the customers of a company—are motivated to contribute ideas and suggestions to business processes. The content generated in this process is referred to as user-generated content. If this integration of customers takes place in production processes, this is called *co-production*.

MEMORY BOX

Crowdsourcing

Crowdsourcing is a collaboration between organizations and their customers in order to further develop the product and service portfolio. For this purpose, the so-called swarm intelligence is integrated into the company's innovation management. Through creativity contests, customer-relevant innovations can be developed. The creative contributions, however, do not need to be limited to the product and service portfolio, but can affect the entire value chain of the company. In this way, suggestions for product names and advertising content as well as advice for attractive supply sources, process innovation etc. can be generated.

User-Generated Content

The so-called user-generated content describes content on the internet, which was generated and uploaded by non-professional internet users themselves. This includes not only photos, videos, texts and music, but also comments and reviews.

Co-Production

When customers of a company are integrated into the production process by for example in real-time communicating product specifications or realizing a creation in production it is referred to as co-production.

In order to start *crowdsourcing projects*, first try to achieve the attention of your fans, for example, through news in Facebook's newsfeed. Now, an attempt can be made to participate in a more coordinated, targeted way, directed to smaller target groups. On the other hand, viral sharing can be useful to reach a wider range. Consequently, relevant posts can be important *triggers for various forms of collaboration* with users. This *user-generated content* in the form of comments, evaluations, recommendations, and ideas is a particularly important result of engagement in social media. In many industries—such as cosmetics, confectionery, textile, and tourism—product developments were developed together with *Facebook* fans. *Coppenrath & Wiese* has invited *Facebook* fans to create their favorite dessert from various ingredients. Out of over 3400 proposals, the fans were able to choose the top 20, which were tested by an internal jury. The market launch of the winning event took place in the spring of 2015.

However, companies should always have "the final say," if they involve users in the creative process to avoid unpleasant surprises. When *Henkel* asked the users to decide which layout a *Pril* package should receive, the majority voted for "chicken taste—tastes like delicious chicken!" This example has already gained cult status!

In a model contest of *Otto Versand*, a man disguised as a woman was voted first! In the case of a photo competition, initiated by *hamburg.de*, a picture with the visual

slogan "Fuck U!" was the most successful, which was not quite in the sense of the initiators. For this reason, companies should transparently define the *rules of the user-generated content* beforehand, which they can rely on if necessary! Users should never be able to operate on their own. Rather, the company must ensure they are the last entity that reserves the right to make final decisions. This restriction is to be communicated to potential users in advance.

This makes it clear that integrating users into the process of content development is not free from risks. However, the invitation to the participation of the users can lead to a high commitment rate and—from their perspective—a high relevance. After all, "normal" people have occupied themselves intensively with the offer, a brand, or a company and publicly display their "creations." That these are not always in the sense of the company is apparent.

In the meantime, various *crowdsourcing platforms* have been developed in order to use the intelligence of the mass in different areas. An example is *Mechanical Turk*, a project by *Amazon*. This is aimed at (potential) inventors, developers, or other creative minds to motivate them to cooperate—against payment. At the same time, companies are invited to post their tasks here in order to invite the masses to creative cooperation.

A rather large project is called Galaxy Zoo (2015). This is nothing less than the classification of galaxies in photos. The project started in 2007 with a record of one million galaxies of the *Sloan Digital Sky Survey*. Such a project usually takes many decades. The presentation as a crowdsourcing project succeeded in obtaining almost 70,000 classifications per hour, 24 h after the presentation. In the end, more than 50 million classifications were carried out in the first year. More than 150,000 people have participated in this. However, there are also many small, very pragmatic projects, such as Wheelmap (2015). Here, volunteers can find places that are wheelchair-accessible through an app.

The report *The State of Crowdsourcing 2015* provides an overview of the extent of crowdsourcing projects. For this report, the international crowdsourcing activities of the "100 Best Global Brands" have been evaluated since 2004. In addition, the measures of the ten most important FMCG (FMCG stands for fast-moving consumer goods) were analyzed on four leading crowdsourcing platforms for the years 2013 and 2014. The key findings are (Eyeka 2015):

- Eighty-five percent of the best international brands have used crowdsourcing within the last 10 years.
- These companies have used crowdsourcing platforms three times as much than launching such projects on their corporate website or on social media.
- The most active crowdsourcing FMCG company in 2014 was *Procter and Gamble*, followed by *Unilever* and *Nestlé*.
- The focus of user-generated content was on video content (45% of all initiatives) in 2014, followed by the development of ideas (22%).
- The use of crowdsourcing dominates in the sector of FMCG, technology, and automotive industries, as shown in Fig. 2.35.
- *Coca-Cola* has used crowdsourcing in the last 10 years in 34 cases, *Pepsi* in 30 cases, *Danone* in 28 cases, and *Samsung* in 27 cases. Whoever was most active in the various sectors is shown in Fig. 2.36.

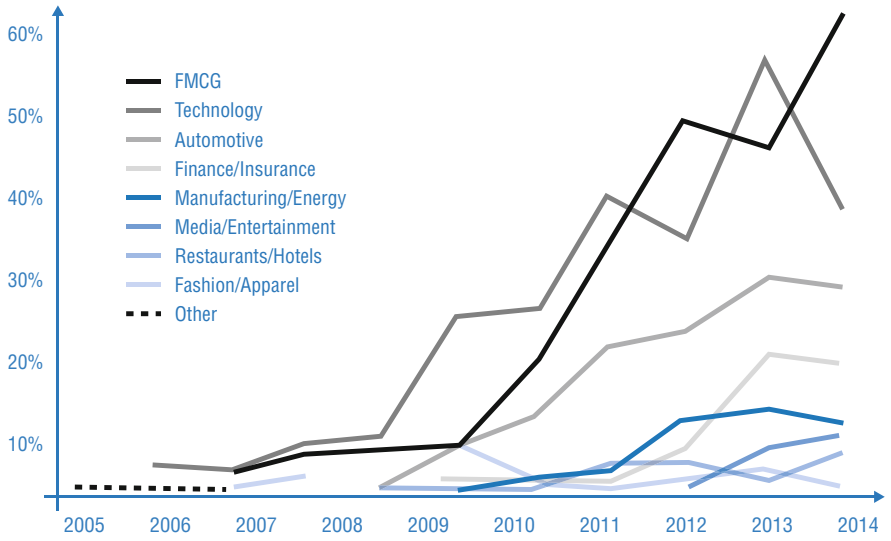


Fig. 2.35 Cumulative use of crowdsourcing by the 100 Best Global Brands—by sector in %. Source: Based on Eyeka (2015)

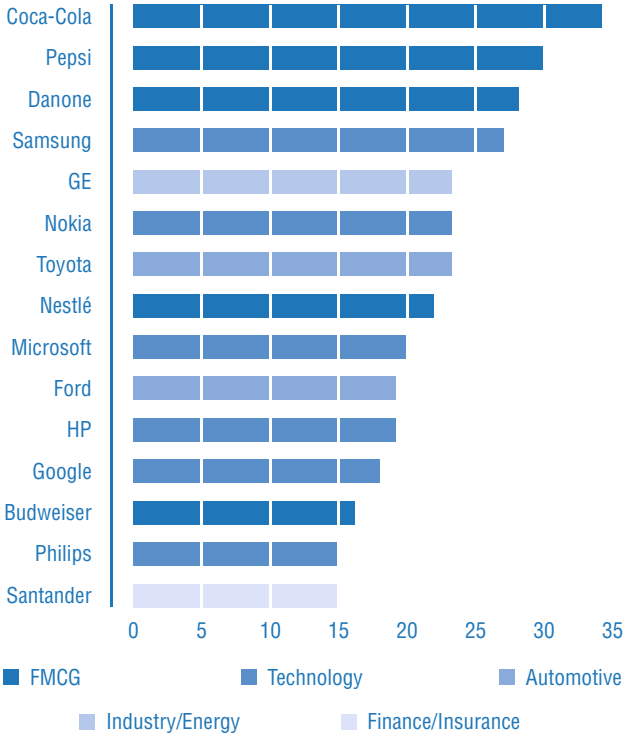


Fig. 2.36 Use of crowdsourcing by the 15 Best Global Brands since 2004—by industry. Source: In accordance with Eyeka (2015, p. 8)

Winners of crowdsourcing are often on both sides: On the one hand, companies can use the boundless creativity of the Internet community in order to achieve cost-efficient and fast innovations, while receiving input *race in innovation*. This is boosted by an ever-increasing pressure on innovation and reduced R&D budgets while simultaneously shortening the life cycle of new products. On the other hand, the inventors and creators, who have so far often been caught in anonymity, finally find attentive listeners who take up ideas and possibly convert them into marketable products. Thereby, important target groups are even more closely linked to the company or the brand. In this context, *customer-generated innovations* must be mentioned.

There are no limits to creativity in this case. *McDonald's* calls its customers via *Facebook* to create their own burgers. *Nike* and *Adidas* are also involved in the design process. Here, customers can participate in the design, colors, etc. to create customized products. A professional implementation of the *idea management* can also be found at *Dell* with *IdeaStorm* (*ideastorm.com*). Here, the customers are actively involved in creative cooperation—and attractive rewards are promised. At *Ritter Sport*, customers were able to choose the top 20 spring variations of chocolate for the year 2017. A convincing example of this is provided by *Tchibo* with its Internet platform *Tchibo Ideas*, where customers are invited to develop new products (Merkle 2016). These are all *new service ideas*—with advantages for all parties!

However, this *process of customer-driven innovations* is at risk. New ideas, insights, and solutions can be "abraded" by the pressure of the masses and, thus, trimmed to mainstream. Often, it is not possible to swim against this stream by individual participants. That is why neither as a private individual nor as a company should you give up your own intelligence to the masses. Here we should remember a nice quote from Steve Jobs: "We do not ask the customers what they want. After all, the customers do not know what is possible" (Lashinsky 2012). This fits marvelously to a statement from Henry Ford: "If I had asked my customers what they wanted, they would have said a faster horse!"

THINK BOX

Questions:

- **Have we already gained experience with crowdsourcing?**
- **What does it look like?**
- **What has worked well and where is optimization still required?**
- **For which questions could crowdsourcing be used in the**
- **future?**
- **What "rules" are to be developed for that?**
- **Which approaches for co-production are conceivable?**
- **How could a meaningful use of this approach look like?**

Who is overall responsible for pushing these processes?

ACT BOX

Workshop to get started in the area of Open Innovation

Use this workshop to explore the opportunities and concrete entry possibilities for Open Innovation.

Scope:
About 6 Hours

Participants:
Interdisciplinary team consisting of innovation experts from the network organization as well as additional innovation-oriented specialists and managers of various organizational areas of the operating part of the company.

Procedure:

- **Introduce the topic "Open Innovation" using the information in the previous chapter.**
- **If necessary, an impulse-presentation from an external speaker can provide important impulses.**
- **The participants of the workshop will be divided into groups of 5-7 people each.**
- **First of all, each team will work out the reasons why it is of central importance for the company to integrate customers stronger and earlier into the innovation process.**
- **The results are consolidated in the large group.**
- **In the next creative round, the teams define concrete starting points and tasks, in which customers can be involved early and comprehensively. The examples should be worked out as**
- **precisely as possible.**
  The results are presented and discussed in the large group.
  Afterwards follows a selection of the project ideas, which are to
- **be implemented promptly.**
- **Tasks and milestones are being defined.**
  A Steering Board for the further management of the innovation processes is defined as an interdisciplinary team.

- **Resources required:**
- **Workshop room and about 6 hours of time from all participants**
- **Whiteboard or free wall surface for attaching notes**
  Sticky notes in different colors as well as text markers

Tools:
Creative minds

2.6 User Centralization: The Needs of a Digital Customer Journey

User centering is a basic principle that always has its future users in mind in the development process of service offers. This should be done iteratively, meaning step by step, based on the empirical verification of the users. In the case of digital business leaders, these feedbacks are specifically collected and communicated within the company. Business areas specifically created for this purpose, for example, are *user experience* (UX) *experts*. In order to be able to develop user-centered service offers, a company must know how a customer buys and which contact points exist between company and customer.

2.6.1 Current Challenges in the Purchasing Behavior of Consumers

The *customer journey* is a term for the process at the end of which a customer buys a product or asks for a service. It describes the "journey of the customer to the company." This "journey" covers the various phases a customer passes through before deciding to buy a product or purchase a service. The so-called customer touchpoints of the company or a brand with which the customer comes into contact on this journey are particularly important. Touchpoints are generally the contact points that exist between stakeholders (i.e., prospective customers, customers, employees, suppliers, cooperation partners, investors) and our company. In the following, the focus shall lie on touchpoints, which are relevant to the company's customers and customers.

We must bear in mind that not only the customer journey itself but also the *customer expectations* have changed significantly. The *complexity of the purchasing process* has significantly increased for all parties involved—both for customers and suppliers alike. The customer journey relevant to our company must be presented in all its facets in order to find approaches for its value-oriented design. The basis for this is initially a deep understanding of the process of buying behavior.

MEMORY BOX

Digital Business Leadership requires the holistic design of the customer journey. All customer touchpoints must be designed from the customer's point of view: The company has to integrate all channels - mobile, online, personal - and create a holistic customer experience.

The *purchasing behavior of consumers and organizations* is the subject of purchasing behavior research, which seeks powerful explanatory approaches to the following central questions (Meffert et al. 2015b):

- Who is buying?
- What is bought?
- For what reasons is something bought?
- How is the information search and evaluation carried out?
- How is the purchase process designed?
- How much is bought?
- When are things bought
- Where are things bought?

So far, there is no empirically secured, widely accepted model—which is due to the complexity of the human being. Thus, science and practice must work with tested concepts in order to find and/or influence the reasons for an explanation of the purchasing behavior. One of these explanatory approaches, attributable to total models, was developed by *Engel/Blackwell/Kollat*. This model draws a holistic picture of processes and intervening variables: the purchasing process starts with *information input*. These can be different stimuli that affect the potential buyer. This is followed by the complex process of *information processing*, which also incorporates past experiences. This is followed by *various decision-making phases and evaluation procedures*. In this case, feedback can often occur with upstream processes. The general motivation and *perceived environmental influences* also affect these processes. At the center is the *decision* (purchase or nonpurchase). After this decision, or after the use of the goods or the use of the service, an *assessment* is made which affects the future behavior (see Fig. 2.37).

The buying behavior research established the *phases of the purchase process*—in different models:

- Problem identification
- Search of information
- Alternative evaluation
- Purchase phase
- Replacement phase

It is assumed that this process will be fully completed only in the case of *high-involvement decisions*, meaning when buying goods that are associated with a *subjectively high perceived financial*, *social*, *and psychological risk*. An example would be the purchase of a car but could also be the purchase of clothing outfits depending on the age, self-assurance, and sense of style. *Habitual purchases*, meaning ordinary purchases of subjectively not "risky" goods, such as paper towels, are skipped or shortened. This is a challenge that the providers of such paper towels are confronted with and are able to score with emotion, instead of information, as the example of the advertising character *Charmin Bear* shows. In sum, the relevance of

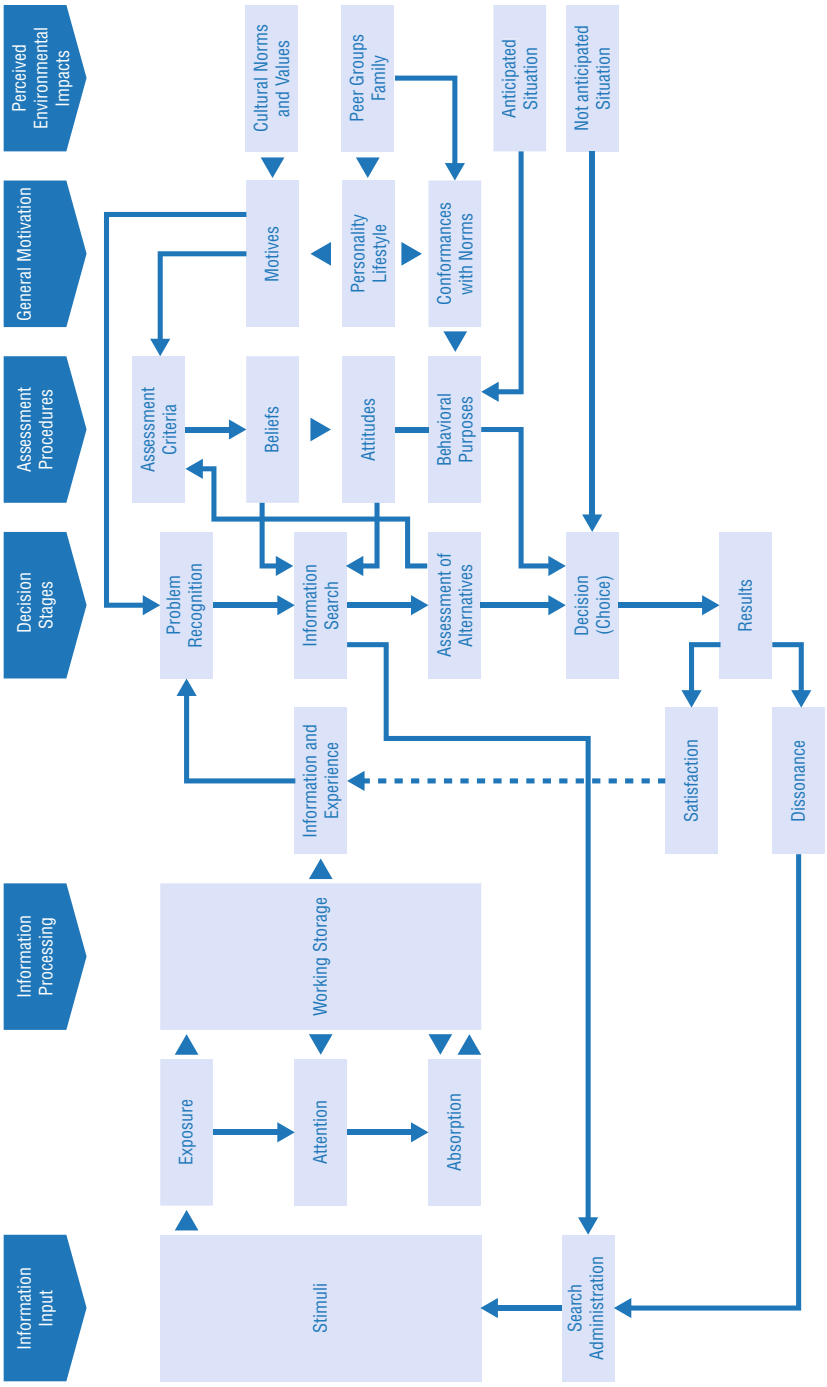


Fig. 2.37 Buying behavior model of Engel/Blackwell/Kollat. Source: Meffert et al. (2015b, p. 133)

emotions in any kind of purchasing decision-making processes—B2C and B2B—should not be underestimated, which is to be highlighted in the following.

Even if it is a *phase model*, there is *quite a lot of feedback* between the individual phases. Thus, for example, evaluation criteria are used in the *phase of alternative assessment*, which in turn is influenced by other factors such as lifestyle, standards, and reference. If new impulses, such as the latest feedback from the peer group, are added, the *search for information* can be restarted, and a modified process can take its course: through the *alternative evaluation* to *purchase* or *nonpurchase*.

This demo shows that the purchasing behavior of consumers, as well as decision-makers in companies, is complex—and it is not easy in the digital business! Through the Internet, the available quantity and type of information about providers and products have risen sharply. This has not only increased the number of alternatives. It is often possible to retrieve a large number of customer evaluations online and to choose between a large number of shopping centers. In addition, the media has changed and increased, through which this information is accessible: the advice in the stationary trade is supplemented by web-based information sources, which can be retrieved from stationary and/or mobile terminal.

An easy example can illustrate this: according to a *GfK* study (Bozdogan 2014) about *purchasing airline tickets*, 65% of respondents used three devices (desktop, smartphone, tablet) for their search, regardless of whether they later bought the ticket online or at the travel agency. Ninety-six percent of the travelers carried out both an online and offline search and spent almost 5 h for the buying process.

The challenge for digital business leaders is to provide relevant information through the different channels and touchpoints that are particularly important to customers. If the company manages additionally to transform these touchpoints into *trust points*, high customer loyalty can be achieved. This increases the likelihood of actually motivating the seeker to purchase.

Not least, *feedback from the virtual community* must be taken into account in the digital age: it covers the various *reviews and recommendations on the social web*. In this context, new terms have developed, such as the *ROPO effect*. It describes the interactions between different channels: research online-purchase offline. The customer prepares his stationary purchases online. But there is also the opposite effect, called *showrooming*. Here, customers initially research in the stationary environment, in order to buy the products (supposedly) more cheaply online. Having this in mind, it is no longer enough for commercial enterprises to implement a multichannel concept, in which the various online and offline channels are relatively unrelated. The development of *omni-channel concepts is* required and crucial for success. These concepts try to combine the possibilities of different channels in order to generate new customer benefits. They include, for example, *click and collect* offers, where online ordered products can be picked up in stationary business. Conforming dealers can also offer their customers to return or exchange online ordered goods in the stationary shop.

Manufacturers and distributors should meet the challenges of digitization with innovative approaches and should use new options. For example, *Burberry* is seen as the first *luxury brand manufacturer* who consistently designed a digital strategy:

Instagram, *Twitter*, *Facebook*, etc.—all channels are used. The strategy not only benefits from high user involvement but is also technically innovative and highly emotional.

For this campaign, which connected emotion with technology, *Burberry* and *Google* developed a technology, *Grow* 2013, that digitizes recorded kisses using a webcam or a touch screen. These kisses could then be colored with a matching lipstick color from the *Burberry Kisses* series and sent by e-mail with a personal message. The journey of the *Burberry Kiss* could be followed via *Google Maps*. The *World of Kisses card* showed all kisses sent out, while on *Live Kisses* it became visible which kisses went on the trip at the right moment.

Convincing concepts also exist in *low-involvement purchase decisions* where there is no comprehensive information search with an alternative assessment after a problem identification. A convincing example is the *Amazon Dash Button* launched in 2015: This is a Wi-Fi-connected device through which favored products can be ordered automatically by pressing a button. This requires:

- The Dash Button as a physical button, which for simplicity reasons is glued close to the drawer or the device in which the consumable material is stored or used
- An app that receives a signal from the Dash Button to trigger an ordering process
- A customer profile on *Amazon* in order to set the preferred products for the replenishment (supply of goods) and to confirm the automatically generated order before a binding purchase

So far (as of March 2016), the *Amazon Dash Button* is only available in the USA, and 550 products—mainly consumables from areas of hygiene, drinks, baby food, and pet supplies—can be ordered.

In order to develop such measures, a variety of instruments are needed. The challenge is to recognize the complexity of the purchase process, as well as to reduce it in an ideal way for the user, while at the same time taking advantage of the possibilities of digitization. A particularly important concept in this area is the analysis, visualization, and design of the already presented customer journey.

2.6.2 Capturing and Designing the Customer Journey

In digital business, the *customer journey* is an interactive, multichannel-, and multi-device-shaped buying process. It covers the entire range from the detection of needs via the purchase and use of a product onto its transfer. The chosen approach is intended to take into account the fact that customers can not only buy their product online or offline but can also resell it. In addition, manufacturers or distributors are also partially obliged to take their products back.

Staying in the analogy of a "journey": On this journey, customers meet different travel companions and sights on different travel sections. From a provider's point of view, they can "get off the road" or "go overboard." In order to understand the customer journey in a meaningful way, it needs to be presented graphically. One

option is the Customer Journey Canvas by Stickdorn and Schneider (2010). On the website *canvanizer.com*, tools to create such a canvas can be found.

In Fig. 2.38 an exemplary implementation of a *customer journey in the service segment* is shown. The *phases of the buying process* have been reduced to three in the canvas in order to increase clarity:

- *Preservice Period*
  Here, all analog and digital information sources can be mentioned, which are accessible through advertising and PR but also through comments and evaluations (word of mouth or—for the online part—word of mouse). Also past experiences of the potential buyer have an effect. The result of this phase is expectations of the customer towards a company and its products or a service provider and its services.
- *Service Period*
  In this phase individual customer touchpoints, which might play a key role in the evaluation by the customer, are being displayed. Are there, for example, critical incidents that are of disproportionate importance to the subjective assessment? In what way can decisive impulses be conveyed in order to support the purchase decision?
- *Post-service Period*
  After using the service, evaluation follows and this leads either to satisfaction or dissatisfaction. It may also affect other (potential) customers through positive or negative word of mouth/word of mouse. The after-sales support can also be used here as part of the customer relationship management (Kreutzer 2016a).

The graphical display in the form of a canvas may vary in its degree of complexity. The reference point is always the particular persona. As it has been already shown in the success factor "from product to process," the design process is always user-centered. Thus, the canvas refers to a specific target group as well as their needs and expectations. The major *component of the Customer Journey Canvas* is the *process* shown in Fig. 2.38, as a result of activities that are went through by the customer. Within these activities, the relevant customer touchpoints are to be assigned—considering the experiences made during this activity and thus created emotions. In addition, other relevant aspects can be displayed. These include, for example, used media, opinions of others, and the own experience, which influence the purchase decision both in the *pre-purchase phase* and in the *purchase phase*. Additionally, the *post-purchase phase* can be visualized. Here, for example, the question is raised of how the customer reports about his experience offline or online—especially on social media.

This phase-oriented Customer Journey Canvas (see Fig. 2.38) is able to pick up on the central aspects of the consumer behavior model of *Engel/Blackwell/Kollat* (see Fig. 2.37) and uses them for contentual enrichment. The *preservice period* visualizes external and internal effects on the purchase decision, which influence the

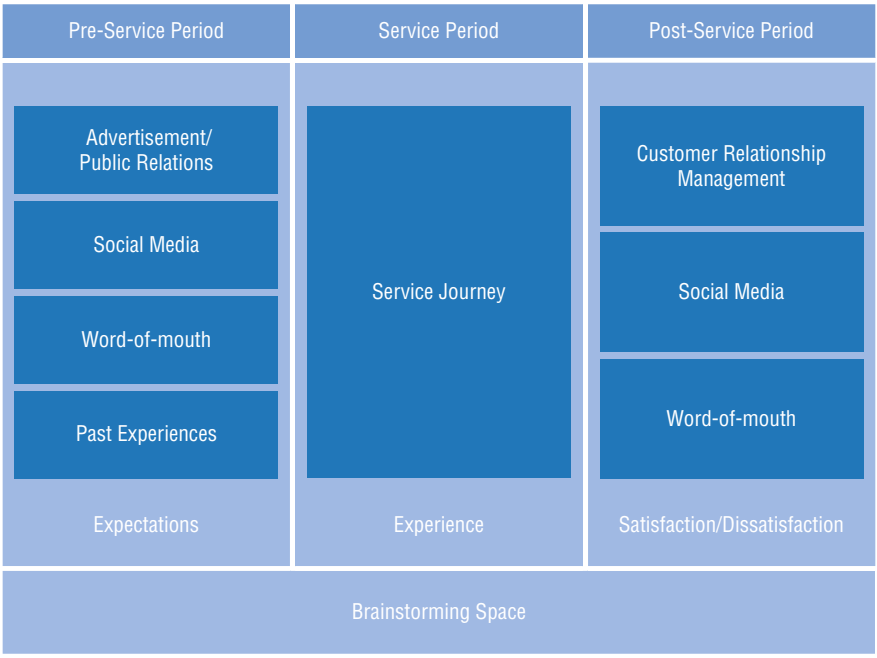


Fig. 2.38 Customer Journey Canvas. Source: Based on Canvanizer (2016)

problem recognition, information search, and alternative evaluation. Within the *service period* itself, further—in the model of Fig. 2.37 identified—factors, which affect the decision-making process, can be taken into consideration. The *post-service period* provides additional information for the ones who have already made a purchase. In this phase, the buyer can also share self-derived information with others. The, respectively, relevant customer touchpoints depend on which product or service is the focus of the analysis.

2.6.3 Management of Customer Touchpoints

As mentioned above, customer touchpoints represent the points of contact of a (potential) customer with a provider. In this context, it is about displaying the full range of direct and indirect as well as personal and media-transmitted communication comprehensively for both online and offline. This includes, for example, all contacts with employees of the provider and its partners, such as field service, call center, retail, or service outlets. Also, the website, TV advertising, mobile apps, blogs, and communities are relevant touchpoints. It is useful to classify these touchpoints according to whether the provider is able to design them or whether they are concealed from corporate influence (Kreutzer 2014).

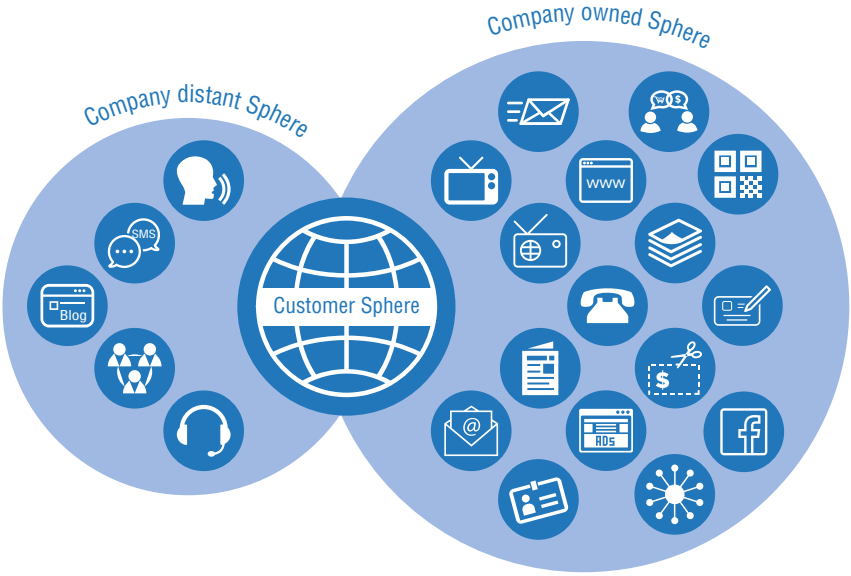


Fig. 2.39 Expanded concept of customer touchpoints. Source: Based on Kreutzer (2014, p. 28)

Previous approaches to the *management of customer touchpoints* focus on *contact points of the corporate sphere*, which are "supervised" by the company itself. Thus, many (new) touchpoints remain unused and uncontrolled, which are accessed by prospective customers or clients in advance or parallel to a purchase or the use of a product or service. This not only includes interaction in the private sphere but also dealing with companies and their offers on the Internet—beyond the own business presences. With regard to gathering information on prospects and customers, especially those blogs, communities, fan groups, evaluation platforms, online shopping clubs (such as *brands4friends*), and social media gain increasingly more importance, which are not supervised by the companies themselves (see Fig. 2.39). That is why they are to be integrated in the *touchpoint management*, as well.

Many companies neglect those *contact points distant from the company's sphere* because they are beyond direct control and influence. Nevertheless, these contact points have a central influence on decision behavior of prospects and customers since statements in online forums are attributed to higher credibility than content of corporate communications. Consequently, touchpoint management needs to be further developed in order to consider the additional touchpoints in corporate communications, as well.

There are certain interactions between the various touchpoints, which have to be considered. As a *GfK* study (2015a, b) of 150 cross-media campaigns shows, sales in consumer goods rise by 44% after visiting the company's own website.

As already mentioned, the interaction between online and offline channels is called *ROPO effect*: "research online-purchase offline" or "research offline-purchase online." Customers inform themselves mobile or on the Internet about offers, in order to purchase them afterward in stationary retail or vice versa.

MEMORY BOX

Companies must say goodbye to channel-oriented thinking. Digital business leaders design and incentify their distribution channels from the customer perspective. This is based on a holistic approach. "Online" and "offline" turn into "noline"!

For example, 40% of all online purchases at *Media Markt* and *Saturn* are being picked up in stationary shops (Puscher 2015). This click and collect process, in which products are ordered online and picked up in retail, implies further organizational changes, such as availability of products in stores and returns management. In terms of incentives, *Media-Saturn* pursues a pragmatic approach. Revenues are attributed to the relevant market and total revenue is allocated to all markets: "If it came to channel interferences and the seller does not use this possibility, it would be a disaster from the customer's perspective," *Martin Wild* states, the transformation officer of *Media-Saturn* (Puscher 2015).

MEMORY BOX

ROPO (Research Online - Purchase Offline or Research Offline - Purchase Online) and "Click and Collect" (Picking up online ordered goods in retail stores) are the realities that Digital Business Leaders adapt themselves to by designing their processes and customer touchpoints along the customer journey.

In order to control the company's own sphere, we need a *touchpoint management* which trains employees appropriately in direct and indirect customer contact but also gives them necessary skills to act. As the case of *Lego* shows, touchpoints with the company's own service can advance to successful communication measures. The customer letter can be found in Fig. 2.40.

How the response of the service employee of *Lego* turned out is shown in Fig. 2.41.

Companies that successfully develop a digital business achieve a holistic management of *company-owned and company-distant customer touchpoints*. They display the relevant customer journey, analyze it, and find potential for optimization—always

Fig. 2.40 Request of a little customer at Lego. Source: Based on Help Scout (2016)

from the customer's perspective and with regard to achieving operational and strategic business goals.

In corresponding analyses during different projects, we repeatedly found that many of these *customer touchpoints* were *not known* among the responsible parties in the company. Moreover, *the number of touchpoints* relevant from the customer's perspective was regularly underestimated significantly. This finding is confirmed by a study of Esch et al. (2012, p. 3), in which about 106 marketing decision-makers were asked. About half of the respondents assumed less than 50 touchpoints. In contrast, the study identified more than 100 touchpoints for most companies. But how is a *goal-oriented management of touchpoints* done if not even the number of these touchpoints—let alone the content and its relevance to the customer—is known?

The study also found that especially in smaller companies, the *importance of touchpoint management* is not known. Overall, there is also missing knowledge of the *relevance of individual touchpoints* from the customer's perspective. Because for a successful effect of individual touchpoints, it is not critical how important companies consider them! At the same time, it is to state that often only a few touchpoints are really important to prospects and customers. These need to be determined systematically in order to manage them appropriately. Since this is

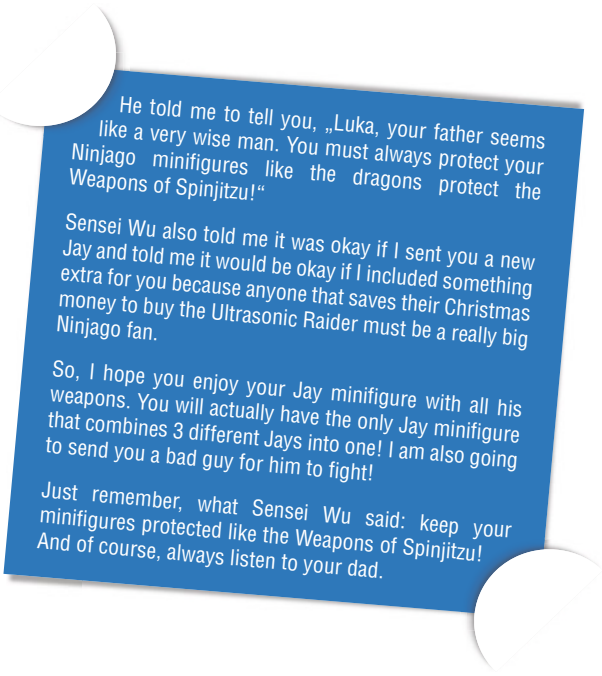


Fig. 2.41 An outstanding example of customer touchpoint management at Lego. Source: Based on Help Scout (2016)

often not given, there is no budget concentration on the really important touchpoints. Thus, almost 40% of companies invest only a small portion of their marketing budgets in the most important touchpoints. The importance attached to touchpoint management today and tomorrow is shown in Fig. 2.42. According to that, only 19% of managers see a high degree of relevance in it. However, in the opinion of 47%, the importance of customer touchpoint management will increase in the future.

At the same time, 43% of respondents consider the *professionality level of their own touchpoint management* as rather low and other 50% as merely average. Consequently, only 7% certify a high level of professionality. Thus, 49% see an average *potential for optimization in their own touchpoint management* and 50% even a high potential (Esch et al. 2012). There is still much room for improvement!

In addition, the following should be pointed out: the most strongly effecting touchpoints, besides the product, are direct—and often personal—*contacts with employees of the own company* (Esch et al. 2012). Often, these have the most lasting impact—both positively and negatively.

A recent study by *Brand Trust* emphasizes the presented findings: 1800 customers in Germany, Austria, and Switzerland were asked about 65 brands from the segments of banking, retail, and sports goods. The following findings were obtained (Brain-Trust 2015):

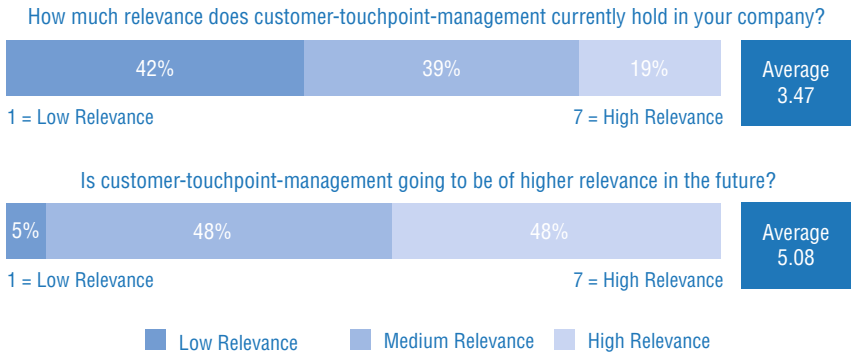


Fig. 2.42 Relevance of touchpoint management—today and tomorrow ($n = 106$ marketing decision-makers, Germany). Source: Based on Esch et al. (2012, p. 4)

- Today, companies often have to orchestrate between *100 and 600 touchpoints*.
- The *most important touchpoints* are *employees* with 32%, followed by *product testing* (24%), *search engines* (21%), and *advertising* (20%).
- Nine out of ten companies do not create a *permanent and total communicative experience* across all channels for their customers.
- In many companies *responsibility for touchpoint management is not regulated clearly*—consequently they are often not sufficiently connected.
- The result: 80% of the examined companies *do not succeed in creating a competitive differentiation* through their presence at the different customer touchpoints!

MEMORY BOX

Without a comprehensive evaluation of your company´s customer touchpoints and their effects on the customer, no successful customer touchpoint management can be carried out.

In the context of touchpoint management, a special importance is attached to *winning the moments of truth*. It is referred to as "moment of truth" because these "moments" show whether the expectations created in particular by advertisements, offer presentation, and consulting at the POS will actually be met. There are four critical moments a brand has to pass by meeting the respective preestablished expectations:

Fig. 2.43 Classic sequence: stimulus-FMOT-SMOT. Source: Based on Lecinski (2014, p. 16)

- Zero Moment of Truth (ZMOT): Internet research in pre-purchase phase
- First Moment of Truth (FMOT): Assessment in the shelf
- Second Moment of Truth (SMOT): Usage
- Third Moment of Truth (TMOT): Communication of own experiences

After entering the online age, some facets of the classic buying process have shifted. So far, distinctions were made only between the First and Second Moment of Truth, after a stimulus as part of the purchase decision process (see Fig. 2.43).

The *First Moment of Truth* (*FMOT*) refers to the moment in which a potential buyer can physically take a close look at a product or service for the first time. Here, all expectations built by advertising, etc. hit the "harsh reality" of the product or service. The *Second Moment of Truth* (*SMOT*) refers to the time the buyer actually uses the product or service. Here, all expectations built by advertising and the first inspection compete with the actual performance and experience of using the product or service. Both moments, respectively, show whether preestablished expectations are being met. However, this classic concept is no longer valid enough since currently a fundamental shift in the customer's decision-making and purchasing process is taking place. In the online age, the *Zero Moment of Truth* (*ZMOT*) has been added to the First and Second Moment of Truth (see Fig. 2.44). It especially refers to the upstream online access to an almost incomprehensible number of third-party information. Part of this so-called user-generated content are reports of other individuals who provide information about their experiences before, during, and after purchase and usage.

Information provided in blogs, communities, and comments on *Facebook*, *Pinterest*, or *Twitter* allow prospective buyers to access a *self-service in foreign experiences* which presents the content of the ZMOT. Own potential experiences are often being "anticipated" by accessing reports, photos, and videos from unknown third parties. Hence, a lot of information on pre-sales, sales, post-sales, and the usage phase of other people can be won, even before the potential buyer develops an own impression about the target object. Thus, the ZMOT is fed by others' experiences alongside their *customer relationship life cycle* (Kreutzer 2016a). The *Third Moment of Truth* (*TMOT*) completes the process by having customers talk about their own experiences, for example, on social media. The presented content represents an informational basis for the ZMOT of other customers.

Especially the Zero Moment of Truth is still underestimated and insufficiently managed by many companies. However, one has to be aware of the fact that the

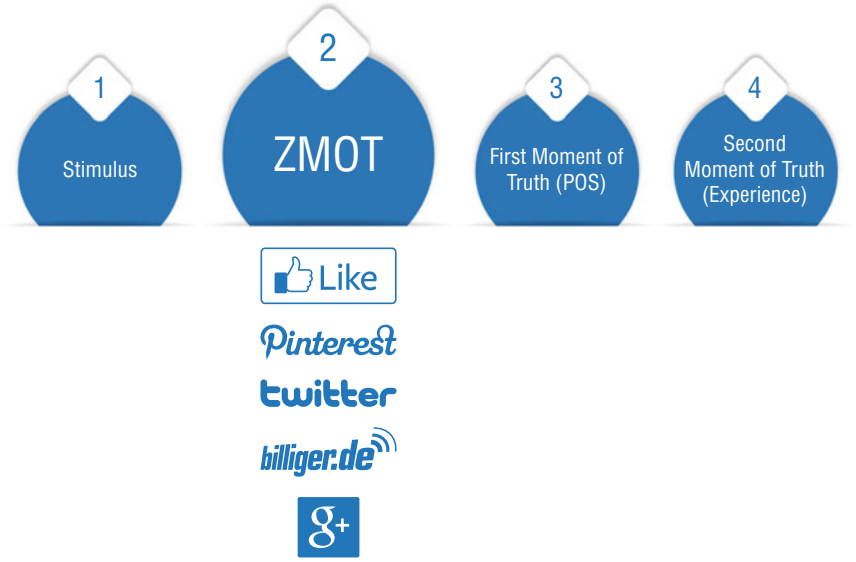


Fig. 2.44 Positioning and sources of ZMOT. Source: Based on Lecinski (2014, p. 17)

customer journey often starts ad hoc: the moment a customer accepts a (vague) need, the journey begins. This means that at the start of any buying process, providers must be prepared with appropriate content in digital media. Especially important to win the customer's favor is to be represented in social media with positive reviews. Therefore, a proper *rating and review management* should be established! Doing so, it is important to support all activities that motivate the own customers to share their experiences with others—hopefully positively. This may be achieved by posts on *Facebook* and *Twitter* and comments in forums, blogs, and communities and of course in personal dialogue. It is our job to motivate our (satisfied) customers to write positive reviews—permanently as part of our sales process. Thus, we can work towards winning the ZMOT.

In addition, we must keep in mind that *mobile Internet usage* is becoming increasingly important across the customer journey. A customer holding a phone in front of a shelf in stationary retail has already become a "typical image" and represents a showcase for the already mentioned showrooming! A *GfK* study on user behavior in Germany, which surveyed 1000 mobile phone users starting at the age of 15, shows the following results (Thommes 2015):

- Twenty-six percent of users perform price comparisons.
- Twenty-four percent of users seek advice from friends.
- Only a minority intends to buy the products via app (12%) and/or via the mobile website (8%).

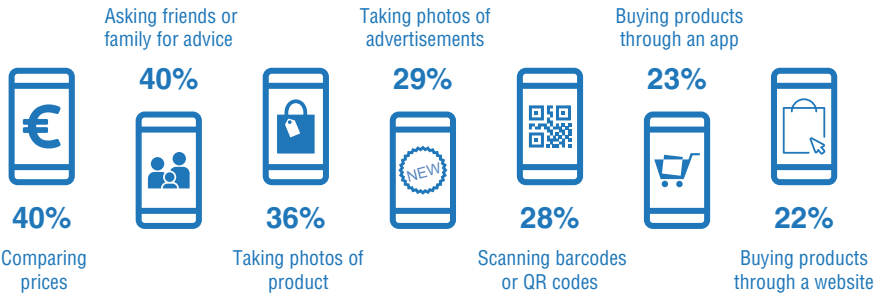


Fig. 2.45 Use of mobile phones while shopping in stationary retail—question: "Being at a store, which of the following activities are you performing on a regular basis with your mobile phone?". Source: Based on GfK (2015b)

In an international comparison, it looks differently, as another GfK study (2015b) suggests. Within this study, 25,000 mobile phone users (aged 15+) were interviewed by *GfK* in more than 23 countries. These included Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Poland, Russia, South Africa, South Korea, Spain, Sweden, Turkey, the UK, Ukraine, and the USA. Within the listed countries, 40% of respondents compare prices, while 23 and 22% want to buy the product via app or the mobile website, as Fig. 2.45 shows.

Sharing such offer information enriches the search for information but provides other aspects, as well. On the one hand, it is a form of *social sharing* and on the other hand a form of *ego-branding*: through communication the transmitter also reveals information about themselves. In the example of a car purchase, personal preferences, motives, and attitudes in terms of sportiness, environmental friendliness, and price of the vehicle are being presented. To ego-branding also belong selfies, which can be posted into the mobile world.

Posting selfies can also be used in market communications of manufacturers: at the *Milan fashion show* for the Spring 2016 collection, the models of *Dolce & Gabbana* stopped on the runway to take selfies with suitably "styled" smartphones. These were broadcasted immediately on screens in the show and were directly posted on *Instagram*. Thus, fashion victims from all over the world were able to see the latest designer collection in real time, and consequently these photos were presented on fashion-related websites for a long time, such as *vogue.com*. Through such a selfie-staging, the designers grab a piece of "everyday culture" by highly stylizing ego-branding and at the same time by triggering social sharing of their products.

Another example of a successfully staged interplay of ego-branding and social sharing comes from Australia: the *Giga Selfie*. At selected sights, tourists can trigger a camera via their smartphone, which is positioned further away. In addition to the close-up photo, a video can be downloaded to the smartphone which zooms out from the selfie and displays the surrounding area. The Australian Tourism campaign is aimed at Japanese tourists in Australia. The campaign aims to support their communication positively, by encouraging them through the *Giga selfies* to communicate about their experiences in Australia. In addition, they should share their photos on social networks and thus attract more tourists for Australia.

Besides being present at the customer's preferred channels, the *management of moments of truth* also includes the generation of relevant content. Here it is to be distinguished between the communication on factual level and on relationship level. Relationships are essential for brand management: customers become brand ambassadors for their "Love Brands" and are often more credible as a sender than the company itself. This even applies when the senders are not personal friends, but "simply credible" real people. Creating and designing sustainable long-term relationships with customers represents a fundamental *component of customer relationship management*. The relevance of these relationships cannot be underestimated: psychographic KPIs, such as satisfaction and trust; behavioral KPIs, such as repurchase and recommendation; as well as economic KPIs, such as revenue, profit, and return on investment, should be supported by relationship marketing (Kreutzer 2016a; Meffert et al. 2015b).

Besides creating involving content, impact needs to be measured. Here, practice is still lagging behind. In a study by Forrester Research (2015, p. 1), 70% of the 238 surveyed practitioners in mobile marketing (USA) state that due to digitization they are (about to) changing and/or adapting their strategies for influencing the purchase behavior of customers. However, only 25% analyze the customer journey in order to identify relevant moments. This is, however, extremely important, because those who have identified all the small puzzle pieces of the customer journey are at a 65% higher chance able to report a highly profitable mobile ROI. Overall, the study concludes that only one third of companies believe they have developed both a "culture of moments" and the necessary skills to operate these moments.

ACT BOX

Winning the ZMOT

According to an internal study, Google receives 100 billion search queries per month – here are Google's recommendations on how to win the Zero Moment of Truth:

1. Identification of relevant search terms
Google Trends provides the major search terms that should be relevant to the providers´ marketing.

2. Top-level presence on all web-enabled devices
When customers enter a search term on various devices, it is crucial for a brand to be at the front.

3. Generate interesting, relevant and involving content
Provide the right information for each device format, which also motivates customers to further interact with the brand.

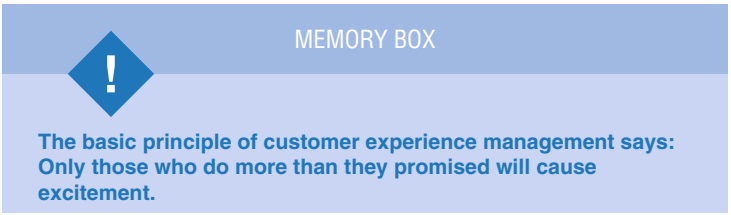
4. Measure the impact
Measure the impact on the relevant KPIs, such as brand awareness, brand preference, purchase intentions, etc.

Source: Lecinski (2014)

2.6.4 Customer Experience Management

In order to convince in the *moments of truth*, companies are able to provide such opportunities along customer touchpoints. Doing so, appropriate experiences should be developed in addition to customized and relevant content. *Experience-oriented consumption* is becoming increasingly important, since buyers are neither able to identify functional differences in offers anymore nor to evaluate them at all due to information overloadings. Customer touchpoints offer various opportunities to convince customers of the provider's performance while binding them to the company through positive experiences. The importance of this experience-oriented approach is supported by *customer experience management*—an approach of increasing importance.

Customer experience is shaped by customized and personal experience, which sets in as a result of interacting with services of a company and/or its employees at various customer touchpoints. The customer experience can be either positive or negative! In order to achieve a positive customer experience, the expectations of customers have to be developed into a direction that can be met by the company. In order to fulfill this task, the topic of expectation management needs to be considered. When it comes to customer experience management, we need to be aware of the fact that we are ongoingly building expectations in the addressee's mind through our communication (especially advertising). This not only applies in business, but to the same extent in the private environment! The one who promises "delivery within 48 h" while delivering after 4 days knowingly produces disappointed expectations. Therefore, it is our fundamental task to steer customer expectations consistently into an area which we can meet or ideally even exceed.



In order to build a *customer experience*, the focus can be put on the following six experience dimensions (see Fig. 2.46) (Gentile et al. 2007, quoted by Meffert et al. 2015a):

- *Sensory experiences* by addressing the senses (see, smell, hear, touch, taste), for example, a water fountain in a shopping mall.

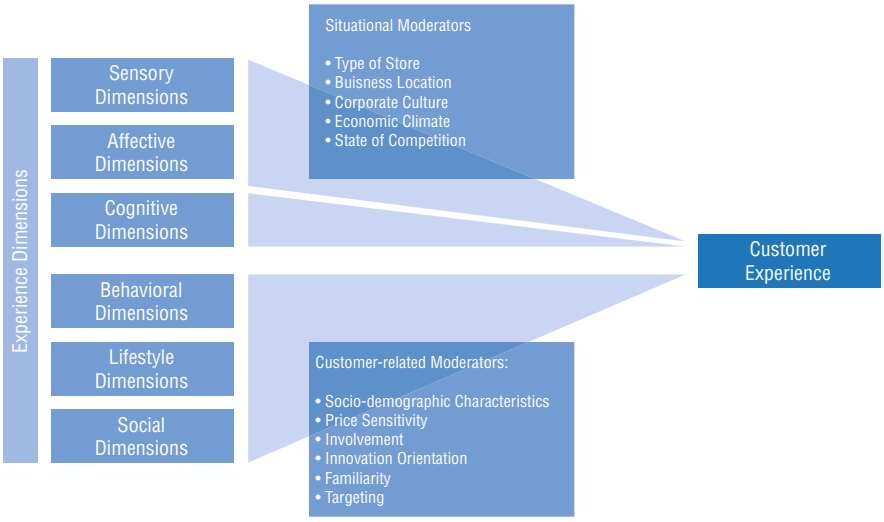


Fig. 2.46 Experience dimensions of customer experience. Source: Based on Meffert et al. (2015a, p. 208)

- *Emotional or affective experiences* which cause certain emotions and moods such as joy, pride, surprise, etc., for example, a personalized invitation to an exclusive shopping event.
- *Cognitive experiences* are caused by information acquisition, processing, and storage with the aim to intensively deal with a certain message for example, campaigns for health education.
- *Behavioral experiences* convey physical experiences, types of usage, alternative lifestyles, or possibilities of interaction, for example, a smart watch can animate to do more exercise.
- The *lifestyle dimension* gives reasons to confirm the values and opinions of consumers, for example, a manufacturer of sports goods offers fashion which confirms a sporty lifestyle.
- *Social experiences* are caused by interaction, contact, and relationship care with the aim to convey a sense of belonging, for example, fan clubs.

With regard to this wide *range of experience dimensions*, companies can create a variety of user-centered customer experiences. In order to provide "striking" and relevant offers, both situation-specific aspects (such as competition or season) and customer-specific factors (such as age, gender, and income) need to be considered.

A successful *customer experience* should equally optimize (to the customer) visible and nonvisible activities. Many companies make the impression as if they consisted of two—more or less independent—parts: front office and backstage! If efficiency, productivity, and control dominate in the backstage area, the performance of the front office is affected. An analogy to theater makes this clear: actor and makeup artist need to be considered as a unit in order to achieve the desired effect. Therefore, in the context of customer experience management, a link between both sides should be established. Backstage staff create the context for experiences and are thus part of creating a positive customer experience. Consequently it is required that these employees clearly understand the importance of the customer experience as well as their own role in it (Zomerdijk and Voss 2010).

Concrete measures could include, for example, job rotation, through which employees, respectively, get to know the "other side." In addition, "mixed teams" in customer service as well as—flanking—incentives for a comprehensive customer service contribute to the desired results. Not to forget the following point, employees need to be provided with appropriate power to act quickly and flexibly. The hereby mentioned *empowerment of employees* shortens decision-making and brings quick solutions to the customer and a higher level of satisfaction to employees through a situational scope of action.

In digital business, employees are able to access a common database through direct and indirect customer contact, design joint actions for digital and analog touchpoints, and measure success. Technical possibilities do exist, while it is now a matter of corporate culture. This culture should honor not only the acquisition but also the targeted development and retention of customers. As a positive example, *Walt Disney* is frequently quoted: "To make people happy" is considered as vision and guideline for all actions—both in the front office and in the backstage area.

The mentioned considerations demonstrate that a structured approach to *customer experience management* is necessary. The term "management" underlines the fact that it is the duty of the company to create all necessary conditions that enable positive experiences from the customer's perspective. There is, however, no guarantee that this will always work. Against this background, a systematic consideration of context is needed as part of customer experience management. In addition, physical artifacts (e.g., tools, documents), used technology, and actors in all activities have to be considered across the entire customer journey (Teixeira et al. 2012).

THINK BOX

Questions:

- What is the importance of services in our business model?
- What contribution to earnings do we generate in our company through services?
- How do we differentiate us from our competitors with regard to the potential-, process- or result dimension?
- What resources must be available when, where, how and in which quality, in order to achieve a convincing service quality for the customer?
- How well do we already manage this today?
- What services can we offer in the course of digitization - as a core service or as an accompanying service - in my company?
- What opportunities and risks does the Internet of Everything provide for us?
- What complementary services can we gather through third-party partners for a convincing service generation?
- How successful are our classic competitors in that already?
- Which start-ups are able to penetrate our traditional business areas with their concepts?
- What beneficial offers does the customer expect from us today?
- What other beneficial offers do customers want from us or from providers who are more innovative than us?
- Which meaningful and valuable approaches are there to integrate our customers into the processes of generating ideas, production and / or marketing?
- What skills and motivation can the customer possibly contribute within his/her engagement?
- What does the customer expect from us in return?
-

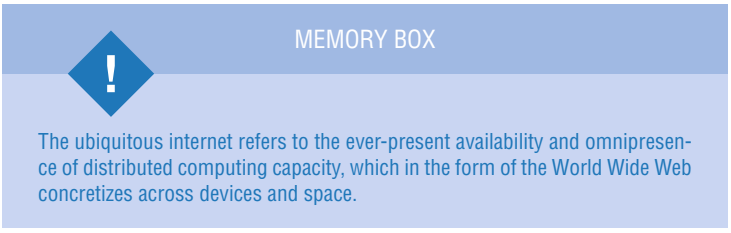
2.7 IT as Enabler of Digitized Business Processes, Products, and Services

Already in 2011, the American venture capitalist and serial entrepreneur *Marc Andreessen* wrote an essay with a clear title (Andreessen 2011.): *Why Software Is Eating The World*. According to him, software-enriched offers will sooner or later penetrate all industries and create completely new value propositions, convergences, and significant structural macroeconomic disruptions. This finding should not be surprising after reading the previous chapters. However, the core of the statement on the central position of software remains extremely relevant, since all activities of digitization eventually lead to concrete solutions that are either entirely based on software or at least massively supported by it. Therefore, IT must be understood as a central element of the digital transformation as well as Digital Business Leadership.

In the context of technical and conceptual considerations, this chapter should not be a substitute for comprehensive e-business literature in the market. It should rather help to understand digital concepts and patterns as well as to apply them for own purposes. In terms of Digital Business Leadership, a certain realization is substantial: the fundamental understanding on technical basics and operating principles of the digital environment cannot be delegated to third parties by any digital leader. On the contrary, the greater the expertise in this regard, the more powerful digital projects can be realized paired with substantive aspects of the aforementioned areas.

2.7.1 The Web as a Platform

Ever since its availability, software is a key driver of enterprise-wide improvement projects. While traditional software development projects usually aim for digital process optimization and automation, our goal here is a particular form or stage of information technology development. Because the basis of digital transformation is the global availability of an *ubiquitous Internet*. To this system, consisting of infrastructures and associated platforms, not only singular software concepts need to adapt but also specific products, service offerings, business processes, and business models if they want to be successful in terms of Digital Business Leadership.



The focus is placed on the World Wide Web, a distributed infrastructure of computing capacity according to the client-server principle or as summarized by Kollmann in its e-business standard work (Kollmann 2011):

> The Internet is a worldwide association of computer networks that use a common standard. [. . .] Each computer on the network can principally communicate with any other network participant. [. . .] Today's great attention from business and society is primarily owed to the development of the World Wide Web (WWW).

An essential component of the World Wide Web is a set of *standards*, which allows for consistent communication and information exchange across rooms. The primary responsibility for this specification of rules lies at the *World Wide Web Consortium* (W3C 2016a), an international community and member organization

that takes care of the development of appropriate regulations. Its areas of operation are the following (W3C 2016b):

- *Web design and applications*
  In this field, the consortium sets standards for creating and presenting web pages. Key elements include the page description language *Hypertext Markup Language* (*HTML*), the description language for design instructions *Cascading Style Sheets* (*CSS*), and guidelines for web content accessibility *Web Content Accessibility Guidelines* (*WCAG*).
- *Web of devices*
  The *W3C* promotes and describes technologies that provide access to the World Wide Web anywhere, anytime, and device-independently. An example is the *W3C Mobile Web Initiative*, which supports availability of the web on a maximum number of device types.
- *Web architecture*
  In this field, basic technologies and functional principles of the web are being described. These include the *URI* mechanism (*Uniform Resource Identifier*), which describes the basic principle of how links or the *Hypertext Transfer Protocol* (*HTTP*) as the standard method for transmitting data on the World Wide Web works.
- *Semantic web*
  In this field, the consortium supports the development of "web of data" technologies. The aim is to link and describe data in a way that optimizes and simplifies its use and automated computer processing.
- *XML technologies*
  By using *Extensible Markup Language* (*XML*), platform- and implementation-independent exchange of data between computer systems is being allowed and simplified.
- *Web of services*
  In this field, the *W3C* supports training of service-oriented infrastructures that aim for a loose coupling and optimized integration of services and data in overall applications. Important technologies are *HTML*, *XML*, *SOAP*, and *WSDL*.
- *Browser and authoring tools*
  In this area, the consortium promotes the diversity of software for reading and using the World Wide Web (browser) and for creating and distributing web content (authoring tools).

Only because of this comprehensive description and standardization, the Internet (in terms of the World Wide Web) is reasonably usable for far-reaching economic and sociopolitical digitization projects. Furthermore, only with the help of appropriate *W3C* standards it was possible to produce the today's worldwide spread of the World Wide Web as well as the accompanying contentual depth of web services. The "Internet marketplace" has to provide a linkage between supply, in terms of content creation, and demand, in terms of content usage.

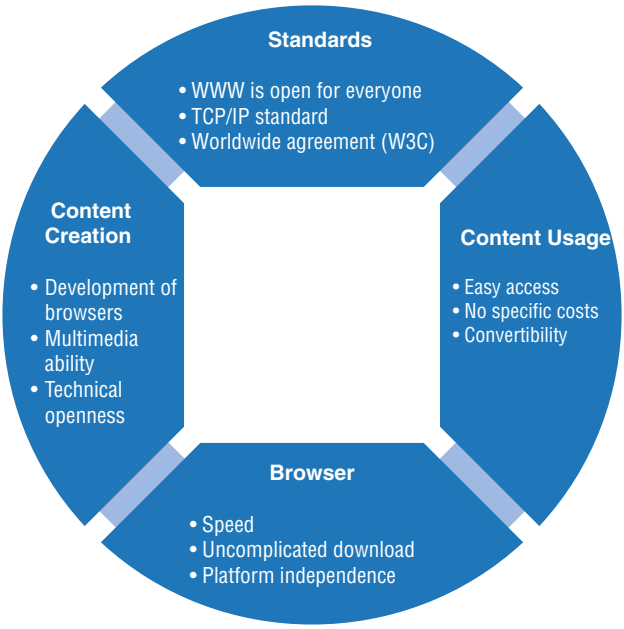


Fig. 2.47 Key factors of Internet growth. Source: Based on Rayport and Jaworski (2002, p. 52), quoted from Kollmann (2011, p. 15)

The value of the World Wide Web increases with the rising amount of participants and the abundance of offerings (*network effect*). Such a diversity can only succeed if communication takes place through standardized procedures, protocols, platforms, and similar transmission speeds. These represent the *key factors of Internet growth* (see Fig. 2.47).

In all technical aspects of their actions, digital leaders are responsible for providing a *web-oriented standardization* of new solutions and to promote the conversion of older nonstandard systems. Due to the intensive use of these rules, a strategic advantage arises. In terms of adopting solutions, web-based platforms are often superior to other proprietary ways. A globally and highly distributed user base allows for quick adoption and massive scale. Integrating own systems or system components into third-party systems becomes much easier and is explicitly required. Successful digital offerings often emerge only from comprehensive technical and procedural linkage of individual services. Finally, a general future-proof can be attributed to the principle of the World Wide Web, which in turn can be transferred to the applications provided in this environment. Due to the fact that today only half of humankind has regular access to the Internet and the development of broadband networks is still a major task even in Western nations, interesting economic prospects can be generated. For digital leaders, the web as a central platform should not be a question but rather a factor that needs to be intensively used as early as possible, before relevant territories are occupied by digital start-ups.

THINK BOX

Questions:

- In general, what is the importance of the "World Wide Web Principle" from a technical perspective in your organization?
- In addition to the traditional corporate website, are there already technically supported solutions and value propositions that make intensive use of web technologies?
- Does a W3C-compliant implementation have priority, when technically renewing existing applications?

The following example illustrates this principle. Let us imagine a company in the finance sector. Next to traditional service offerings of a bank, the company has been offering software for handling payment processes for decades. Up to now, these software components were realized in a proprietary and non-web-oriented way due to regulatory requirements and the historically evolved architecture. Through complex integration projects, the software components were integrated into payment processes of other banks or big trading companies. According to its digitization strategy, the board of the company expects now an adjustment of existing solutions to the requirements of the digital age as part of redesigning the business model, while processes and value chains shall be questioned. New target groups—especially small- and medium-sized companies in e-commerce—are to be developed using the existing expertise in payments of many decades as well as a renewed IT.

Coming from this strategic demand, the following parent requirements for a company's digital IT can be derived:

- The application has to be accessible and usable on the web (see the principles web design and applications, web architecture).
- The application has to allow for a device-independent usage (see the principle web of devices).
- The offered system has to provide interfaces while enabling data exchange with other systems (see the principles web of services, XML technologies).
- The integration of offerings into third-party systems, such as various e-shop systems, has to be effectively possible (see the principle browser and authoring tools).

Apart from a real company's actual options for action and the strategically comprehensible intention of the management to open up new markets like this, building a promising strategic opportunity in this market seems—at least today—possible to a limited extent only. Because such web-compliant applications have been offered successfully for quite some time by digitally centric providers like *PAYMILL*, *Amazon Payments*, or *Authorize.Net*. While established credit institutions were not (sufficiently)

using their competitive advantage, these digital service companies were able to use their understanding of the conceptual and technological mechanisms of the Internet, in order to build up a significant counterweight in the market for payment services. Besides general strategic differences between start-ups and established companies in the industry, the success of the digital payment start-ups is mainly based on focusing on the key principles of the World Wide Web. Administration and usage of these services are performed via web browser. Standards-based interfaces exist. Easy integration as a web service into systems from other software vendors is a common practice and part of the business model. An efficient registration opportunity for traders, also directly via web browser, is another important cornerstone of these offers.

Thus, a *technological competitive advantage* for such solutions is created, which technically could be simulated today by an established and insufficiently digitized bank. However, due to the advanced market development in this environment, a significant entry barrier is present, which can be overcome only with a considerably different value promise and massive cost advantages and/or only with major financial and human efforts.

The much maligned *Deutsche Bank* is a striking negative example in this context. Suffering from considerable challenges in legally dealing with its own past, the IT subject also creates many tasks for the future. Outdated, inefficient, and nondigital systems encounter an environment of strong competitive pressure, which is dominated by the challenges of digitization. According to industry media, CEO *John Cryan* called these omissions considerable problems of the past and barriers to the future success of the institute (de la Motte 2015):

> The bad computer systems are blamed for many efficiency problems [. . .] How enormous these problems are, Cryan made clear in his first letter to the employees in early July: 'We have allowed to be too inefficient. Inadequate and ineffective processes, outdated and inappropriate technologies, too many activities carried out manually and nontargeted investments in our infrastructure have made our cost base increase. Thus, a big part of our hard earned income has been used up', Cryan wrote at the time.

It remains to be seen whether the new personnel restructuring within top management will help not only to eliminate the problems of the past but will also create an appropriate technological basis for far-reaching digital future requirements—after all, the associated targets are huge (Klostermeier 2015):

> The former Chief Operating Officer and Chief Digital Officer Henry Ritchotte (52) will leave the board at the end of 2015 to set up a new digital bank for *Deutsche Bank*. [. . .] Since November 2013, he additionally is responsible as Chief Executive Officer Digital (CDO) for the worldwide digital agenda of the bank. [. . .] The chairman of the bank, Paul Achleitner, commented on the changes in IT: With the creation of a digital database, Henry Ritchotte will represent a key role in the restructuring of the bank.

No matter which industry we consider, it remains clear that as an enabler of the digital transformation, IT needs a specific—namely, web-oriented—design. If software does not meet these principles, it is generally unsuitable for constructing a Digital Business Leadership. We have to take the following into consideration: If we

can't align the existing technologies to the principles of the web as a central platform, we will face strategic and operational disadvantages compared to our digital competitors.

2.7.2 From Open Industry Standards to Open-Source Software and Versatile Systems

The standardization of the World Wide Web leads to further developments and new concepts of software development. This allows for implementing individual business much faster and more cost-effective and—building on this—to continuously adapt to new requirements. The standardization efforts of the *World Wide Web Consortium* demonstrate the power of a commonly accepted set of regulations.

Another special feature of the web is that the majority of the Internet's technological regulations are *open standards*. Content and usage of such principles can be reviewed and used by any market player.

OASIS (OASIS 2016) and *OpenStand* (OpenStand 2016) represent initiatives dedicated to the promotion of open standards and which ascribe specific advantages to these standards (see Fig. 2.48).

Fig. 2.48 Ten advantages of open standards according to the OpenStand initiative. Source: Based on OpenStand (2016)

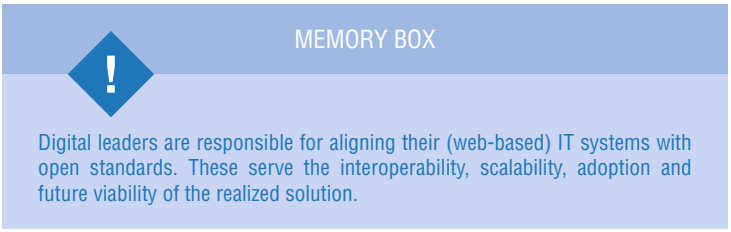
An example of such an industry standard presents *CMIS*. The acronym stands for *Content Management Interoperability Services* and is supposed to—with the help of an abstraction layer and web services and Web 2.0 interfaces—enable the exchange of information via content management systems of various providers.

This standard is specified by an independent standardization body at *OASIS*. Participating companies are comprised of leading manufacturers of the enterprise content management industry such as *Alfresco*, *EMC*, *IBM*, *Microsoft*, *OpenText*, *Oracle*, and *SAP*.

New market opportunities therefore arise not only with the integration across systems but also with regard to the advancement of their own respective systems.

The general provider independence of the standard creates comprehensible framework conditions.

Additionally, the openness of the standardization facilitates the application integration and accelerates the overall pace of development.



The *Open Source Business Alliance*, a German interest group in the field of open standards and open-source software, states the following in its guidelines on open standards (OSB Alliance 2016):

> Open standards are an important prerequisite for ensuring interoperability and to avoid manufacturer dependencies. They therefore have to be required and promoted at all times.
>
> With regard to the definition of these open standards we adhere to the definitions of the EU and FSFE. [...] Furthermore, the usability of the standard absolutely requires its complete documentation, whereby an open source reference implementation offers the best assurance regarding inevitably emerging uncertainties involved in the interpretation of the standard.

Thus, an additional effect of these open set of rules is not only commercial offerings, but also *open implementations* of respective standards emerge.

In the case of *CMIS* standard, for instance, a group of developers under the umbrella of the *Apache Software Foundation* carried out an open-source reference implementation in collaboration with *Apache Chemistry*, which makes it easier for software developers to integrate the *CMIS* standard in their own applications.

The resulting opportunities in view of a Digital Business Leadership resultant are clearly visible. *Open standards* represent the basic components for supporting further technological innovations and serve for the interoperability of systems by

offering a *quick solutions integration* as well as a simplified exchange of data. In search for human resources, relevant specialists for companies are more identifiable, and multipliers are reachable much faster. Software developments that are based on *shared standards* offer new market opportunities and oftentimes growth options that are scalable more quickly. Open reference implementations promote equal opportunities and help to avoid information asymmetries. Not without reason the *OSB Alliance* is occupied by an open-source industry association with open standards. Because the concept of such open principles that are shared across the industry is closely linked with the concept of an *open-source software*. To this end, the above example presents an excellent transition to another essential aspect of web-based IT.

Open source at its core means first and foremost that the respective source code of the application under consideration is openly accessible to third parties.

In the current understanding, however, open-source software is much more. The *Open Source Initiative*, an American nonprofit organization, besides others, places a focus on the following aspects of open source from a license perspective (Open Source Initiative 2016):

- *Free transfer*
  Software licenses should be constructed in a way that enables a (cost-)free transfer and use of the software.
- *Source code*
  The program must include a source code, and a disclosure of the source code or the software must be allowed in a compiled state if necessary.
- *Derivative work*
  The license must allow derivative work as well as the proliferation under the same license conditions.
- *No discrimination*
  Licenses may not contain any discrimination against persons, groups, or specific fields of activity.
- *Neutrality*
  The licenses must neither be tied to a specific product nor create any restrictions on other software and should be designed technologically neutral.

According to these basic provisions, further economics and social benefits are linked to open-source software. The *OSB Alliance* summarizes these as follows (OSB Alliance 2016):

> The use of open source software reduces one-sided dependences on suppliers, supply chains, customers and employees and thus prevents misinvestments.
>
> Thus, thanks to equal opportunities for all providers and users head monopolicies can be avoided. In case of changing software suppliers or in case of breach of service of a supplier, users of open source software are no longer forced to perform a costly re-implementation of an existing software providers. Open source software ensures fair competition and therefore leads to greater benefits for users, manufacturers, service providers and society. Open source

software promotes innovation, lowers barriers to market entry and therefore leads to a more agile IT industry. It is thus the key to a successful IT industry.

Open-source software plays a prominent role with regard to the World Wide Web and the digitalization in general.

Prominent examples of open-source software solutions with web reference include:

- The web browser *Mozilla Firefox*—developed and maintained by a global, nonprofit organization—is now one of the most popular browsers.
- The operating system *Linux* is especially admired by developers as valid alternative to other operating system solutions on the market. Its various distributions equip the majority of available servers worldwide.
- *Android*, an operating system and a software platform for mobile terminals, which drives the vast majority of smartphones, tablets, and other types of devices.
- Various software projects of the *Apache Software Foundation*, which are considered powerful basic components and thus starting point of diverse concrete software implementations.
- Various other freely available software projects, which either provide specific web-based applications, such as the content management system *TYPO3*, or deliver basic development frameworks. These include *Bootstrap*, a framework for the development of modern and cross-device web front ends.

From the perspective of Digital Business Leadership, open-source software and open standards are especially important in terms of their *innovation function*. With this diversity and performance, it is oftentimes possible to develop innovative web-based services much faster and more agile than by developing conventional proprietary principles. As a rule, digital start-ups make intensive use of such software libraries. For this purpose, globally accepted and thoroughly tested (in production mode of other companies) open-source software components are recombined upon one's own logic. Oftentimes, the proportion of "finished" components can significantly make up more than half of the total solution. Therefore, it is possible to create new business models and services considerably *faster and with higher quality*. Development costs can also be substantially reduced.

MEMORY BOX

Properly deployed, open source software enables digital leaders to realize their own business models faster and more efficiently. Best attention needs to be given to the recombination of available open source algorithms into new and highly individual solutions.

However, even established firms are taking advantage of open-source software, as it is possible to achieve shorter development times. Additionally, the software allows for reaching a *wide circle of interested and trained software experts*.

One example is *SAP*, which makes intensive use of open-source technology within the scope of the modernization of user interfaces of their business applications. For this purpose, a dedicated group was formed within the company, which as part of the project *SAP Fiori* aims at transferring current, cross-device user interface concepts which are known from Internet applications to one's own range of products and solutions (SAP 2016a):

> SAP Fiori is the new user experience (UX) for SAP software. It applies modern design principles for a completely reimagined User Experience. SAP Fiori UX represents a personalized, responsive and simple User Experience across devices and deployment options.

In order to reach the desired project results much quicker and to achieve a wide adoption on the market, open-source basic components such as JavaScript framework *JQuery* were used. Additionally, the entire work was included in the SAP production text as *SAP UI5* and eventually released as *Open UI5* as an open-source software (SAP 2016b). Among other things, the company justifies this step as follows (SAP 2016c):

> One reason was there from the very beginning of UI5, When it was quietly called 'Phoenix': we always felt it should be Open Source. It just felt right and in line with the basic principles of UI5 which were all about openness and standards. [. . .] And we felt also felt it was time to do it before it was too late—UI5 will profit when more people are using it. Be it due to feedback, bug reports, contributions, or simply because there is a bigger pool of UI5-aware developers in the world who can help each other.

If the world's leading commercial software providers make extensive use of open-source software and in turn supply their own developments as free software, digital business leader should not prevent themselves from pursuing such concepts. Because open standards and open-source software have another aspect in common, which is particularly relevant with regard to digital transformation activities and the sustainability of their own solutions. Solutions design in this way is developed strongly component-based, i.e., the result of a development is comprised of many individual parts. These in turn are standardized in the highest possible degree, and each of them represents open-source basic components. The result: The *overall solution is flexible and versatile*. It can be easily expanded by new aspects of function. Furthermore, it is possible to easily transform the solution according to new business requirements or to optimize it by new or continuously improved open-source basic components.

Overall, the digital IT must be embedded in the currently existing business model and strategy pattern and is supposed to set the related targets in terms of their IT. In this regard it does not differ from other IT projects. However, in terms of potentially changing digital environment conditions and particularly with regard to possibly modified target orientations, it is even more important to pay attention to versatility

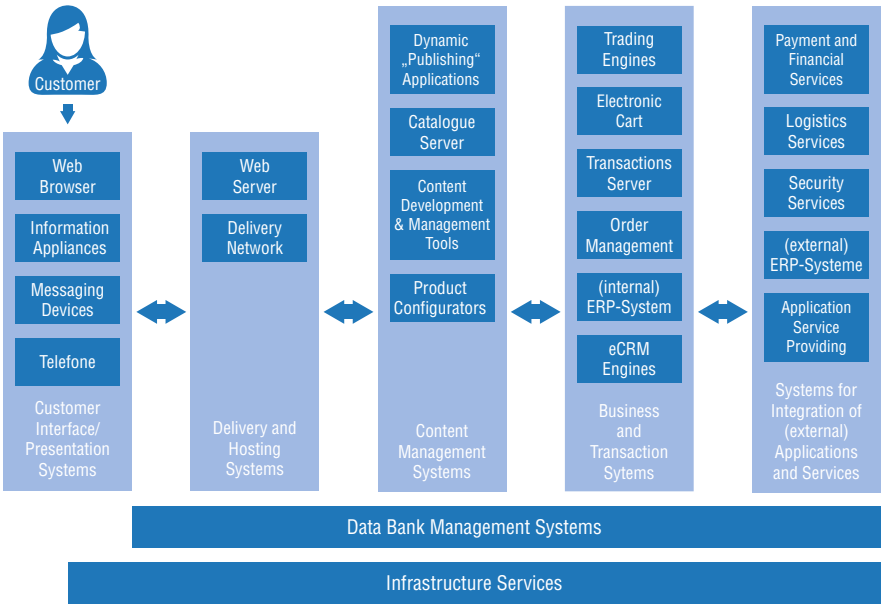


Fig. 2.49 Example structure of an IT architecture for e-businesses. Source: According to Strauß (2013, p. 331)

and sustainability. As Fig. 2.49 shows, e-business architectures are distributed structures that integrate diverse systems, components, and services and allow those to interact with each other.

For the most part, digital processes can only be provided professionally if specific technological industry solutions are integrated into an overall system concept and if the underlying processes are as automated as possible. In addition to the presentation and information systems at the customer interface in the background, IT architectures in e-business use a variety of other components.

These include, for instance, e-mail marketing solutions, ERP and CRM systems, as well as oftentimes generic services for payment, logistics, and security by third-party providers (see Fig. 2.49). This is where open standards and open-source software can help to reduce complexity, enable data, and process flow as well as to allow for changes to the structures over time. Digital Business Leadership within the terms of IT enables digital innovations and thus also requires a thorough analysis of one's own IT capabilities and system architectures.

Only once these are designed sufficiently flexible and contemporarily, further steps can be taken. Openness towards the great number of developer communities, which partly form in a self-organized way and partly supported by entrepreneurial interest, is of utmost importance. And finally, besides pursuing one's own ambitions, a compensation of (financial) benefits from open standards and open-source software should also be taken into account.

In a digital world, sponsorships, donations, and the publishment of own developments under open-source license are a common practice.

ACT BOX

Workshop: Planning digital IT architecture

Use this workshop in order to take the first steps towards a versatile digital IT.

Scope:
About 4-6 hours

Participants:
Interdisciplinary team of IT experts from all relevant parts of the company as well as additional innovation-oriented specialists and executive staff from various organizational areas

Procedure:

- **Introduce the topic "digital IT" using the information in the previous chapter.**
- **The participants of the workshop are divided into groups of at least 3 to maximum 5 people.**
- **Create a current sketchy overview of your current IT landscape, first in the respective groups and afterwards summarize it all**
- **together.**
  Using the tools below, give all participants the opportunity to look at possible web-based alternatives and standards and to
- **discuss optimization suggestions.**
  Finally, transfer the shared results to the innovation projects
- **generated in the previous chapters.**
  Summarize the workshop results and agree on further steps.

- **Resources required:**
- **Workshop room and 4-6 hours of time from all participants**
- **Whiteboard or free wall surface for attaching notes**
  Sticky notes in different colors as well as highlighters

Tools:
Overview of current open standards
https://www.oasis-open.org/standards
https://www.w3.org/TR/tr-groups-all

Overview of current open source projects
https://github.com/explore

Latest news and articles on open source and digital IT
http://www.heise.de/open/
http://t3n.de

2.7.3 Technological Innovation Creates New Opportunities for Digital Leaders

The *Gartner* Hype Cycle for new technologies, which is updated on a yearly basis, has already been introduced in Sect. 1.3. Additionally, relevant technologies across industries have been presented.

However, when taking the exponential transformative power of the digitalization into account, each description of currently significant technologies is only a snapshot with relatively little relevance. Therefore, Digital Business Leadership requires a continuous *early recognition and forecast of new technology*, which is individual for each context. The mere understanding of the technological *hype* is not sufficient (Gerpott 2005). This allows to absorb technologically relevant (weak) signals and to develop entrepreneurial assessments with regard to four different aspects (Gerpott 2005):

- Which different types of optimization potential are offered by new technologies?
- Which limits are linked to popular technologies?
- Does substitutionability exist between technologies?
- Is it likely to expect upheavals in the development of technologies with regard to discontinuity of technology?

It is this thorough analysis of technologies and the *development of specific courses of action as early as possible* which differentiates digital leaders from its followers. By massively experimenting according to the Lean Start-up approach, technology enables firms to create a superior business model (see Sect. 2.2.5).

Because in the digital field, the principle of "the winner takes it all" markets applies. Only those who recognize new trends early and are able to combine existing know-how with current technological approaches will be successful.

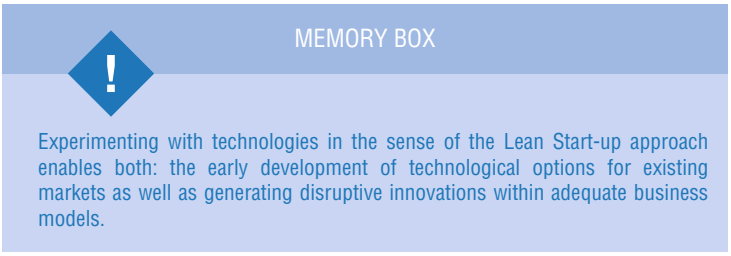
The best example: *Salesforce*. Founded in 1999, the software company focuses on customer relationship management. With its rental solution of CRM software, the company significantly shaped the term software as a service and anticipated the technological advancement of storage capacity towards *cloud* services. As of today, the company not only ranks among the market leaders in CRM software, but the business model principal of highly flexible software leasing from the cloud (established by Salesforce) has become a new delivery standard for software.

The *technological competitor analysis* (Gerpott 2005) enables other software companies to transfer the established principal of software as a service on their own offers. However, this leads to the risk of being late for market entry. Thus, it is important to not simply analyze direct rivals. Instead, the analysis—in terms of the *early recognition and forecast of new technology*—must start much earlier. Information and interaction sources include the following (Gerpott 2005):

- *Existing customers* and *suppliers* of your own company, which are known as innovators and which are possibly willing to participate in lead user and open innovation processes.

- *Scientific institutions* cooperatively research on future fields of technology. It is important to translate their knowledge into concrete market-ready solutions.
- *Publicly available information*, such as relevant literature, patent publications, technology-centric online communities, and other relevant web-based media.

Because from the perspective of a Digital Business Leadership, the ultimate goal must be to make use of new technological developments intensively and as early as possible. It is further of utmost importance to *continuously experiment* with these technologies in order to draw conclusions about existing entirely new business model aspects as well as to derive general learning effects on the future of digital technologies.



The so-called scenario analysis is well-known in strategic management. This approach is also suitable for addressing questions in the area of digital technology forecasting.

Technological changes with high uncertainty and exponential growth require that the experimentation with technologies is followed by the derivation of concrete courses of action. Within the scenario analysis, these courses of action have to be portrayed as possible future scenarios (Reisinger et al. 2013):

> Within the scope of scenario management alternative future scenarios are developed, evaluated and systematically integrated into strategic management. Especially in turbulent environments, the challenge is to let go of a predictable future and to think and act in alterative development opportunities instead.

Visualizing the anticipated developments in the form of a *scenario funnel* is a possible alternative for dealing with various technological options. Through continuous experimentation, digital leaders—especially in the network-oriented part of the organization (see Sect. 2.3.1)—develop a basic understanding of individually relevant technological developments that could be relevant in the future and derive possible scenarios from these. One specific trend scenario (see Fig. 2.50) presents itself as a possible future, surrounded by two opposing possible opposed scenarios.

The more one looks into the future, the greater the uncertainty with regard to the expected scenario, and the wider is the span of the scenario funnel with its potential scenarios.

One special feature of the scenario technique in the digital field is the time reference to be selected. Traditionally one started from a relatively manageable

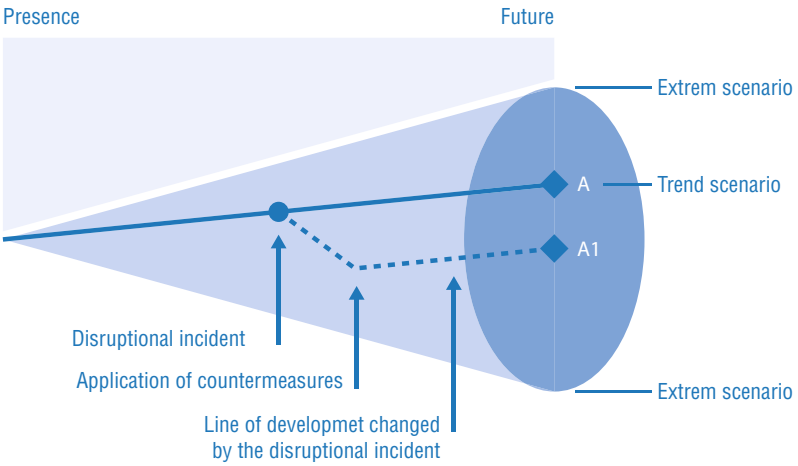
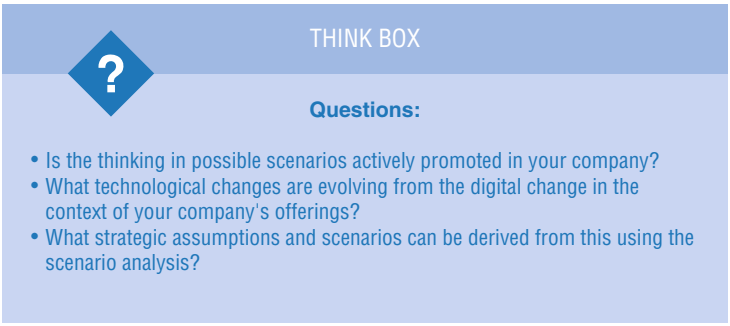


Fig. 2.50 Scenario funnel. Source: Based on Reisinger et al. (2013, p. 88)

change in the "near future" of 2–5 years, and the lines of development to be considered in the scenario analysis expounded much longer. However, due to the exponentiality of digital developments, a much shorter period must—most probably—be taken under consideration. Even observation periods of maximum 3–5 years are connected to such considerable uncertainty that these represent a sufficiently large total period. Timeframe maximum of 3–5 years is already connected here with so considerable uncertainty that this may represent a sufficiently large total period.

It remains questionable whether it will actually be possible to develop successful countermeasures against occurring "disruptive events" (see Fig. 2.50) in case of particularly dynamic developments on a global level or if not rather this leads to the arising need of a dynamic reorganization of scenarios.



Thus it is left to one's own capabilities to convert the various technological trends of the digitalization, such as cloud computing, Industry 4.0, the Internet of Things,

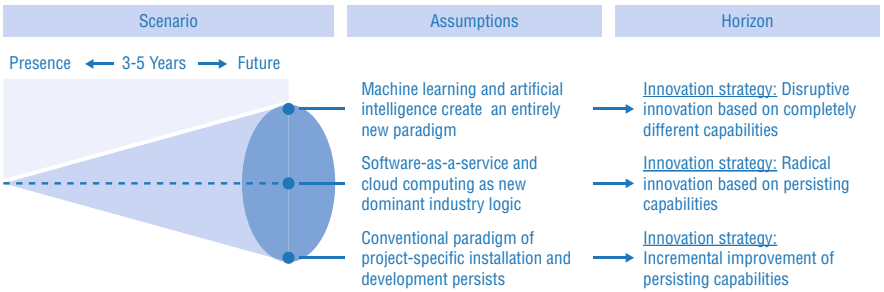


Fig. 2.51 Example of a scenario funnel in the environment of software as a service including assumptions and innovation horizons

3-D printing, augmented reality, wearables, machine learning, or robotics to own meaningful future scenarios. In this case, however, the scenario analysis constitutes a framework for action, which as laid down in the *three-horizon model of innovation* (see Sect. 2.2.3) links the early recognition and forecast of new technology with solid strategies of action.

Figure 2.51 shows a fictitious example of a scenario of the sector changes in the software market of the enterprise resource planning (ERP). Due to assumed technological and conceptual changes in the next 3–5 years, three scenarios may be expected. The expected *trend scenario* describes the transfer of software as a service and cloud computing strategies—which have already been successfully introduced in other contexts (e.g., *Salesforce*)—to ERP project contexts. A *lower extreme scenario* is that—despite contrary expectations—these new logic will not prevail and that currently dominant paradigms of project business and customization remain. An *upper extreme scenario* is possibly that entirely new logics arise, resulting from exponential technological development in the field of machine learning and artificial intelligence. In this case, ERP software would undergo a completely new approach that lifts the enterprise resource planning through artificial intelligence and machine learning to a stage of development that was previously impossible.

As presented in Fig. 2.51, the following instruction for action should be followed:

- At the level of the existing industry paradigm (*lower extreme scenario*), a competitive advantage can be achieved—or expanded—through continuous improvement processes. The innovation strategy must be of incremental nature according to a "Horizon 1" and is established in the hierarchically structured part business unit, which exploits the existing competitive advantage. These continuous improvement processes must be directly implemented directly on process and solution level.
- In view of the most likely *trend scenario* of the acquisition of software as a service and cloud computing paradigms, radical changes as laid down in *Horizon*

2 need to be produced, which convert the existing solution of the provider in a designed future. Accordingly, it is of importance to act in close partnership between hierarchically structured business unit and a company-wide innovation network. The specific arrangement of such a new ERP solution has to be designed by an agile development process and by establishing continuous learning processes. Furthermore, it is crucial to continuously test a new offer that corresponds to the trend scenarios as it is being developed in the traditional market.

- With respect to the probability of a disruptive change in the industry paradigm through completely new technological developments (*upper extreme scenario*) according to the principle of a *Horizon 3*, the following actions must be taken. Linking up latest technological findings at an early stage, continuous experimentation and ongoing learning will be the focus here. Also in this case, all activities should be transferred into concrete prototypes as early as possible. These prototypes should be developed in an agile way and according to substantive market feedback. In addition to the traditional market, however, it is important to explicitly search for new fields of application and current "noncustomers," for whom technology could enable the creation of a unique and totally different value.

Technological development, thus, does not merely pose a risk to digital leaders, but constitutes a particularly constantly arising opportunity to innovate processes, services, products, and the entire business models. They master not only to create and operate a technological basis designed suited for the web. On this basis they are able to think in technologically induced scenarios and to experiment in these scenarios on various innovation stages in parallel. For this purpose, digital leaders link these technologies with business models, make use of a strongly customer-centric view, and—according to the mode of a dual organization—activate both the hierarchical organization unit and the innovation network of the company.

Finally, when scouting for technology, digital leaders do not rely merely on traditional sources of information or solely on politically determined frameworks provided by the digital agenda of the federal government or the European Union, but are also an active part of communities, regularly participate in technology *meetups*, monitor the technological changes, and actively contribute to shape the digital environment.

2.8 Controlling of a Digitalized Organization

2.8.1 Framework Conditions for the Design of Controlling

The *basic concepts of controlling* remain valid in a digitalized organization—in keeping with the motto:

> Technology changes—economic laws don't!

However, digitized organization has a much larger number of data sources, data formats, and data content—a development which is referred to as *big data*. If one

attempts to describe the term "big data" further, it must first be pointed out that this concerns large amounts of data, which cannot sufficiently be processed by traditional databases and data management tools. The big challenge is to capture a wide variety of data formats and update rhythms and data sources to convert them into a relevant data stream in order to ultimately transfer big data into *smart data* that supports decision-making. This challenge can be described with the following dimensions of big data:

- *Volume* (in terms of data volume or quantity of data)
  "Volume" generally describes the gigantic *amount of data*, which is obtained due to the variety of digital footprints of humans and machines. On the one hand, this involves the width of the available data but also their depth.
- *Velocity* (in terms of speed or change cycles)
  "Velocity" describes the speed at which data records are recreated, updated, or deleted completely. The forms of data collection, which are reflected in the required loading and update times, also have an effect on these change cycles. Increasing importance is attached to systems in which the changes are recorded and documented and possibly even evaluated in real time.
- *Variety* (in terms of the diversity of data sources and formats)
  When speaking of "variety," the diversity of internal and external *data sources* is being described. This firstly includes the company's data pool, such as the traditional CRM system or, for example, information from data pools including product or sales information. In addition, information about transactions can be obtained, which are recorded via sensors. Additionally, an extensive number of public data pools, such as openly accessible data pools, which provide a variety of information, exist. Besides increasingly generating data via sensors, social media—where private individuals and businesses generate information—are the most comprehensive source of data.

The concept of "variety" also includes the diversity of divergent *data formats* which are generated in the different sources. While currently no comprehensive standardization of data formats in the Internet of Everything exists, first efforts have been made here. Furthermore, the data also differ with regard to nomenclature, i.e., when terms are used for certain data contents. Consequently, a very powerful mapping is required in order to avoid mistakes when merging data. In addition, since besides local data saving an increasing amount of data are kept in the cloud, different data storage locations have to be taken into account. In addition, the diversity of data storage systems (such as the data model, database type, software, hardware) must be considered. Finally, the data also have divergent data availability, depending on the storage locations.

The task to be performed by the controlling department is shown in Fig. 2.52. While the term big data initially attracts attention to the *data sources* and the *data* available there, at an early stage, their perspective should be widened to the *addressees* of the findings. Because data processing is not an end in itself, but must satisfy the information needs of the addressees. However, it is the duty of the

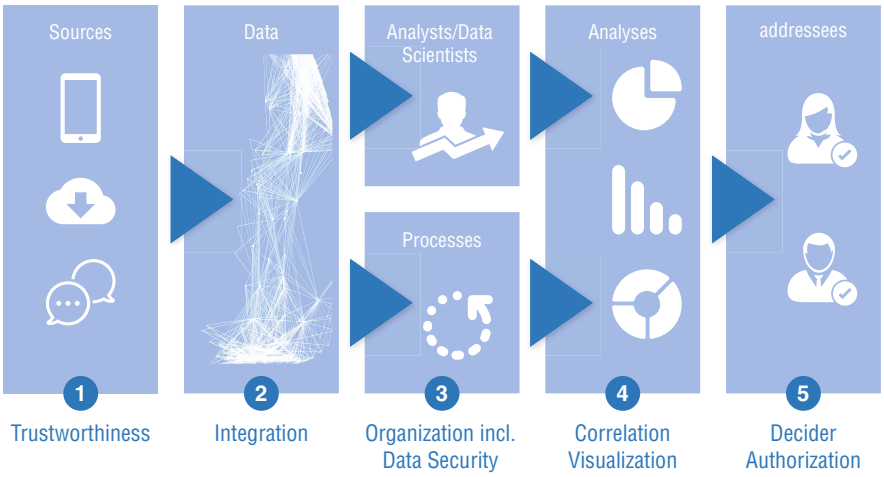


Fig. 2.52 Fields of action for big data in company management. Source: In accordance with Mehanna (2015, p. 18)

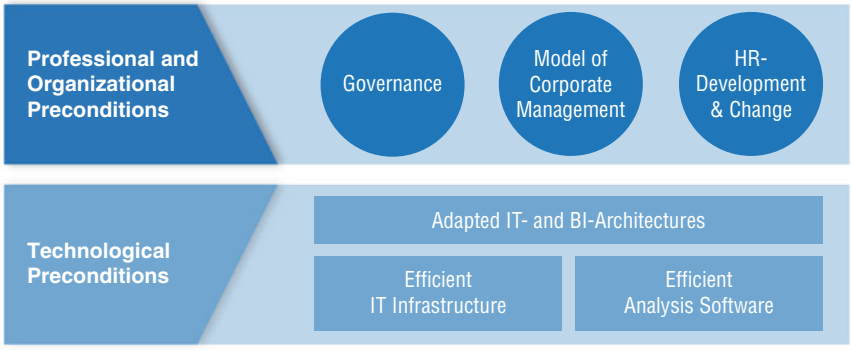


Fig. 2.53 Requirements for successfully using big data. Source: In accordance with Mehanna (2015, p. 19)

analysts and *data scientists* to also provide answers to questions that have perhaps not even been asked yet. Also this task must be fulfilled with the help of a wide variety of *analyses*.

In order to fulfill these tasks, various *requirements* must be met. These are shown in Fig. 2.53 (Mehanna 2015). Every company needs guidelines for *governance* by management accounting on how to deal with data, models, and the insights gained while doing so. This governance covers the entire process, which is illustrated in Fig. 2.53—from the source of data to the addressees. This also defines how, for example, conflicting data and findings as well as uncertainties in general should be addressed. The *model of corporate management* also is of vital importance. To a large

extent, it is their design that determines what knowledge can be gained. In order to develop sustainable value driver models, lesson-learned processes need to be established in order to ensure a continuous advancement of the models used. The *Human Resources and Change* Department also is a contributing factor. The need for this is not limited to the employees responsible for the analysis and preparation of data, but also for the addressees of these findings. It is of vital importance that the latter are able to also properly process the information provided adequately and to base their decisions on it. The *technological prerequisites* have already been discussed in Sect. 2.7.

In the course of the *targeted compression of information*, the following four stages including their respective key questions can be distinguished:

- *Reporting*: What happened?
- *Analysis*: Why did it happen?
- *Monitoring*: What happens at the moment?
- *Forecasts*: What is going to happen?

The basis for such an analysis firstly is an overview of which data are available in one's own systems. The necessary information can be obtained via basic evaluations.

In *reporting*, the core question is "What happened?" A reporting can be based on a basis of evaluation in terms of available corporate data, for instance. An example for this is the *filling level analysis of the customer database*. This analysis assesses to what extent the necessary features are present within the addresses in the database. The basic structure is shown in Table 2.5. This clarifies how successful the company's data collection has been in the past.

On the basis of the findings obtained through a filling level analysis, measures can be derived which aim at systematically obtaining the most relevant information. Similar filling level analyses can also be carried out with regard to product and/or supplier database.

Reporting, for instance, also shows which *customers* have ordered a great deal, which have denounced, and which new customers have been acquired. At the *product level*, top seller and flop lists can be created, and the distribution of profit margins

Table 2.5 Basic structure of a filling level analysis

Characteristic	Filling level (in %)
Surname	100
Given name	85
Date of birth	62
Address origin	49
Creation date	100
Marital status	32
Income class	16
Car ownership	27
Housing situation	34
...	...

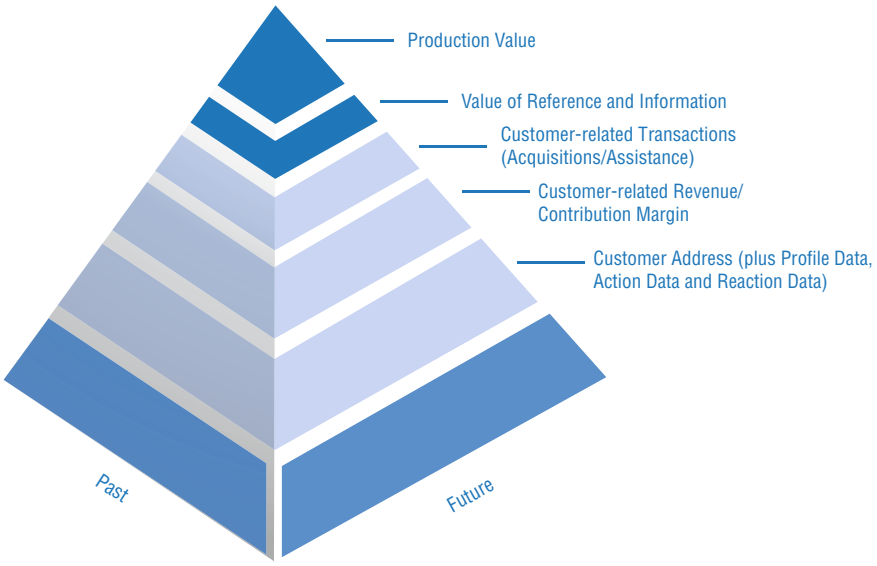


Fig. 2.54 Competence pyramid for customer value evaluation. Source: In accordance with Kreutzer (2016a, p. 32)

achieved on product and product group level can be shown. Additionally, the *analysis of customer value* is one of the most important issues in reporting.

Depending on the industry-specific characteristics of their own objectives and the availability of relevant data, companies are encouraged to develop their own *approach to customer value determination*.

A greater degree of accuracy in customer value determination should be aspired to if the company has the opportunity to carry out a correspondingly differentiated customer service. The differentiation of the customer evaluation must be combined with a differentiation of the customer approach. The conceptual approaches are indicated in the *competence pyramid for customer value determination* (see Fig. 2.54). The construction of a competence pyramid is possibly a multi-year project. This applies in particular if online and offline activities must be evaluated in an integrated manner.

In order to identify this customer value, all relevant *address data* must be gathered. With regard to customer value drivers, *net sales*, or rather future sales—even better—the corresponding *profit contributions* of all products acquired or services used can be determined. The challenge for multichannel companies is to consolidate revenue and profit contributions from online and offline purchases into one customer account.

As far as profit contributions are determined on the customer side, the supply-related costs for the delivered products or the provision of services are generally used. When determining profit contributions, the *transaction costs* associated with such a customer relationship are taken into account less often. These include customer-driven documentation costs caused by the customer's specific patterns of behavior (e.g., by a

high frequency of product returns, many calls at the call center, slow payment with the consequence of interest, and handling costs). In addition, the company-driven documentation costs must be calculated, e.g., by taking into account the costs depending on the number and content of advertising impulses as well as by phone and e-mail addresses or visits to the workplace (e.g., sending a high-quality catalog). These considerations also need to be undertaken across online and offline channels.

The value of a customer, however, is not limited to monetary values. Thus, a customer can have an important *reference value* for the company—both in the B2B and B2C market. This aspect is particularly important in the online age. Nowadays, every single customer has the potential to exert lasting influence on the well-being and woe of companies through their reviews and evaluations.

This power is also granted when people do not make use of the products or services offered by a company, but nevertheless have an opinion on it and make their views known. When developing value models, one has to take greater account of the role of opinion leaders and multipliers that customers and noncustomers can play. For instance, statements relevant to a company's range of services can be communicated to a global target audience using social networks such as *Facebook* or *Twitter*.

Why is the *reference value* of such importance that it is necessary to integrate it in concepts of customer valuation? A worldwide study on confidence in forms of advertising shows that with 66% online recommendation is the number 4 among the most credible forms of advertising and on a par with editorial content (Statista 2015a). Besides personal recommendations, online recommendations and evaluations are often the second most credible source of information in Germany (Kreutzer and Land 2016a). In the light of the above, a concept for determining the (*customer*) *reference value* is needed (Kreutzer 2016b).

The diverse interaction possibilities of the Internet make it increasingly important to evaluate the *information value* of customers and noncustomers as well. Nowadays, everyone who has Internet access has the opportunity to act as an inspiration or creative partner for companies simply by contacting companies directly or by engaging on relevant platforms (e.g., *Tchibo Ideas)*. Once a customer becomes a co-producer, an even stronger relationship is expressed by a customer's *production value*. For this purpose, various concepts and (online) platforms can be used (Kreutzer 2013).

In *monitoring* responses to the question "What happens now?" are invited. Monitoring is the immediate, systematic observation, recording, and monitoring of processes and developments. The purpose of monitoring is to use the knowledge gained to control the ongoing process when critical developments are emerging. For this purpose, *dashboards* (in terms of an instrument panel) can make an important contribution. Therefore, since currently happening developments are being presented, monitoring can also be understood as a *real-time reporting*.

For this purpose, *customer monitoring* is of special importance because it is essential to identify critical developments at an early stage. This includes, for example, a worsening of credit ratings at the consumer or company level. As soon as such a signal is present, the outstanding invoices should be checked and, if necessary, converted to more secure payment methods. However, it is also possible to identify

Region A	Target	Actual	Trend
Rate of new customers	10 %	5 %	
Contribution margin per customer	25 €	28 €	
Rate of bad depts	0.02 %	1 %	
Loyalty rate	25 %	18 %	

Fig. 2.55 Dashboard as a management cockpit. Source: In accordance with Kreutzer (2016a, p. 71)

changes which indicate additional sales potential. This could be a move, for instance, which can indicate a consumer need for residential and business premises.

An example of a *management dashboard* is shown in Fig. 2.55 for the region A. This clearly illustrates that this region is well below the goal of attracting new customers and that no improvement is in sight. The profit contribution per customer is above target. At the same time, however, a significantly higher loss of receivables can be determined. Here too, no improvement can be foreseen. At the same time, the loyalty ratio drops. Such a result is a warning signal for management. In this case, in order to improve the situation significantly, an in-depth analysis of causes needs to be made immediately.

The purpose of *web monitoring* is to systematically search for business-related entries on the Internet. These include, for example, statements of their own company, products, or services or even of relevant competitors. In doing so, it is important to classify the information obtained quickly and meaningfully in order to prepare it in a decision-oriented manner. At an early stage of fine-tuning, the findings gained in this process can be integrated into ongoing operations. In addition, a *clickstream analysis* can be performed, during which a visitor's behaviors on the website are systematically evaluated. Among other things, during this analysis, it is checked from which sites visitors are directed to your website, which parts of the website are visited, and how often this happens. Such a type of monitoring provides guidance for website optimization. If this monitoring happens in real time, suitable promotional speeches can possibly be communicated in the ongoing process (Kreutzer 2014).

Forecasts are frequently based on appropriate models to predict future behavior. The following questions can build the center of this form of data mining:

- Which customers are worthwhile to send the special catalog to, because further purchases are to be expected?
- Which customer can be expected to terminate the contract at the end of contract?
- Which member of my customer loyalty program will respond particularly well to the 10% coupons?
- Which of the sporadic donors can be developed into long-term donors?
- Which customer segments promise a large cross-sell potential?
- Which customers will follow the online invitation to refer a friend?

Data mining predictions are also used to *determine future customer values*. Frequently, as already discussed, customer value estimates are based on a historical

value ("How much revenue has been generated by the customer relationship so far?") and a current value ("How much revenue does the customer relationship currently generate?"). The estimation of the future customer value, however ("What value does the customer have in the future?"), is much more demanding. It is important to determine the turnover generated by the customer as a whole and in which assortment fields the purchases were made. Due to the different profit contributions (e.g., when it comes to groceries compared to perfume, clothing, household electronics, or furniture), this division is of central importance when forecasting the potential value of a customer. In addition, estimates of the cross- or up-sell potential or the probability of migration can help determine the profitability of a customer.

In the context of customer management, it is further important to determine which customers are likely to migrate, e.g., by canceling a subscription or a new mobile contract (*churn scoring*). In addition, the amount of inactive customers which have a high probability of being reactivated can be calculated (*reactivation scoring*) The concept of inactivity has to be defined precisely, since this does not become clear by a simple termination in the case of all business models. For instance, when it comes to an online seller, it is necessary to determine which customers of the third and fourth quarter of the year 2015 have not bought anything in the first quarter of 2016.

Such queries need to be carried out regularly in order to obtain an *assessment of inactivity rates*. It is only by combining customer value (e.g., defined by the amount of future sales) with the risk of migration that clear priorities for the focus of bonding measures can be derived (see Fig. 2.56).

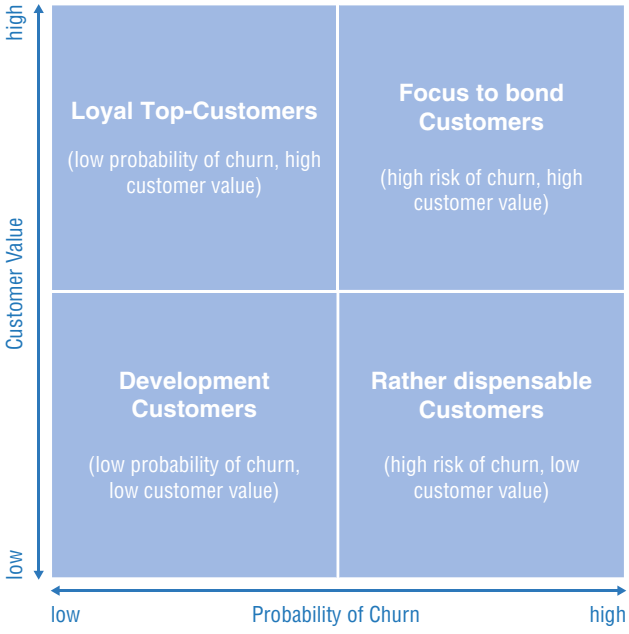


Fig. 2.56 Focusing customer support based on customer value. Source: In accordance with Pfeiffer and Imhoff (2008, p. 346)

The examples presented above provide a first impression of the knowledge potential of well-maintained customer and prospect databases. This "gold" in the data is to be "prospected" for continuously. It is not without reason that the term *data mining* is used for this purpose.

THINK BOX

Questions:

- **How comprehensively did we exploit the different sources and data of Big Data for our controlling?**
- **Is Big Data already integrated in our company´s controlling**
- **system?**
- **If yes, in which fields?**
- **If no, where does the most important backlog demand exist? Which functional and organizational preconditions for using Big**
- **Data are still to be created?**
- **How comprehensively is the subject area "Governance" already**
- **handled?**
- **Do we master a comprehensive controlling system? How much importance do we place on "personnel develop-**
- **ment"? To what extent have we created the technological preconditions**
- **for using Big Data? How comprehensively have we worked on the areas of repor-**
- **ting, monitoring, analysis and forecast already? Which areas of the competence pyramid for customer value**
- **determination have we already worked on? Have management dashboards already been established for relevant fields of action and are they being continuously filled? How comprehensive is the link between the customer value determination and the corresponding customer care at our company?**

2.8.2 Transformation of Controlling

These developments in marketing controlling have an influence on the design of controlling as a whole. Schönbohm and Egle (2016) assert that in view of the digitalization, there is a need for a *transformation of controlling* (see Fig. 2.57).

Because both controlling as an institution and the staff working in this field of business need to go through a transformation process if they want to succeed as a *value driver of the digital transformation*. "First and foremost, the CFO-driven development of a digital controlling understanding as navigator for the digital transformation, the expansion of competences in the field of strategic controlling and the digital evolution of existing key figures" (Schönbohm and Egle 2016).

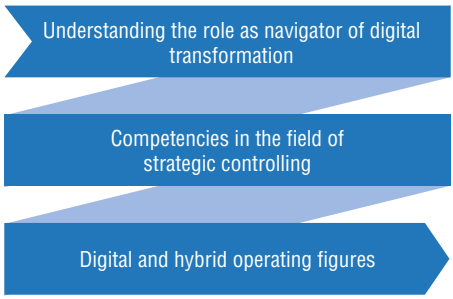


Fig. 2.57 Transformation of controlling. Source: According to Schönbohm and Egle (2016, p. 322)

According to Schönbohm and Egle (2016), for this purpose the *role of controlling* must first be developed. Controllers these days are increasingly required as a creative and critical partner in the "modeling and transformation of digital business models." Gamed controlling concepts, for instance, can also be used in strategic management and project management (Schönbohm 2015). In addition, the necessary *skills of controllers* change as part of the digital transformation. At this point, in addition to the tried-and-tested classic craftsmanship, there is also a need for thinking and action in the context of digital business models.

For this purpose, "thinking in classical functional areas, cost types, cost centers, and cost drivers" must oftentimes be further developed towards the digital world (Schönbohm and Egle 2016). Finally, currently used *key figures* must also be adapted to new fields of action. The emphasis here is on:

> For the digital transformation, a multi-dimensional control system is required that takes qualitative and quantitative key figures into account. Starting from the digital strategy the associated processes and activities must be identified and their performance must be assessed. The established financial key figures need to be combined with nonfinancial, quantitative and qualitative key figures. The nonfinancial key figures are temporary and are supposed to display the financial value of the digital transformation for the company in the medium to long term. (Schönbohm and Egle 2016)

At this point, it has to be pointed out once again that the best practice financial metrics remain valid but must be supplemented by new key performance indicators (KPIs).

In order to create a flexible and targeted *approach to measuring the digital value contribution*, Schönbohm and Egle (2016) have developed a *digital cockpit*. This includes the four dimensions community, partner, portfolio, and resources. The entrepreneurial digital strategy is the starting point for the development of this digital cockpit. In response to this cockpit, it is derived which dimensions are relevant to the company and which goals need to be achieved. The relevant KPIs must be defined in accordance with the target system. Systematic examination goal achievement is designed to sustainably support the company in the implementation of the digital transformation.

Table 2.6 shows a selection of the key figures to be used within the scope of the *digital cockpit*. When using these key figures, it is of utmost importance to regularly check whether these are valid and can provide important impulses for the digital

Table 2.6 Key figures for a digital cockpit

Community	Partner	Portfolio	Resources
Reach (unique users/ visitors)	Employee turnover	Revenue versus market growth	Share of digital turnover
Proportion top user	Employee satisfaction	Market share/ market position	Digital EBITDA
Traffic (visits, page impressions)	Average age	Growth digital sales pro forma in %	EBITDA return in %
Time on site	Digital RTD	Goodwill in % of the EK	ROI/payback on investment
Bounce rate	Ideas or suggestions per employee	Depreciation of goodwill	Liquidity
Engagement (likes, virality)	Application rate for business model competitions	Share of digital turnover	IT costs as a % of sales
Search engine performance (share of search engine traffic, visibility)	Project costs	Share of digital EBITDA	Depreciation as a % of sales/ investments (analog/digital)
Sentiment analysis	Milestones	Share of online advertising sales	∅ EBITDA multiple for acquisitions
Net promotor score	Earn-out ratio	% of the acquisitions that reach sales targets after 3 years	Share price
Backlinks	Training days per employee	Cash inflow through the sale of (analog/digital) investments	Immaterialization ratio
Conversion rate	Digital employer ranking	Gains/losses from the sale of digital investments	Transaction costs (M&A induced)
Cost per click (CPC)	Number of participations		
Customer lifetime value	Number and H Öhe of litigation with digital partners and suppliers		
Churn rate			
Customer satisfaction			
Customer acquisition			
Number of customers			
Revenue per customer			
Digital subscriptions			
Terminations of subscriptions			
App downloads			

Source: Based on Schönbohm and Egle (2016)

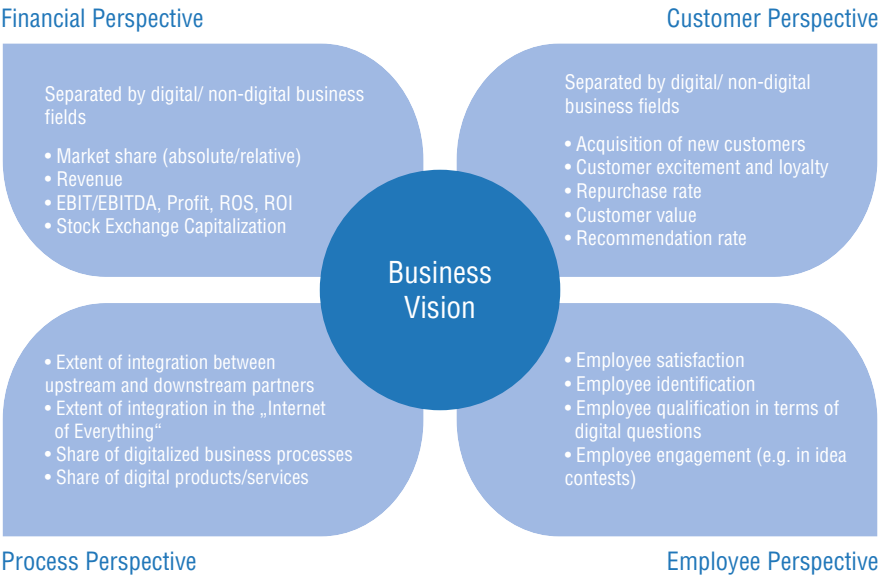


Fig. 2.58 Balanced scorecard to support digital transformation

transformation process. Additionally, existing interrelationships between the individual criteria have to be identified (Schönbohm and Egle 2016).

Aligned with the digital vision and mission, the *balanced scorecard of the company* needs to be developed further (see Fig. 2.58). For the classic fields of the balanced scorecard *objectives*, *indicators and targets for the digital transformation* at the enterprise level have to be defined. Formulating these, the following considerations can be of help:

- *Financial perspective*
  How do we want to document our financial results against our shareholders?
- *Customer perspective*
  How do we measure the extent to which the implementation of our vision satisfies our customers?
- *Process perspective*
  How do we identify which processes are efficient and effective?
- *Employee perspective*
  How do we determine whether we convince our employees of our vision and whether they are committed to contributing in its implementation?

A balanced scorecard can be used to define central corporate goals for digital transformation. In doing so, already in the *goal setting process*, it is achieved that several business-related perspectives, i.e., customer and employee perspective, for instance, are considered simultaneously in the transformation process at the highest

corporate level. Based on the defined targets, on a quarterly basis, or after the conclusion of the financial year, it is possible to check which areas are on course and which require action.

In the *planning process*, the corporate subgoals identified within the balanced scorecards need to be assigned to programs of measures, which ensure target achievement. For each subgoal, it is necessary to regularly check whether the company will achieve it. If necessary, in the current financial year, already additional measures need to be taken in order to ensure this. Due to the documentation within a scorecard, possible interactions with other goals can be checked at an early stage.

Since this "digital clock" runs much faster than in the "analog era," these intermediate controls are particularly important.

On the basis of the above, it becomes clear that the *total area of controlling* needs to be developed further in order to achieve a *Digital Business Leadership*. The emphasis here is on:

> Controlling must expand its toolbox in order to capture, plan and control the opportunities and risks of the digital transformation. [. . .] A classic cost and revenue calculation is no longer enough to meet the complex environmental requirements. Controlling must be an integral part of (digital) business models and digital ecosystems, and must navigate management at all stages of the digitalization. (Schönbohm and Egle 2016)

The design and the consequent development of the digital cockpit are an important prerequisite for this. In order to develop its effect, it should be developed free from any silo mentality and should be checked continuously for its value contributions. *Controlling as a learning system* then equally fertilized the *entire company as a comprehensive*, *learning system*.

In a *learning organization*, the respective causes are identified and taken into account in the subsequent planning process both in the event of target achievement and at target shortfall. In some cases, planning assumptions were incorrect, competitor activities were overestimated or underestimated, or market potentials were misjudged. Only once the causes for *success and failure* are identified and documented and are incorporated into new planning processes, the results can be improved from planning round to planning round. Here we can then speak of *closed impact cycles*.

For this purpose, there is a need to anchor the following key *guiding principle for entrepreneurial activity* in the company. This includes the four levels—listen-learn-act-control (see Fig. 2.59). First, at all relevant levels of action, we should *listen* in

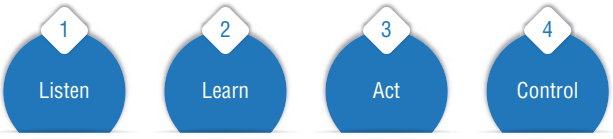


Fig. 2.59 Guiding principle of own action—not only in a company

order to understand where problems, ideas, fields of action, challenges and opportunities, and risks lie. A good conversation always starts with an appreciative listening, in order to absorb the needs, interests, and moods of the opponent. While listening a very special empathy is needed in order to gain a deep understanding of the counterpart, both internally and externally. Then the stage *learn* follows. In this stage it is necessary to recognize what is heard, what is learned, and what is known in its significance, in order to draw the correct conclusions and to develop solutions. Then the action in terms of the implementation follows: *act*. Decisions need to be made and actions need to be taken. In this phase the following is of utmost importance:

Even those who do not make decisions or take no action have decided and acted! Finally, the *control* phase follows in order to determine whether important milestones and set objectives have been achieved. Then the cycle can start from the beginning. This is the only way to build a learning organization. It is important to note that we must learn even faster in the coming months and years than we used to in recent decades.

THINK BOX

Questions:

- **In which phase are we in terms of the digital transformation of our**
- **controlling?**
- **Does our controlling work as a "navigator of digital transformati-on"?**
- **Were the competences in the area of "strategic controlling"**
- **correspondingly further developed?**
  Do we dispose of the relevant key indicators on digital manage-
- **ment?**
- **Has a digital cockpit been developed and is this continuously filled with the relevant data?**
- **Is there already a Balanced Scorecard for the entire company?**
  If so, has it been supplemented by key figures to measure the improvement in the digital transformation within the entire compa-ny?
  Where lies the responsibility of having the controlling being further developed in this way?

ACT BOX

Initial workshop on the digital transformation of controlling

Elaborate the need for the digital transformation of the controlling: With this workshop format you define new requirements for the controlling department.

Scope:
About 4-6 hours

Participants:
Management, as well as specialists and executive managers of the controlling department; Executives of all other departments (marketing, logistics, production, IT, personnel, procurement).

Procedure:

Through a speech by an external specialist, you can show the need for action in your industry and present best cases for the further development of the controlling.

Break down the total number of workshop participants into groups of maximum 5-7 people, with the managers of the other departments being evenly distributed among the groups dominated by controlling staff.

Each group initially defines the tasks assigned to the controlling department in the course of the digital transformation. Which solutions are required from the controlling department?

These results are consolidated, supplemented and adopted in the large group.

In small groups, it is to be discussed which KPIs can be used to determine the progress in digital transformation. These KPIs are being merged into a digital dashboard.

Development of KPIs for a balanced scorecard at the corporate level

These results are consolidated, supplemented and adopted in the large group.

Finally, task sets and milestones are agreed on in term of how the transformation process of the controlling should be continued.

Resources required:
Workshop room and about 4-6 hours of time from all participants
Whiteboard or free wall surface for attaching notes
Sticky notes in different colors as well as highlighters

Tools:
- Balanced Scorecard layouts

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Change Management: Shaping Change Successfully

3

If we get rid of the idea that it should always continue as before, then suddenly a thousand new possibilities become visible.

3.1 Fundamentals of Change Management

In order to achieve Digital Business Leadership, a digital transformation is required in most companies. Figure 3.1 illustrates the process and lets us determine where we stand in terms of transforming the company digitally.

Are we still the *viewers* who observe the change in the balance of power on the markets and thus the "new" with interest without being the real *audience* yet? Since, for example, we have not launched web monitoring yet and have not entered into an intensive dialogue with our target groups in order to find out about their expectations for the coming years yet. Or are we already part of the category *analyst of changes*, which stands for being part of those who perform a deeper investigation of the challenges defined by the digitalization and dematerialization in terms of their own business model (Kreutzer and Land 2015). Or have first test projects already been piloted in order to explore the opportunities in new business ideas brought by the digitalization? It could also be that we have already reached the level of *strategic and organizational anchoring* of the digital challenges and are working on developing a digital value chain. Or have we already reached the stage of *active participation as a daily business*, because we no longer differentiate between "analog" and "digital" because our structures, processes, and service offerings are holistically designed to integrate the possibilities of the digitalization? In this case the digital transformation has been completed!

Based on this rough analysis, it is important to enter the various *phases of the digital transformation*. Figure 3.2 illustrates in which stages this process can develop.

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https://doi.org/10.1007/978-3-662-56548-3_3

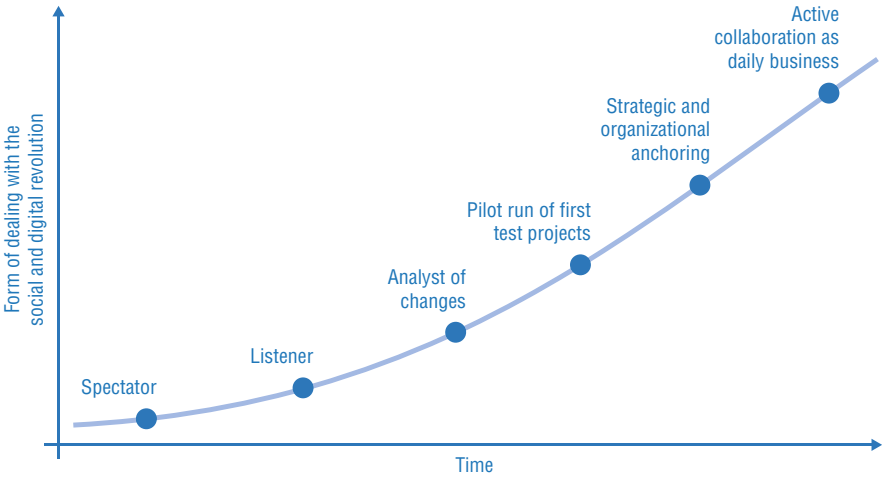


Fig. 3.1 Status quo analysis: Where does your own company stand in the process of digital transformation?

When it comes to the necessary transformation, many companies are still arrested in *Stage 1: experimental phase*—if they have even started the process yet. In this phase it is all about taking first steps—often without dedicated allocation of human and financial resources—without any real commitment by management. The entire event runs rather under the title "Youth Researches"—which in some cases actually applies in terms of age! In an uncoordinated approach, the entire organization is trying to define first possible solutions for emerging challenges.

Those companies that have reached *Stage 2: construction of digital islands* (see Fig. 3.2) have advanced a little further on the path towards digital transformation.

At this stage, first social media applications are started within the company, for instance. These operations are executed with limited human and financial commitments. A holistic social media strategy does not exist.

Selectively. The opportunities and risks of the increasing digitalization for one's own products and services are checked selectively. A digital strategy, however, is still lacking. Most employees consider the company's commitment as something "exotic without real potential."

In *Stage 3: establishment of singular digital solutions*, companies formulate the targets for the use of social media and digitalization (see Fig. 3.2). Additionally, an overall strategy for social media activities is being developed. While the basic structures of a digital strategy are available, they are not completely planned. First KPIs in order to take account of the exhaustion of social and digital potentials of managers and employees are defined and are incorporated into the performance-linked compensation. Staff and budget for the development of social and digital solutions have been provided in a goal-oriented manner.

In *Stage 4: digital transformation of the entire organization*, a digital value chain as a complement to the traditional value chain is installed in the company (see

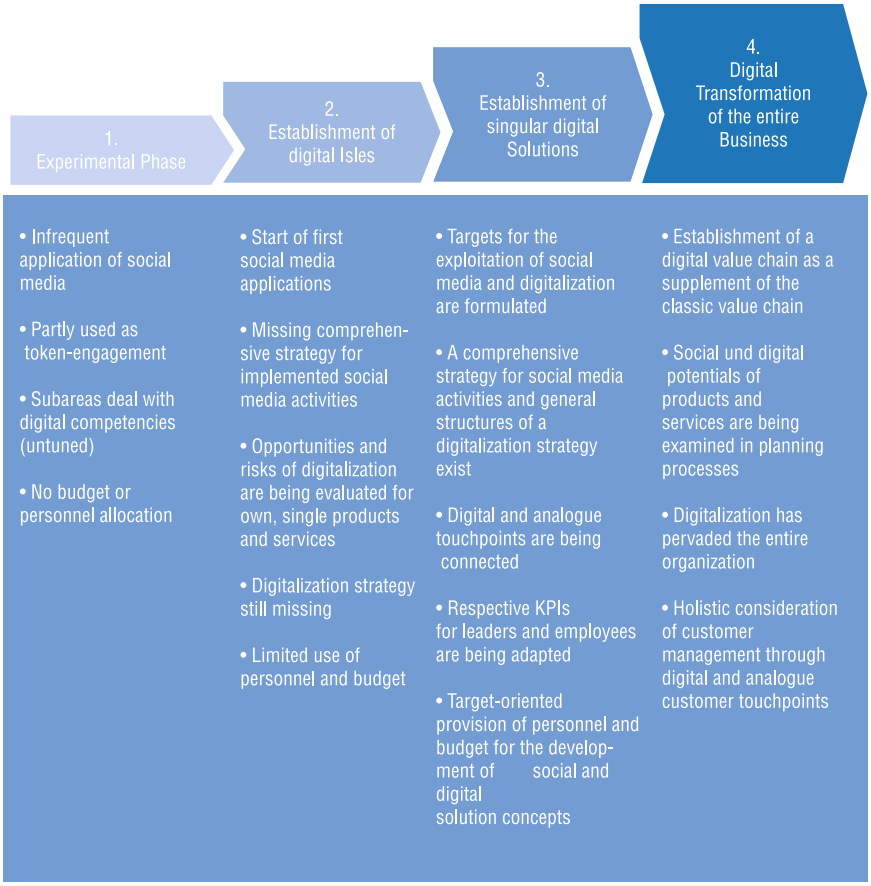


Fig. 3.2 Development stages of digital transformation

Fig. 3.2). The potential of social media as well as of digital possibilities for designing products and services are systematically being explored in the planning process. A distinction between "digital" and "analog" is obsolete. Digitalization has thus pervaded the entire organization. Also in customer management, a holistic approach takes place. Digital and analog customer touchpoints are fully integrated. The digital transformation of the company is complete; any business model innovation that might be necessary has been established successfully (Schallmo 2014).

It is understandable that the process described above requires a systematic *change management* needs. Established visions, values, goals, strategies, responsibilities, budgets, and operations, reporting paths, and structures are subjected to a radical process of change. By doing so, the entire organizational and operational structure needs to be scrutinized and oftentimes needs to be developed comprehensively. In this context, existing information and process silos also have to be broken down.

MEMORY BOX

The core task of change management is the adaptation of corporate objectives, strategies, structures and processes to changing conditions. The change management, however, can also include the vision, the business model itself and the products and services offered.

The digital transformation in terms of an alignment of the entire company to the possibilities and necessities of the digital era requires a *systematic change management*. It is important to note that this process must always start internally—in the minds and hearts of managers and employees first, then in the structures and processes. Only then the results of the digital transformation should be made visible to the outside world. There is no doubt that in the course of this process important comfort zones have to be abandoned, in which one has settled and which are familiar! Only after this has been achieved, the commitment should become visible from outside.

MEMORY BOX

An idea for reflection:

Everyone said it is not possible.
Then a man came who did not know and did it.

What are the special *aspects of change management?* First of all it has to be noted that change management is often linked to a merger, acquisition, or strategic realignment as part of the digital transformation. These are a few of the biggest challenges most managers have to master.

At the same time, these are the tasks they are least prepared for. Mainly due to the fact that the responsible managers today have never had the task to master a digital transformation yet, because this particular task has only emerged recently. At the same time, however, we are dealing with a *time-critical process* since oftentimes after a thorough strategic change, a company has either created new value within the first 6 months or the opportunity to do so was missed! This means that within 6 months a company is either on the road to normality or would be in chaos.

If we are responsible for the successful *design of a change management process*, we should deal with the *typical behavioral patterns* within such a process. This is shown in Fig. 3.3 using the time axis and one's own perceived competence. If employees are exposed to a profound change process in prospect, this oftentimes

Fig. 3.3 Classic course of a change management process

triggers a *shock reaction*. The own perceived competence decreases, because one does not know exactly how to react yet. Once body and soul have recovered from the shock, we usually switch to rejection or withdrawal. The perceived competence rises again because you now know what to do: counteract! For managers, this behavior is often unexpected and therefore surprising. However, as change managers we should keep in mind that this defense corresponds to the normal behavior in the course of a change process. And we have to endure that!

Ideally—supported with information—the *rational acceptance of the situation* follows the phase of rejection. One rationally comes to terms with one's fate but has not processed it emotionally. Therefore, in case of affected employees—ideally—the *emotional acceptance of the situation* follows. It is the role of the change manager to ensure that these phases will actually be reached. After that, *learning phases* should follow in order to enable employees to prepare for the new tasks and challenges ahead of them. For this purpose, as part of the change process trainings, seminars and coachings must be offered, because this learning process does not take place by itself. After several learning phases, a *commitment* in terms of a rational and emotional YES to change can be achieved. This is the prerequisite for entering the phase *integration* of new challenges. Depending on the extent of change, this process can take many months or even years!

In order to recognize the effort and the resources necessary within the change management process, *the intensity of change* needs to be recorded. The following two dimensions should be considered:

1. *Size of the threat*—from the perspective of each employee
   The following applies: the larger the size of the perceived threat, the greater the need for guidance within the organization.
2. *Extent of the necessary changes in mindset and behavioral patterns*—with regard to each employee

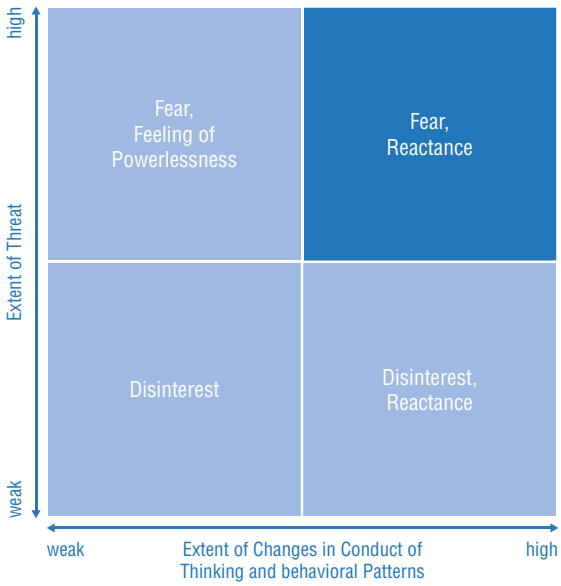


Fig. 3.4 Matrix of dismay: typology of perceived changes

This implies that the greater these changes, the more change managers have to expect resentment and resistance and the more will they be confronted with defensive reactions.

The *matrix of dismay* in Fig. 3.4 allows us to develop a typology of the perceived changes. At the same time, typical behavioral patterns are demonstrated and enable us to derive the tasks for change management! If the extent of the changes and the personal threat is classified as minor, this results in *disinterest*. If the extent of the changes is classified as minor, the personal threat, however, as high, the usual consequence is *fear* and a *sense of powerlessness*. On the other hand, if the extent of the changes is high while the personal threat remains moderate, *disinterest*—possibly even reactance—can also be the response. In contrast, if both the extent of the changes and the size of the personal threat are highly pronounced, *fear* and *reactance* combined can become an explosive mixture.

It once again needs to be highlighted that the *analysis based on the matrix of dismay* has to be performed from the perspective of each employee. For this purpose, the responsible change managers must develop is a high degree of empathy. Otherwise they can neither identify the reasons for the behavior of the staff nor react properly.

It is of utmost importance that change managers are aware of which *influencing factors of the change process* must be considered. In order to recognize these, the *iceberg model* shown in Fig. 3.5 can be useful. During a change process—but not only—rather rational-driven managers focus on the *visible level of "Facts and Figures*." However, focusing solely on this level, a change process cannot be created

successfully! Instead, the *invisible elements of the psychological level* are of much greater importance. We have to manage these psychological aspects within the change process. They have a significant impact on the acceptance or resistance of the whole change.

The influencing factors of the change process shown in Fig. 3.5 need to be considered when *positioning the various change triggers* within the "matrix of dismay." Besides digital transformation, in Fig. 3.6 further triggers depending on the associated changes and threat level are positioned.

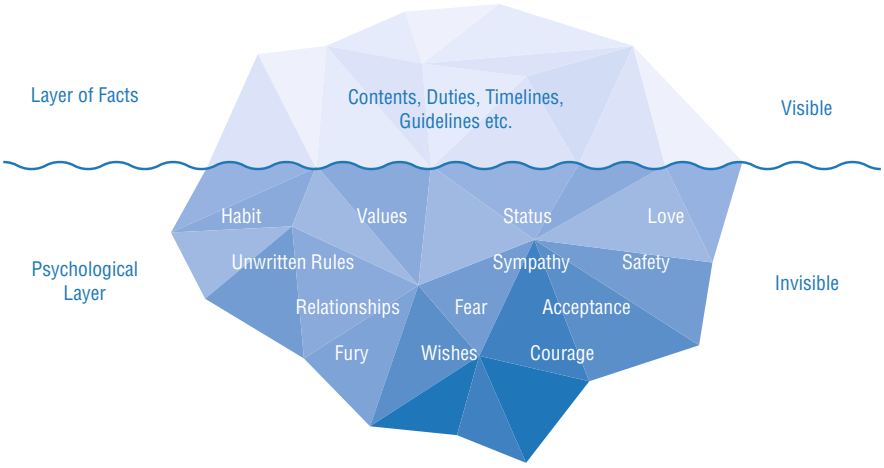


Fig. 3.5 Influencing factors of a change process

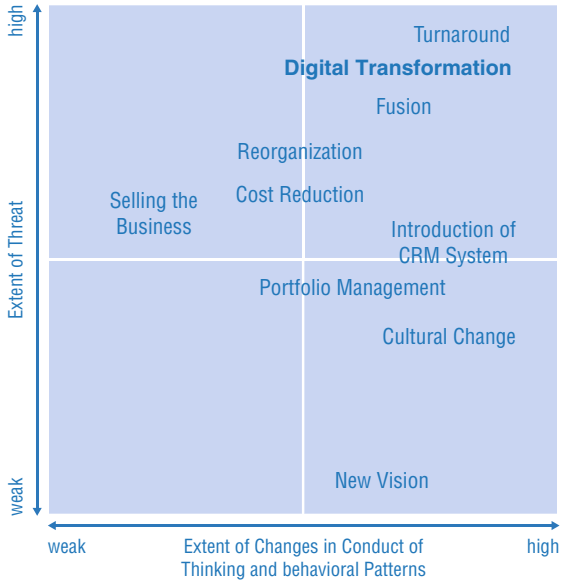


Fig. 3.6 Classification of various change triggers in the matrix of dismay

Experience with change management processes consistently shows that there are seven major *barriers to a successful change management*. These have to be overcome successfully:

- The *lack of understanding of the necessity of the change process* with managers and employees oftentimes represents the biggest hurdle in the implementation of changes.
- The *lack of a leading figure for the change process at top management level* undermines the acceptance of the required changes.
- A *lack of experience in change processes* of managers and employees complicates successful implementation.
- *Insufficient know-how for tackling new tasks* slows the transformation process down.
- *Warfare* between different people, levels, and departments steals key energy for unnecessary "secondary battlefields."
- *The absence* of a corresponding remuneration system—geared to the new requirements—can be misunderstood as insufficient commitment from management.
- The *inability or unwillingness to change* a part of the management and the staff constitutes another major obstacle.

Figure 3.7 illustrates a typical *initial situation in change processes*. Whether leaders are favorable of change or not depends on the degree of perceived personal risks.

It is safe to assume that during the change process—especially at its beginning—a small *promoter team* confronts a large majority of people that have a negative attitude towards the change. These include *skeptics* who do not believe in the success of the process. Those who are *resistant* and especially the *brakemen* face are intentionally opposed to the changes. They procrastinate decisions and consistently boycott their implementation. If this potential for opposition will not be won for the cause in the course of the change process or leave the company, the process will fail.

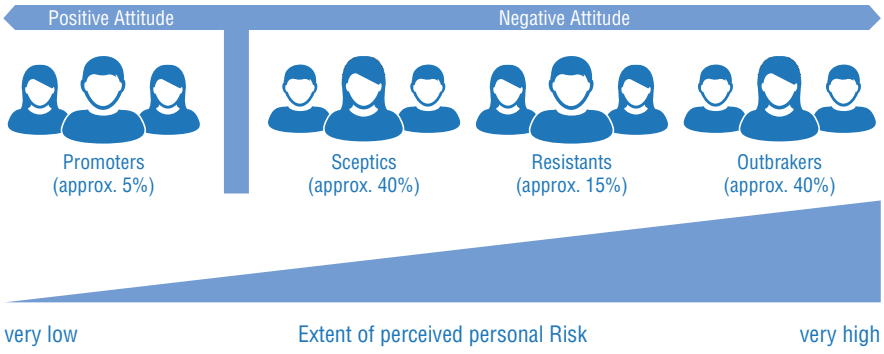


Fig. 3.7 Typical initial situation in change processes

Fig. 3.8 Prerequisites of a successful digital transformation

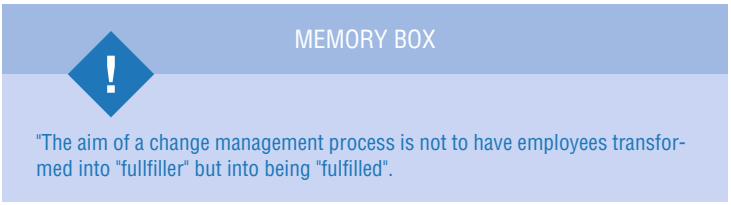
Therefore, the following important guiding principle implies: "Turn affected persons into parties involved." Therefore, it is especially important to consistently involve these brakemen, skeptics, and resistant employees in the change process with appropriate tasks. However, a team should not just be comprised of brakemen or skeptics! In such teams, the promoters are particularly challenged. Therefore, we should be aware of the following: *change managers* are the central resource for successfully designing the change process!

In order to manage the digital transformation as a specific manifestation of *change management* successfully, several requirements must be met (see Fig. 3.8). First of all, a compelling *vision* needs to be communicated, and the necessary *skills* to implement it must be built within the company. In addition, a *coordination* for harmonization and networking of the individual implementation steps is of significance. Additionally—as already mentioned—the *resources* needed within the change process need to be provided: financial, personnel, and time. In order to ensure coordinated and targeted action, an *action plan* with concrete milestones is needed, which must be communicated comprehensively. Finally, sufficient *commitment* across all levels, from top management to the "last" employee, is important. If all elements are equally considered, the desired change can be achieved. Whenever only one element is neglected, failure in different ways is inevitable.

If there is a lack of entrepreneurial vision, the result is *confusion*. Everyone or many are moving, but not towards a common goal since this has not been communicated.

Anxiety sets in when the affected employees are lacking the skills necessary for the implementation of the realignment and if the company does not create possibilities to acquire them. And fear is always the worst possible advisor! If the individual steps are not aligned and employees largely work "for the trash" *anger* and also rage are the consequences. *Frustration* builds up when the *resources* for the necessary steps in the process of change are missing. If there is no *action plan*, companies are threatened by a complete standstill—because no one wants to move in the wrong direction. If there is then also a lack of *commitment*, only a superficial change will be achieved. It only appears that the company is picking up speed.

Below the surface, however, everything remains the same! It certainly becomes clearer how comprehensive the task of change management must be understood. The task of change management must be seen as comprehensive. The task of change management must be tackled.



3.2 Instruments and Processes of Change Management

In the light of the above, the following *tools of a successful change management* should be used consistently:

- The CEO or the company's management is responsible for the *starting shot for the change process*. It is important that their contributions to the overall process become visible and that the objectives, targets, and specific needs for action are formulated concisely.
- A dedicated *mentor at the management level* supports the entire change process.
- A continuous *communication of the employees in charge for change with the management* is crucial.
- After *kick-off meetings* for the entire staff, *departmental meetings on* "*change*" need to be carried out continuously.
- In order to enhance the motivation for the tasks that often need to be taken on in addition to the daily business, it is of utmost importance to adequately *appreciate* the *contributions* of the individual employees as well as of each team.
- In the course of the digital transformation which goes hand in hand with reorganization, the new or additional *demands on employees* as well as their *responsibilities* need to be clarified early and transparently.
- *Individual performance reviews* need to be aligned with new targets.

In order to achieve sustainable changes, it is also crucial to install *change controlling*! The formulation of precise change targets is a central prerequisite for this. Change controlling enforces precision in implementation and makes (undesired) deviations quickly visible to everyone! Also at management level. In addition, the installation of a change controlling underlines the seriousness and durability of the changes! The whole team realizes: They're serious! Furthermore, such controlling enables reviews to determine the "target loyalty" at any time!

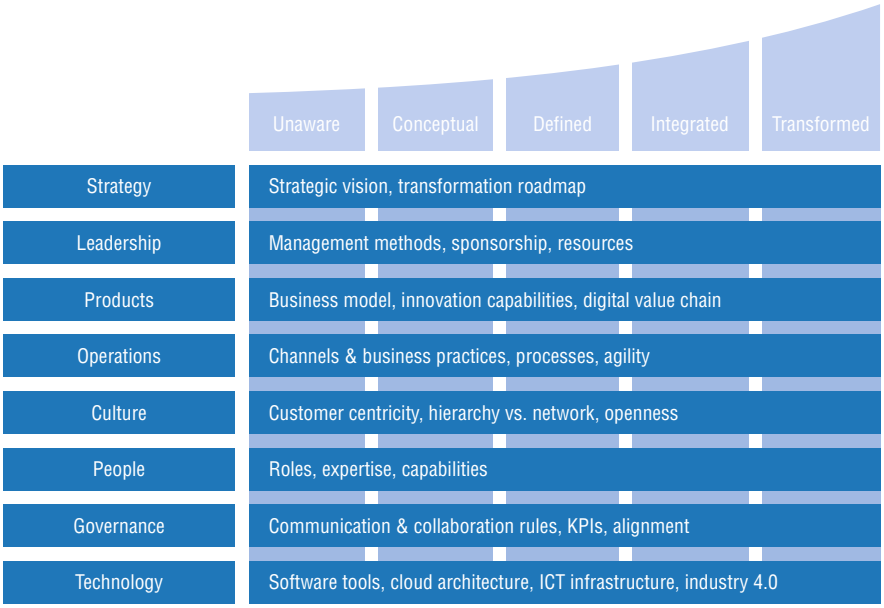


Fig. 3.9 Digital maturity model. Source: Based on Peyman et al. (2014, p. 38)

Before entering such a change process, it should first be ascertained to what extent a company already corresponds to the target image of a transformed company. For this purpose, a specific evaluation procedure is used. This procedure was developed by *neuland* in collaboration with the *Research Center for Digital Business* at *Reutlingen University.* The so-called *Digital Maturity Model* consists of a total of 32 individual criteria. It provides a metric to assess the digital maturity of a company from the perspective of different stakeholders. The use of this procedure allows to discover fields of action and concrete optimization potentials in certain areas. The findings gained by using the Digital Maturity Model provide the basis for the development of a digital road map. At the same time, it represents a reference model for sustainable development towards digital excellence (Kreutzer and Land 2016).

Figure 3.9 describes the basic concept of the *Digital Maturity Models*. It shows that eight different *dimensions* must be analyzed. With regard to these dimensions, it is again possible to differentiate between five levels of expression. In "*Unaware*" the company is literally unaware of the relevance of the appropriate dimension. The expression "*Conceptual*" shows, however, that within the company, conceptional considerations to the corresponding dimension were already made. In "*Defined*" you are already one step further, and targets, measures, and timetables have already been created. The expression "*Integrated*" means that relevant "digital" solutions have already been integrated. The highest level is reached once a company is

"*Transformed*." At this level, the necessary changes are already an integral part of the company's organizational structure.

The *first model component* "*Strategy*" captures the maturity of the corporate digital strategy (Peyman et al. 2014). The development of a digital strategy that takes account of disruptive technological developments and changes in customer behavior is one of the core tasks of the company management. An important prerequisite for implementation is to not only document this digital strategy but also to communicate it across all corporate hierarchies. For this purpose, a *transformation road map* is used. It is only if this strategy is understood in its entirety by all service providers that it can show the desired transformative effect. Awareness of digital transformation must also be embedded in the digital strategy.

Furthermore, a constant review and adjustment of the *digital strategy* is necessary, given the dynamic nature of technological developments. Simultaneously the *company's strategy* is to be audited from a digital perspective on a regular basis.

For this purpose, a clear digital target has to be developed for the entire company!

The focus of the *second model component Leadership* is the role of the management team that implements the strategy within the company. The core mission of top and middle management is to recognize the relevance of new technologies and to raise awareness of the need for (digital) change throughout the company. The *management commitment*, the extent of involved functional areas, and the predominant leadership culture are important indicators for the success of the change management process.

In general, the more areas of a company have internalized the need for (digital) change and actually work and think digitally, the more successful the transformation will be. The implementation of the digital strategy must not be the sole responsibility of a single area or a department. Especially, not at a low hierarchical level, as the entire enterprise is covered by digital transformation. Regarding a convincing implementation of the "leadership" dimension, it is important to involve all managers in the development and implementation of the digital strategy. Against this background, the established *management processes*—in line with the company's internal incentive program—are to be developed. In addition, the digital transformation requires a mentor at a top level of the company!

For a successful implementation of change within a company, it is crucial that employees do not fall into the so-called *competency trap*. That is the case when employees are convinced of the alleged superiority of the used products, processes, and/or technologies and do not see any need for action to use new (digital) products, processes, and/or technologies.

MEMORY BOX

We should be aware of one thing:

The biggest obstacle to a change process is the (previous) success!

The refusal to recognize the need for action, and the rejection of new developments, must be overcome by leadership. And every kind of leadership always begins with the guidance of one's own person. Therefore, this task cannot be delegated, especially not by the top and middle management.

To measure how far the digital transformation in the product and service offering has already taken place, the *third model component Products* is analyzed. In this context it is to be determined in what extent the degree of innovation of the business model, the relative customer benefits as well as the cost superiority over competitors can be attributed to the achieved *digitization depth of value-added processes* and end products produced by them. The complete range of products and services is then to be reviewed to see where digitization can lead to customer advantages and/or cost superiority. In addition, "digital offers" can complement the product and service range. It can be said: The *digitization of the value chain* is not to be interpreted as a pure "efficiency project!"

On the basis of the *fourth model component Operations*, the business processes are reviewed regarding their flexibility of facing new challenges. In addition the extent to which digital channels are already used internally and/or externally for the networking of value-added chains is analyzed. In order to provide *seamless customer experiences* ("seamless integration"), the *digitization of core processes* is to be promoted. For this purpose, data and process silos—especially silos in the minds of the people—must be overcome. Eventually, customers differentiate less and less between "on- and offline" or between "mobile and stationary". Therefore, the classic work-based organizations must be reviewed from the customer's perspective regarding their "functionality!"

The challenge of Operations also consists in constantly exploring new *technological possibilities* in perspective to their contribution to value creation for the company—and integrating those with positive performance contributions in their own processes.

It is also necessary to examine the extent to which the required resources for the implementation are provided in this area.

Every employee of a company has to make a variety of decisions during a working day. Not all of these decision-making processes can be regulated by clear guidelines. This is, for example, the question of which customer or project is to be given a higher priority. In these cases, employees often refer to the *fifth model component Culture*, based on a specific set of values of the company. This means that corporate culture has a direct effect on the daily workflow.

Companies require a *new innovation culture to* enable the digital transformation. Corporate culture can become either an innovation brake or an innovation accelerator. This culture dimension not only affects the open-mindedness towards innovation but also determines openness in communication within the company and with external stakeholders. Concepts such as the construction of "internal incubators," the integration of customers into the innovation process, and other forms of open innovations allow for thinking "out of the box." Therefore in the course of the culture dimension, it is analyzed how this dimension is designed with regard to transparency, dynamics, communication intensity, and the willingness to change.

In the *sixth model component People*, it is analyzed how comprehensive a digital expertise has already been built within its own workforce and to anchor corresponding learning processes within the company. For the digital (working) world requires new qualifications. For the transformation process, carriers of "digital know-how" have to be anchored at central locations in the company. At the same time, the employees "afraid of the new" are to be relieved of their fear. In addition, it is determined whether the resources necessary for the digital transformation are available.

Without a correspondingly designed corporate management, a digital strategy cannot be implemented. Based on the *seventh model component Governance*, it is determined how binding and holistic the digital strategy is implemented across departmental and divisional boundaries. Furthermore it is analyzed which control instruments are used. A central requirement for the implementation of the digital strategy is the definition of measurable objectives. In addition, the implementation of the digital strategy must be part of the *target agreements* of all managers. Only in this way will the digital strategy be anchored in the minds and hearts of the entire team!

Important enablers for digital transformation can be seen in the digital technologies. It is therefore crucial to use the necessary technologies, for example, for data analysis, for cross-channel management, for process automation, and for setting up ecosystems. That is what the *eighth model component Technology* aims for.

The focus here is on the extent to which it has already been possible to integrate the further development of its own IT infrastructure or corresponding cloud solutions as a core area into the digital road map. By means of their cross-channel interaction (offline–online), customers define new requirements for the customer management, which must be technologically represented. The requirements for this further development will therefore be particularly market-, customer-, and marketing-driven and require a flexible design of their supporting systems.

How well each company is positioned may be documented in the grid to be found in Fig. 3.10 for an *audit of digital transformation*—at least roughly. However, each company is well advised to involve external (independent) resources for an analysis of the status quo.

Here it becomes clear what measures are necessary to achieve a Digital Business Leadership. The recognition that companies, their business models, and brands have to adapt to the new requirements, however, is only gradually taking place throughout the different levels of the company. The most important *strategic bottleneck* remains: the *implementation*. How do you manage to implement "strategy into

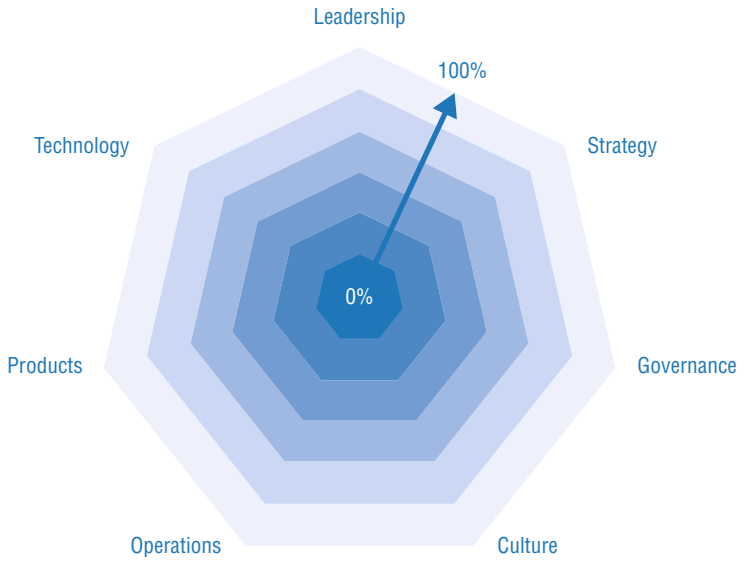


Fig. 3.10 Audit of digital transformation

action?" We have to consider that too many brilliant concepts and strategies were never implemented successfully.

To support the change process, a *canvas concept*—such as shown in Fig. 3.11—can be applied. First of all, the *urgency* of a change process can be defined here to illustrate the need for action. Already at this point, the readiness to implement necessary changes can be tested. In addition, the *target state* (also meaning the necessary supporters) and the *vision* as a description of the intended target state are to be developed. It is also important to specify the necessary actions to achieve the planned targets. Additionally, the type of the required *communication* and relevant *success criteria* should be specified as well. In addition the change recipients are to be determined, and the *guiding team* is to be defined.

Not to be underestimated are the *required investments* to be defined in Fig. 3.11. It is important to define and provide the necessary resources at an early stage. Simultaneously, the "carrot" for the change process is clearly to be highlighted: the *wins!*

A process that is oriented towards these central conditions from the start already will more likely lead to the desired success.

3.3 The Position of Employees in Change Processes

We must all be aware of the importance of our employees within the context of digital transformation. Therefore, an in-depth look is taken on how extensively companies have already tried to use *managers and employees as a strategic resource*

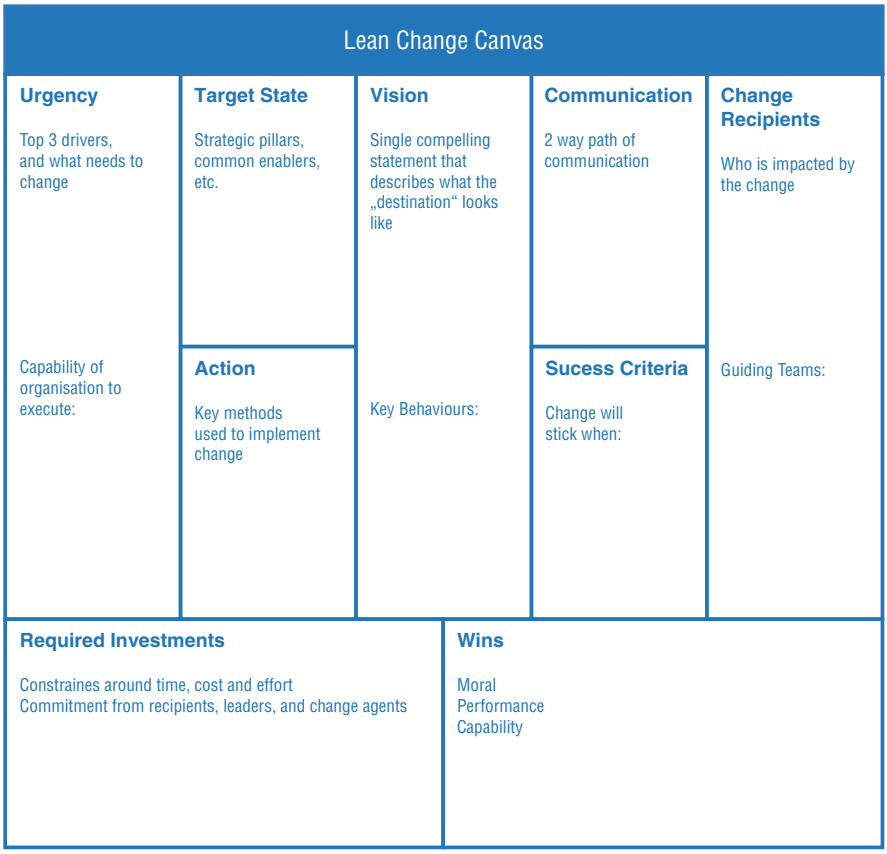


Fig. 3.11 Lean Change Canvas—designing change process creatively. Source: In accordance with Canvanizer (2016)

in the battle for competitive advantage today. It helps to look at the data published annually by the *Gallup Institute* within this context.

The *Gallup Institute* again has carried out a study in 2014 on the extent of *binding between employees and companies in Germany*. For this purpose, a total of 2034 employees were interviewed in Germany starting from a minimum age of 18 years. The results presented below are representative for workers in Germany from 18 years of age. According to this study, *85%* of the nearly 34 million workers in Germany feel *no real commitment* to their work, where *70%* feel *marginally bound to their business* and *15%* have their *internal termination* already processed (Gallup 2015). In this way, the proportion of employees with a low or no emotional attachment to their profession reaches a frighteningly high level (see Fig. 3.12). The proportion of workers in Germany, which has a *high emotional attachment* to their professional task or the working environment, is only *15%*.

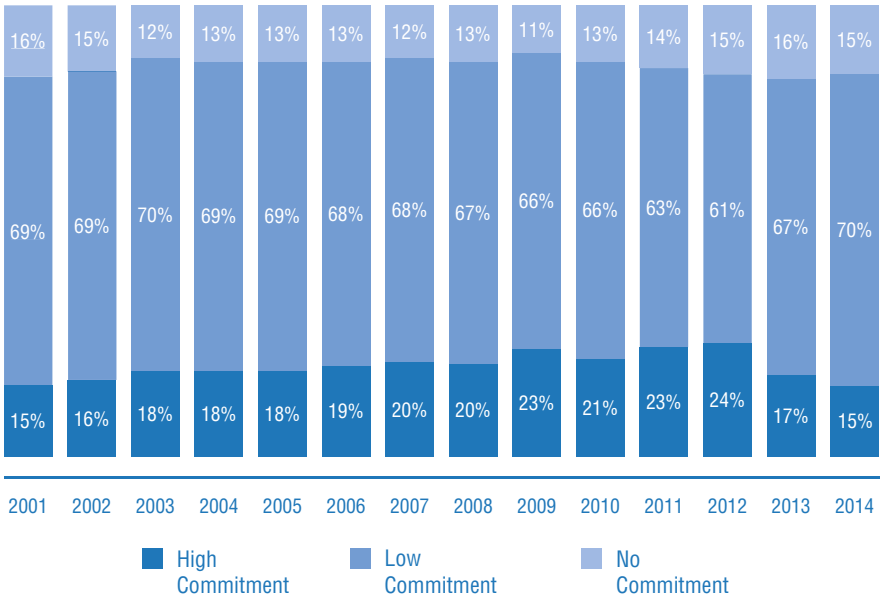


Fig. 3.12 Development of the Gallup Engagement Index in Germany from 2001 to 2014. Source: According to Gallup (2015, p. 12)

Comparing the values of the *Engagement Index* with those of other countries, it shows that Germany with 15% at the high emotional bond within this selection takes the third place (see Fig. 3.13). The USA is far above-average with 27% "high emotional attachment"; Canada also reached a higher value of 18%. In countries such as Italy (10%) and France (8%), the emotional attachment is much lower; in Japan it is almost entirely absent with only 4% (Gallup 2014a).

An analysis of the results of *Gallup* from the years 2001 to 2014, as shown in Fig. 3.12, clarifies that the low rate of employees with high emotional attachment is not a temporary problem but a stable situation. The numbers above the *bye into inner emigration* stay at a high level for years—despite some difficult economic situation. However, if we want to make our digital transformation successful, we have to take these findings even more comprehensively into account than before. One thing to note is that the successful promoters for the change process can only be found within the executive and employee pool with a high emotional bond. People who only have a low emotional connection with their employer will hardly be able to drive challenging change processes with the necessary energy!

The *causes of the different binding levels* are shown in Fig. 3.14. Here, at first it becomes clear that the degree of emotional bonding increases significantly with the fulfillment of central employee requirements. By the values shown here, it is clear which way companies can adopt to *overcome the bond gap*. Here can be seen that the fulfillment of *working technical basic needs* in the enterprise—i.e. work equipment

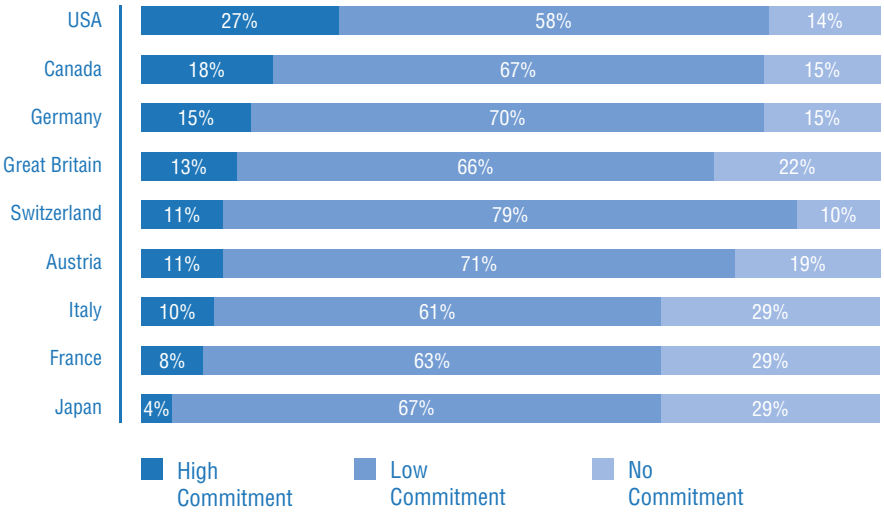


Fig. 3.13 Development of the Engagement Index 2014 in international comparison. Source: In accordance with Gallup (2014a, p. 1)

and expectations—still has the smallest differences in the three groups of employees. The picture in terms of experienced *support* is a completely different one. The employees with a high emotional attachment feel much more supported by their company than the other two groups. There is virtually no support for employees without emotional attachment. The *teamwork* is rated significantly better in the emotionally bonded group. Here, too, the employees without emotional attachment have to sacrifice any team spirit. The emotionally attached employees also see much better opportunity for personal *growth*. From the perspective of employees without an emotional attachment, growth literally does not even take place whatsoever.

The presented expectations and needs at the workplace can also sharpen the view for which aspects could be approached in the course of the digital transformation—so to speak piggyback—in order to increase the extent of the emotional bond in the company itself.

Every company is required to analyze the *status of emotional ties* to derive appropriate measures for improvement. Especially within the run-up of the discussed change processes! For it is a priority management task to increase the degree of emotional attachment, because this not only affects the employee satisfaction but also the performance of each individual employee. The effects of a *denial* of emotionally uncommitted employees are manifold. Employees without emotional bond are significantly more likely to be absent compared to those with high binding (8.8–3.8 *sick days* per year). In terms of *word-of-mouth advertising*, employees with a low emotional bond are also significantly more reserved and do communicate in a more negative way about their employer. Only 24% respectively 82% of the employees show the *intention to recommend their own products/services*. Similar results are achieved concerning the *recommendation of the own company*: only of 7% respectively 68% of the employees have the intention to do so (Gallup 2015).

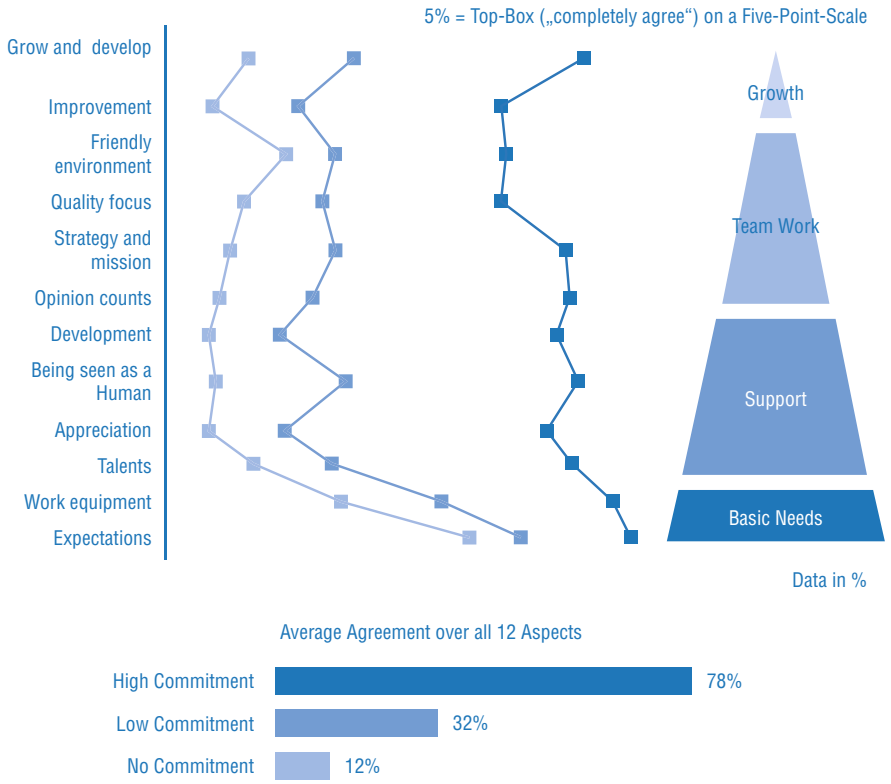


Fig. 3.14 Fulfilling expectations and needs in the workplace according to the degree of emotional employee loyalty. Source: In accordance with Gallup (2015, p. 34)

The extent to which the degree of *customer orientation* is influenced by the level of emotional bond is shown in Fig. 3.15. By the figures provided here, it is clear that *employee loyalty to their company* is the indispensable *prerequisite* for a *strong customer focus*.

If companies are striving for a strategic development and differentiation within the market competition to achieve sustainable and profitable growth, *employees and managers* must no longer be neglected for that they are the main important *success factors*. These have to fill the strategic direction and the underlying values with life. At the same time, employees will provide an increasing share of the company's value due to the increasing importance of services, as the established industrial nations increasingly develop into becoming *service companies*. This means nothing else than that employees and management will become increasingly important as a central resource within the company because they are integrated more intensively into the *value chain and on to the customer*.

The *launch of a digital transformation* as a precondition to achieve a Digital Business Leadership has soon to happen in most companies. The extent to which a

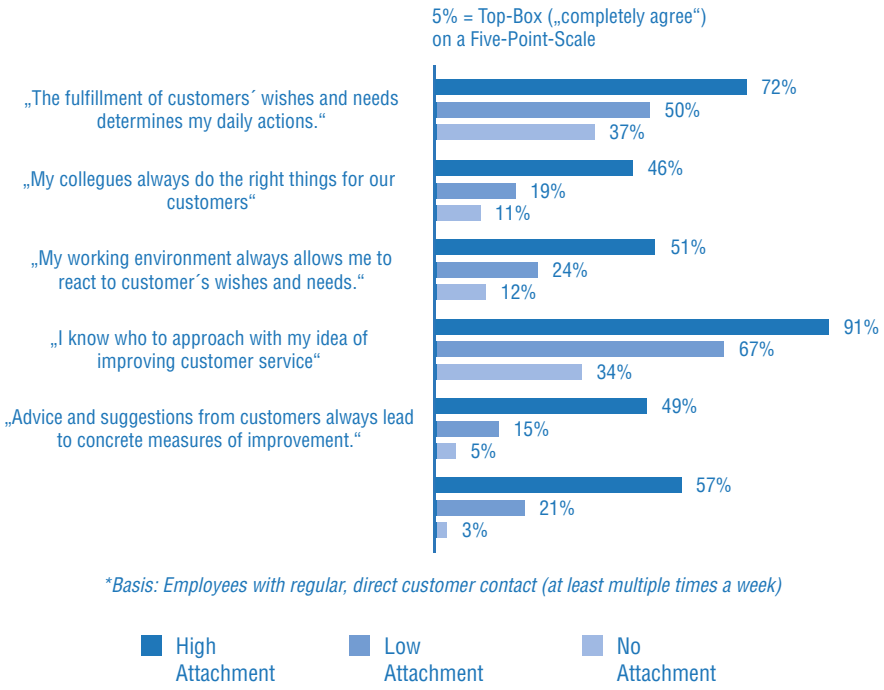


Fig. 3.15 Customer orientation in 2013 in Germany according to the degree of emotional attachment—in % (Basis: employees with regular direct customer contact, i.e., at least once a week, 70% of all employees work in a workplace with direct customer contact out of which 90% have direct customer contact several times a week). Source: In accordance with Gallup (2014b, p. 22)

company is "to be changed" depends on the industry and the status quo. However, every company should perform the *Digital Maturity Check* to detect needs for action for themselves, and to then act quickly.

MEMORY BOX

Today, it is already foreseeable that the process of digital transformation will not be over on the 9th May 20xx. Transformation will become a normal state, albeit different in its intensiveness for different companies. What has been said often receives a new relevance:

Change will be the only constant!

As executives and employees, we have to cognitively and emotionally adjust ourselves to this situation.

ACT BOX

Initial workshop on Change Management

Recognize the relevance of change management: With this workshop format, you set the right starting point for a necessary change process.

Scope:
About 6-8 hours

Participants:
Senior management (C-level / management) and second management level.

- **Procedure:**
  Through a speech by an external specialist, you can show the need for action in your industry and have best cases presented.
  Divide the total number of workshop participants into groups of maximum 5-7 people.
  Within the teams the Change Canvas is used.
  Give each team the layout for the Change Canvas with the task of working on it as convincingly as possible within the next three hours.
  After the development phase, each team presents their own findings, which are discussed intensively.
  Afterwards, a consolidation of the results is carried out to elaborate the most important cornerstones for the company. The priority is to formulate a common (digital) vision for the entire company.
  In doing so, different solutions can be developed for different business areas, but all of them follow the big vision.
  At the end of the workshop, concrete work packages and milestones will be defined on how the findings will be further developed.
  The CEO announces that they are themselves at the forefront of the digital transformation and take over the central lead management. As a result, they must be regularly informed of progress and / or included in the process of digital transformation.
- **Resources required:**
  Workshop room and about 6-8 hours of time from all participants
  Change canvas for the structuring of creative work
  Whiteboard or free wall surface for attaching notes
  Sticky notes in different colors as well as highlighters

Tools:
Change Canvas
https://canvanizer.com/new/lean-change-canvas

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Best Practices in Building a Digital Business Leadership

4

Those who know nothing must believe everything!

In the search for the European Digital Business Leaders, we have identified companies that we believe are excellent in selected fields of action. Here, we do not claim to provide full representativity in terms of a possible population or scientific objectivity, but we want to give—with holistic representations—*insight into Digital Business Leaders*, how they organize themselves, how they define business and create value propositions for customers. In order to cover a bandwidth as broad as possible, we deliberately selected "digital native" and "digitally transformed" companies. In addition, these sample companies operate in both business-to-business and business-to-consumer markets.

We want to tell the stories of Digital Business Leadership from a selected perspective—here they are! We wish you lots of fun and valuable insights—which we had during our visits and "telling" these stories.

4.1 Axel Springer: A Publisher in Transition Towards Being a Digital Publisher

When it comes to digitization strategies, one specific name is mentioned repeatedly: *Axel Springer*! The traditional publishing house, whose debatable founder shaped the German media landscape and established a polarizing media brand with "Bild," is in a fundamental process of transformation. This is triggered by the Internet, fueled by financial slumps in the industry and within the shareholder circular of the company (e.g., the bankruptcy of the *Kirch Group* in 2002, a 40% shareholder) and visionary designed by *Mathias Döpfner*, CEO since 2002 and influential leader of the digital transformation. His goal: "We want to be the leading digital publisher." Accompanying communication measures on the Internet show the journey of digital

R. T. Kreutzer et al., *Digital Business Leadership*, Management for Professionals,
https://doi.org/10.1007/978-3-662-56548-3_4

transformation, including the actual travel of top management to Silicon Valley in 2012.

It is probably attributable to the core business of the company that the stories are well told: One is able to watch as *Jens Müffelmann* (head of management division Electronic Media) and *Ulrich Schmitz* (CTO management division Electronic Media) are sitting in a hotel bed playing with Tipp-Kick figurines and tell the story of *Axel Springer* SE in 71 seconds (Axel Springer 2016a). What is also demonstrated is that it is not a noble five-star hotel but a "charming" ground-floor hotel in Tenderloin, where the managers were accommodated in double rooms after their economy class flight. With the *MEDIA ENTREPRENEURS campaign*, an employer branding measure within the social web aimed at digital natives, *Axel Springer* management proves humor and self-irony: When changing to a digital publisher, cultures collide and differ in type and style of communication but also can learn and profit from each other (Axel Springer 2016b).

The publisher's management shows the willingness to actively develop the digital transformation. How does the change in the company now affect the employees? How will the necessity to become a digital publisher be communicated to the employees? How could their commitment be gained? We spoke about exactly this exciting question with *Johannes Burr*, who works as Head of HR Marketing and Change Management. We first meet him in the central bar of the *Axel Springer* office: a long central bar counter, aquariums with tropical fish in bright colors above our heads, polished wood, attentive waitresses in uniform—chic design. However, we do not stay there; Mr. *Burr* takes us across the street to another building and to the sixth floor of the "*Axel Springer* Penthouse," because there you can feel the current change of the company better.

And indeed, we arrive in a large lounge; along the dark concrete walls, there are pillows, stacked pallets are placed in the middle, and a full window front with a view over Berlin and the balcony. We are accommodated in one of the adjacent rooms, equipped with a meeting table for ten people and a huge flat-screen, and, here again, seat cushions and an unobstructed view over the city. Instead of cappuccino, there is "Kreutzbergs Regenerativum"—from the can. The location is more like a start-up workshop. No wonder it is also used among other teams from *Axel Springer's* accelerator program *Plug and Play*. We will specify this briefly after we have outlined the company *Axel Springer* and its fundamental values, to finally get to the real story: *change management at Axel Springer!* (Fig. 4.1)

4.1.1 The Company Axel Springer SE

Axel Springer SE is one of the largest publishing houses in Europe, with 15,023 employees and a total turnover of 3.29 billion euros, as of 2015 financial year (Axel Springer 2016d), headquartered in Berlin. Almost half of sales are generated from international business through subsidiaries, joint ventures, and licenses in more than 40 countries. The company was formed in 1946 by its namesake as *Axel Springer Verlag* (ASV) in Hamburg, among their first publication products such as *Bild*,

Fig. 4.1 Johannes Burr, Head of HR Marketing and Change Management. Source: Axel Springer SE, with kind permission

Hörzu, and the *Hamburger Abendblatt*—the latter two were sold in 2013 to speed up the digitization strategy.

All activities are divided into three segments that are based on journalism or benefit from journalism:

- *Pay deals*
  These are all business models that are refinanced mainly by paying readers, for example, *Bild*, *BILDplus*, *BZ*, *Computer.de*, *Business Insider*, *Welt Online*, *N24*.
- *Marketing offers*
  These are all business models, which are mainly refinanced by paying advertisers for example, *Travelbook*, *stylebook*, *idealo*, *kaufDA*, *Zanox*.
- *Segment offers*
  These are all business models refinanced mainly by paying job, real estate, or car advertisers. This work includes among others online classified portals bundled in *Axel Springer Digital Classifieds* such as SeLoger, Immonet, Immowelt, Immoweb.be, StepStone, Totaljobs, and meinestadt.de.

As the products of these segments show, *Axel Springer* invests in new business models and start-ups and develops its own online services to build a *growing and*

Fig. 4.2 Logo of Axel Springer SE. Source: Axel Springer SE, with kind permission

highly profitable digital portfolio. Thus, the start-up investor and accelerator "Plug and Play" was built by *Axel Springer* and the *Plug and Play Tech Center* in Silicon Valley in 2013, with the goal to promote media-based business models. It provides early-stage start-ups premises, 25,000 € seed funding, and a 100-day program which is pitched to its conclusion at Demo Day in front of international investors (Fig. 4.2).

How can we connect new business models and a start-up mentality with the huge tanker Axel Springer SE? Change management being located right in the middle of the staff, *Johannes Burr* assesses as just right. He himself has been a part of the company for 6 years being a media enthusiast—"a positive batty," as he describes himself as a change manager: "You have to inspire others for the adventure while having an understanding of the business, the brand, and the daily business." His goal is to accompany changes within the company to support them and to empower with "low-threshold measures to experience *Axel Springer* as an innovative agile employer."

Here, transparency plays an important role that is also covered by his HR team. Since two and a half years, *Johannes Burr* is Head of Personnel Marketing and Change Management and is living by his motto: "What you expect from others, you have to bring yourself." The fact that this is not an empty phrase shows the photo (see Fig. 4.3) of his office. The HR team is agile, the employees are the customers, and the jobs are the mentioned low-threshold measures. *Axel Springer* also established the transparency, which is supported by the Internet, within its offices: companies today are sitting in glass boxes—at *Axel Springer* they literally do. And so they do throughout all hierarchical levels—the office of *Mathias Döpfner* is a "slightly bigger phone booth" within the open-plan office area of his fellow board members.

Before we illustrate selected measures in detail, we want to show the values of the corporate culture at *Axel Springer* SE.

4.1.2 Corporate Culture at Axel Springer: Three Action-Guiding Values

Since 2008, management principles at *Axel Springer* are creating transparency about the requirements and expectations of the leadership role. These are based on *three values* that determine the self-confidence of the company and serve for the daily activities of all employees as a benchmark: creativity, entrepreneurship, and integrity.

Fig. 4.3 Office of Johannes Burr. Source: Axel Springer SE, with kind permission

From the self-presentation (Axel Springer 2016c):

1. *Creativity* as a crucial precondition for journalistic and business success.
   a. *Exemplify motivation and enthusiasm*
      We inspire and convince. We identify new opportunities and make them understandable. We live on motivation and peak performance. We only demand what we deliver yourselves. We involve our employees, inspire change, and promote fun at work.
   b. *Create space for ideas*
      Create space for new thinking. We support unconventional ideas and encourage independence of thought and action. We appreciate ideas and creativity regardless of hierarchical levels and continually strive for improvement. We recognize creative achievement as valuable even if it is not directly usable.
   c. *Enable changes*
      We see change as something positive and know that changes represent opportunities. We design change processes actively and use opportunities to try new things. Where necessary, we are ready to say goodbye to familiar things. We never stop learning. We are open to criticism, calling actively for feedback, and take it seriously in consideration. We accept constructive contradiction from our employees and are able to admit mistakes.

2. *Entrepreneurship* as defined by ingenuity and responsible and result-oriented actions of employees and managers.
   a. *Seize opportunities responsibly*

      We make decisions and represent them resolutely. We recognize opportunities, assess the risks involved conscientiously, and are willing to take failures into account. We know our customers, the market and are at the forefront of current developments—we lead our company to success.
   b. *Think and act across segments*

      We think and act across national, divisional, and brand boundaries and hierarchies. First we recognize the profit for both sides in a cross-divisional cooperation. We develop team spirit beyond the will of cooperating. All decentralized corporate responsibility aside, the big picture of the entire company is always in the center of focus.
   c. *Achieve results*

      We set motivating and transparent goals for us and our employees. We set out clear priorities. We check and control results consistently. We celebrate successes together and analyze setbacks without recrimination to learn from it.
3. *Integrity* towards the company, readers, customers, employees, business partners, and shareholders.
   a. *Communicate and act respectfully*

      Respect and fairness characterize our leadership. We have recognized that recognition and respect are the most important bases for performance. We maintain a regular dialogue with our team as well as individual employees and are always approachable for our employees. We communicate decisions honestly and respectfully. We are loyal to the company as well as to our employees—at all levels.
   b. *Support and challenge employees*

      The development of employees is an integral part of our management philosophy. We trust our employees and give them responsibility to foster them. The skills of our employees are crucial to our success as a leader. We spend a significant portion of our time on their development. We search for specific development opportunities for our employees, even if they are outside of their own area. We ensure that the best come to *Axel Springer* and stay here. This means that we search for excellence and especially encourage people who are better than we are.
   c. *Respect the law*

      In everything we do, we pay attention to the consistent compliance with the law and our company policies. In daily work and in our leadership style, we focus particularly on our corporate constitution, our values, the catalogue of social standards (International Social Policy), and the guidelines of journalistic independence. We are deeply convinced that success can only be guaranteed in an environment of compliance and adherence to ethical standards.

4.1.3 Change Management at *Axel Springer Move*

What are the "low-threshold measures" to create the cultural change of a conservative media company to a digital agile employer who wants to be attractive not only for new digital talents but also wants his former team with many years of experience and specialized expertise to also be part of the journey?

As a baseline for all further considerations, *Johannes Burr* outlines the *four pillars* on which the change management at *Axel Springer* is built upon:

- *Skills* = skills and competences
- *Will* = understanding and conviction

On the other hand, the company's sides are:

- *Permission* = corporate culture and understanding of roles
- *Obligation* = structures and processes

For the purposes of the given pillar—*Obligation*—it was natural for *Johannes Burr* that agile project management with Scrum, Kanban & Co. is used in the process of change management. In the first step, personas of their customers—their employees—were built, and ideas for the benefit offers for these personas were generated. The developed ideas were then discussed in test groups with real people. It became clear that *networking and positive optimism* should be the goal of human resources development. Stimulating the *Skills* and *Will* now is the challenge of *Johannes Burr* which he meets with actions under the communicational umbrella brand "*move*—dialogue, knowledge, doing" (see Fig. 4.4). The logo is dynamic: a launching rocket and the claim consistent with the subtitle "digitization campaign."

Move includes a variety of formats, policies, and services that deal with issues of the future and the digital world. *Johannes Burr* and his team see *move* as "an initiative of human resources development, which stands for awakening and movement. It is the call to dare explore something new together with curiosity for the undetected. It is about to join in, to enter into dialogue, and even to become a 'mover.'" Among others, this includes the following formats:

- Future Talk at the *Pizza Connection*
- Speed Networking at *Early Bird Café*

Fig. 4.4 Move—The communicative umbrella brand of the digitization offensive of Axel Springer. Source: Axel Springer SE, with kind permission

- Workflow and networking at the *talent campus* and the *think tank*
- Exciting impulses on *Media Powerhouse* and *Learning Lunch*
- Exchange of experts in *digital mentoring* and *Best Practice Club*

The format *Pizza Connection* seems to be of particular importance to *Johannes Burr*. No wonder, because it is a successful mixture of entertainment, networking, and information. All those are elements that match the *move*—theme of *dialogue*, *knowledge*, and *doing*. The *Pizza Connection*, same as all the measures of *move*, are announced but not advertised with strong push methods. An announcement looks like this: "For those who like to take a look outside the box in a relaxed atmosphere, the next *Pizza Connection* should not be missed! While enjoying hot pizza, visionary recipes for the digital world are being discussed—an interactive panel discussion with insiders from different sectors." This format will be held during the lunch break, and the name says it all: Eating pizza together—sponsored by Axel Springer. During these breaks the participants discuss how digitization and technological progress influences and alter the various aspects of everyday life.

One of the first topics was "the future of football" with the motto "On Saturday, there will be the DFB Cup final! But what will I do on Friday?!—Sure thing: 1:30 PM *Pizza Connection!*" Together with *BVB* striker legend and radio presenter *Norbert Dickel*, *Matthias Brügelmann* (second editor of *Bild*) and *Tobias Holtkamp* (chief editor *transfermarkt.de*) discussed the following questions, moderated by *Kai Traemann* (head of *Bild Bund Sport*): How Is football influenced by football Internet portals? What is the impact of a web portal in which the market value of individual soccer players is estimated? And how is money earned by that?

The *Pizza Connection* takes place every 2 months and is announced, among others, offline through a mounted pizza box in elevators (see Fig. 4.5). Here you will find specific information about the event and also a QR code, which the interested employee has to scan in order to register for the event.

Media news and tweets are running through the screens installed in the elevators, as well as the note that the *Pizza Connection* on "the future of football" was sold out within 48 h—80 people!—so that another application would be pointless. Employees will exchange ideas on topics of general interest and talk about digital media. Positive emotions, encouraged by a relaxed ambiance, facilitate the open exchange of arguments and the active engagement with the digital.

Likewise the *Learning Lunch* takes place every 2 months during the lunch break, alternating with the *Pizza Connection*. Here an external speaker is invited to speak on a topic.

Media powerhouses last a whole working day: Experts share their knowledge in various fields, for example, search engine optimization, online marketing, legal, multiscreen marketing, agile project management, and user experience, just to name a few. The 1-hour lectures are streamed live and can also be followed by the employees at their respective workplaces. The essence here is that the *experts are in-house employees*. Following the motto "we can do that," the company demonstrates its diversity and strength. "If we master these skills and even have the experts within the company, we will also accomplish digitization!" Each

Fig. 4.5 Communication campaign for the Pizza CONNECTion in elevators. Source: Axel Springer SE, courtesy

powerhouse is initiated by a member of the Executive Board. *Johannes Burr* reports that at such an opening, which was held by *Mathias Döpfner*, the first row chairs were changed with rows of beach chairs. "This was an allusion to *Mathias Döpfner*'s announcement that he does not care where we work, whether in the office or on the beach—what matters is the performance!"

Source: Mathias Döpfner on the Axel Springer Management Conference 2014 (MEEDIA 2014)

Generally *storytelling* indeed is a strength of a publishing house. That this exact storytelling works very well towards the inside is verified through additional stories mentioned by *Johannes Burr* during our visit in the penthouse. The fact that all these are shaped by *Mathias Döpfner* is not surprising; he is the charismatic leader in a company environment characterized by a strong leadership mentality. "Do not fear to cannibalize yourself or else others will"; "Digitization must be an opportunity"; "Not every digital success story has to happen in the Silicon Valley"—headlines which are anchored in the minds of the employees and strengthen their confidence and trust in the company's digital strategy.

In February 2000, *Mathias Döpfner* as chief editor of *WELT* states as a credo for his strategy: "Internet, Internet, Internet." The figures for the fiscal year of 2015 do show the success: digital business contributes 62% to sales, 80% to advertising revenue, and 70% to EBITDA (Axel Springer 2016d). Furthermore, praises can be heard from circles of the brand management: Bild has been a pioneer for paid content in 2015 and received the "Marken Award" for "Best Brand Momentum." The jury praises the consistent digital strategy, which has transformed Bild to a multimedial media brand on all channels. "The convincing payment structure for editorial content

on the Internet also has a signal effect for the entire industry" (Marken Award 2015). *BILDplus* generated the strong brand momentum with a cross-subscription on all digital platforms and devices with elaborate multimedia recycled content. According to *IVW* (an information community to determine the reach of advertising media), BILDplus has a scope of more than 310,000 subscribers in December 2015.

Speaking of awards: The *move* initiative of *Johannes Burr* and his team was honored in 2014 with the *Human Resources Excellence Award*, highlighting the harmonized range of measures of *move*, which culturally shape the development of implementation-oriented, nonhierarchical, and cross-border cooperation within *Axel Springer* SE (HR Award 2014).

How do the employees of *Axel Springer* SE see *move?* So far, 132 events with 8700 participants have taken place—this high participation already shows the strong popularity. The ratings in terms of satisfaction with an average of 90% and an average recommendation of 95% are very high.

There was a lot of positive feedback and the next steps are currently being planned: *move office*—a collaboration platform for the entire company of *Axel Springer* SE. The media used in the workplace should be as up-to-date as the media used in the private life. Instead of mailings, there are newsfeeds; instead of cumbersome exchange of data, there is uploading files to the cloud; instead of business cards, there is digital identity. In total, a company-wide portal is to be set up, which supports collaborative work and the expert search. This allows the agile project teams to be spatially distributed and asynchronously networked—so that working on the beach is actually an option.

4.2 *XING*: Digital DNA in Action

In January 2016, we have spoken to *Timm Richter*, Chief Product Officer (CPO) of *XING*. He confirmed that *the focus of Digital Business Leaders is not the digital but the business*. *Timm Richter* is primarily concerned with the user. "Bringing value to customers" is his top maxim. Competition-relevant is—just like in digital business—that a benefit is created, on the one hand, through agile and autonomous teams, which act in an outcome-oriented manner and thus constantly optimize products in detail, and, on the other hand, through a strong development of the innovation function at all levels, not only incrementally at the level of agile teams in product development but also radically and disruptively with the help of independent units. But most importantly, it is not about *digital* as an end in itself but about *leadership* in ever-changing environments. Unless otherwise indicated, the data presented here are coming from an interview on January 6, 2016 with *Timm Richter*, CPO of *XING* (Fig. 4.6).

Fig. 4.6 Timm Richter, Chief Product Officer (CPO). Source: XING, with kind permission

Fig. 4.7 Logo of XING. Source: XING, with kind permission

4.2.1 The Company *XING*

Founded as OpenBC (*Open Business Club*) by *Lars Hinrichs* in Hamburg in 2003, *XING* is now the *social network for business professionals* with nearly ten million members (cross-platform) in its core market D-A-C-H (February 2016) and approximately 74,000 specialist groups. The core business is paid membership. New markets are opened up by *XING* through the divisions e-recruiting and events. Through these benefits, *XING* positions itself opposite the US competitor *LinkedIn*. User activity is high: more than seven million unique users according to AGOF study (AGOF 2015, as of October 2015) and more than 46 million visits (IVW 2016, as of January 2016). Among others, to *XING* also belongs the acquired platform *Jobbörse.com*, which is with over 2.5 million jobs, the largest job search engine in the German-speaking countries (2015); *kununu*, the market-leading platform for employer reviews in German-speaking countries (acquisition 2013); and *amiando AG*, Europe's leading provider of online event management and ticketing (acquisition 2010). Currently, 800 employees are working at *XING AG* (Fig. 4.7).

4.2.2 What Makes *XING* a Digital Business Leader?

To answer this question, *Timm* first takes a look at the two term components: digital and leader. *First of all*, *XING is the leader*: *XING* has relevance as a professional network. It is about a "better working life." *XING* realizes this through people, news, and jobs. The "measure of leadership is success!" The digital is relevant for value creation, to "make things better and easier—to use digital for the analog world." The *DNA of XING is digital*.

In order to provide value to the customer, *XING* asks a central question: "How do I manage to be continuously and sufficiently innovative?" Here, the digital is "only" a current challenge with particular force and an outstanding example of the need to prepare the organization for continuous change. Therefore "digital" alone is not a goal. Rather, the best possible and "optimal" benefit for the customer is the focus. This benefit is generated on an integrated basis both digitally and non-digitally. *Digitization is an enabler and not an end in itself.*

4.2.3 Vision, Culture, and Leadership of a Digital Business Leader

Action-guiding for all *XING* employees are the vision and the mission that have been developed by the executive management and the leaders of the company's strategic areas in a 1.5 year process:

- *Vision*: "For a better working life"
- *Mission*: "Enable professionals to grow"

XING

As a digital business leader, XING strives for a visionary goal and focuses on a socially relevant corporate purpose. In this context, XING chooses a strong link to the value proposition from the customer perspective [cf. paragraphs 2.1.1 and 2.1.2 in this work].
In proper style as a true digital business leader, XING does not use the term digital in their vision statement: Digital is part of their self-conception, integrated into all functions and patterns of thinking as a central part of XING's own DNA.

When it comes to *vision and mission of a Digital Business Leader*, *Timm Richter* refers to Drucker (1954): "There is only one valid definition of a business purpose: to create a customer." Thus, the basic philosophy of leadership is outlined for the CPO as follows:

- Every company should *serve society* and not vice versa.
- This service has to take place through the creation of *value propositions for customers*. Only continuous improvement and innovation will ensure the survival of the company.
- Competition—according to Darwin—does not aim for winning but for being "good enough." Profit maximization is not the focus but a sufficient profit, which *Timm Richter* ambiguously calls "MVP" (Minimum Viable *Profit*—instead of Minimal Viable *Product*, which is defined in the following text).
- Competition is valuable when it is not about the victory but the *pursuit of excellence and learning* from the best.

XING

"MVP" is mainly used in digital business as an abbreviation for "Minimum Viable Product". The MVP represents the central construct in the Lean Start-up innovation method. In the sense of a lean and risk-minimizing product development, a product is equipped in incremental steps only with the necessary features to pass a so-called building-measurement-learning cycle and achieve intended learning effects in the market. Commonly MVPs are issued to a limited customer / user group in order to obtain real market feedback at an early stage and in iterative cycles for further development.

The ultimate credo of XING's CPO is: *The company serves society—and not vice versa*. The rules of the game are defined by society with the creation of legal and infrastructural framework conditions. The European model of the "honest businessman" is the strong sense of responsibility for one's own company, its employees, society, and the environment. By making a relevant value proposition for its customers, a company serves this claim. The fact that this value is sufficiently monetarized (MVP as in the Minimum Viable Profits) justifies its right to exist—not the shareholder value!

Timm Richter makes his understanding of leadership clear in public by posting on his blog (Richter 2016b): "I want to be a responsible executive." His action-guiding philosophy is to generate customer value and achievable MVPs: If companies create a superior value proposition, customers are willing to pay for it.

XING currently employs about 30 product managers, 30 UX designers (user experience designers), and 150 software developers in product teams. Internally, they act autonomously, but they must also feel interconnected to an extent that realizes a common whole. Therefore, culture and values represent a central role for the company. This is why *XING* has defined the following values for all employees:

- Listen.
- Be courageous.
- Make mistakes.
- Ship it (build for outcome).
- One voice.
- Be accountable (embrace responsibility).

Within *P@X (Products at XING)*, a cross-team organization which consists of employees from product management, a further charter exists (see Fig. 4.8), which displays the abovementioned values for the respective organization area more deeply.

The following *action-guiding aspects* need be considered by the P@X participants on a daily basis:

1. *Build for outcome—Result orientation*:
   - Create relevant value for our users and thus our sales.
   - Iterate to sustainable success.
   - Try to make quantum leaps.
2. *Get autonomy through alignment—Autonomy*:
   - Everyone knows the "why."
   - Check and confirm the "what" (before).
   - Teams freely choose the "how."
3. *Factualize: Challenge assumptions—Question assumptions with facts*:
   - Make assumptions explicit.
   - Use data for insights.
   - Experiment and fail early.

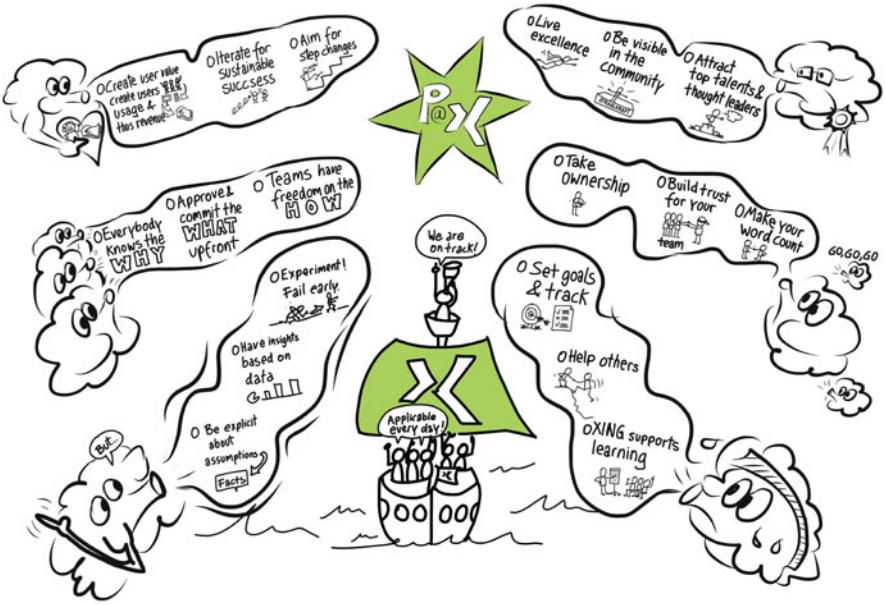

Fig. 4.8 Model "North Star" for the XING Product community P@X. Source: XING, with kind permission

4. *Be the place where the best go to learn—A hoard of learning for the best*:
   - Live excellence.
   - Be visible in the community.
   - Attract top talents and ideas.
5. *Embrace responsibility—Responsibility*:
   - Take ownership.
   - Build confidence.
   - Be reliable.
6. *Get better every day—Learn*:
   - Set goals and follow them.
   - Help others.
   - XING supports learning.

4.2.4 How the Vision Is Implemented by a Strong Leadership Personality

XING

As we have pointed out in the field of designing the digital organization (cf section 2.3.3 in this book): Digital companies need a strong culture to be attractive to Smart Creatives. Values and norms have to be commonly understood and shared within the company in order to motivate desired actions. There are no general standards and values all digital business leaders share - in their respective organizational cultures digital leaders differentiate themselves from the competition.

Design of the digital organization: a question of the abstraction level and the temporal reference point.

For *XING*, autonomy and leadership are not mutually exclusive. For *Timm Richter*, *hierarchy is natural*—for example, the hierarchical processing of stimuli on the retina and the self-organization of people in a room need a certain level of hierarchy. At *XING*, it is not being communicated, but in fact the following is true: "We also have a matrix organization. Each product team includes developers, designers, and product managers with different reporting lines. In contrast to classical organizations, however, this matrix does not live in higher hierarchical levels but directly in the teams that create the customer value." This also means that hierarchy is an organizational prerequisite for questioning problems at different abstraction levels and at different time intervals. Therefore, all teams receive a necessary framework of action through their superordinate functional areas.

For *XING*, agile processes at product level are completely normal, as product development takes place in cross-functional agile teams. In addition to the technical roles, all other necessary functions (e.g., user design/user experience) are also integrated directly into the agile development teams. Here applies the *principle of continuous improvements* (target, improve; see Fig. 4.11): Products are constantly developed by the responsible team (daily web releases, app releases approx. every 2 weeks). Criteria for the optimization of these product parts are KPIs, which in turn are interconnected with overlying abstraction stages with regard to global goals. This results in a relatively high degree of autonomy for necessary decisions at team level. Kaizen/KVP represents standard tools to increase KPI target achievement within a product area, for example, by A/B testing. The distinct user centralization is expressed in "user stories" for shorter time horizons (within the agile team). Continuous improvement can only be successful if the teams not only gain access to relevant data in their area of impact but also gain knowledge about processes in

neighboring areas. This is why, in addition to autonomy and the framework for action, there is a third aspect: transparency over action on team level and beyond.

In this context, another relevant question concerning the design of a digital organization is raised by *Timm Richter*: "How do I manage to create a breeding ground so that meaningful connections/networks can be created?" Here, *XING* uses the principle of communities of practice, professional associations, and guilds. Thus, professional networking within the company and general knowledge flow regarding specific subject areas are made possible, even beyond the agile teams. An example of this is "Products at *XING*" (*P@X*; see Fig. 4.8) (Richter 2016a; Richter and Rusch 2015).

Ultimately, there is a distinction:

- The *task of management* is: "What is to be done and why?"
- The *task of the team* is to answer the question: "How to do it?"

This separation between "what" and "how" is known from the classic agile role understanding, for example, in the scrum process model: product owners define the "what" and are responsible for the market success of the respective product, while the development team stands for the "how" of the detailed implementation and is given considerable autonomy for this. According to this credo, *XING* is scaling agile principles across teams and organizational levels.

But now *Timm Richter* faces very quickly the problem of the "local optimum." This means that concerning incremental innovation steps, well-defined KPIs and continuous product development are indeed important in order to successfully position existing products on the market. However, for larger innovation steps, other criteria, which require a higher level of abstraction and different temporal references, need to be used. Therefore, innovative projects in existing product areas or in traditional markets are performed by the *XING*-owned model Assignment Clarification Exercise (*ACE*). These projects would be assigned to Horizon 2 in the *three horizons model* (see Sect. 2.2.3), whereas *Timm Richter* describes Horizon 2 as "Expand" (see Fig. 1.14). The resulting developments take place in iterative loops, which are integrated into 3–9-month rhythms and are managed by product directors.

The *ACE* tool is a goal-oriented tool for communication and coordination based on the vision and mission of *XING*. Before a major product initiative starts, a one-to-three-page document will be compiled which describes the initiative while using seven sections.

1. *Context*
   Each new initiative has a history of development that is described first. The following two questions are answered:
   - *What is the initial situation?*
     This leads to a shared, fact-based understanding.
   - *What are the triggers?*
     Each initiative has its beginnings in a challenge or change (e.g., market opportunities, KPIs are not achieved, new focus project within the framework of strategic orientation).
2. *Our intent*
   The central question which must be answered at this point is: What do we want to achieve? This is what is meant with intent—it is not about a concrete solution. The intention must be clearly stated so that the team knows where to look for a solution—but it must also be generalistic, so that the team still has the chance to determine the "how" itself.
   For digital products, this means: A description of the job-to-be-done, the definition of the value proposition, and the relevant target group. The intention could be formulated in a single sentence: For [*target group*] we will provide [*value proposition*] so that [*benefit*] is created. In the best case, this also stimulates the debate why we can do it better than the competition and what capabilities we have to achieve this.
3. *Higher intent*
   With this aspect, the context for the teams is extended by the view of the management. Here, it should be described what is intended by the management at one or two hierarchy levels higher. This is not about people but about the overall strategy of the company: for example, the product owner of XING's contacts division has to understand how his work contributes to the company-wide goal of XING as a network platform. This additionally implies a broader understanding of the activities of other *XING* offerings.
4. *Boundaries*
   While intentions 1–3 are positively formulated, there are also limiting aspects that need to be taken into account. This covers everything outside the solution space. Additionally, it shall be written down what should not happen—everything serves the definition of the playing field for the teams.
5. *Input*
   The resources made available to the initiative are put into concrete terms: people, financial resources, support from other teams, etc. This also includes internal documents, analyses, and decisions that the developers need—all including a deadline.

6. *Output*
   Ideally, the output is described as a "problem solution" that "appears in front of the customer" and not as a concrete feature (e.g., a search mask). At this point, timings are made, as well. This is particularly important in order to clarify the expectations of progress.
7. *Outcome*
   Product quality and progress controls are quantified. For example, the goal of "reducing the buffer times of our website from 5 to 4 s" requires different solutions than a "reduction to 0.5 s." Quantifiable metrics help the teams to measure their own progress and success—and ultimately to develop a certain pride in their achievements.

Overall, *XING* uses the *ACE* as a tool to involve all stakeholders and bring them to a common information booth. Thus, *XING* reaches the commitment of all team members. However, the order clarification is not static—it is checked at regular intervals whether circumstances have changed in order to react accordingly.

In conclusion, the process of drafting an Assignment Clarification Exercise is helpful: By writing a document, facts must be collected and arguments must be comprehensibly displayed. However, writing alone does not bring the relevant benefit: The owner of the Assignment Clarification Exercise must ensure that all stakeholders and all team members have actually understood the clarification! (Fig. 4.9)

The ACE model is also available as a card set in a box (see Fig. 4.10). *Timm Richter* explains the card set as follows: "This is an experiment. The individual elements of the Assignment Clarification Exercise are described on the maps and various exercises and checklists are offered to create a good ACE. We want to playfully help raising the discussion quality of a topic."

Horizon 3 innovations, particularly risky and disruptive business models with the aim to "disrupt" (see Fig. 4.11), are realized in a separate organizational unit, the *New Bet*. This part of the company is not so much integrated into the company's daily business, as it rather pursues new business ideas. It is not for nothing that the responsible teams are separately seated in their own office.

Thus, the *organization principle* according to a *Digital Business Leadership* is implemented: *XING* extensively uses the *three-horizon model* in order to align their own company to the goal of continuous innovation at all three levels and thus constantly enriches the own vision in a changing environment. Comprehensible management principles, company-wide recognized values, and a culture focused on user centralization, value creation, and innovation form the basis. The vision of the company, the "why," is primarily action-guiding.

This foundation is supplemented by a *balance between autonomy and hierarchy*. *XING* understands hierarchy as less power centered but rather as problem and time related. The "what" and "how" at the management level have a longer time horizon (1–2 years) and a higher level of abstraction (success of the company) than at the product level (3–9 months, success of the product area) or in the respective agile team [1–4 weeks, success of the product (part)]. This scaling of the "what" and

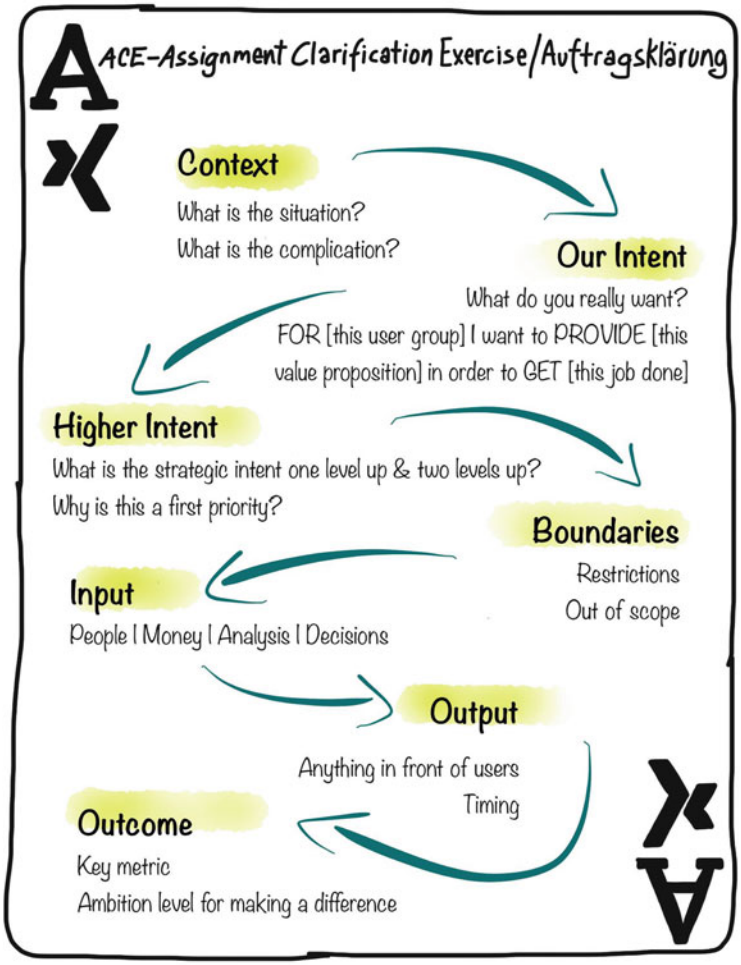

Fig. 4.9 Contract clarification model—ACE. Source: Richter (2016a)

"how" takes place on every level. The "what" is always translated into the required framework, with the aim to finally create a real value for customers as a product or service.

Finally, the question "how" concerning the implementation is answered by highly autonomous teams, who can always optimize in detail and regularly check their success on the basis of defined KPIs. In this way, the basis for further profitable growth is consistently oriented towards the vision/mission and customer benefit. Every day again!

Fig. 4.10 Order clarification box. Source: XING, with kind permission

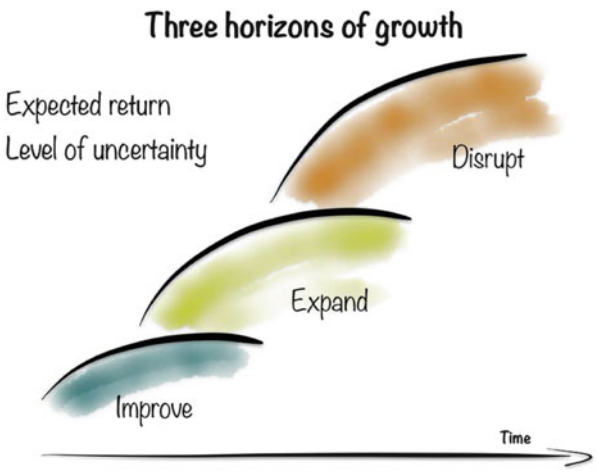

Fig. 4.11 Three-horizon model at XING. Source: Richter (2016b)

4.3 *ImmobilienScout24*: Digital Titan

ImmobilienScoout24 presents itself with the focus on user centralization—to learn how products evolve from data and finally bring benefit to the user. This is the *vision* of *ImmobilienScout24:* "We enable people to realize their dreams of real estate in a simple, efficient and stress-free way." How does *ImmobilienScout24* know these "people" and their dreams? To answer this question, we talked to Sabrina Brauer, a Senior User Experience Researcher at *ImmobilienScout24*.

First, we show how *Sabrina Brauer* and her colleagues at *ImmobilienScout24* have proceeded to get to know their customers and to find out how their customer personas look like. Since these personas are not an end in itself, but among others influence product development, we outline afterwards how the innovation process (incubator) of *ImmobilienScout24* looks like. Insights into this world gave us *Sonja May*, Senior PR Manager. If not indicated otherwise, the data presented below are coming from an interview with *Sonja May* submitted on October 22, 2015, and with *Sabrina Brauer* on November 27, 2015 (Fig. 4.12).

Fig. 4.12 Sonja May, Senior PR Manager and Sabrina Brauer, Senior User Experience Researcher. Source: ImmobilienScout24, with kind permission

4.3.1 The Company ImmobilienScout24

ImmobilienScout24 was founded in 1998 with 12 employees and the goal to bring real estate search to the Internet. The business sector is the real estate advertising market, which is of great importance for personal decisions—but which is also highly intransparent. The six founders aim to *increase security and speed of decisions for the benefit of individuals and society*. This benefit manifests itself in a wide range of offers in real estate search and marketing, as well as related issues, such as real estate purchase, financing, relocation planning, furnishing, and renovation. On its homepage (ImmobilienScout24 2016), *ImmobilienScout24* states as simple and ambitious as it is: "We are the Internet for real estate." This is realized by more than 550 employees at the company's location in Berlin (Fig. 4.13).

Who is this person who *ImmobilienScout24* wants to help in realizing his/her dreams? First of all, "he/she" only consists of numbers, data, and facts! The question "who is our user?" is centrally located in the room when product developers, designers, and marketing managers meet in 2013 for a workshop. The joint mission: "to drive product development closer to the customer—to build the product more user-centered". The concrete task: "to develop prototypical users with prototypical demands."

From each respective perspective and with individual experience and expertise, the team discussed possible users of *ImmobilienScout24*. From the discussion emerged the following four differentiating criteria, which are relevant to define user categories for the personas:

- Life situation
- Demands towards the real estate
- Internet and technology
- Type of real estate search

To enrich these vague types with "real data," Researcher *Sabrina Brauer takes the* analytical path and presents diverse insights from user studies:

- *Diary studies* of seven people during November 2011 and May 2012
- *Mover tracking* (Mindline) of 844 subjects from September to December 2012
- *Online survey* (W3B) of 5169 moving people and real estate searchers in March 2012

Fig. 4.13 Logo of ImmobilienScout24. Source: ImmobilienScout24, with kind permission

IMMOBILIENSCOUT24

The theory of the persona phases from family planning, pregnancy, birth and maturity, adult life to retirement was explained in detail in the conception of services with service design and design thinking (see section 2.4.5). In the end, the team opted for five user types that are relevant to ImmobilienScout24. Three of them are presented here: Stefan, Andreas and Silke as well as Angelika.

4.3.2 A Human Being with Face and History: Added to the Facts

4.3.2.1 *Stefan* (23): The First Searcher and Digital Native

Short Profile
For his studies, *Stefan* has to move to Heidelberg and is therefore looking for his own apartment the first time in his life. Since he got the acceptance letter for the studies at very short notice, he quickly has to find a suitable apartment or shared flat. He would like to live in a cool old building but is also willing to compromise because he must quickly find an apartment and has only a small budget (Fig. 4.14).

Tagline "Ideally a cool booth—but most importantly my own!"

Life Situation
During general studies, *Stefan* has lived with his parents in Frankfurt, but now he wants to transfer to Heidelberg and is therefore looking for his first home. With this step, life is just getting started for him: He now wants to live the real student life with parties, concerts, and lots of fun. Just like some of his friends, he would like to have a cool old building apartment. However, he soon realizes that he has to be quite pragmatic, to even find something, at all.

Requirements for the Property
Stefan initially thought about a stylish old apartment but found out soon that this does not fit into his budget and his parents will not increase their financial support. Therefore, he is now searching for a compromise: The apartment should have a certain coolness factor, either be in an old building or be located in a cool area. For this, he would be willing to live on a main road or in an unrenovated apartment. If his search is still unsuccessful, he could also imagine to move into a shared flat. But that

Fig. 4.14 Stefan. Source: www.stocksy.com; Image # 907438

would be his second choice, because moving out, for him, actually means to finally live alone.

Internet and Technology

The Internet is an indispensable part of *Stefan's* life. He uses it intensively, for example, to shop, to communicate via Facebook, to gather information, or to find an accommodation. For 2 years, he has been owning an Android smartphone as well as a flat rate for telephone and Internet; since then, his notebook usage is becoming increasingly rare.

The Property Search

Stefan found out very last minute about his university acceptance. Therefore, only a little time is left to find an apartment. Since he does not want to travel frequently from Frankfurt to Heidelberg, *Stefan* has researched all major real estate portals for apartments in advance and has also scheduled many viewing appointments. In

Fig. 4.15 Silke and Andreas. Source: www.iStock.com; Stock photo ID 77966583, © kupicoo

Heidelberg, he continuously checks via the smartphone app, if any new offers have been added shortly.

His goal is to come home with a lease contract soon. He wants to show this contract directly to his parents, who are skeptical about whether he is able to do all this by himself. After the first viewing appointment, however, he noted that he does not make any progress without his parents: most landlords require a guarantee, since his income does not represent a sufficient security.

4.3.2.2 *Andreas* (45) and *Silke* (42): The Nest Builders

Short Profile
Silke and *Andreas* are looking for a house with a garden for themselves and their two children. Concerning the location, they have a clear idea: the new property must be located close to public transport and the schools of their children. In contrast, they are willing to compromise in the condition of the house: they could imagine to buy a rundown house and to do some renovation works themselves. The best-case scenario for them would be to find a property without having to pay a broker. Therefore, they include neighbors and acquaintances in their search (Fig. 4.15).

Tagline "We want a home for our life, where can we feel comfortable and spend the rest of our days!"

Life Situation
Silke and *Andreas* have "arrived" in life. They are a good team. Every day, they master sovereignly, despite the many challenges coming from professional life and their children. As their rental apartment is becoming too small and they want to invest in property, they are looking for a house with a garden. This is a great wish of both, for which they have been saving money for a long time.

Requirements for the Property
Silke and *Andreas* are looking for the house for life, where they can raise their children and perhaps even grow old. It is important to them that the house is located close to public transport to Berlin and that the children can continue to ride their bikes to school.

The house they are looking for should provide a garden as well as sufficient space for the whole family. *Silke* especially cares about a large kitchen, while *Andreas* is looking forward to his own work room and the children to larger playrooms. In terms of price, they have little financial leeway: They cannot spend more than 250,000 € to keep the monthly rate in a bearable frame. However, concerning the condition, they are more flexible: "At a good price we would be willing to invest in renovations ourselves. Consequently, we can rebuild the house as we like."

Internet and Technology
Silke and *Andreas* use computers and the Internet for simple applications during their jobs. However, they see it more as a means to an end and do not want to "waste" more time than necessary in front of the computer. The use of the Internet at home is strictly regulated, so that the kids do not spend too much time in front of the home computer. *Silke* and *Andreas* own cell phones (but no smartphones), which they use for making phone calls and sometimes for writing text messages.

The Property Search
Silke has been keeping attention for a longer time already, hoping she might hear something about a vacant house from neighbors, friends, or colleagues. Lately, she has intensified her search: she now regularly reads the real estate section in the local newspaper and has set a search order on *ImmobilienScout24*, which she controls every afternoon after work. But there are rarely new offers, and even more rarely, there are interesting offers the family would want to visit.

Preferably, they would like to buy from a private person in order to save broker costs. Therefore, they plan to hang posters in their search area soon and hope to finally get in direct contact with sellers.

4.3.2.3 *Angelika* (59): The Predictive Senior

Short Profile
After the separation from her partner, *Angelika* is faced with the challenge to build a new life. Especially the search for an own apartment plays an important role in this.

Fig. 4.16 Angelika. Source: www.stocksy.com; Image # 871492

The new apartment should be barrier-free and well located, so that *Angelika* can live there independently—even in older age. Even though she is looking forward to a new home, she has a few worries about everything she needs to handle in the context of moving, all the challenges she now has to face alone (Fig. 4.16).

Tagline "I want to finally find an apartment, but all the trappings scare me a little."

Life Situation
After 39 years of marriage, *Angelika* left her partner and is now completely on her own for the first time. Sometimes, she feels overwhelmed by this situation, but sometimes she also enjoys the new freedom. "Now it's my turn"—according to this motto, she now wants to start her new life.

Claims to the Property
Angelika's ex-husband is still living in their commonly rented apartment, while she moved into a holiday apartment as an interim solution. This situation is stressful for her, which is why it is very important to her to find a new home of her own soon. Nevertheless, she does not want to make too many compromises, because she's looking for an affordable home, where she can grow old. To *Angelika*, the location is especially important: supermarkets, shops, and her best friend should be reached within walking distance.

In terms of the apartment itself, she is less demanding. Still it would be nice to be in a kind neighborhood, to have a pretty kitchen, a balcony, and an apartment on the ground floor/with an elevator, so that she does not have to climb the stairs when she gets older.

Internet and Technology
When it comes to technology, *Angelika* feels rather insecure. During her job, she often sits in front of the computer though, but usually it is only about simple data input. At home she has an older, rarely used laptop that she has "inherited" from her son. In addition, she owns a prepaid cell phone, which she uses for making phone calls only.

The Property Search
At the beginning of her search, *Angelika* has searched exclusively in newspapers and was disappointed with the low amount of offers. Her son brought up the idea to look for apartments on *ImmobilienScout24*. Since then, she regularly visits the *ImmobilienScout24* website and looks at new offers. All interesting exposés are being printed. During the search, personal contact to the broker or landlord is especially important to her. Already during the first call, this person must be kind and take her seriously; otherwise, she does not even look at the apartment.

Angelika is searching with mixed feelings. She is indeed happy to have her own apartment soon, but at the same time she worries about the work that is still ahead of her. Contracting, renovation, and relocation are issues, which she is not familiar with and which seem to her as costly and risky.

Working with Personas
After the "birth," *every product development team* took *one persona*, in order to develop applications for it. Thereby, the personas were added to the team: printed on posters, they were visible for everyone in the room. Through their physical presence—even if only as printouts—the developers had selected customers in mind and thus were able to concretize the relevant value propositions for these personas. In summary, *Sabrina Brauer* found out that personas are a great way to become more focused in product development. "Endless discussions about niche topics" are contained, and there is a "common basis for discussion." But beyond this *functional use*, the team is also building an *emotional relationship with the personas*. They have a face and life story; they are familiar characters, like friends. Or how *Sabrina Brauer* says: They were "our babies." And as it is with all children, they grow and at some point they escape the parental influence. This also happened at *ImmobilienScout24*: "At some point, *Stefan spoke* Bavarian!", but it did not even fit to him...and then the silent farewell came. Today, you can still find the posters in the offices, but the voices of *Stefan*, *Andreas*, and *Silke* are not really loud anymore—time to send them to retirement?

The personas have done a lot for the product development of *ImmobilienScout24*: They succeeded in focusing on a set of differentiating characteristics, which were translated into user typologies for these products. Today, the consumer department works with the existing data or real-time interaction with real users: Through A/B testing *ImmobilienScout24* can immediately recognize whether an ad works or not, because *ImmobilienScout24 is a big data phenomenon!* If data is the currency of the digital economy, *ImmobilienScout24* owns a great treasure. However, one of the biggest challenges is to use this huge amount of data to improve products and

services and consequently to respond more strongly to the needs of users. Insights on how this is successfully done in a specialized market provided us Senior PR Manager *Sonja May*.

4.3.3 *ImmobilienScout24* and Big Data: Product Development Along the Customer Journey

ImmobilienScout24 digitally displays the real estate market: There are more than *26 million anonymous objects and approximately 27 million saved requests*, and every month 150,000 new properties are added to the *ImmobilienScout24* portal. For the calculation of market prices and the price development, *12 million individual records* are being analyzed.

The data volume continues to grow, as Fig. 4.17 shows. Thus, the self-image of *ImmobilienScout24* as a "*digital controller*, who empowers the people to make decisions for a better living and working competently on they own," is quite convincing.

What insights *ImmobilienScout24* derived from big data are outlined by *Sonja May* with the following three examples: search criteria, times and devices, and search process.

Fig. 4.17 One minute at ImmobilienScout24. Source: ImmobilienScout24, with kind permission

Search Criteria: Where Are Users Looking?
ImmobilienScout24 is familiar with the most popular residential areas and their alternatives.

The anonymous notepad entries as well as the saved searches provide clues to search criteria and areas where a user is searching and, if necessary, what alternative districts he/she also considers. Based on this search behavior, *ImmobilienScout2* can give "district recommendations" to other users and propose alternative locations.

Times and Devices: How Are Users Looking?
ImmobilienScout24 offers a device- and location-independent search.

In the mornings, starting from 6:00 A.M., smartphone usage is most frequent, around 9:00 A.M. desktop usage rises (in the office), while in the evenings an increased tablet usage is recognizable (on the couch). Following these usage patterns, there is a *cross-device integration*, so that, for example, the wish list is displayed on all devices of the customer and can be shared with other search partners everywhere. Based on the current trend that TVs are increasingly equipped with an Internet connection and the living room becomes more and more digitized, *ImmobilienScout24* developed together with Fraunhofer Institute the first *Smart TV app* for real estate with second-screen experience. Via a coupling of App and TV, users are able to look at furnishing ideas and information about regions on two screens.

Search Process: What Do Users Need at Each Step Towards the Property?
ImmobilienScout24 supports the process.

Starting from the creation of a search profile, to the rental debt-free certificate and *SCHUFA* information, up to relocation and financing offers, *ImmobilienScout24* covers all individual process stages to rent or buy a property. The Digital Leadership of this case is presented in a seamless integration of systems, which convinces the customer by its simplicity as well as by its benefit. Let's look at the example of the "rent payment confirmation"—a service that is now available online. Contacting the previous landlord to issue a rental debt-free certificate is not necessary anymore. A prerequisite for using this new service is online banking and that the bank uses the widespread HBCI safety standard. Based on information such as monthly rent, recipient, and purpose, *ImmobilienScout24* creates a rent payment confirmation from the account data. The online banking data is not stored, while the connection to the bank is SSL encrypted and protected with all current security certificates. The rent payment confirmation can be printed out immediately to present it to the new owner directly or to send it as a PDF via e-mail. Landlords can check the authenticity of the document online at any time via a verification code.

The mentioned services of *ImmobilienScout24* show that the company—as Digital Business Leader—tries to occupy relevant topics from the perspective of the target audience: According to the brand values "innovative, optimistic, easy, trustworthy," new offers are being put on the market in short innovation cycles, while the existing structures are being extended through the integration of mobile applications and cross-device applications. Overall, the company transforms from a static Internet

platform to a full-service provider and networked marketplace, which follows a *mobile-first strategy* since 2010. User numbers suggest that these offers actually reach the target group: The *ImmobilienScout24* apps are installed on more than five million smartphones, tablets, and other mobile devices.

What Happens When Data Is Shared? Innovations!
There are many creative sources within *ImmobilienScout24*, but as well as other renowned Digital Business Leaders, the company also makes its way towards independent, young ideas and inspirators and opens up to the outer world. With the *3-month accelerator program YOU IS NOW*, *ImmobilienScout24* connects with the *start-up scene*. Founders of Internet-based business model ideas are being supported with capital (15,000 €), co-working spaces, and mentoring. They get access to the entire *ImmobilienScout24* network. At the same time, more than 30 internal *mentors* are supporting them: the founders benefit from the expertise of *ImmobilienScout24*, for example, in areas like online marketing and law while they can rely on IT development resources and product management capacities. In addition, external mentors share their experience with the founders. Through a partnership with the *Founder Institute*, the start-ups receive weekly coachings about founding-relevant topics. At the end of the program, all teams present themselves and their ideas on the *Demo Day* of *YOU IS NOW*. They pitch in front of a selected round of international investors and industry experts as well as in front of *ImmobilienScout24*. This could either lead to a further cooperation with the development department or the start-ups find an investor for a follow-up financing and pull themselves out of the lab.

IMMOBILIENSCOUT24

The business purposes of start-ups go beyond mere business management aspects. All activities are initially aimed at making the idea big. In doing so, they do not have to take existing structures, processes, employees and customers into account - because they have no history of their own. This makes head and heart free, especially for impetuous and great thinking (see section 2.13 in this book). ImmobilienScout24 benefits from this spirit as an accelerator!

With some of the so far 27 funded teams, *ImmobilienScout24* works together very closely, even after their time in the lab. Examples are *CommercialNetwork*, *umzug easy*, or *wg-suche.de*. Some of these projects have either been successfully integrated into the platform or together with the teams *ImmobilienScout24* drive the development of products in die field of real estate.

In the following, some exemplary start-ups which have undergone the accelerator program *YOU IS NOW*:

- *wg-suche.de* (formerly *noknok24*): A platform for searching a shared flat and/or roommates with *Facebook* integration.

  The team developed a portal which, besides presenting a room in a shared flat, also focuses on representing the interests and hobbies of the residents. The aim is to bring together seekers and suitable applicants more efficiently. The latest project: a portal for senior shared flats.
- *Casavi*: A customer portal solution for property managers and housing companies.

  With this portal, the team allows for more efficient and at the same time customer-friendly digital communication with property owners, tenants, and service providers. Within a protected online area, important messages, appointments, and documents can be easily shared at any time, while also services can be offered.
- *MyKeys24*: Through the *MyKeys24* app, duplicate keys for homes can be ordered based on mobile photos.

  Through this app, the founders enable the creation of a digital backup copy of the physical key. Once the app has been downloaded, the own key is photographed with the mobile phone camera, stored digitally, and can be ordered simply and straightforward in the case of loss.
- *Building Radar*: A global online database for new construction projects.

  Data search is done by satellite-based search algorithms, machine learning, and data mining. The data is used by companies that deal with the construction or maintenance of buildings (building materials, office equipment, cleaning, etc.). They need to know as early as possible when, where, and what is being built by whom so they can specifically sell their products. The annual turnover for leads in construction projects accounts to 72 billion euros (USA, Europe, and Australia).

IMMOBILIENSCOUT24

As it has been explained in this work´s section 2.3.1 on performance- and innovation engine, digital business leaders create innovation through a targeted linking of their own abilities with the flexibility and power of digital investments in start-ups. Doing so, the challenge lies in the integration!

4.3.4 Persona Data, Start-Ups, and What Next?

It is about user centralization, which is why we started this case study by asking the question: "How does the person look like for whom *ImmobilienScout24* wants to realize dreams?" The personas are present in all previously outlined services as well as in the interaction with start-ups. Sometimes more, as in product development, where the photos actually hang on the glass walls of the open-plan offices, and sometimes less, as in the start-up lab. No matter how strongly the personas shape the product development, the customer and his/her data equally represent the important base. We conclude the story with the process in which user centralization is obviously translated, namely, a new (digital) product: product development.

Product Development Process
In order to specifically encourage innovations, the entire product development of *ImmobilienScout24* underlies the scrum process. Interdisciplinary teams in terms of time and processes, which are detached from traditional structures, allow for more freedom and initiative in product development. Here, the product development can be roughly divided into three phases: before product development, during product development, and after going live.

- *Before Product Development*
  In the phase prior to product development, *ImmobilienScout24* analyzes what the exact needs of the customer groups are. In various processes, such as in the search for an apartment or the sale of a property, "test customers" are being accompanied over a period of 3 months. To find out which products are needed, interviews with the "testers" are submitted, the testers are possibly accompanied to viewing appointments, and they are asked to write online diaries or blog posts.
- *During Product Development*
  After a certain picture of what products can potentially support the customer has been generated within the product development team, idea development starts for concrete implementation. In this phase, prototypes are developed and made available to test users in a timely manner. Each week, users are invited to the own UX Research Lab for marketing research, to test the portal and the new features critically. Then again, their experiences are included into product optimization. Also telephone interviews with screen sharing are conducted as well as so-called guerrilla testings, for example, when *ImmobilienScout24* presents a new product on a laptop to passersby and travelers at Berlin's Ostbahnhof while asking them for direct feedback on usability. Since the early years of *ImmobilienScout24*, user tests are performed. Since 2011, the in-house research lab exists.
- *After Going Live*
  After going live with a new product, more departments of *ImmobilienScout24* come into play, such as business analytics and web analytics. They check the performance of the product. In this phase, additional user and customer feedback is collected through various channels. On the one hand, a feedback function is built right into the product; on the other hand, *ImmobilienScout24* asks at various

other locations on its website for customer satisfaction. Customer satisfaction is measured by the net promoter scores. In addition, the company receives important customer feedback from its customer support, which is also included into the development and optimization of the product.

IMMOBILIENSCOUT24

Digital business leaders actively generate relevant feedback through various online and offline channels. Product optimization is continuous; therefore adjustments and rework are not a "failure" of the previous version. Just "typical" service design: The "go-live" is just one step, and the next one includes some modifications that not just "happen" but are "desired". After all, it is about the commitment of all stakeholders (see section 2.4.5 in this work)!

4.4 *Dalia Research*: Silicon Valley in Berlin

Within our discussion of the eight action areas of *Digital Business Leadership* we have illustrated, among others, business models and innovation processes have talked about IT as an enabler and user centralization. The relevance of *start-ups* as a driving force and *innovation engine* for established companies has been shown at various points with the example of accelerator programs. Now we want to give an insight into a special start-up. This start-up *intelligently links* the *technological trends with existing IT infrastructure*. The target is to develop a radically new business model, a business model which means total *disruption* for the established industry—driven by the unconditional will for design and autonomy: The Berlin mobile survey start-up *Dalia Research* (Fig. 4.18).

We met *Nico Jaspers*, the CEO and founder of *Dalia Research* in his premises on a former factory floor in Kreuzberg. All information comes from this interview with Dr. Nico Jaspers, submitted on January 28, 2016. Formerly, fine silk ties were produced here, but today it is a space for start-ups, including one that sells fair condoms and artists. As usual for a factory floor, the rooms are generous, so generous that in the front area another start-up is being the subtenant. On the ground, long beach boards are lying—"those will become the new conference table." The current one still is from a Swedish furniture store, which we can convince ourselves

Fig. 4.18 Logo of Dalia Research. Source: Dalia Research, with kind permission

of, as we take a seat in the only separate area of the floor, the meeting room space (Fig. 4.19).

Prior to the interview, we were able to have a quick look into the working area of *Dalia Research*: at long tables, young people are working, focused on laptops (Fig. 4.20). "Above" them—and this is probably not to understand only physically but also in line of a visualization of their success—an hourly reporting "Display of replies" is visible on a monitor. What actually is behind these "replies" and how *Dalia Research* was founded, you will learn in the following.

4.4.1 The Idea

The impulse for the foundation of *Dalia Research* is market data, matching the profession of *Nico Jaspers:* market and opinion research. At the time, *Dr. Jaspers*—he holds a PhD from the London School of Economics—worked at *dimap*, a leading polling firm, as #managing director of *global solutions*. In his business, he recognizes a *platform shift*: more than one billion smartphones are sold worldwide each year, and in only a few years, more than four billion people worldwide use a smartphone daily. Consequently, for him, *the future of the research market is mobile*, and his goal is to "create big data as large and international as possible and to generate relevant insights." An offer of a high-quality, fast, and efficient data

Fig. 4.19 Nico Jaspers, CEO and founder. Source: Dalia Research, with kind permission

Fig. 4.20 Impression of Silicon Valley in Berlin. Source: Dalia Research, with kind permission

collection for the global market and opinion research on smartphones—that is something the industry logic is overwhelmed with. A "classic case of *disruption*." In retrospective, Nico Jaspers is happy not to have built his own app for market research, as they have failed with only a few exceptions. His business model is different: he uses *existing infrastructure* but combines it in a new way, making it faster and more autonomous than in a large organization.

The Mobile-Disruptive Business Model

First, *Nico Jaspers* had the thought to implement his idea of mobile market research by using an app. However, initial market analysis showed that the competition is very high and the usage value for the user would be too low before he could have even thought of a first round of financing. At the same time the team observed the existing mobile phone infrastructure: distributed worldwide, used daily, always available. Basically, a market researcher's dream. But how do market researchers create value in this environment for the user whose knowledge they want to tap into and at the same time create value for those organizations that need this knowledge always in another form for their own market research purposes? And, moreover, how to do it when the obvious way of a private app is apparently not effective?

After several creative rounds, it became clear that the most promising way is a very basic and procedural solution, combined with a question that seems to have absolutely nothing to do with the field of market research: "How do media agencies buy their advertising space in order to achieve large volumes?" The answer: The

purchasing process is carried out via highly automated platforms, so-called *ad exchanges*. On these platforms, supply and demand are being negotiated in large numbers on a global scale. A *good starting point for a technology-driven digital start-up*.

The business model sharpens itself within a few weeks. First a *flexible mobile survey solution* is created, which contains diverse *interfaces*. These flexible interfaces allow to become interesting for app providers of different types and sizes as additional monetization and marketing solution. According to the *principle of in-app purchase*, users receive polls generated by *Dalia Research* at predetermined locations in an app. By answering these questions, app-specific assets, additional free minutes, or other bonuses can be earned. This is beneficial for app users, makes sense for the App operators, and also ensures a high level of motivation in answering the *Dalia Research* polls. The user profile remains anonymous and privacy compliant. The user does not have to leave the app and will remain in the application flow of the respective program.

The business principle works just fine. An initial launch of the service in a half-year time period in the Germany, France, the UK, Canada, and the USA shows promising adoption rates. This allows the team to generate a first funding from business angels and, thus, to achieve a global rollout in 60 countries in mid-2014.

Since its founding in 2013, *Dalia Research* has grown to 15 employees: technicians, sales experts, and data science experts (see Fig. 2.14). The name *Dalia Research* comes from *Nico Jaspers'* Co-Founder and today's Chief Technical Officer, *Fernando Guillén*, a passionate botanist. He often uses analogies from the kingdom of plants to explain IT architectures. And when the team was in search of a unique name, which also should signal integrity, *Dalia* was chosen. It is supplemented by the term *research*, which—according to *Nico Jaspers*—provides the "fascination of how data works and what you can do with it—Big Data in Market *Research*."

From the beginning, great emphasis has been put on *efficiency*, *speed*, *and high-quality data*. Efficiency is also a key term for general proportions. The fact that *Dalia Research* is pretty "big" despite its manageable team is proven by current data (January 2016) (Fig. 4.21):

- Thanks to a scaled-publisher network, the solution is available in 91 countries and allows for a range of up to 3.5 million responses per day.
- Up to now, more than 2.8 million surveys were conducted.

The data shows: With classic market research logic and traditional communication channels, such a growth with a relatively manageable company size would not have been possible. The *focus on a highly automated digital solution* makes it possible. *Dalia Research* does not understand itself as a project partner for large-scale research projects of large corporations. *Nico Jaspers*: "From the beginning we have focused on avoiding the project business. Individual projects indeed can

Fig. 4.21 Impression team of Dalia Research. Source: Dalia Research, with kind permission

reach a seven-figure budget framework, but they also require a large market research team. Our strategy is another one. We want to provide a *platform* that is able to *capture and process data in large numbers*. This is our core business, and this is our focus."

Today, *Dalia Research* is very successful with this *digitally driven focus*. With funding from the *IBB Beteiligungsgesellschaft* and venture capitalist *Wellington Partners*, the company operates in the following areas:

- *API integrations*
  Through specially developed algorithms, users are matched with interested data collectors via API interfaces in nearly real time. Here, *Dalia Research* provides capacity by matching the respective parties according to the marketplace principle of supply and demand. Here, on all sides, value is created: for app users through the incentives to participate in the surveys, for data collectors who have a fast and controllable access to a global user base, and finally for the platform operator *Dalia Research*, who is responsible for the platform maintenance and further development.
- *Strategic partnerships*
  Dalia Research works together with three of the global top five market research companies (*Nielsen*, *Ipsos*, *Kantar*). Within this cooperation, the company provides the market research infrastructure. Thus, in each project, the involved market research companies can have access to an individual and extremely large user base, whose willingness to participate in a survey is exceptionally high. Polls

are not only planned quickly but also carried out quickly thanks to the infrastructure of *Dalia Research*.

- *Census*

  As politically interested entrepreneurs, the founders of *Dalia Research* provide their platform for another purpose, which is to generate a representative opinion of Europe by conducting regular surveys. Just as if Europe would be understood as a single country. Although it started as an experiment, today various organizations, including the renowned *Bertelsmann Foundation* and *Stanford University*, show interest in this data.

In the future, the business model of *Dalia Research* will be extended through a *subscription model*. The verticals are not fixed yet, but it is quite likely that it will be about app/mobile, technology/consumer products, and political risks (for banking and insurance). We are pretty sure that the company's success story will continue. Not only because the mobile data collection infrastructure is already holding a *massive user base* but also because the team, led by *Nico Jaspers*, is willing to continuously *experiment* with the business model while also continuously *innovating* it.

4.4.2 Massive Scalability with Open-Source Software

The story of *Dalia Research* is already amazing enough. But it includes another facet which revealed when speaking to *Nico Jaspers* about the *history of the own software platform*. After all, it is the central component of the business model and represents the most important "asset" of the company. But how does such a powerful solution result in a start-up that started on the market without large IT budgets or support of an established market research company?

Nico Jaspers said: "You look at several *open source components* and you combine them newly. The basis of our technology are existing open source solutions. We have supplemented them by our individual requirements, for example by designing them cloud-ready." Despite of the highly individual overall logic, *Dalia Research* develops only a small part of the software by itself. A lot is taken from the open-source community, composed of open-source components, and only supplemented or modified when it is really necessary. In addition, there is the existing infrastructure of the World Wide Web with its high grade of distribution and networking as well as the technological platforms of the major operating system providers for mobile devices, like *Google's Android* and *Apple's iOS*. Here we are talking abount an environment in which building completely own IT platforms would not only be unnecessary but even damaging for business.

An example of how to act with regard to IT is the need to localize smartphone users as closely as possible. In order to do so, *Dalia Research* started with an open-source principle called *geolocating* via the web browser. Since the results of open standard technology, however, did not turn out precisely enough for their own purposes, they started researching a possible optimization in order to generate

more accurate data. *Nico Jaspers* recalls: "We were not satisfied with the existing open source solutions. However, members of the open source community helped us in generating our own solution. That's the beautiful thing: You ask a complex question in a forum and you get a competent answer—in no time." Besides the open-source base, the advanced overall solution of today includes more from *Dalia's* individually developed components and is therefore considered as "technological intimate knowledge" of the company.

Another challenge for *Dalia Research* was the constant improvement of collected data quality. The company had to invest in building its own *trust algorithms* in order to verify the quality of captured responses. Within an iterative process, the team developed algorithms, which, for example, use the time of answering questions or comparisons between response categories as a verification element. This data science approach has a significant advantage: No person must check each answer manually, since the IT system of *Dalia Research* takes care about the data quality. Again, maximum digitization.

4.4.3 Response

Software solutions created by *Dalia Research* are not only flexible and sustainable, but they were also produced at a fraction of the cost and time that would have been necessary when not using open-source components. With this strategy, the company won the prestigious *IIeX Europe Award as "most innovative start-up" in the market research industry* in 2015. Thus, *Dalia Research* has been recognized as a game changer within its international industry-playing field. What consequences will follow by the established players remains an interesting question to which, however, no market research study may give an answer.

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Beginning Is the Most Difficult: Our Call to Action

5

Today's management literature is full of advice for a successful digital transformation. We believe a general *solution* or *formula* that fits every industry, every organization, every context, and in particular every person cannot exist. Today's business world is simply too complex. In addition, digital challenges as well as the people involved are often too different. Moreover, our case studies have shown that each of the featured companies emphasized specific aspects of our presented fields of action. The tools and structures considered in this work are therefore not to be understood as a linear guide; they rather form a network of necessary activities. Adapting them is highly individualistic, and of course they need to be questioned.

In general, *beginning is the most difficult*.

- But where to start when all the elements are interacting and the network of options for action includes at least eight central fields?
- What steps should be initiated before others, which later?
- Considering all the individuality, is there at least a basic, common pattern to build a Digital Business Leadership?

Not just Chap. 3 (change management) made clear that it is about the people and their experiences and fears concerning the cultural togetherness within the company. Organizations are complex social systems which require complex answers to the questions that arise from digital transformation and the goal of a Digital Business Leadership. For this reason, the *creation of a company-wide change awareness* is central and indispensable.

Gary Hamel (2012) writes in his management book *What Matters Now*:

> [. . .], the only thing that can be safely predicted is that sometime soon your organization will be challenged to change in ways for which it has no precedent. Your company will either adapt or falter, rethink its core assumptions or fumble the future—and to be honest, a fumble is the most likely outcome.

R. T. Kreutzer et al., *Digital Business Leadership*, Management for Professionals,
https://doi.org/10.1007/978-3-662-56548-3_5

This lack of alternatives, while actually needing a change, can demoralize. But it rather should and can motivate. Why? Because exactly this urgency is required to accomplish change processes to the necessary extent. Therefore one thing is decisive in order to create a company-wide action awareness:

Communication, communication, communication.

The need for change must be recognized in the company, while the urgency as well as the lack of alternatives must be transparent. Do not rely on one person. A broad base on different levels of the organization is needed to meet the challenges in a fast and reliable manner. Above all, include the people who in Chap. 3 were defined as promoters and can advance the process of change with enthusiasm and ideas.

However, every change requires not only a reason but specifically a target. Otherwise change awareness leads to impulsive and diffuse activity that is only partially successful. In this sense, it is a *nondelegable duty of top management* to formulate the general need of change from inside the organization and to develop and broadly communicate the *digital vision*, both as parallel as possible (see Sect. 2.1). This vision must be highly independent, meaningful, action-guiding, and motivating. It eventually specifies the target for the next years, forming the path of digital transformation. *Axel Springer* is a prime example for this (see Sect. 4.1).

Start by strongly abstracting all business aspects and by establishing a structured *thinking and communication in business models* (see Sect. 2.2). Too much focus on the existing own abilities is just as damaging as a singular consideration of market requirements. Balance both views! Regularly, there is a lack of insights into the market which go beyond superficial perceptions. Do not only think in products or services but in hybrid product-service combinations and digital services (see Sect. 2.4). Take advantage of the possibilities of open innovation to meet creative solutions and new insights from a customer perspective (see Sect. 2.5). And finally build on a stronger user centralization (see Sect. 2.6).

Based on these activities, promising innovation projects can be identified, and concrete digital action steps can be determined. Here it is especially important not to act only in *incremental steps* but also to think in challenging *scenarios* (see Sects. 2.2.3 and 2.7.3).

Once this conceptual framework is staked, a *powerful innovation network* needs to be established, in order to follow the radical and disruptive approaches (see Sect. 2.3). The *dual organization*—which combines the performance engine and the innovation engine—should be formed quickly in order to establish the necessary partnership between hierarchy and innovation network. Here, Digital Business Leadership requires consistent action. It is highly negligent to work on innovation projects within the existing hierarchical organization, when these projects actually pose a massive threat to it. Rather the already described mechanisms of a second company part are required, which can deal with groundbreaking innovations free from all limitations of today's action. Digital leaders create all the necessary conditions in this very environment. If time is the currency of the digital age, this

ambidexterity of the organization (dual organizational principle—both optimizing the existing business and working on [some far-reaching] innovations) must defeat it.

Throughout the entire company, digital thinking and action need to be anchored. In order to do so, classic tools for detailed business improvement can be used. *Kaizen* and a *continuous improvement process* (CIP) are here the order of the day. In addition, the existing *customer journey* should be considered and optimized from a digital perspective (see Sect. 2.6). At staff level, flanking measures need to be taken: training for new requirements, digital task profiles, and new job descriptions are to be established company-wide. *Incentive programs* which are based on the new requirements have to be adapted.

Without comprehensive integration, all this will not succeed. Therefore, the existing *IT* needs to be integrated comprehensively in the transformation process from the beginning (see Sect. 2.7). And of course, a digitally oriented *controlling* must continuously check whether the organization is still on track—albeit with different KPIs (see Sect. 2.8).

At the same time, top management must remain realistic. However motivating and shaking the vision may be, real activity only takes place if the necessary *resources* needed for a transformation process are provided. If you think you can delegate the "digital" as an additional task, think again. A Digital Business Leadership is not obtained through quick wins but comes only as a result of broad-based activities at all organizational levels. In order to achieve these targets, investments are necessary: First of all, in personnel but also in material resources and finally in venture capital in order to participate in promising start-ups (see Sect. 2.3.1). The financial conditions for such a transformation process need to be generated by the existing business.

As soon as the financial basis is set, the reason (*awareness*) and the goal (*digital vision*) of change are clearly defined. And as soon as a digital optimization process has been implemented successfully in an existing solution, contextual work on building a Digital Business Leadership can finally start.

Finally, it is important to celebrate successes at all levels to make visible what is *possible* and what has been already *achieved*, in order to finally trust the seemingly *impossible*. This also requires a new handling of mistakes.

Celebrate failures!

They are part of any learning and development process. Without these failures, there will be no change because they are part of any change process.

The road to Digital Business Leadership does not include a singular sprint.

Achieving a Digital Business Leadership corresponds to a marathon.

Therefore: *Endurance counts and pays off.*

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