Volker Johanning

IT Strategy

Making IT Fit for the Digital Transformation

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Preface

Digitalization and digital transformation are buzzwords that are also fueling the discussion about expanding and maintaining competitiveness at our industrial sites. One might sometimes wonder to what extent companies can carry out the digital change so that they are not overwhelmed by the "digitalization wave".

In the new edition of this now established textbook, the question of the significance of digital change for an IT strategy and the possible role of IT as a driver for digitalisation topics will also be taken into account.

In addition, many reviews and feedback from readers have made it clear that an IT strategy can be very different depending on the industry. An IT strategy always depends on the company strategy and the core processes of a company. For example, a trading company focuses on different issues than an industrial company. The process and value creation for a trading company is based on purchasing and selling with as high margins as possible; the focus for an IT strategy is more on purchasing and sales portals or webshops and platforms. According to the industry service HDE, online retailing had already overtaken stationary retailing in 2015. In addition, within the framework of digitalisation, concepts are also being developed that are oriented towards new payment systems or much more detailed analyses of customer data by business intelligence systems specifically for trade.

For a manufacturing industrial company, in addition to import and export, the production and logistics processes including quality assurance, technical development and electrical/electronics with networked systems are of great importance. Here, completely different systems come to the fore from an IT perspective, for example an MES or a PLM system. Topics such as rough and fine planning, MDE, BDE etc. play a major role here and on the digitalisation level the topic of Industry 4.0.

And Industry 4.0 is something completely different from Trade 4.0.

A stronger focus on the new edition was thus the logical consequence. That this fell in favour of the manufacturing industry was due to the fact that it equipped the author with the corresponding specialist knowledge as his professional "home". In addition, the book had already set a focus on this segment in the 1st edition with the example company "Produktio weltweit GmbH".

When it comes to choosing the right IT organisation, a lot has changed as well. Keywords such as “agile”, ’DevOps” and “bi-modal” IT organisations outline the contents that have been added in Chap. “IT organisation”. In addition, the chapter goes into more detail on digitalisation in the section on IT governance, in particular on the role of IT and the CIO. Because the CIO must clearly differentiate himself from the digital responsible persons and possible Chief Digital Officers (CDO) and sharpen his role accordingly with regard to digitalisation topics.

It is also important to understand the “why”: Here are some explanations of why and for what purpose each of the seven steps makes sense or can make sense. Not every one of the seven steps has to be taken. Here too, practice has shown that depending on the starting situation of the company, some steps are very helpful and others are not necessarily necessary.

Last but not least, you will now find tasks to do in each chapter. These were added at the special request of professors and university teachers. Because in the meantime this textbook has also developed into a standard reading material in business-related computer science courses at some universities and universities.

The IT world continues to rotate rapidly and will remain dynamic. A topic like artificial intelligence will not only turn the way we operate IT today upside down, but above all the whole human race will face the big question of “who is in charge on this planet”. What these developments will do with the book in front of you remains to be seen and may be reason enough for another new edition very soon.

In this sense, the question “Does IT matter?” from the first foreword is probably basically clarified: Yes! And in the future even more, because IT is now not only part of all our lives, but will influence our lives in the near future more fundamentally than we might like.

I wish you every success in your strategic work on IT and always a good hand in all decisions around IT.

Marl am Dümmersee,
Jahreswechsel, 2018/2019

Herzliche Grüße
Volker Johanning

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About the Author

Volker Johanning is an expert on IT and digitalization strategies to increase the productivity and time-to-market of manufacturing companies.

He helps medium-sized and large industrial companies in questions of the strategic orientation of IT. Important to him are the close involvement of the departments and the management. As a consultant, manager and CIO, Volker Johanning has many years of experience in management, both in corporations such as BASF, ZF Friedrichshafen, KPMG, Continental and Volkswagen/Audi, but also in medium-sized family businesses and hidden champions such as Pöppelmann, Grimme, Rational or Wernsing.

In addition to the degrees as a Diplom Informatiker FH and Diplom Kaufmann, he has completed numerous further education courses. Among other things, as a restructuring and restructuring consultant at the IFUS Institute in 2017, as a certified coach at Rauen/Steinhübel in 2010, as an organizational developer at Steinhübel in 2016 and as a strategy consultant IHK in 2014. He was awarded Entrepreneur of the Year 2015 (Top 100 Entrepreneurs in Germany, Austria and Italy with the Entrepreneur Excellence Award).

His first book "IT Strategy" was published by Springer-Verlag in November 2014. You are holding the second edition in your hands right now. His second book "Car IT: From the connected car to autonomous driving" was published in 2015.

The topic of IT strategy has accompanied Volker Johanning in all professional stations. The present book is a practice-oriented summary of all essential essences for the development of an IT strategy. It is important to him that IT is not a technical sorcery that comes incomprehensible to top management and is therefore only to be controlled by costs. All essential levers for the construction of an IT organization can be discussed and decided with business management tools. It is about bringing business and IT together with the same language and on an equal footing. This was the starting point for this book, in which the development of an IT strategy can be worked out with the help of well-known tools, taking into account all the departments involved and the top management.

In the second edition, the focus on manufacturing companies has been added, which now also adorns the subtitle of this book. In addition, the topics of digitization and the distinction between an IT strategy and a digitization strategy have found their way into the book.

Part I

Introduction and Basic Information on IT Strategy

Introduction to the Topic

Abstract

The first chapter consists of an introduction to the world of IT strategy and clarifies basic questions: "What is an IT strategy, when and why is it needed, how does science and practice see the subject of IT strategy? What is the relationship between corporate and IT strategy? 'Chapter 1 concludes with the topic' Strategic Planning and Management of IT".

In today's world, companies are not only partially dependent on IT—they cannot exist at all without IT and successfully compete. IT has become a fixed component of many company products through the ongoing digitalization. Only through IT can valuable analyses be gained for the control of the company. IT ensures the smooth, highly automated operation of worldwide supply chains, so-called supply chains, and controls the production lines of industry.

The management is increasingly aware that it cannot do without IT and exerts pressure on it. The IT organization and above all the CIO have to reposition themselves. The close interlocking with the business and the departments is considered the most important support for this. Only if IT exactly understands what is required can it go the way into the future in small steps with the help of standardization and outsourcing. Exactly this is to be helped by the IT strategy to be created in the following chapters.

Successful IT projects that perfectly support business processes are reflected in the success of the company as well as in the satisfied faces of all participants. But what are the prerequisites for such successes? How can it be guaranteed that IT correctly recognizes the

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needs of the department, in other words: that the IT department exactly understands and realizes what the company needs in order to generate competitive advantages and to be able to act successfully on the market? And how do you still keep the costs under control?

These questions take on a new importance in entrepreneurial decision-making when it becomes clear how important a success factor IT can be on the hotly contested markets everywhere.

To lead the IT landscape to highest (cost) efficiency through simplification and standardization is only a first step. Thanks to the professional tools and aids that have arisen in recent years, this is not too difficult to accomplish: from IT governance to service management, one benefits from standardization models such as COBIT and ITIL, in project management from PMI or PMBOK. Hardly any other department can fall back on such solid working bases and build on them.

If someone is also able to get the IT out of the penalty area of "being too expensive" and the "incomprehensible but somehow necessary part of the company" even when individual solutions are required, it can become a key factor for new developments and future growth.

The aim is to find ways to bring the IT on an equal footing with the specialist departments. The IT should make its potential as a significant innovation engine of the company transparent.

Basically, three strategic options can be set for this, as shown in Fig. 1:

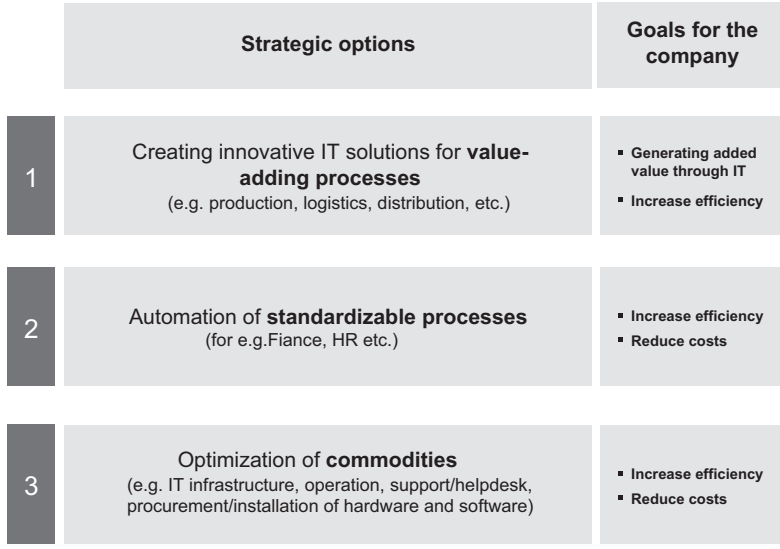

Fig. 1 Three levers for optimizing the performance of IT

1. Providing *innovative and competitive IT solutions for value-added processes* in departments such as production, supply chain or in other areas that directly increase value creation through decisive customer benefits. Here, IT support plays a competitive role and, in contrast to the following two options, is a core task of entrepreneurial decision-making and action → **Goal: Generate value for the company's end customer through innovative IT solutions**
2. Improved support for company processes through the strongest possible automation of *standardized business processes* (for example, in specialist areas such as personnel, finance) → "Bread-and-butter business" → **Goal: Save costs and increase efficiency**
3. Last but not least is the well-known challenge of IT: simplifying and standardizing technology → optimizing commodities (hardware, operations, infrastructure, etc.) and streamlining internal IT processes and governance structures → **Goal: Save costs and increase efficiency**

This book goes one step further: IT should not only support specialist areas processes optimally—as is usually the case—but also play a decisive role directly at the interface with the end customer in future. This also means that the IT organization will no longer only focus on what the specialist area requires for process support (typical ERP solutions for standardizing personnel and finance processes). The IT organization must work together with the specialist area at the customer's premises—ideally on site—to identify and understand what the bottlenecks and problems of the company's customers are and how they can be eliminated by tailor-made IT solutions.

In recent years, a lot of money has been invested in optimizing ERP systems. As a result, most large companies and corporations now have a well-functioning ERP landscape. The administrative and management processes based on this are highly automated and standardized, and may even have been outsourced as part of BPO (Business Process Outsourcing). The processes optimized in this way—mainly in the areas of finance or personnel—are, however, the administrative and management processes that are of relatively minor importance to most companies in the market context and that should be mapped as efficiently and sparingly as possible.

For example, while industrial companies can primarily reduce costs through standardized administrative processes, the value-added processes are of much greater overall strategic importance. These value-adding processes are, for example, research and development, production processes, the supply chain or sales. On the IT side, applications include business intelligence, innovative production and logistics systems, but also, for example, CRM systems. These must be distinguished from the system solutions of the competition primarily in that they map the company's strategy and specialization one-to-one in the IT application. Ideally, they even innovate through a company-specific IT solution to create a competitive advantage.

Since the specialist departments are often more progressive in these customer-oriented disciplines than IT, catching up is necessary here. Salesforce.com is a good example of an innovative and customer-oriented application that is mostly purchased directly

by the specialist departments, here mainly marketing and sales. The IT organization is often not involved at all in such easily procurable applications from the cloud, and the infamous "shadow IT" arises. This is just one example of how important it is for IT to take the step from the technical corner and the easily standardized world of processes into the really value-adding and market-differentiating world. Because it is precisely here that IT can give the company an enormous innovation and competitive advantage with the great technical expertise and comprehensive process knowledge of its employees.

And this is precisely where the approach of this book and the motivation of the author lie: By closer interlinking of IT with the specialist departments and also by direct contact with the end customers of the company, the value-adding processes in the company can be optimally supported by innovative IT solutions. If IT then manages, together with the specialist departments, to provide exactly the right information in the right place for the right recipient, then IT will become a competitive factor and an important, business-strategic instrument.

In order to achieve this goal, IT needs a strategy. This is to be explained in detail and absolutely practice-oriented in seven easy-to-understand steps.

IT Strategy: Definitions

Before the strategic work begins, the term IT strategy should be considered and defined in more detail: What is an IT strategy and what are its characteristics?

Various quotations from leading market researchers in the IT business illuminate the term very helpfully. So the IT analyst and market researcher Gartner refines: "IT strategy is about how IT will help the enterprise win. This breaks down into IT guiding the business strategy, and IT delivering on the business strategy. Although some or all tasks involved in creating the IT strategy may be separate, and there are normally separate documents, IT strategy it is an integral part of the business strategy" [20].

Gartner emphasizes the close interlocking of the IT strategy with the corporate strategy in his definition. The IT strategy should be part of the corporate strategy, which explains exactly how the company should "win" through IT. This definition underlines Gartner's conviction that IT is an extremely innovative and competitively relevant factor for companies.

The second major market researcher in the IT sector, Forrester, goes even further: "[…] that there should be no IT strategy, just business strategy with a technology component […]" [16]. Forrester calls for the IT strategy not to be seen as a detached component. In his opinion, there is no explicit IT strategy. There is only a corporate strategy, which includes a technological—i.e. IT—component.

Here the IT strategy is a part strategy that is very closely interlocked with the corporate strategy, but which includes specific IT components that do not have to be included in the corporate strategy (for example, the IT governance/organization or the

IT infrastructure strategy as elements of the IT strategy, but not the direct corporate strategy).

No IT Strategy Without Existing Corporate Strategy

Both definitions have in common the direct "connection" or even the complete integration of the IT strategy into the corporate strategy. In other words: an IT strategy cannot be developed without a corporate strategy according to Gartner as well as Forrester.

However, the reality in companies unfortunately shows that about 92% of them do not have a fixed strategy in writing [27]. In almost every article or book about IT strategy, however, the derivation of the IT strategy from the corporate strategy is postulated. Against the background of the fact that only about 5% of all companies have a documented strategy in writing, the derivation theory cannot be the only measure for developing an IT strategy. Only the knowledge in the heads of the employees and the management is not enough. Only strategy and process documents fixed in writing testify that really work has been done on these topics; because only with the written composition of such documents do questions arise that our reason does not get asked at all and therefore cannot answer.

If it is not quite clear where the company will be in 5–7 years and what the business model will look like then, an IT strategy lacks a essential basic. Only with clear specifications from the business can a stable and matching IT system landscape arise and be operated for so long that it pays off. Because the introduction of ERP systems, for example, takes at least 2 years, usually longer. In order to generate these immense introduction costs again, such a system must run stably for at least five years without major changes. But if every two or three years a completely different business model comes into play, the IT strategy can be as promising as it is, it will not pay off and instead of a closer shoulder-to-shoulder between business and IT, it will only lead to frustration in management.

The development and implementation of an IT strategy is a learning and development process, not only for the CIO and the IT organization, but for the entire company. The IT strategy as part of the corporate strategy is the fertilizer for further growth of a company. In the end, it is not only about the analysis of the technical feasibility in IT, but above all about the examination of the economic viability: How can IT products support strategic decisions positively and open up strategic advantages?

Changes Through an IT Strategy

Strategic decision means deciding; that is, it sometimes also means a divorce or separation from the perhaps familiar or traditional, whereby on the other hand, something else, new, usually arises. This sometimes comprehensive, cross-departmental and far-reaching change describes the business-related interpretation of the term change or change management.

Changes in the IT sector are usually equated with budget cuts, after all, the prevailing tenor of all corporate leaders is: "IT costs are much too high!" This may be true at first

glance, but should not be an excuse for hasty budget decisions. The question should rather be: "Which are the right investments in IT that lead to a higher return on investment for the entire company and which investments in IT are rather to be neglected?"

In order to answer this crucial question about the economic viability of IT, only an IT strategy helps. Because in the IT strategy these questions are answered exactly:

- How can the actual needs of the company and the departments be linked with the right IT support?
- How can classical make-or-buy decisions be used to determine which IT services can be economically provided by third parties and which can be provided internally?
- How can a project portfolio create transparency for all IT projects and show which projects are economically viable and which are not?
- Last, but not least: How does a modified balanced scorecard ensure that the goals of IT can be controlled and reported transparently in the form of a cockpit?

Sustainability of an IT Strategy
The IT strategy must be sustainable enough to withstand the constantly changing requirements of the departments.

How Can this be Successfully Realized?

Many CIOs hesitate at this point and hesitate to start the IT strategy project because, from their point of view, it is already outdated after completion and therefore needs to be revised. The question of constantly changing requirements should therefore be turned into a question of IT to the business: "How do I implement new business processes or innovative IT concepts to solve customer problems with my users?"

In order to establish a sustainable IT strategy, it is of great importance that IT takes on a new role in the company as a shaping force on an equal footing with the business or departments. Therefore, the topic of IT governance in the form of roles and responsibilities (see step 5) is also shown as an integral part of the IT strategy in the procedure described here, as well as the development of an IT strategy cockpit (see step 7) for the continuous control and adaptation of the IT strategy to the changing company goals.

The strategy development method presented here deliberately sets itself the goal of not developing a technically mature IT landscape down to the last detail. The questions to be answered are:

- How should IT look in five to seven years? → Vision, application strategy, IT organization and governance
- What is needed for this? → Resources in terms of finances, employees, innovations
- How is the way there traversed and controlled? → Roadmap and IT strategy cockpit

Most Common Reasons Why IT Strategies Fail

When defining an IT strategy, it is always helpful to investigate beforehand what could cause it to fail. This can eliminate possible stumbling blocks in advance. Here is a compilation of possible reasons for the failure of an IT strategy from the personal practice of the IT specialist:

- Not everywhere where "IT strategy" is written on it is also IT strategy inside: Often, those responsible do not understand an IT strategy to mean that, for example, one focuses on Microsoft or SAP products. Other areas, such as sourcing, the necessary investments or the necessary IT infrastructure, are completely neglected or ignored. This is not an IT strategy, but one of many management decisions and only a fraction of an IT strategy that cannot withstand the demands of sustainable orientation.
- There is no written corporate strategy that the IT strategy can orient itself to. Assumptions have to be included that are often not detailed by management or validated.
- The implementation does not take place; the IT strategy has arisen as a theoretical construct and remains in the drawer.
- The IT strategy is "overtaken" by new requirements of the department at an ever-increasing pace and is no longer implementable after a short time.
- What starts out as an IT strategy project quickly becomes a blueprint, an IT planning or even just an analysis of the situation. This does not allow for sustainable control and strategic leadership. Therefore, this approach does not deserve the name IT strategy.
- There are generally different views on the content, structure and purpose of an IT strategy.

Areas of Application, Benefits and Target Group of an IT Strategy

In addition to a closer look at the benefits and purpose of an IT strategy, the factors will also be examined more closely, which are decisive for its success or failure. The resulting guidelines for the development of a successful IT strategy work across industries and companies.

An IT strategy is particularly relevant in these company phases:

- Before or after company purchases or acquisitions (Mergers & Acquistion)
- When the company and the IT organization are growing very rapidly or have grown very rapidly
- After a re-organization or restructuring in the company
- When the complexity of processes and technology is too great
- When the IT landscape is outdated and no longer meets today's requirements

The Benefits of an IT Strategy

What are the concrete benefits of an IT strategy? The following list makes the primary benefits of an IT strategy clear:

- Ensuring that IT sustainably supports the corporate strategy
- Improving the performance of IT
- Clear decision-making basis and guidelines for new IT investments
- Transparency of IT resource use with maximum efficiency for the company
- Clear roadmap/implementation planning, prioritized project plans
- Cost reduction through optimized enterprise architectures
- Better communication between IT and the business units (optimized business-IT alignment)
- Optimal support of business unit goals
- Focus and better support of important, value-adding business processes
- Increased transparency of IT activities and projects to business units and corporate management
- Medium and large IT projects can be successfully carried out, saving time (time-to-market) and costs
- IT-side integration of acquisitions and new subsidiaries is significantly easier and faster
- New requirements for new products or product changes can be implemented much faster and more cost-effectively
- Cooperation between sister and subsidiary companies is significantly more efficient through a uniform IT. This results in time and cost advantages in the coordination and joint work for the business units and the customers.

Target Group of an IT Strategy
For whom an IT strategy is developed and against which background:

- The management/executive management/board: For the optimal linking of IT objectives with corporate objectives
- The supervisory board
- The departmental head: For the close coordination of the medium and long-term IT support of all departmental processes
- IT manager/CIO: For the control of the goals derived from the IT strategy for the IT organization

Strategic Planning and Management of IT

In order to "keep an IT strategy alive", it requires the leadership of all IT responsible persons based on this strategy: The strategic leadership. This is now an important success factor not only in large companies, but also in medium-sized and small companies. Strategic leadership ensures that the actions of all managers are oriented towards long-term goals and that the scattering of forces in everyday business is minimized.

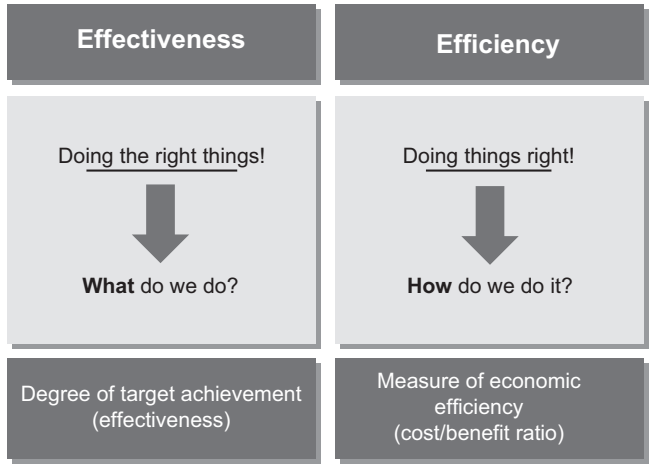

Fig. 2 Difference efficiency (operational leadership) and effectiveness (strategic leadership)

As shown in Fig. 2, strategic leadership means "doing the right things" (effectiveness) in contrast to operational leadership, where the postulate is: "Doing things right!" (efficiency). Good strategic leadership ensures that managers work on the right problem areas and thus guarantee a long-term, successful positioning of the company.

These strategic leadership principles also apply to leading an IT organization. The CIO or IT responsible person is obliged within his scope of duties to generate added value through IT for the entire company and therefore also required in terms of planning to decide and act with foresight. This can only succeed on the basis of a sustainable IT strategy, which one orientates oneself to continuously.

Due to the rapidly developing technologies in the IT sector, it is tempting to jump on new hypes. But it endangers the concentrated work on the basis of an IT strategy because of the great danger of getting bogged down in new technologies again and again. A long-term oriented and thus strategic leadership of the IT area is one of the decisive principles for its successful work in the sense of the company.

▶ In order to counter the danger of operational management based on new technologies and hypes, a sustainable IT strategy must exist that sets long-term goals, which the IT management orientates itself to. Strategic leadership in IT means doing the "right things" and is based on the long-term goals from the IT strategy.

Delimitation of IT Strategy to Digitalization Strategy

In the context of the introduction to the topic and the basic definition of IT strategy, the question arises in times of digitalization to what extent the IT strategy is delimited from a digitalization strategy and what possible similarities there may be.

In the management of companies, especially in manufacturing companies, the topic of digitalization has been on everyone's lips since the introduction of the term "Industry 4.0". The big question is: "Do we need a new strategy for this, so to speak, a kind of digitalization strategy? Or is digitalization part of the existing corporate strategy and only an extension of the business model with digital elements?"

In this context, IT quickly comes into focus. What role does IT play for manufacturing companies in digitalization?

Before a decision can be made in which strategy corner digitalization belongs, a definition of the term digitalization should take place. In this case specifically for the manufacturing industry.

The author's view is that digitization in manufacturing companies does not only refer to Industry 4.0, but takes a significant step further.

Industry 4.0 in a wider sense refers to pure process improvements and the raising of efficiencies in the production or manufacturing process. (see Level 1: "Process optimization through digitization") (Fig. 3). This is done by automating the manufacturing processes as well as by further supporting, for example, more mature robot technologies or optimized machine or operational data and the better analysis of these data resulting from newer MES systems. This also includes the topic of "predictive maintenance", i.e. the automatic prediction of when certain parts in production need to be serviced based on automated data analysis. From the author's point of view, this is a great development, but in a narrower sense not a revolution in the form of a new business model for the customer with greater value. Rather, it is more of a continuous improvement process of the production lines and production.

The real, disruptive function of digitization in manufacturing companies lies on another level: it lies in the extension or complete renewal of physically manufactured products by networking with each other, by product-related services and in the long term also by the use of artificial intelligence for these products. The resulting extended benefit for the customer fundamentally challenges the business model of manufacturing companies.

What does this mean for the understanding of digitization with regard to manufacturing companies?

Both are important: Industry 4.0 for increased process efficiency and the establishment of innovations in the form of new, intelligent products including services to increase customer benefits. However, a real revolution only takes place through the so-called disruptive innovation, which leads to a complete restructuring or break-up of an existing business model.

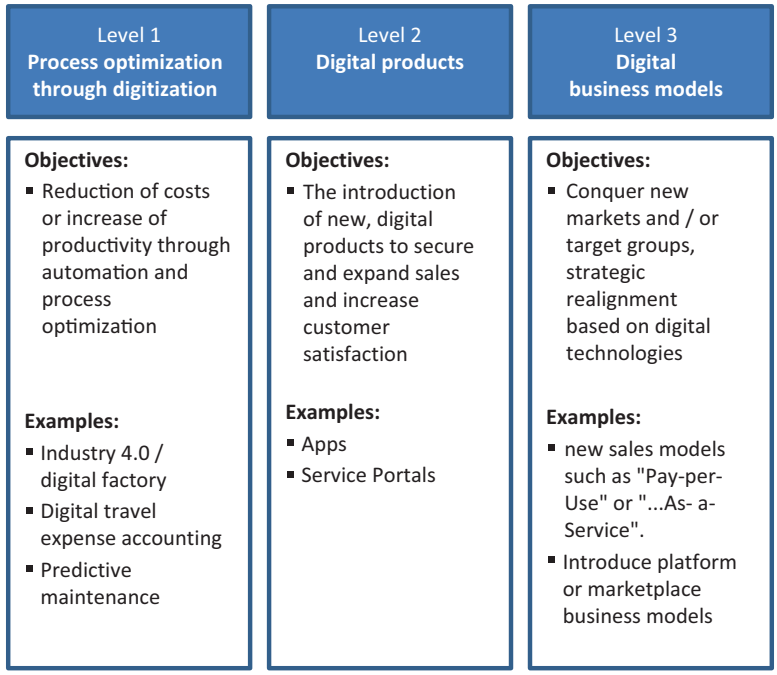

Fig. 3 The three levels of digitalization

An example of a real product innovation through digitalization is the transition from the vinyl record to the CD to the purchase and storage of audio files from online providers. The disruptive effect of digitalization is also clearly visible in the money traffic—from the cash register to the online payment system.

In this context, one also speaks of Product-as-a-Service (PaaS).

Once it is clear what digitalization means for manufacturing companies, the question of the IT vs. digitalization strategy can be answered.

On the level of process optimization as part of Industry 4.0, for example, IT plays a significant role in the introduction or optimization of MES systems. Almost all technologies within the framework of Industry 4.0 have an interface to IT or are IT systems. Therefore, the IT strategy must refer to this. But who is the driver of such process optimizations? From the author's point of view, this can only be done in cooperation between departments—here production/logistics or supply chain management—together with IT. In the end, all optimization projects must be included in the IT strategy and fit in with the existing IT architecture. Therefore, IT is rather an enabler than a driver in this case.

Within the framework of product innovations (see level 2: "Digital Products") (Fig. 3) IT plays an important role. Especially when it comes to digital additional services in the form of apps or service portals on the web for a product. These must be provided by

IT, as they often have interfaces to core systems such as ERP or PLM and thus have to fit into the existing system landscape and IT architecture. By way of example, an app and a portal may be mentioned which, for an electrically manufactured and sold battery, provides additional information, for example the current consumption, the still available charge, the previous use, necessary repairs, etc. It is important with such product innovations that IT is always involved from the beginning in all decisions in order to avoid that the additional services such as the app do not fit the current IT system landscape afterwards and that interfaces are only very difficult or not available at all.

On the third level, with regard to new digital business models, IT is sometimes even considered one of the essential core processes and the heart of a new business model. This is because new IT technologies can give rise to new business models. For example, new services can be offered to existing customers based on complex data analysis that provides additional value and can be priced accordingly. The role of IT has become inextricably important, because without IT competence this business model is inconceivable.

In the first edition of the book, the principle still applied that the IT strategy must be derived from the corporate strategy, the so-called "business-driven IT strategy". In the now available second edition, this principle has changed due to digitalization. A kind of reciprocal relationship has arisen: it is still the case that the specialist departments and the management set the strategy for IT, but through the technical innovations of digitalization, IT also drives the specialist departments and management forward. So it goes: "Business drives IT drives Business"!

It is precisely in this interface that, from the author's point of view, digitalization strategy has its place.

It is part of the corporate strategy on the one hand, and part of the IT strategy on the other. The diagram in Fig. 4 shows this interaction very clearly.

Fig. 4 Digitalization strategy vs. IT strategy

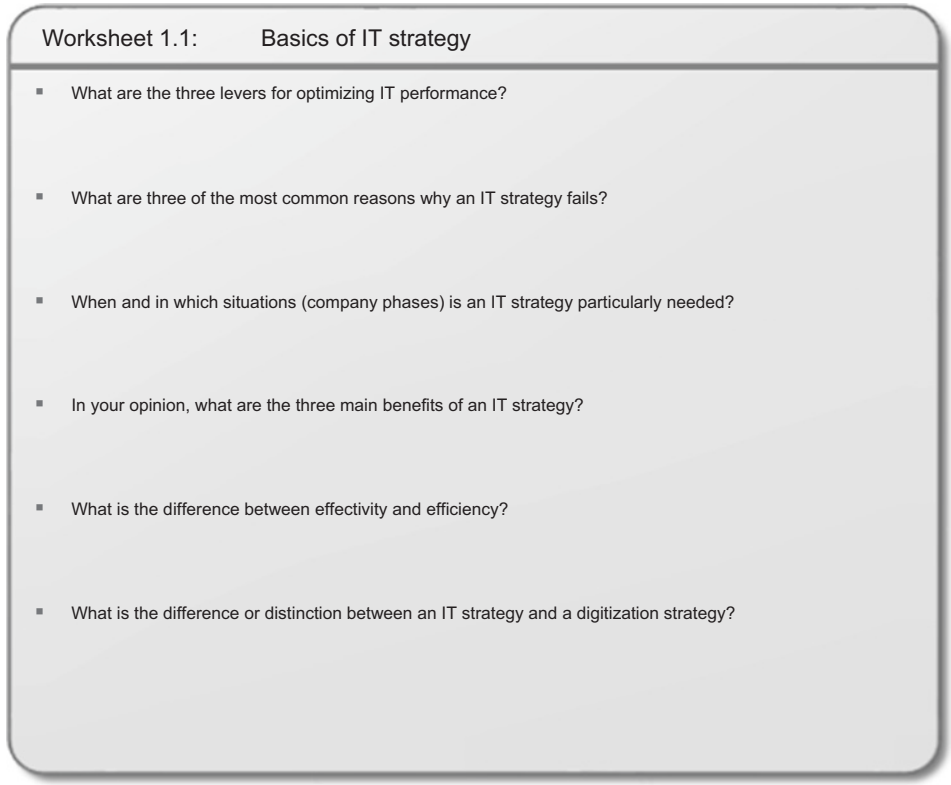

Fig. 5 The success of M&A depends heavily on IT

It should be noted that the IT strategy does not replace the digitalization strategy and does not integrate it completely. The IT strategy contains core elements that are important influencing factors for the digitalization strategy.

Working Questions for Chapter 1

(See Fig. 5)

Six Good Reasons for an IT Strategy

Abstract

In this chapter, the current and burning questions of IT organisations that can be answered with the help of IT strategies are elaborated.

Organizational Challenges

The Role of IT in the Company

IT is usually considered as a service provider in most companies. Traditional tasks include providing services such as e-mail, telephony, network and printer services, as well as ensuring uninterrupted availability. Top management usually only comes into contact with IT when budget planning is due or—which unfortunately happens more than once a year—when the above-mentioned services or devices do not work. The image of IT organizations is therefore rather poor with many board members and CEOs and many do not see IT as having much strategic relevance.

When large system implementations are due, IT is back in the spotlight. Most of the time, such a project is not even entrusted to its own IT department, so that external service providers are commissioned. And here too it becomes apparent that most of these projects do not go ahead without problems and that top management receives more negative news in the form of delays or budget overruns.

These scenarios characterize the traditional role of IT, as it was still known a few years ago and as it still exists in many small and medium-sized companies today. Of course, there are also companies that are already at the forefront of today. For them, IT is no longer just a corporate domain that has the primary goal of mastering technical complexity. Instead, it is becoming more and more a strategic innovation engine.

V. Johanning, *IT Strategy*, https://doi.org/10.1007/978-3-658-38772-3_2

The IT organization is thus transformed from a "commodity" despised department to an organization recognized by the department heads and the management, which is absolutely necessary in this rapidly rotating business world. Because the business processes of yesterday and today are already different tomorrow and that is why a flexible IT is so important today.

Of course, this increases the demands on IT and thus moves it organisationally even more into the business. This is made clear by the increasingly practiced demand / supply IT organization, which receives a greater business focus through the "demand branch".

The Role of the CIO in the Company

The role of the CIO is changing as a result of the aforementioned changes to IT organization in the direction of business. In the past, CIOs were mostly technologically oriented, but today managers are needed who understand the business well and are able to precisely assess where the value lever for IT is in the company. This goes so far that CIOs take on the role of process responsible on the methodological level. This is then referred to as a split of the CIO job into three directions:

- CTO as technical responsible on the supply side as well as
- CIO as overall responsible for IT, especially the demand branch as well as
- CPO as process responsible, who is mostly not on the demand level, but in the business again

It is interesting to see how IT responsible see themselves. For this purpose, Gartner has written a study that is based on the question of what IT responsible consider important in 2013 [16]. Tab. 1 shows these considered important priorities differentiated by business and technology.

Of course, at the top of the business priorities list is: increase company growth. This very clearly shows the value that strategic measures have for IT and the new role of the CIO in the company. In first place on the technology side are not the old commodities like optimization of the data center, but is quite clearly the outsourcing variant of cloud computing as well as—following Carr's predictions from 2003—the "information side" of IT, namely the topic of "big data", that is: how do I get the most important key figures for controlling the company out of all the available data and information.

Important are—also for the enforceability of an IT strategy and the new role—the hierarchical position of the CIO in the company as well as the integration into the management board. In order to optimally support the most important changes or innovations in all business or specialist areas through IT, it is of great importance that the CIO is at least a regular member of management bodies that meet regularly. In order to be able to participate in the relevant decision-making processes, the CIO should have access to all protocols. Of course, it must be taken for granted that, as part of corporate strategic