MARC BEIJEN

SUCCESSFUL DIGITAL TRANSFORMATION

A SURVIVAL GUIDE FOR MANAGERS AND EXECUTIVES

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Successful Digital Transformation

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Preface by Erik Beulen

Professor of Information Management, Tilburg University; Academic Director Executive Master Information Management, TIAS School for Business and Society

Successful digital transformation is still a major challenge for many organizations. Markets are in a state of flux, technological capabilities and compliance requirements are greater than ever. In these dynamics, organizations must digitally transform. I see insufficiently innovative use of IT among many. After all, it is essential for organizations to continually renew themselves. Executing a strategy once chosen is no longer enough; continuous adoption of innovation is necessary for survival. Emerging technologies such as artificial intelligence, blockchain, internet of things and robotics can be deployed by your organization but also by your competitors. Therefore, focus on adapting the DNA - continuously and radically adapt your organization, processes and ways of working.

This book elaborates on successful digital transformation using a phase model and five digital breakthroughs that can be used in the development of a business strategy to realize ambitions. The phase model presented includes three distinct steps - from product focus in the first phase to customer orientation in the second phase, followed by a third phase in which the customer is at the center. The book describes what is required to take these steps - the checklist that is included provides organizations with direction. This helps in setting up a strategy and developing an effective roadmap for organizations to transform.

However, they will have to ask themselves whether there is enough time to transform sequentially. For many organizations, it is five to twelve and the question is whether there is still time to accelerate by initially focusing only on the no-regret choices. A parallel transformation, skipping the step to the second stage, is sometimes the only option to avoid being pushed out of the market by digital competitors. A risky

scenario but sometimes you just must follow through and trust intuition. Leave the drafting of a strategy for what it is.

In addition, the five digital breakthroughs are elaborated. The first, data-driven organization, is the most important. Together with the fourth breakthrough, an agile and resilient organization, these are, in my opinion, the basis for the other three breakthroughs. Much has been said about agile working, although most organizations have not made enough progress in adopting it. Data remains the Achilles heel for many digital transformations - data quality is inadequate, master data management is a concern, and volumes of available data are growing exponentially. So, try to make your organization data driven. By focusing on data, it becomes possible to effectively engage in the introduction of new business models (breakthrough 5), customer experience (breakthrough 3) and improving business processes (breakthrough 2).

Good luck with digital transformation!

Erik Beulen

Preface by Marco Keim

CEO Aegon International and member of the Management Board of Aegon N.V.

It is impossible to imagine today's business without IT. Ten years ago, as an executive, you could say that your focus was limited to the business and the IT department ensured that it was adequately supported; today, this is unthinkable. IT is an integral part of the business for every director, board member or manager. It is no longer a choice; it has become a given! At all levels, from C-level to operations, you need to understand what is going on. As a director, board member or manager, you don't have to be an expert, of course not, but you do have to constantly ask yourself what contribution IT can make to your business and ensure, together with the IT department, that this value is actually achieved. You may now feel a threshold for taking this on. Where should you start, what is important and what is not, as there are so many terms and buzzwords. Where do you get the right information from, how do you make it applicable, who is going to help you?

The author of this book, Marc Beijen, is uniquely positioned to show you the way in this comprehensive matter. I have known Marc for more than 20 years and have enjoyed working with him on a regular basis. From my first years as a young manager, he has shown me the way in, what is for me, the still unknown world of IT and business architecture. Marc's strength is that he not only knows everything about the latest techniques and developments, but that he also translates this into realistic, pragmatic, working solutions and added value for my organization. Marc makes complexity accessible and understandable for non-IT people like me and is, therefore, the ideal author for this book.

Successful Digital Transformation - A survival guide for executives and managers is a valuable reflection on knowledge developed and experience accumulated in daily practice, focusing on the approach to contemporary digital business challenges. Written in understandable language and with a powerful, logical structure, it has become a very accessible book that remains fascinating from beginning to

end. It teaches you to understand topics that matter such as the need for digital transformation, the connection with business strategy and the essential differences in starting positions between organizations. What to do next is made concrete and practical by identifying five necessary digital breakthroughs and working them out into clear goals, which should be included in the change cycle as part of your digital strategy.

I read this book with great attention and pleasure. It makes you aware of the need for further digitalization to stay in business. It makes you think about how you can make the difference with modern information technology and gain a decisive competitive advantage. Topics that every manager and executive must deal with and, therefore, a book that every manager and executive should read in my opinion. Take your time to allow all the rich and valuable information to sink in. For example, don't read it all at once but rather chapter by chapter. Let the content sink in and place it in the context of your business before you go any further. This will help you provide the right direction for your business transformation.

Marco Keim

Recommendations

"The book 'Successful Digital Transformation' reads like a modern fairy tale. It's clever how the essence of the field of digital transformation is captured in barely 100 pages. But the theme has also been made very practical, the underlying topics (such as data management, enterprise architecture, change management) have been tied together and explained in a comprehensible way. I think the book fills a great need, because many books and articles on this topic are either full of buzzwords that are not further described, or lapse into academic jargon that is incomprehensible to the average reader. This book sits nicely between academia and practice, without falling into compromises."

– Frank Harmsen - Associate Professor of Digital Transformation, Maastricht University

"I enjoyed reading Marc Beijen's 'survival guide' to digital transformation. To me it read like a digital cookbook! It is not easy to make a good dish from a huge variety of ingredients. A good cook must not only know the flavors and preparation of the ingredients. But also understand which ones go together. And which ones don't. In addition, a good cook knows the required preparation time and thus understands that sometimes he must work on the dessert while also working on the entrée. Marc has managed to help with this complexity. All the ingredients are in there. From technology & data to business models & organization. Including the three different phases in which to work (usually simultaneously). This book thus guarantees a lot of inspiration and cooking pleasure in the digital kitchen; both for the cook himself and for the visitor who expects a delicious three-course menu."

– Sjoerd Blüm, CIO – Schiphol Airport

"Marc Beijen takes a big step with this latest book by adopting the need for digital transformation as a compelling guiding theme. A trigger that comes mainly from outside the organization, not so much from its own needs or capabilities. Alignment is dead! It's all hands-on deck. But then ... how? Marc takes the usually recalcitrant starting situation (organization, skills, legacy systems, etc.) that hinders a

transformation into account in his approach. The digital strategy is transformed into a manageable, integral, transformation calendar. I commend this survival guide to every manager who has to bring such a transformation to a successful end. I also commend this to the supervisors in these ever-faster changing organizations."
– Eric Sluis, who was CIO of Achmea Insurance / holds various supervisory directorships at financial institutions

"Much is written about digital transformation. Very few companies succeed in transforming the business model based on digital technology. With this book Marc Beijen has succeeded in reducing digital transformation to its essence. Marc describes the digital breakthroughs in a clear and understandable way. This makes it a reference book, a guide and a source of inspiration at the same time for anyone who leads an organization or is responsible for digitalization or ICT."
– Erik Hietkamp, CIO / Director IT DAS Rechtsbijstand

"Nicely written book and interesting frameworks that are closely linked to the practical insights I gain every day."
– Martijn Ollefers,
Head of Digital Transformation for Allianz Benelux

"It is a beautiful book that is easy to read. It contains extremely useful advice and tools for anyone who is working on the digital transformation of their own organization or wants to start one. Digital transformation is a broad task that touches on people, process and technology - in that order. The book describes this strikingly, as well as the tasks and change areas that play a role in this and the importance of a well-thought-out transformation vision and strategy. The realization of that vision and strategy remains, precisely because of the often-radical nature of the change, ultimately the major task for every organization. In practice, digital transformation often turns out to be a bumpy road, with unexpected turns, necessary accelerations, beautiful views and, alongside the successes, also the necessary disappointments. Precisely at such times it is important to have a clear, well thought-out course. This book provides a number of very valuable ingredients."
– Arnoud van Petersen,
CIO Cyber Security Center

"Marc Beijen demonstrates great expertise and experience. In a clear and convenient way, the coherence between the latest insights in the areas of digital strategies, business models and processes, emerging IT trends and change management aspects is presented. The practical examples help executives and managers to make the translation to their organization."
– Albert de Bree, IT Director Rotterdam School of Management,
Erasmus University

"A beautiful compilation that is insightfully articulated. Written from practice, of which I was allowed to be a part."

– Peter van Wijk,
Change & Program Director Aegon, The Netherlands

"The coherence of complex digital changes is made manageable in this book for strategy formation and execution. Understandable and necessary for every manager."

– Rob Heerkens,
Member of the Board of Pension Fund PGB

"After reading this book you know what to do to digitally transform your organization. It's an easy read and the active writing style makes it possible to quickly see the steps you need to take in this complex subject."

– Gert van der Kooij,
Chief Digital Officer Hoogheemraadschap van Rijnland

"I find it very relatable; the book gives a good overview of the current issues with concrete suggestions for a successful digital transformation. You can get started with it in practice in no time."

– Henriette Setz, Director of Operations - Essent

"The book is a kind of Swiss Army knife in which relevant digital developments are sketched and then practical models, approaches and tips are provided on how to deal with this in your organization."

– Arie van Burgel, CEO of Univé South Netherlands

"Digital transformation can no longer be ignored. Both in the way we work and how we shape the world in these challenging times. But to realize this potential, a different view of your organization is needed. This book makes this complex task tangible, with concrete methods and solutions for taking steps. This makes it a good basis for any organization going through this transformation."

– Erik Oostwegel, CEO Royal HaskoningDHV

1 Digital revolution in the 21st century

■ 1.1 CHALLENGES FACING ORGANIZATIONS

The world is changing rapidly. Organizations from all sectors are facing enormous challenges. Whether it's retail, healthcare, financial services, transportation or government, radical changes are occurring everywhere. The needs and behavior of consumers are fundamentally changing. They demand faster response times, transparency, excellent value for money and 24-hour service. Customers are increasingly organizing themselves, becoming more assertive and less loyal to suppliers and service providers. And customers want to be sure that doing business is safe.

New organizations are appearing on the market with new business models, positioning themselves ahead of the original service provider in customer contact. They steal your customer contact and push you into a supplier role with marginal revenues. Your position as the original service provider is lost forever! How will you respond to all this?

At the same time, technological advances are accelerating at a dizzying rate for organizations. This in turn raises new questions. What gives value to customers, employees, society and shareholders? What should you keep doing and what should you say goodbye to? What opportunities are you going to take advantage of in terms of market approach, business models, efficiencies and technology? What choices do you need to make?

The speed of change in society and technology means that organizations need to dramatically increase their flexibility, resilience and pace. An agile way of working certainly contributes to this but more is needed. The biggest obstacles for corporates, who have been in the market for a long time, are legacy problems. Not only of outdated systems and technology but also of associated processes, organization, practices, even culture. How do you ensure that this legacy does not block your strategy? How do you create overview and insight into which measures you need to take; which projects can continue or where you need to take drastic action?

The Greek philosopher Heraclitus proclaimed it long ago: *panta rhei*. This means, "everything is in motion," freely translated, "change is the only constant." This requires a trade-off between renovation and improvement of the existing, often side-by-side. So, renovate with the store open. How do you ensure that your organization smoothly transitions to the intended situation? In such a way that customers do not experience any negative effects and the organization retains control? And do you ever reach that intended situation, or is it an ongoing journey to Utopia?

■ 1.2   ASSIGNMENT FOR MANAGERS AND EXECUTIVES

In today's society, digitization is an important factor to stay in business. More than ever, organizations will have to think and make choices about how digitization can create and contribute value to product offerings, services, chain collaboration and business operations. Optimal use of modern information technology can make the difference between decisive competitive advantage, survival and loss. In addition to focusing on the short term, one must also look to the future: what structural changes can you expect and how do you respond to them? Which (new) technology offers value to stakeholders? What opportunities do you seize in market approach, efficiency improvement and technology? Is what you want feasible? And how should you organize digital innovation?

Dependence on digital technology is increasing daily. If online banking is not available, the world quickly comes to a standstill. A failed ERP implementation can mean the end of your business. Developing digital channels too late can result in your customers switching to competitors. Investments in digital technology are, therefore, a significant part of the budget. Digital innovation is no longer a priority, it is a necessity. So, it requires structural attention from, and control by, managers. Every manager and director must therefore have the necessary knowledge, insight and decisiveness regarding digital technology. You can't leave this to specialists in your organization, or outsource it to a supplier or consultant.

Managers and executives need to know and understand the world of robotics, IoT, big data, blockchain, machine learning and artificial intelligence. Make the right choices from a sharp view of market developments, technological possibilities and business perspective. And having a clear picture of how to organize and manage this transition successfully. This is called digital transformation: an integral business transformation in which digital technology plays a dominant role. The goal is to create an agile organization and to use the opportunities, possibilities and expectations of digital technology in the utilization of data, the optimization of processes and with the focus on the customer. Digital transformation starts with the formulation of a resistant and successful *digital strategy*, a strategy in which digital technology is the main driver of change.

Literature on digital transformation has appeared with regularity in recent years. Often with promises and (often recurring) success stories about disruptive business models, for example in tourism (Airbnb, Booking.com), transport (Uber), media (Spotify, Netflix) and retail (Amazon, Alibaba). While we can indeed learn a lot from this, in practice it appears that organizations are struggling immensely with digital transformation. Research firms such as IDC predict that global spending on digital transformation is expected to reach around $2,300 billion by 2023. However, several studies show that only a minority of all initiatives will succeed. Why is it so much harder than described? What are the reasons for this?

There are answers to this. First, the success stories are often nicely polished; little or nothing is written about failures (and there will be many more). And that is a pity because it would provide many more and better insights and learning moments. Secondly, the case descriptions are almost always about newly established companies that have the "luxury" of a greenfield environment, which does not detract from their achievements. This contrasts with the established order, the existing corporates, that usually carry an opaque amount of ballast from the past. They are burdened with complex products, historically grown business processes, outdated information technology and even outdated competencies and culture. Complexity over which no one has the overview anymore. And we all know unlearning something is much more difficult than learning something new.

The digital vortex

1. Media & entertainment
2. Technology
3. Retail
4. Financial services
5. Telecoms
6. Consumer goods
7. Education
8. Business services
9. Tourism
10. Manufacturing industry
11. Transport & logistics
12. Real estate
13. Healthcare & pharma
14. Energy & utilities
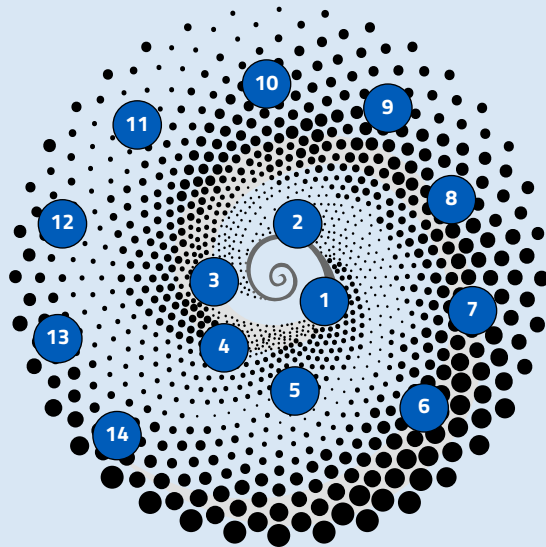
The Global Center for Digital Business Transformation describes the "digital vortex"[1]. A vortex illustrates the disorder and complexity of digital disruption. Some industries are hit faster and harder by digital disruption than others. Sectors in the middle of the vortex are hit the most, while the effects on the outer edges are still light. But the vortex exerts a rotating force. As a result, sectors such as healthcare, manufacturing and energy are also drawn into the vortex. Sectors that are the first to be affected still have a great deal of work to do in terms of efficiency, convenience for the customer and transparency. More and more organizations are having to deal with the disruptive forces of digital disruption. Leaders of these organizations are increasingly aware of this, but a large proportion of them are still taking little or no action.

How will you approach digital transformation? Why, where and when are you going to work on it and how does it connect to the goals you have? How do you create an overview of the whole and determine what is relevant to you? How do you divide scarce means and resources between maintaining the current operations and implementing structural improvements and radical innovations? Do you organize renewal *within* the existing organization or deliberately outside it? But shouldn't you then integrate this at a later stage? Or do you, upon proven success, let the existing slowly die out? Which customer relations, services and business processes will be improved by all this and how does this relate to ongoing change processes? Where should (dis)investments be made? What choices must be made from the various change options?

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1 "The Digital Vortex in 2017: It's not a question of when"; a four-part series of articles on digital disruption, by Professor Michael R. Wade.

These are just some of the practical issues that require a solution, it has become enormously complicated. Nobody has the overall view anymore: if you pull one string, others move with unknown consequences, everything is connected to everything. How do you get out of this? The core of the solution is making complexity manageable again. By applying structure, disentangling things and considering them holistically, in context. By distinguishing main issues from side issues, using the 80/20 rule and setting clear priorities. That is what this book is about.

■ 1.3   DRIVERS FOR CHANGE

Making complexity manageable again starts with properly defining the problem. Or rather: the opportunities and challenges you are facing. This starts with recognizing drivers for change, the search for the WHY.

> **Reading tip:**
>
> *When digital becomes human*;
> Steven van Belleghem, 2014

Many drivers - in the sense of triggers, motives and incentives - can be identified that provide impetus for digital transformation. These have been clustered into six groups for ease of reference. However, these are not entirely isolated, there are interdependencies and they will interact:

1. Emergence of new markets and business models
   Organizations, machines and people are increasingly interconnected, forming a web of digital connections. These real-time interactions and data flows create new values that enable new products and services to be delivered more quickly and efficiently. There is a shift from traditional, technically closed infrastructures to open ecosystems that break down organizational barriers. This still sounds somewhat abstract but think of booking a flight with an airline: in a few clicks you have also purchased a hotel, rental car and tickets for the amusement park. Within a minute it's settled, and you have confirmations from all the organizations involved. These transactions not only involve the suppliers of what you purchase (airline, car rental company, amusement park) but also a digital platform, one or more insurers, a payment service and your bank. Organizations are changing the way they operate by becoming part of this "connected economy". Value chains are being unbundled, traditional business models are transforming to digital platforms at the top of the chain or to "low-cost" providers of partial solutions, more at the bottom of the value chain. The boundaries between industries are blurring, competition is becoming asymmetrical: companies are competitors and partners at the same time. Links in value chains are made redundant and pushed away or, on the contrary, new forms of intermediaries appear.

2. Customer needs and expectations are fundamentally changing

The digitalization of society has led to an increasingly smaller world and this trend is continuing. It is becoming easier to find each other, regardless of distance. Organizing meetings between large groups of people has even become a matter of mere hours, if not minutes, due to social media. The masses can exert a great deal of influence, which can have both a positive and negative effect. Customers are becoming more vocal and demanding. The loyalty of customers to suppliers and service providers is decreasing, thresholds to switch are hardly there anymore.

3. The changing relationship between man and machine

Digital developments have led to an information age in which new technological advances lead to new uses of people and machines. Developments such as "human enhancement", a collection of technologies that improve human productivity or abilities, facilitate our daily lives. This can focus on intellectual, physical or emotional abilities. The internet of things (IoT) is a network of physical objects such as cars, machines, household appliances and the like, which use sensors and software interfaces (APIs) to connect to, and exchange data over, the internet. Machines are becoming more intelligent and can take over human tasks more and more easily and quickly. As a side effect, many professions will fundamentally change or even disappear.

4. New technological developments offer new opportunities

Reality and the (virtual) digital world are increasingly merging, causing people to see and experience society differently. Technology is increasingly diffused in the physical world, boundaries between digital and physical are blurring. Applications of technologies such as "augmented reality" and "voice recognition" are beginning to take an increasingly prominent role in society. Blockchain technology can improve efficiency and transparency in the value chain, enable secure mutations and minimize the role of third parties. Artificial intelligence (AI) combined with automation and robotics offers opportunities to dramatically optimize processes. Digital twin technology, a digital replica of a living or non-living physical entity, can be used in product development, calculating what-if scenarios, production improvement and maintenance. These are just a few examples of the enormous potential that digital technology has. And this development is continuing all the time.

5. Growing regulatory, privacy and ethical requirements

A driving force of an entirely different order but certainly no less important. Organizations must increasingly weigh up the pros and cons of quickly keeping up with new technological developments on the one hand while considering the opinions (or preconditions) of the outside world on the other. This gives organizations less and less freedom compared to the past. These changing

relationships between society and organizations mean that an organization must make important trade-offs. Is everything that is technologically possible always desirable? The reality is that any new technology can be used for good or bad. For example, gene technology, privacy violations and cybercrime, so how do we deal with this? Robotization can eliminate entire professions, but do we want that? This calls for new principles and rules for organizations. A clear balance must be found between responsible business and making use of the latest digital opportunities, which are not always without risk. At the same time, we see that national and international legislation often lags digital developments. In many situations, regulations are not redesigned but instead (to the despair of entrepreneurs) grow exponentially. All this affects how we price and sell products, how we manage risks and how we organize our business. Again, this increases complexity, reduces returns and requires strong adaptability.

6. The increasing value of data

Data is typically called the most important asset of today's economy. As a result of ongoing digitalization, organizations are generating ever larger amounts of data. It is a major challenge to obtain the appropriate insights from the masses of data so that new products and services can be developed. The ability of organizations to use these large amounts of data intelligently will cause a change in the relationship between organizations and society. Data is also a driver for further digitalization such as AI and machine learning. Advanced customer analytics such as behavioral and predictive analytics are increasingly becoming a necessary core competency. For example, applying statistical algorithms and machine learning techniques enriches insurers' propositions and reduces or prevents risks. Large amounts of data (e.g., generated by IoT and wearables) can be analyzed to identify customer patterns and form the input for personalized insurance products and risk management.

Are we complete with these drivers? No. Who would have predicted in 2019 that the coronavirus pandemic would break out with such a huge impact? We can now see that this will make organizations focus even more on creating digital relationships with customers and partners, and further digitizing work environments for employees. You cannot predict the future, but you can prepare for it, at least better than your competitors. You can have an influence on what the future of your organization will look like. Organizations that master this are the winners of tomorrow.