

Tudor Bodgan

Model and Scorecard

# Practical Digital Transformation and AI preparation for the AI Age

Digital Business Recurrent Transformation and AI Nimbleness

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# 01

## Introduction to **Digital Transformation**



## Introduction to Digital Transformation

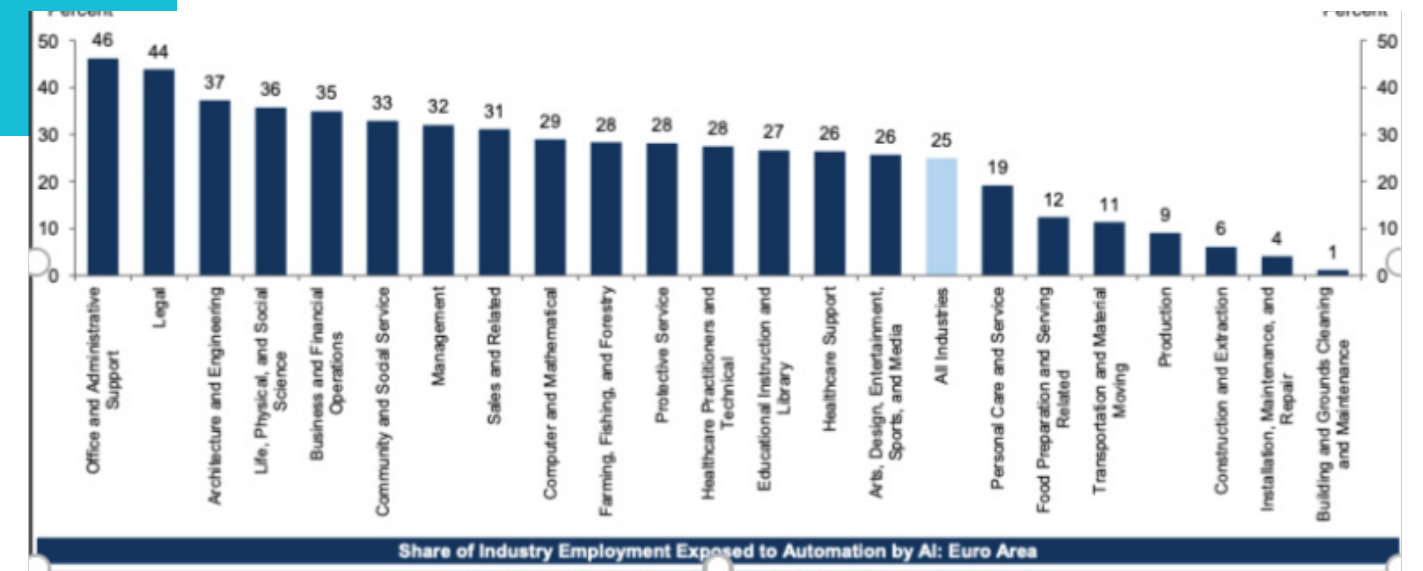
This book goes well beyond the buzz generating names that everybody heard about, like Netflix, Amazon, Google, Spotify or Facebook. It is not about analyzing what they have done, but it is about what you can do in order to leverage the power of digital transformation.

Assuming the top 10 of these well-known names\*, they are a minority that represent 0.00003% of the active companies in United States and 0.000001% of the companies in the world. If this is the case, we choose to focus on some other big names that successfully navigated the digital transformation journey and smaller companies that I believe the reader should know about as they are leading in their sectors even not achieving mainstream status.

If you are not one of the lucky few that everybody is talking about, you were probably taken by storm by the level of change of the past years. Goldman Sachs provided insights, showed that over the last years, especially after the pandemic situation, digital adoption across sectors accelerated dramatically, suggesting that businesses must adapt or risk becoming obsolete.

Also, a study by McKinsey highlighted that companies that are slow to digitally transform are at a significant risk of being left behind. They found that the top quartile of digitized businesses are likely to increase their market share and revenue significantly, while the bottom quartile might face dramatic reductions.

**The new Generative AI is only accelerating, accelerating, accelerating again the shift to digital business transformation.**



Probably you already know these data, and it is not that you as an individual or as part a company, do not assume the importance and have already done “something” and want to do “more”, but you may be probably missing a structure for this digital transformation. And this is our objective, through this book we have approached digital transformation in a step-by-step, methodical way, not by referring only to what a company can do but we sliced it to each department as we prepared a digital map of the solutions that each department may implement.

**Using data on occupational tasks in both the US and Europe, a Goldman Sachs report from 2023 find that roughly two-thirds of current jobs are exposed to some degree of AI automation, and that generative AI could substitute up to one-fourth of current work. Extrapolating our estimates globally suggests that generative AI could expose the equivalent of 300mn full-time jobs to automation.**

This book ultimately is written following my 25 years of real-world, field level experience, working with and providing solutions to companies like Office Depot, Walmart, Company.com, Coca-Cola and other 100+ business names that you will find around this book, many of which are backed by specific examples of their transformation initiatives.

I am a licensed Computer Science engineer with a master’s degree in Automatics. who is attesting that digital transformation is much more than just an IT issue and actually, leaving it to IT is the worst thing an organization can do. We will explore together through this book why.

Digital transformation is 20% digital tools and 80% business transformation and this is why it is such a critical business subject that's crucial for organizations aiming to stay relevant and competitive in today's AI age. Digital transformation is not just about adopting new technologies, but it is about creating a future-oriented vision backed by a solid strategy and executing a shift towards becoming a digital-first organization.

A "digital-first" organization is a business or enterprise that prioritizes digital channels, processes and experiences as the primary means to engage with customers or optimize operations. This approach has become increasingly relevant with the rise of mobile devices, cloud computing, and changing consumer expectations. In such organizations, digital isn't seen as an add-on or afterthought, but as the default and preferred way of doing business as they focus on digital technologies in its strategies, operations and culture.

A company focused on digital improves and transforms all aspects of the organization, from customer interactions to internal processes. Organizations use digital channels as the primary means of interacting with customers, but this may not be exclusive. They focus on providing seamless, personalized, and engaging experiences across various digital touchpoints. These organizations leverage data analytics to drive decision making. They collect, analyze, and interpret data to gain insights, optimize performance and create value. A digital-first mindset involves embracing agility. This could mean implementing agile practices and adopting a culture of experimentation and iterative development. Also, they foster a culture of innovation. They encourage employees to experiment, take risks, and come up with new ideas. They're often open to changes and adapt quickly to new market trends and customer needs. Employees have a high level of digital literacy. This involves under-

standing and leveraging digital technologies effectively as they create and use systems and processes that are fully integrated, creating a streamlined and efficient operational model that eliminates silos.

**This way companies respond more quickly to changes, create more value for their customers, and stay competitive in the rapidly changing digital landscape.**

Why it is so hard for already established companies to "go digital"? Because these changes requires a company to become an "ambidextrous organization" as my Stanford's Graduate School of Business professor Charles O'Reilly was teaching me and others from a long time ago. This is the ability of a company to both managing its current business while simultaneously preparing for changing conditions. "You often see successful organizations failing, and it's not obvious why they fail" but what determines the ideal balance between exploitation and exploration is one of the big open questions in the research on ambidextrous organizations. Disney has undergone a significant digital transformation in recent years while still doing what it was known for doing at the same time. It transformed the Disney Parks by introducing the MagicBand, an RFID-enabled wristband that acts as a park ticket, hotel room key and payment method. The company also launched a mobile app for its parks, allowing guests to check wait times, book fast passes or order food and used the data analytics to understand its customers better, personalize their experiences, and make strategic decisions improving the parks.

The company launched Disney+, leveraging its vast library of content and new productions through his own direct-to-consumer streaming, reaching the last mile and not depending exclusively on other traditional distribution channels or on Netflix like digital ones. Disney+ attracted more than 100 million subscribers in the first-year of launch, which is more than expected and reached 160 million by 2023. The launch of Disney+ signi-

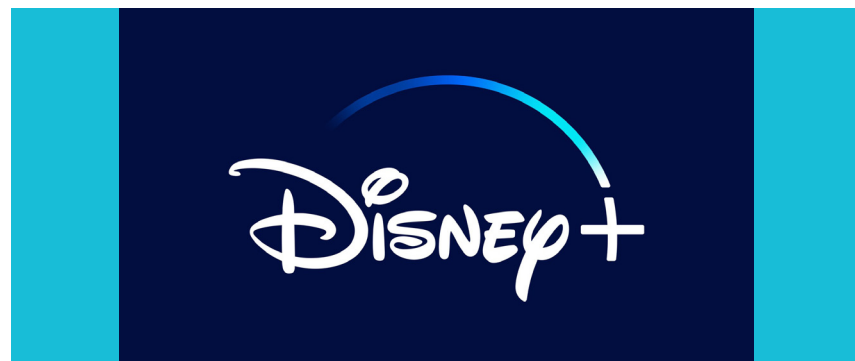
fies a shift in Disney's strategy towards a direct-to-consumer (D2C) model.

This gives Disney greater control over its content distribution, the ability to gather valuable consumer data, and the opportunity to build direct relationships with its audience. Besides Disney+,

Disney also owns and operates other D2C platforms like ESPN+ and Hulu.

But not only parks and Disney+ exemplifies the digital transformation, but also the core business that is creating content was also improved by technology. Disney has always been a pioneer in adopting new technologies including the use of AI and machine learning that can predict audience reactions by analyzing their facial expression on a movie theater, Disney Research uses machine learning for automated colorization of images, facial recognition in its animations or VR applications for movie sets.

But for any company, doing two things at once, taking care of the current business and transforming into a new, better version of themselves is not an easy thing to do. In a seminal paper, **Stanford Professor James March wrote about the need for organizations to do two things at once and ar-**



**ticulated the challenge.** "Both exploration and exploitation are essential for organizations," March wrote, "but they compete for scarce resources." That means organizations that try to do both face difficult trade-offs, choosing one sometimes only at the expense of the other.

Senior leaders should set a clear vision, articulate what digital transformation means for the organization, and foster a culture that is open to change and innovation. A successful digital transformation requires a cultural shift towards embracing risk and innovation.

All these changes also mean prioritizing skills and talent development. This could imply retraining existing staff or attracting new talent with the necessary digital skills. But few organizations have right away, all the capabilities needed for a successful digital transformation. Hence, developing partnerships and leveraging digital ecosystems can be beneficial. This might involve collaborating with technology vendors, startups, or other industry players and implementing an open mindset and a collaborative approach and switch to agile methodologies.

Airbus, the European aerospace corporation, partnered with Palantir, a big data analytics company, to optimize its manufacturing process. Through this partnership, Airbus developed a data platform called Skywise that collects and analyzes vast amounts of data from the aircraft production process and in-service aircraft. This has led to more efficient manufacturing processes and proactive maintenance

The image shows the Airbus logo, which is the word "AIRBUS" in a bold, blue, sans-serif font, centered on a light blue background.



that reduces aircraft downtime. In the same trend, Walmart uses Microsoft, migrating Walmart's existing digital assets to Microsoft Azure to using Microsoft's AI and IoT tools to optimize operations and customer experiences or pharmaceutical company Novartis is working with AWS analytics and machine learning services, optimizing its supply chain, improving manufacturing and boost the delivery of innovative, personalized therapeutics.

Harvard Professor Clayton Christensen went pointing out in The Innovator's Dilemma, the famous book about business transformation that the very things that make an organization successful today will actually work against it as conditions change. It's not just that resting on your laurels is tempting or that managers are blind to the changes around them but rather innovation can easily seem like a threat to a business that is already working well.

And this is mostly because at **the heart of digital transformation is the customer** and the customer is always looking for the easiest, most convenient and efficient way to connect with a business. Digital technologies provide a wealth of opportunities to connect with customers in new ways and deliver personalized experiences. This is evolving from a website experience or from developing a mobile app to implementing a natural-language (text or voice) communication channel that leverage generative AI and can provide a full human-like seamless experience that adhere to a comprehensive omnichannel company strategy.

**When is comes to the "why" of digital transformation**, much more than just connecting with the customers, the benefits of digital transformation are having different faces.

[www.amazon.com/Innovators-Dilemma-Revolutionary-Change-Business/dp/0062060244](https://www.amazon.com/Innovators-Dilemma-Revolutionary-Change-Business/dp/0062060244)

Drawing from my 25 years of experience with the technology sector, **the foremost reason that you would like to include digital transformation in, is as potent way to achieve a powerful competitive edge.**

In healthcare, ZOOMCare utilized a digital-first approach, allowing patients to schedule on-demand, no-wait doctor visits and telehealth sessions, revolutionizing patient experience. In the education space, Duolingo gamified language learning, making it more engaging and accessible.

Their app-centric approach, combined with AI-driven lessons, made them a leader in online language learning. Rothy's, a sustainable shoe brand used digital technology not just for direct-to-consumer marketing but also in its production processes, transforming recycled plastics into footwear using **3D knitting technology** or in the mattress industry, Purple combined digital marketing with unique technology (their hyper-elastic polymer grid) to stand out in a crowded direct-to-consumer mattress market.



## Class IT Group

www.startechteam.ro

Or take Class IT Group, a small IT solutions and services company from Europe, that invested in an innovative software for customer requests management, automation and IT service management platform that allowed it to take on the big tech guys and approach - through partnerships in United States - big companies like Office Depot or Walmart.

Utilizing a blend of digital strategies and using data to understand the customer needs, some companies may not just adapt but thrive, redefining the contours of their respective industries. Instead of merely following established norms, identifying gaps in traditional market dynamics by merging technology with vision, strategy and execution, digital transformation can propel a company from mediocrity to leadership, challenging even the most entrenched competitors.

**Without targeting setting up a specific order, another powerful reason for digital transformation is in its role as a driving force behind business revenue expansion.**

For instance, facing near-bankruptcy in the early 2000s, Lego adopted a digital strategy, embracing video games, apps, and even producing movies. “The brand “Allbirds,” which started as an online-only shoe company, reached customers globally before ever opening a physical storefront, tapping directly into a global market.

In the pet supply industry, Chewy capitalized on a digital-first approach to outpace many traditional competitors, resulting in substantial revenue increases and an eventual acquisition by PetSmart.

By using AI-driven chatbots and personalized marketing techniques, Sephora, for instance, uses AR (Augmented Reality) to allow customers to try makeup virtually before buying which is driving up sales and saving time the customers spend with the store associates. Internet of Things (IoT) is enabling companies to add smart features to traditional products. For instance, Sleep Number beds now come with sensors that adjust firmness in real-time based on the user’s sleep quality which allowed the company to differentiate and increase sales exponentially.

**“We’re an innovation company. We love creativity. We actually re-inforce and communicate creativity. So we do that not only with the products but across many things that we do in the organization.”**

**Lego**



**LEGO**

**Subscription-based** models enabled by digital platforms are increasing revenues and improving business predictability for the companies. Adobe changed his business model from selling software to subscription based SaaS and seen record financial results and stock price. Very traditional companies like Caterpillar improved its business by offering data-driven services, allowing construction businesses to maximize equipment efficiency and John Deere, known for farming equipment, integrated IoT and



AI technologies into its machinery, allowing for smart farming solutions by subscription. These endeavors have significantly added to the companies revenue streams.

**Also, digital transformation leads to operational efficiencies, process efficiency, resource optimization and reduced overheads and a leaner, more efficient business model.**

IoT and predictive analytics lead to smarter inventory management, reducing storage costs and by automating manual processes and businesses can significantly reduce time and human errors. For example, Ocado, an online supermarket, has automated its warehouse operations using robots, drastically cutting the time to process customer orders and Maersk, the shipping conglomerate, uses sensors to track containers in real-time, optimizing routes and reducing fuel costs.

Digital collaboration tools and cloud platforms allow employees to work remotely, reducing the need for physical office space. InVision, a digital product design platform, operates with a completely remote workforce, saving on infrastructure costs. Digital platforms can handle customer service inquiries more efficiently, reducing the need for large customer service teams. For example, **Babylon Health uses AI to offer medical consultation**, reducing the strain on human medical practitioners. For those that are still coming at the office, smart sensors can lead to significant energy savings.

For instance, Siemens' smart building technology has been instrumental in monitoring and adjusting energy usage in real-time in buildings, leading to cost savings.



SCAN ME

**Lufthansa Technik**, that provides maintenance, repair, and overhaul services for aircraft, launched a digital transformation initiative called AVIATAR ([www.aviatar.com](http://www.aviatar.com)), which provides an open platform for digital services in aviation. Predictive maintenance is one of its primary features, leading to **reduced downtime and maintenance costs which for larger fleets translated in savings of millions of USD.**



[www.aviatar.com](http://www.aviatar.com)

Based on a study case provided by a big RPA provider, DS Smith, a leading packaging company, implemented robotic process automation (RPA) across their supply chain. By automating various administrative tasks, they reduced manual processing times and errors and the savings were on 20-40% range according to the information provided.

Last but not least, other benefits of digital transformation may be less tangible, yet significant and enhanced customer experience and customer retention, **enhanced brand reputation, faster feedback loop, improved decision making and holistic business view, agility and speed to market, risk mitigation or crisis resilience**, may not translate immediately into revenue or loss of it, but on the long term have a big impact and place high on the order of priorities for some companies.

*And of course, not all digital transformation is the same. Digital transformation can be categorized in various ways and different experts might categorize digital transformation differently.*

In this book we choose to categorize companies based on **Maturity & Depth – as Silo, Starters, Transformers and Innovators** - and digital transformation initiatives on **Business Model Impact, Significance, Scale, Business Area and Business Function Impact**. Just as it's inconceivable for a company to operate without a website today, digital transformation initiatives range from current essentials, which are reactive, to those that are forward-thinking and innovative, spanning a spectrum from basic to intricate.

### If digital transformation is so beneficial and so important, why so many initiatives fail?

Based on my experience with 150 various implementations of different sizes and different companies in different industries, I can now strongly affirm that digital transformation is always a journey not a destination and an ever-moving target. And this is a very tough reality that so many companies are having a very hard time to digest. Most of the time the objectives, the deliverables, the expected results and even the technologies are changing not only right after the project is finished but during the project implementation.

The companies that are able to stay so flexible and agile are the ones that succeed and any other level of rigidity is a tremendous vulnerability.



Maybe less than 3 in 10 projects fail because of technology missteps or technology associated problems. Most of the time it is the organization that needs a dramatic tune-up. It may be the lack of a clear vision and strategy, the resistance to change, insufficient leadership support or resource allocation. Sometimes it is lack of patience, expectations that are over the bar on what only technology can deliver or misaligned expectations. Other times it is a lack of careful planning that gets a company into vendor lock-in, inadequate risk management and incomplete understanding of customer needs. We have dedicated an entire section on what can go wrong and how to mitigate against.

Max Bazerman, my well-known professor of Business Administration at the Harvard Business School, told me while teaching Managerial Decision Making

*“Most people recognize that they should think about the future, at least some of the time. The challenge is to do it now”*

**Max Bazerman**  
Harvard Business School

that “people in companies make hundreds of decisions every day. While we may expect them to be largely rational, they’re not always like this. Some of them are personal, and by personal we understand based on their own experience”.

Probably part of the situation is that it is time to assume that our own rationales, motives and exposures does not reach them, we did not succeed to convince them and we, as digital transformation professionals we need to do something about it.

This is why we dedicated a whole chapter on how to pursue your plans with the C-level and people affected by these plans.



And also, some of the reasons we are sometimes stuck in Digital Transformation, is that just like any business initiative it is important to be measured correctly. Setting clear KPIs, tracking progress and making adjustments when necessary (and immediately) are more important than ever in order to carefully track the success of digital transformation efforts and being able to make continuous improvements. This is how this book will end.

As Ovidiu Dambean-Creta, the rector of ASEBUSS Business School in Bucharest, Romania where I am teaching a course on Digital Transformation for MBA and EMBA students, asked me one day: “With all the buzz around digital transformation isn’t a big risk of having everybody getting into this DT thing for the DT sake?” I remember that it was a hot sunny day when I answered that “based on my experience in the industry right now, everyone I know is already into this pit.

The challenge is how to regroup, reevaluate, reposition and redeliver something of impact and real value at the current moment. Restating how can you make an impact, not just doing it for the sake of a digital transformation”.

**As we turn the pages of the digital era, it’s crucial to assume that digital transformation is not focused on technology and about technology — it is about reshaping our very perspectives on innovation, growth, value creation, people and endless possibilities. We stand on the brink of a world where boundaries are blurred between the real and virtual, where every challenge paves the way for new solutions, and where each one of us has the power to redefine the future.**

It’s a journey of continuous learning, adaptation, and evolution. In this ever-evolving landscape, it’s those who are willing to embrace change, take calculated risks and relentlessly pursue improvement who will not only survive, but thrive.

From Bill Aulet, at MIT Sloan School of Management - Entrepreneurial Development Program I learned that: “An idea is worthless. The value comes from turning your idea into an innovation that truly has impact”. Bill is a well-known figure in the entrepreneurial community and is currently managing director of the Martin Trust Center for MIT Entrepreneurship. He’s the author of “Disciplined Entrepreneurship: 24 Steps to a Successful Startup”, a very structured book that inspired me writing this one as well.

Leaders are facing two relentless sources of pressure right now. The first is the intense demand to perform— to deliver excellent short-term results despite radical shifts in what customers need and want, where and how people choose to work and whether whatever happens at all. The second is the urgent need to transform — to reimagine the future of your company, the marketplace and your workplace, given these shifts, and to reinvent your company’s vision, mission, strategy and culture to win that future.

Dealing with either source of pressure is tough, which is why so many leaders seem so anxious and stressed. But meeting both of them, at the same time, can feel truly daunting.

The challenge of performing while transforming has become the leadership test of our time. This is why we believe a more structured approach should help.





Some of you are holding this book in your hands out of... obligation – as this is the case of my students, just joking – or curiosity or just attracted by the buzz, but I hope you will be keeping it in your hands and continue the journey over the next book chapters, embracing this journey, in order to better shape the next chapters of your life by understanding with me that the technology is not a foe but a friend and implementing digital solutions is also for you, yes, for you, even you did not believe it was possible until now.

**Individuals capable to implement digital transformation will be only more and more in strong demand by companies of various sized and having the confidence, knowledge and the right structure, can help you shape a digitaly integrated world that themselves, ourselves and future generations will be proud of.**

