

47. Tool 3: The Digital Roadmap: plan and do it right

Having used the Megatrend Tracker to examine the changes happening in the market, shifts in customer expectations, the evolution of production processes, and innovations in sales channels and in products themselves, it is now time to take action. We must now look at how to apply those learnings to your company so that you can identify appropriate strategic objectives and the routes towards achieving them.

Through my experience as a general manager in manufacturing companies and as the founder and CEO of a technology company, I have distilled key insights into creating a digital transformation strategy. From now on, we will be focusing on how to build, implement and, most importantly, execute a comprehensive digital transformation plan. Digital transformation is not just a set of trends you hear about at industry conferences: concrete steps forward are crucial. I will now guide you through the process of successfully creating, implementing and executing an effective and efficient plan that delivers tangible results.

The Digital Roadmap is a tool that integrates methodologies from both strategic consulting and operational reorganization project methodologies. This unique combination makes the tool both effective and flexible. Working with the Digital Roadmap involves three key steps: analysing the current state of the organization, developing a list of transformation initiatives, and building a coherent internal plan to implement these initiatives, including estimating their economic effects. Using the Digital Roadmap can guarantee the success of a transformation, but only if it is implemented and managed as a transformation process.

Let us start by addressing three fundamental principles on how to build a digital transformation plan such as the Digital Roadmap for an organization. First, the plan must encompass all aspects of digital transformation; as we have seen from numerous examples, a company can no longer focus solely on its product and assume that market dynamics will remain static. Therefore, the digital transformation plan must cover a wide range of changes both within and beyond the organization. Second, digital transformation is an ongoing

Digital Pathfinder

process; technological and business trends and increased global competition will ensure that digital transformation will now never truly end. Transformation is not a goal; rather, it is an approach that requires a complete shift in how we manage processes. Third, digital transformation involves the creation of various parallel pathways. Analysis of transformation trends across industries and companies has identified typical development pathways. Even having created a proper Digital Roadmap, you should be prepared that, within a few months, it may need modifying to account for technological changes that have emerged in the meantime.

To ensure that the transformation plan is coherent and covers all aspects of organizational transformation, it is divided into six major areas, which I have called ‘the six axes of digital transformation’. They are, in brief: process digitalization, digital products, digital business models, data management, a culture of transformation, and cybersecurity. This division into six axes is an essential part of an effective digital transformation plan as it offers several benefits. It allows for better comprehension, management and implementation of the digital transformation process.

Why are these six digital axes so significant? Firstly, they provide an organized structure for all the main areas of transformation. It is crucial to take all aspects of your company’s operations into account if you are to precisely identify what work is needed and where. This avoids inadvertently omitting vital elements and enhances the effectiveness of the transformation. Secondly, the division into axes provides the ability to see coherent sequences of actions. This means that you can plan and implement initiatives and changes in a coordinated way, taking into account the dependencies between different areas. For instance, changes in products can affect production processes, which can have a knock-on effect on organizational structure, and this interconnectedness can quickly produce confusion. Chaos can only be avoided by adopting a structured paradigm, and that is what the six axes provide. Thirdly, each endeavour must be assessed in terms of the competencies it demands. Each of the digital axes requires specific skills and knowledge, so it is crucial to identify the competencies needed for developing and implementing initiatives in each area. This helps manage human resources more effectively and focuses efforts on developing the appropriate skills within the organization.

However, I cannot overemphasize the fact that all the digital axes are equally important to your organization. A common mistake made by leaders during transformation is to assume that certain areas are not relevant to their company. This assumption is dangerous. Every company, whatever its industry or size, must consider all these areas. Digital transformation affects the entire economy and all players. Companies that trivialize certain areas are left unprepared for unexpected and unfavourable market changes. There is reason to think that, for a car, the engine and steering wheel are more fundamental to our power to decide where we go than the brakes are. After all, we use the brakes when we have to, but the accelerator and steering wheel are the primary mechanisms by which we determine where we go, which is what a car is *for*. But we obviously won't stay alive on the road if we ignore the brakes. Similarly, the axes of processes, digital products and digital business models are the ones through which we drive our company, but if we ignore the axis of, say, cybersecurity, we won't survive long.

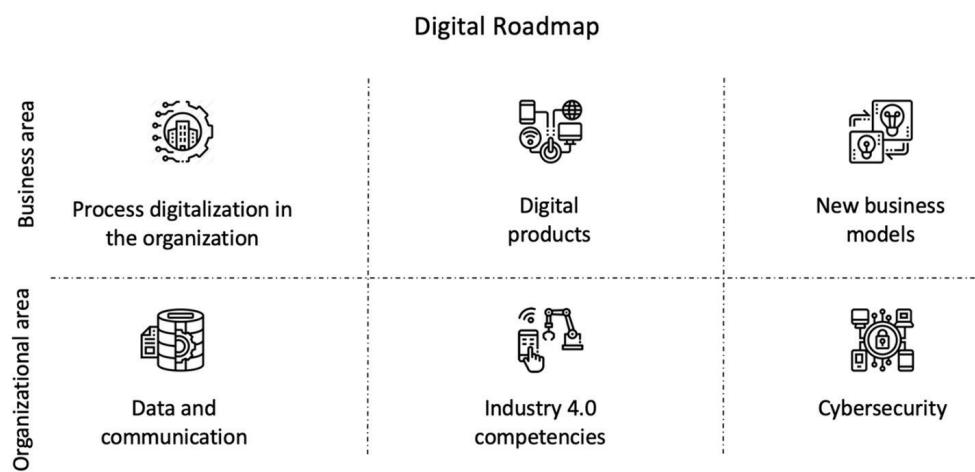


Figure 9

Digital Pathfinder

The six digital axes form the foundation of an effective digital transformation plan, but they also provide tools for managing action sequences, competencies and resources. In the continuation of this chapter, I will present each axis of digital transformation in turn. I recommend that readers refer to the appendix at the back of the book. It includes example rating scales for all axes and describes areas to assess. If you find that any areas or terminology are unclear, I invite you to return to parts A and B of this book, where all necessary concepts and methods have been described.

Axis 1. Processes. The first axis of digital transformation is focused on Digital Processes. Processes are the backbone of your organization, as they determine how strategies are executed and how customer needs are met. These include sequences of interrelated actions or operations planned and executed to achieve specific outcomes, such as sales, marketing, technology and R&D, procurement, logistics, production, quality management, financial management, and human resource management.

Digitalizing these processes means more than just incorporating new technologies; it requires a comprehensive strategy to fundamentally transform the company's internal operations. This transformation is pivotal because it enhances organizational efficiency, improves agility, and strengthens competitiveness. For each process area, the digital transformation involves several levels of digital maturity, starting from basic data recording to full automation and AI support. For instance, the progression in sales processes is from simple electronic registration of agreements and orders to using AI to personalize customer interactions and predict sales trends. Similarly, in manufacturing, digital tools range from the basic capture of data on operations to the use of advanced Manufacturing Execution Systems (MES) to optimize production workflows.

The evaluation framework for this transformation is structured around a seven-level digital development scale. This scale helps organizations identify their current stage of digital maturity in various processes and guides them towards higher levels of precision, efficiency and data integration. The ultimate goal is to create a seamless flow of information and enhanced collaboration across all areas of the organization. By systematically upgrading each process,

organizations can not only improve their operational efficiencies but also ensure that they are adaptable to the future challenges posed by technological progress and market dynamics. This axis is not just about incremental improvements but about rethinking and redesigning processes to drive fundamental changes that will sustain your business in the digital age.

Axis 2. Digital products. Within this significant domain of the digital transformation of organizations, you will assess to what extent the company is already offering digital products. Business portfolios that already contain digital products can be further developed and refined. Attention can be focused on enhancing these products into more advanced market forms, increasing their appeal to customers, and opening new revenue streams.

Key areas of interest within this axis include the extent to which products can adopt an electronic form. Another important consideration is the ability to build products based on a community structure that fosters engaged, loyal customers. Equally significant is the extent to which the company is associated with the ICT industry, which can influence innovation and competitiveness. Product personalization is also gaining increasing importance, warranting reflection on how to tailor offerings to individual customer needs. Another critical aspect is product scalability – the capacity to meet growing demand through increased production or service provision.

Digital products change the way value is delivered to customers but also open up new avenues for satisfying needs, often involving both the creation and resolution of needs. Digital products frequently represent rapidly growing supplementary revenue sources for traditional companies.

Axis 3. Digital business models. Axis 3 explores the evolution of Digital Business Models, reshaping how companies generate value and interact within their markets. These models leverage digital capabilities to meet evolving economic demands and consumer preferences, marking a significant shift from traditional business strategies. It is essential to assess your company's position concerning these traditional models if you are to understand and determine how to implement innovative alternatives. This assessment spans five key areas, each representing transformative strategies for adapting to the digital era.

Digital Pathfinder

The e-commerce sales model, for instance, has transformed retail by expanding market reach and reducing costs through digital means. Similarly, platform models create expansive ecosystems that facilitate collaboration and exchange among various providers and customers, enhancing service delivery and user engagement with potent network effects. The shift to As-a-Service models allows companies to offer continuous value through subscription-based services, fostering long-term customer relationships. Additionally, asset sharing enables organizations to pool resources, maximizing efficiency and cost-effectiveness. Lastly, the strategy of data monetization exploits the extensive data that companies collect, turning them into a substantial revenue source and actionable business insights.

These models collectively advocate for the more dynamic, interconnected and scalable business operations that are crucial for success in a digitally-driven marketplace. Despite their significant benefits, digital business models are often underappreciated. In my experience, companies are often reluctant to embrace these new models, with fewer than twenty per cent of projects successfully convincing organizations to innovate their market approach. Thus, attention to this axis is crucial if you are to integrate these new models into your overarching strategy and fully realize your potential.

Axis 4. Data management. The digital revolution is fundamentally data-centric, underscoring the importance of data as a critical component of any transformation strategy. In today's environment, modern companies, regardless of industry or size, are accumulating vast amounts of data. However, merely collecting large volumes of data is not sufficient; the quality of data and their effective management are equally crucial.

For organizations, acknowledging the pivotal role of data is essential. Data can be a significant source of knowledge and competitive advantage when managed wisely. Advanced technologies now enable data to be collected, stored, analysed, and utilized in innovative ways that were not previously possible.

Data analysis forms an integral part of digital transformation, covering several key aspects that collectively enhance an organization's capability to leverage data effectively. It starts with data collection, where information is

systematically gathered from both internal and external sources, ensuring a comprehensive dataset for analysis. This step is followed by secure and compliant data storage, crucial for maintaining the integrity and confidentiality of data while addressing security and regulatory compliance issues. Data communication also plays a critical role, involving the efficient transmission and sharing of data within the organization to enable accessible and collaborative analysis.

Moreover, analysing Big Data allows organizations to derive deeper insights from extensive datasets, significantly influencing strategic decision-making and operational efficiencies. The use of computational technologies is vital for efficient data management, enabling the rapid processing and analysis of large volumes of data, thereby supporting more informed and timely business decisions.

Together, these elements create a robust framework for harnessing the power of data, which constitutes a significant portion of digital transformation. The proper collection, processing and utilization of data enables organizations to achieve superior results, make more informed decisions, and respond more agilely to market changes. This axis supports but also drives organizational success in the digital age.

Axis 5. Culture of transformation. Organizational culture is the collection of values and beliefs that members of the organization hold and the daily behaviours prevalent within the organization. It influences how employees make decisions, collaborate with each other and respond to changes. Without the appropriate shift in organizational culture, even the best-planned strategy may not yield the desired effects.

Organizational culture is evaluated based on several critical areas that collectively influence the success of transformation initiatives within a company. Preferred leadership styles are pivotal in shaping the culture and behaviour of employees; leaders who encourage openness, flexibility and empowerment can significantly drive forward the cultural shifts needed for transformation. Additionally, an organization's readiness for change is essential, as it enhances the likelihood that new processes will be adopted and integrated successfully, which will translate directly into the effectiveness

of the transformation process. Furthermore, fostering a habit of continuous improvement within the company culture can lead to greater flexibility and competitiveness, enabling the organization to respond swiftly and effectively to evolving market demands and technological advancements. A culture that vigorously supports and drives innovation is also crucial because it determines an organization's ability to adopt and implement new solutions and ideas promptly.

Lastly, the availability of resources, including financial and human capital, critically shapes the organizational culture. Sufficient resources ensure that transformation plans are not only envisioned but also effectively executed, facilitating a smoother transition and better alignment with strategic objectives. Together, these factors create a robust framework for assessing and cultivating an organizational culture that supports energetic growth and sustained transformation.

Axis 6. Cybersecurity. In the era of rapid technological progress and increasing cyber threats, the security of data, IT systems and infrastructure is paramount for safeguarding company interests and maintaining customer trust. Cybersecurity is an integral part of a digital transformation strategy, aimed at ensuring secure, sustainable growth while constructing a positive image as a dependable business partner committed to protecting the data and information of its stakeholders. With cybercrimes such as hacking, data theft and ransomware attacks having severe repercussions for companies and their customers, the responsibility to shield against both financial and reputational damage has never been more crucial.

Axis 6 addresses the comprehensive measures and practices necessary to protect an organization's digital infrastructure and sensitive information. It includes strategy and risk management, which involves assessing potential threats and devising effective mitigation strategies. The protection of networks and systems is critical, requiring robust security protocols to safeguard against unauthorized access and cyber-attacks. Data security is also essential, focusing on protecting data integrity and privacy from breaches and theft. Additionally, education and training are vital to equip employees with the skills needed to recognize and proactively respond to cybersecurity threats. Emergency

planning is another integral component, preparing the organization to swiftly handle and recover from security incidents.

This holistic approach to cybersecurity is essential for the integrity and resilience of any modern organization facing evolving cyber threats. In our fast-paced digital revolution, it is easy to overlook the need to adequately secure digital assets. Therefore, organizations must devise comprehensive risk management strategies that encompass network and system protection, data security and proactive employee education to ensure a well-prepared contingency plan for responding swiftly to any attack or security breach. This proactive and inclusive approach to cybersecurity ensures that organizations not only defend against immediate threats but also foster a culture of continuous vigilance and improvement.

As seen in the approach to digital transformation, the six axes describe all aspects of change relating to both the enterprise's business performance and its organizational structure. This approach is designed to ensure that the transformation programme based on the Digital Roadmap is comprehensive and holistic. Additionally, it is important to remember that the effectiveness and efficiency with which this programme is implemented will depend on the coherence of the initiatives it contains.

In the first step, you will need to assess the current level of digitalization across all six axes and all the areas described within them. From experience, I know that self-assessing your own company usually results in much higher ratings than when the assessment is carried out by an external specialist; a company assessing itself will tend to paint an overly rosy picture that is not brutally honest enough to serve as a sound foundation on which to build a successful transformation. A warts-and-all picture is best taken by external specialists leading the management team through a structured conversation that systematically reviews the entire organization. The outcome of this first step is a set of assessment scores that cover all areas of all axes of digital transformation. This matrix of scores constitutes your assessment of your company's level of maturity level before any changes are implemented.

The second step involves creating lists of transformation initiatives for all areas of all digital transformation axes. In practice, this action is relatively

Digital Pathfinder

simple, as the assessment matrices drawn up in step one have very obvious implications; your initiatives will be little more than proposals for achieving the next levels of digital maturity. For example, if in the first axis your company was rated at level three in the first area, which is sales processes, we can automatically assume that the next steps of development are levels four and five. Proceeding in this way with all areas of all digital transformation axes, we create from forty to even fifty transformation initiatives.

In the third step, we proceed to connect initiatives into sets of actions that should be carried out together and to arrange these sets in a timeline. It is extremely important here that the initiatives be coherent and logical and that their implementation be sequenced for success. For example, if we have initiatives related to influencing organizational culture and data collection systems, these initiatives should certainly precede initiatives related to the construction of advanced algorithmic solutions supporting digital processes or products. It is obvious that, before we start investing and working, it is necessary to build the appropriate knowledge plan and acquire the required resources. Once the schedule describing the implementation of actions over the next three to four years is ready, it is worthwhile estimating the economic effects of the developed plan. From experience, I know that no transformation, whether understood as a strategic or operational programme, can succeed if the stakeholders of the organization do not support it. And of course, in the case of long-term transformation plans, any attempt to create precise assumptions for financial models will be exceedingly inefficient and inaccurate at first. It is therefore all the more important to start early; early attempts will always be rough-and-ready, and it is necessary to allow for the time it takes for successive iterations to become steadily more precise.

Thus prepared, the Digital Roadmap allows us to take action. This plan can and should be verified and adjusted on the fly to changing external and internal circumstances. The plan is, in its essence, a multitude of initiatives that together contribute to the achievement of the goal. Therefore, if your next update to the Megatrend Tracker or any other event renders the assumptions of the transformation plan out of date, it is always possible to proceed by identifying only those transformation initiatives that need to be modified.

This capacity to adjust selectively to changes means that your transformation strategy sets the direction and establishes main activities while ensuring flexibility and readiness for change.

In following the three simple steps outlined above, there are several considerations to keep in mind, and we shall outline these here.

Firstly, remember that the Digital Roadmap is a tool that supports digital transformation as a process, not a one-time project. Therefore, it is intended for use in regularly reviewing the company's digitalization level and the effectiveness of transformation initiatives. In practice, I perform an audit with my clients or suggest a self-assessment at three-month intervals, because the hyperreal world is so changeable that strategic assumptions are worth reviewing even four times a year.

Secondly, a transformation plan needs to maintain a balance between the present and the future. It is crucial to consider both current business-oriented actions and those directed towards long-term strategy. Overemphasizing either of these aspects can have negative consequences. Overly focusing on the future may result in a loss of competitiveness. Conversely, excessively concentrating on the present may cause you to neglect critical opportunities for change.

Thirdly, the digital transformation plan should not be limited to business-related activities. Changes must also encompass products, processes and business models, as well as organizational structure. If business transformation is not preceded by changes in organizational culture, employee education, data management and cybersecurity, the company can be exposed to risk and inefficiency. Thus, business and organizational aspects need to be worked on in sync to ensure harmonious development.

Next, digital transformation plans must maintain a healthy balance between planning and action. Many companies undertake hasty actions without adequate preparation and planning, which can eventually lead to issues. Transformational actions must be built on solid foundations, which include understanding the directions of transformation, proper data management and having a culture of digital transformation in place. Although actions can take

Digital Pathfinder

effect more quickly if this groundwork is skipped, the lack of attention can threaten the success of the entire transformation.

Further, the primary goal of digital transformation should include both financial and social aspects. When creating a transformation plan, we often focus on initiatives promising financial benefits and a positive return on investment. However, we must not forget the social aspects. Transformation affects not only a company's financial performance but also its employees, customers and the wider community. Hence, it is equally important to consider social goals in the decision-making process for a sustainable and effective transformation that benefits the company and its environment alike.

A balance must also be maintained between technology and human factors. We are all excited about technological megatrends such as artificial intelligence, but business and social megatrends are equally important. When planning transformation based on the six digital axes, we must consider both technological initiatives and social changes.

Finally, we often concentrate on the use of the latest technologies, but we must not forget that people are key actors and beneficiaries in the transformation process. Thus, the transformation plan needs to encompass both technological investments and the development of employee skills and competencies. Any comprehensive picture of digital transformation will entail the combination of these two factors.

In summary, then, when reviewing an organization's current state of digitalization, we first look in detail at where the organization stands in terms of each assessment area within each digital axis. These axes are elaborated on in detail in the appendix to this book. This furnishes us with a total of 34 partial assessments. Only by collecting and thoroughly analysing data on these can we make an overall assessment of where the organization currently lies along its digital transformation journey. To download the Digital Roadmap tool, please visit www.dbr77.com/pathfinder.

This will not only tell you where you stand on each axis now; it will also provide a clear view of what the next levels are in each area. Thus, the tool

Piotr Wisniewski, PhD

also provides a clear foundation on which to draw up a comprehensive and coherent set of transformation initiatives. Their implementation will steer the company onto the right path of digital transformation in a way that is logical and aligned with your strategy.

48. The digital leader: the transformation within

For over twenty years, I have been working closely with manufacturing companies all over the world. This has involved hundreds of official and somewhat less formal conversations with leaders, managers and line workers, as well as consultants, advisors and scientists, about what it means to be a leader in these transformative times. These conversations have happened for the very prosaic and pragmatic reason that I have spent this time leading various companies, once mainly in manufacturing and now a technology startup, and working on the boards of various companies. It is therefore my professional duty to best serve the organizations and people I lead.

As you have read repeatedly throughout the preceding chapters, the era of digital transformation we are witnessing and participating in requires that we all put into effect radically new attitudes and competencies. We should all get used to the idea that things will no longer be as they were before. New territory awaits us and, as we forge onward, the obstacles it presents will only grow and the changes will only come more quickly. This chapter will first address what look set to remain the biggest challenges facing leaders at various levels of organizations in the coming years. In the second part, I will share my experiences as a change leader, talking about the duties that fall to every leader in the digital era.

It is difficult to definitively list the challenges that each of us faces. Nevertheless, many areas are common, and we all encounter them, some more consciously and others less so. It is worth identifying them because only by being conscious of them can we begin to look for solutions. Above all, this awareness is a prerequisite for our readiness for the change that must begin within ourselves. The mass digital transformation of the world is currently one of the biggest issues facing leaders at various levels. The transition to digital tools and processes is becoming increasingly important for organizational success. We live in times in which sticking to outdated methods and technologies can lead to a loss of competitiveness. Therefore, leaders must focus on managing this transformation and ensuring that the organization exploits new technologies to the full.