INDUSTRY 5.0: GUIDELINES TO DIGITAL TRANSFORMATION AS A STRATEGY FOR SUSTAINABILITY

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Abstract Digital transformation involves the integration of digital technologies and solutions into every facet of an organization. However, it's not just about technology, but also requires a cultural shift within the organization. It's a crucial component for any comprehensive business transformation strategy and can be the key to success. By leveraging the right technologies and involving people, processes, and operations, organizations can adapt quickly to change, seize opportunities, meet customer demands, and drive growth and innovation. To ensure long-term sustainability, it's essential to integrate sustainability strategies across various dimensions of the digital transformation roadmap. This paper explores how digital transformation has evolved since the COVID-19 pandemic, the significant challenges that organizations are facing today, what leading organizations are doing differently, and what steps can be taken to identify and address the key areas of focus in the coming years, with an emphasis on the people component as a critical success factor.

1   Introduction

In the digital transformation, organizations are facing a multitude of changes. Industries, markets, and customer demands are developing with great dynamism, and not just since the pandemic gave us a digitalization boost. Organizations need to respond to digitization and shape this change to remain fit for the future and to address sustainability topics. When organizations undergo organizational change, this also offers opportunities for sustainable business. Digitization and sustainability are driving themes of our time and, when considered together, can create social, ecological, and economic benefits. Not enough organizations focus on the transformation of the human success factor in digital transformation. Transformation has always been about people. This has often been a weak point for many digital transformation efforts and is the component that many organizations are missing.

2   Literature Review

2.1   Digitization

Digitization involves the integration of digital technologies into business processes to enhance their effectiveness. This transformational process often changes the way organizations interact with stakeholders and even their revenue streams. Fundamentally, digitization involves the mechanical translation of physical data into a digital format. Digital information consists of ones and zeros and cannot be distorted, and its transmission occurs without losses. In recent years, digitization has increasingly been understood as a collective term for the use of digital information in business, politics, and society. Digitization enables processes in all these areas to be modernized and improved. Digital transformation is a direct consequence of digitization (Ordieres-Meré et al., 2020; Ananyin et al., 2018).

2.2   Digital transformation

Digital transformation is the transformation of the corporate world through new Internet technologies with effects on society. Digital information and communication technologies are used to improve performance by transforming or enhancing corporate processes, customer experiences and business models (El Hilali

& El Manouar, 2019). The concept of digitization can be used in and affect many different areas. A common application of digitization is the upgrade of a business model, where the goal is to achieve added value through the introduction of new technologies. The introduction of digital technologies can improve industrial processes (Ghobakhloo, 2020; Ananyin et al., 2018).

2.3 Digitization in organizations

Organizations are currently taking a reactive approach to digital transformation, with many using new technologies to remain competitive and relevant, rather than looking to innovate (Erkollar & Oberer, 2023; Craig, 2021). However, when done correctly, digitization can bring significant benefits to organizations, such as improved working conditions, new customer acquisition channels, better decision-making, higher employee retention, improved teamwork, and a greater willingness to innovate. Digitization offers primary benefits in the form of better workflows, greater efficiency, improved products, and new services, leading to secondary benefits such as improved competitiveness, reduced response times to customer feedback, and shorter time to market for new products (Ghobakhloo, 2020). Additionally, end-to-end integration of entire supply chains can lead to cost reductions in production. Despite the benefits for customers, digitization may not always provide immediate value to the organization (Craig, 2021; Ghobakhloo, 2020; Teece & Linden, 2018). However, digital transformation, sustainability, and strategy are interconnected concepts that are crucial for organizations to succeed in today's fast-paced and ever-changing world. Digital transformation involves the integration of digital technology into all areas of a business, leading to fundamental changes in how the business operates and delivers value to customers. The increasing prevalence of digital technologies such as cloud computing, artificial intelligence, and the internet of things are driving this transformation, revolutionizing the way businesses operate and interact with customers (Erkollar & Oberer, 2023; Craig, 2021; Teece & Linden, 2018).

At the same time, sustainability has become a critical issue for businesses and society as a whole, as concerns about climate change, resource depletion, and social inequality have increased. Sustainable business practices involve balancing economic, environmental, and social considerations to create long-term value for all stakeholders. Strategic thinking is also essential for businesses to succeed in today's

highly competitive environment. A strategic approach involves setting goals and objectives, making decisions, and allocating resources in a way that aligns with the organization's overall mission and vision. Together, these concepts form a powerful framework for businesses to navigate the challenges and opportunities of the digital age. Digital transformation provides the tools and technology to enable sustainable business practices, while strategic thinking ensures that those practices are aligned with the organization's overall objectives (Craig, 2021; Manrique et al., 2021; Teece & Linden, 2018).

Further, a 'the-winner-takes-it-all economy' that encourages the creation of monopolies. Challenges for most organizations include the complexity of implementing a new technology, the lack of resources in terms of skilled IT staff, the general reliance of the workforce on proven technologies, and the question of why change something if it does work. Other challenges that can stand in the way of digital transformation include upgrading the workforce to cope with digitization, introducing new business models, increasing focus on environmental and social sustainability, transitioning to a digital enterprise, and adapting to the realities of a digitized economy. This is expressed through decentralized collaboration, and the merging of digital and physical information (Craig, 2021; El Hilali & El Manouar, 2019; Ananyin et al., 2018).

3   Methodology

A deductive, qualitative research approach with a descriptive research design is applied. The primary research method used is that of document analysis. The research question for this publication is explorative: 'What are the key success factors of a digital transformation in a post-pandemic environment?' A document analysis is conducted on the topics of digitization, digital transformation, and sustainable development. Based on this, approaches for a successful post-pandemic digital transformation are analyzed.

4   Results

4.1   Digital transformation – a post-pandemic view

The COVID-19 pandemic has acted as a trigger for digital transformation in many organizations, driving them to accelerate their technology initiatives, make drastic changes to processes, and re-evaluate their culture's role in today's business world. However, many organizations are still facing significant challenges in their digital transformation efforts, and addressing these challenges should be a top priority for organizations in 2023 and beyond. The integration of technology, streamlining of processes, and delivery of increased business value remain top priorities as organizations look to the future. Key investments in digital transformation include business process automation, artificial intelligence, and machine learning. For many organizations, 2021 was a year dominated by digital transformation as they evaluated the impact of their investments and refined their strategies. Successful digital transformation requires organizations to move beyond survival mode and embrace change (El Hilali et al., 2020; El Hilali & El Manouar, 2019; McConnell, 2015).

4.2   New success factors and priorities

As organizations seek to adapt to new business models and achieve their goals, they are also changing their digital transformation objectives. These goals include optimizing their data strategies, innovating, and enhancing the customer experience beyond pandemic-related adjustments (Felsberger & Reiner, 2020). However, achieving these objectives can be challenging and may compromise organizational success if not addressed properly (Junge, 2019; Kayikci, 2019). Staffing challenges are a significant impediment to digital transformation, as organizations face difficulty finding and hiring talent to support new initiatives and in creating a culture of continuous learning. Failing to address these issues can not only jeopardize the organization's ability to support new technologies but also compromise its competitive advantage in the long run. Organizations must also align their digital transformation efforts with business goals and key performance indicators, which are critical to the success of the transformation. Digital transformation requires more than just developing new applications, and it is essential to integrate it into existing processes and adapt business processes. Retraining employees on new activities is necessary (Felsberger & Reiner, 2020; El Hilali & El Manouar, 2019).

4.3   Why some are more successful than others

Successful digital transformation in organizations is characterized by leaders who communicate a clear vision of the transformation, and inspire employees to embrace change to foster a culture of transformation (El Hilali et al., 2020). To achieve this, leaders need to empower employees at all levels and reward them for taking initiative in becoming agents of change. Organizations need to create a culture that accepts failure and encourages taking risks to drive digital transformation (Junge, 2019). However, building such a culture can be challenging in organizations where success is defined by not making mistakes.

The COVID-19 pandemic led to unprecedented labor shortages, forcing organizations to re-evaluate their talent needs and face the challenge of effectively allocating resources to the right areas of transformation (Ghobakhloo, 2020; El Hilali & El Manouar, 2019). Many organizations struggle to find and retain talent to support their new technologies and business initiatives. To address this challenge, organizations could prioritize upskilling and training their existing employees, which is an often-untapped opportunity (Alenezi, 2021). However, organizations may hesitate to invest in training because they assume that employees will leave the organization at some point (Dias et al., 2022).

In summary, successful digital transformation requires clear communication from leaders, a culture that embraces change and risk-taking, and effective allocation of resources, including talent. Organizations can leverage internal talent by prioritizing their upskilling and training, leading to a more sustainable approach to meeting their talent needs.y assume they will simply leave the organization at some point (Dias et al., 2022).

5   Discussion and Conclusion

5.1   Measuring the success of digital transformation

Many organizations struggle with aligning their business goals and key performance indicators (KPIs) with their digital transformation initiatives. However, leading organizations prioritize aligning their digital transformation efforts with their business objectives and KPIs to achieve their goals (Lixu, 2022). They make it clear

that their digital transformation initiatives are meant to achieve specific objectives and goals.

While organizations may focus on operational efficiency as a metric to measure the success of their digital transformation efforts, it may not be the most effective measure. Operational efficiency is more about digital refresh than digital transformation, as organizations replace outdated legacy processes with new digital ways of working. Instead, organizations should avoid relying solely on process-oriented benchmarks to measure the progress of their digital transformation efforts. Employee satisfaction is a crucial yet undervalued metric that organizations should use to measure the success of digital transformation initiatives. This is because engaged employees are more likely to adopt new technologies, leading to successful digital transformation (Katsamakas, 2022).

5.2   The priority is still on technologies

Organizations have been driven to invest in business process automation due to labor shortages resulting from the COVID-19 pandemic (Ghobakhloo, 2020; El Hilali & El Manouar, 2019). As a result, artificial intelligence (AI) and machine learning are becoming high-profile technology investments once again, as organizations seek to better interpret data and make more informed decisions, as well as engage with customers more effectively using analytics (Lixu, 2022; Katsamakas, 2022). While technological advances have contributed to changes in markets, organizations must also address ecological and social sustainability deficits, and integrate core competencies into new business models and market areas in alignment with corporate sustainability strategies (Dias et al., 2022; Junge, 2019). Therefore, meaningful digitization of processes is necessary to leverage opportunities and overcome challenges in the current business landscape.

5.3   What comes next?

Many organizations were quick to jump on the digital transformation bandwagon without a clear understanding of their goals. To ensure successful investments in new technologies, organizations must prioritize productivity, good employee experience, and good customer experience. Digital transformation has become increasingly crucial for businesses, as it enables them to break free from constrained

business activities and shift their focus to delivering more business value. To achieve greater success in their transformation efforts, organizations must address the key cultural challenges that hinder their progress. In the area of human resource management, hiring strategies need to be re-evaluated, and retraining and upskilling programs must be supported to ensure that corporate transformation efforts align with business goals and KPIs. Sustainability, digital transformation, and strategy are interdependent and should be approached strategically to ensure long-term business success. By adopting a strategic approach to sustainability and digital transformation, businesses can identify new opportunities and markets, develop innovative products and services, reduce their environmental impact, and create long-term value for all stakeholders (Katsamakas, 2022).

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