

# Digitalize or Die: A Strategic Approach to the Digitization of the Manufacturing Sector

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**Abstract**— Digital strategy is focused on leveraging technology to enhance corporate performance, whether that is developing brand-new goods or completely redesigning existing procedures. It outlines the strategy a firm will use to develop new technological competitive advantages as well as the methods it will employ to bring about these improvements (SIEMENS, n.d.). In the manufacturing industry, embracing digitalization platforms may unleash innovation at scale and speed. The most effective strategy supports the manufacturing sector's digital transformation in terms of raising revenues and margins while also fostering collaboration and innovation. This article will explain how the manufacturing industry could create a digital transformation plan that incorporates several elements of the strategy that are specifically suited to the needs of the manufacturing industry.

**Keywords**— Digitalization strategy, Strategy for modernizing manufacturing sector, Digital transformation plan.

## I. INTRODUCTION

The industrial sector is clearly trailing behind consumer-focused industries like financial services in terms of game-changing applications of digital technology as the digital revolution enters its second decade. The terms "industry 4.0" and "industrial Internet of Things (IIoT)" were well-known in the middle of the decade, and there are some inspiring cases of development among producers and other B2B companies. However, leaders are growing more and more dissatisfied with their companies' inability to go forward with the promised digital transformation especially in manufacturing sector in a way that has a major positive impact on business (Rob Bell, n.d.). The macroeconomic and

geopolitical environment around the manufacturing sector is highly unpredictable, and there is a great deal of uncertainty affecting consumer spending and confidence (i-SCOOP, n.d.). When implementing and maintaining digital changes, manufacturing organizations undoubtedly confront a variety of difficulties, but the main cause is often the absence of a clear strategy. Ironically, in order to fully utilize the promise of digital transformation, executives must adopt a future-focused vision for their organizations that is strategy-led and technology-enabled rather than technology-led (Rob Bell, n.d.). A company's digital transformation journey is guided by its digital transformation strategy, which is viewed as a formal, structured plan.



Four Dimensions to Consider When Developing a Digital Transformation Strategy

Figure 1: Digital transformation Strategy Dimension (GORBACH, 2020)

## II. DEVELOPMENT OF A DIGITAL TRANSFORMATION STRATEGY

### A. Vision and objectives for digital transformation creation

The first step for organizations should be to define the goals and vision they hope to achieve through digital transformation. The notion of effective transformation and how it affects the company's overall operations and its clients in terms of customer engagement and experience should be included. By defining the goal, firms can implement technologies that place a strong emphasis on growing the business rather than just marginally enhancing particular operations. This will facilitate the creation of an all-encompassing plan that incorporates and transforms the entire business while preventing the adoption of technologies in silos. When creating a digital transformation strategy, the company's current situation should be taken into account. Setting goals and objectives over a five-year period is an excellent idea. Goals for the organization should be set up front and center with the greatest ROI in mind. Finding performance improvement opportunities that will either directly or indirectly have a large positive impact on customers and staff is a smart strategy for starting a digital revolution in manufacturing. This places a strong emphasis on the company model itself as well as aspects like operations, engineering, supply chain, and customer service (Albukhitan, 2020).

### B. Evaluation of Organizational Capability for Digital Transformation

We evaluate where the company is at this point in its digital transformation. The company should evaluate its infrastructure and determine how effectively its tools, software, and system are fulfilling both present and future needs. To implement its digital transformation strategy, the firm must identify the essential elements needed. The organization will benefit from this assessment in determining what technology needs to be upgraded, which processes should be automated or optimized, and which tools need to be modified.

### C. Implementation of framed Strategy for Digital transformation

The final phase is to gather the total business's digital goals, projected outcomes, available technologies, and prospective solutions, then combine them into a workable strategy. The creation of a digital transformation programme takes time, money, and people resources. This is one reason why digital transformation is frequently carried out in phases. To ensure the necessary availability of human and financial

resources, it is crucial to properly organize every action, such as vendor meetings and technology assessments. Organizations can benefit from a smooth deployment by having a plan with a deadline. An implementation timeline will also assist the involved and associated stakeholders, from senior executives to front-line workers and clients, in providing the necessary support for the Digital Transformation programme and minimizing disruptions to ongoing business operations. Like any other project, a digital transformation initiative requires ongoing support from all relevant organizational stakeholders.

## III. RECOMMENDATIONS FOR REDUCING MANUFACTURING-RELATED DIGITAL TRANSFORMATION CHALLENGES

### Traditional Methods

Manufacturers want a cutting-edge, agile digital solution that transforms their antiquated, error-prone paper-based operations into digital ones.

### Change Reluctance

1. Organizations should have the finest digital solution in place to cut down on time-consuming procedures, increase worker productivity, and lessen employee stress by allowing access to work from anywhere, anytime, and regardless of location.
2. As a part of the process of undergoing a digital transformation, high commitment should begin with top management and be transferred to individual employees.
3. In order to get everyone excited about the potential of this new technology, openness and effective communication are crucial.

### Old-fashioned Business Mode

By utilizing digital technology that offers excellent efficiency inside their current legacy systems, manufacturers must step outside of their comfort zone, overhaul their business model, and move forward with business processes that are more efficient and faster time to market.

### Lack of necessary knowledge

1. If the company's current experience is insufficient, it may be essential to collaborate with outside consultants or hire additional staff.
2. Rather than being the sole duty of a select group of employees or departments, introducing new technology should be a shared objective of the entire organization.

### **Inflexible organizational design**

One approach is to assemble teams from several disciplines, including as engineering, product design, data analysis, and service experts, and use them as the focus teams for the digital transformation. New technologies will be developed by the team, put into practice through proof of concept and after receiving company approval, successful iterations will be introduced.

[https://resources.sw.siemens.com/en-US/white-paper-product-optimization-consumer-goods-digital-twin?gclid=EAIaIQobChMIkrikhqLEgIV0tdMAh2HnAHYEAAAYAAEgLUw\\_D\\_BwE&stc=indi100002&ef\\_id=EAIaIQobChMIkrikhqLEgIV0tdMAh2HnAHYEAAAYAAEgLUw\\_D\\_BwE:G:s&s\\_kwid=AL!4](https://resources.sw.siemens.com/en-US/white-paper-product-optimization-consumer-goods-digital-twin?gclid=EAIaIQobChMIkrikhqLEgIV0tdMAh2HnAHYEAAAYAAEgLUw_D_BwE&stc=indi100002&ef_id=EAIaIQobChMIkrikhqLEgIV0tdMAh2HnAHYEAAAYAAEgLUw_D_BwE:G:s&s_kwid=AL!4)

## **IV. CONCLUSION**

- Customer experience, operational procedures, and business model change are all driven by digital transformation. Organization-wide collaboration is necessary for the digital transformation process, which also incorporates alterations to company culture.
- As opposed to culture, technology is the main focus of digital strategy. A corporation can use technology to develop the competencies it needs to transition to a digital business by implementing a digital strategy, which is most pertinent to changes in business models. A critical step in the transformation process is establishing a strategy, which guarantees that technology will be applied in a way that supports organizational goals.

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