

# Dos and Don'ts for Successful Digital Transformation

*Success is a multi-variable equation; you need to address all the variables*

## CIMdata Commentary

Key takeaways:

- *Successful companies must digitally transform their business to create and sustain their competitive advantage.*
- *Digital transformation is more than just digitizing data—it requires a change in how a business operates, eliminating information silos and creating a digital thread that spans the value network.*
- *Digital transformation enables companies to create and drive more competitive business models, opportunities, and business resilience.*
- *Success requires commitment, planning, focus, and sustained funding and effort.*

## Introduction

The world is in the midst of a digital industrial revolution, today's manufacturing enterprises are facing new challenges that impact most, if not all facets of their business. Manufacturers are under continuous pressure to evolve, improve how they operate (i.e., develop, produce, and service their products), and deliver value to their customers and stakeholders. Customers are demanding smarter, more connected, and eco-friendlier products and services tailored to their unique needs that are often able to operate autonomously. These complex products and systems of systems require integrating specialized tools, expertise, and data repositories distributed across the processes and digital threads that support an organization's extended value chain ecosystem.<sup>1</sup>

Technology is evolving and converging rapidly. Manufacturers need seamless, collaborative environments that encompass their internal organizations, as well as their partners, suppliers, and customers. Executives need to have maximum flexibility and leverage on their technology and product investments to improve business performance and profitability, to shorten product development time, and get the right products to market. Businesses must be able to quickly, and effectively, deal with change—change in product, change in production, change in service, and change in customer demands and expectations.

Addressing these challenges requires manufacturers to digitally transform themselves and their processes to succeed in an increasingly competitive landscape. Digital transformation enables companies to challenge the status quo, define new business models, support new methods of operating, and sharpen their competitive advantage. They need to digitize their business and evolve their current product development, production, and service lifecycles. This requires enabling true end-to-end lifecycle innovation and optimization that encompasses ideation, realization, utilization, reuse, remanufacture, recycle, or (in the worst case) disposal. To accomplish this, companies must be willing and able to dissolve the boundaries between their product innovation platform (the domain of product and process conceptualization, design, development, and support) and other critical innovation platforms (e.g., administration, manufacturing & support operations, digital services, and sales & marketing).

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## What is Digital Transformation?

Digital transformation is the movement from analog to digital, and then to the implementation of technology solutions that can be used to transform the way a business operates and how value is delivered to end customers. Digital transformation transcends organizations and processes, enabling companies to adapt to the ever-changing landscape of market and business requirements. Fundamentally, it is a strategy for dramatically improving business operations, including profit margins, quality, and speed to market by leveraging data, corporate knowledge, and information technologies.

CIMdata defines Digital Transformation as the adoption of digital technologies to transform a business' products and services. Digital transformation enables companies to harness the ability to leverage digital data, that enables actionable insights, resulting in smart decision making. By enabling an ability to change business models quickly and easily, digital transformation creates a more agile, more competitive business. Digital skills transformation (a core part of successful digital transformation) also enables a more flexible workforce.

### Digital Transformation Definitions

- **Digitization**—the process of moving information from paper to digital forms (e.g., computer files, connected data elements representing a product, managing a configuration and all its dependencies). Basically, the process of changing from analog to digital form.
- **Digitalization**—the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business.
- **Digital transformation**—the transformation of business activities, processes, products, and business models to fully leverage the opportunities of digital technologies. The primary goals are to improve efficiency, manage risk, and enable new business models and operational paradigms. Digital transformation means doing things in a new (digital) way.

However, achieving success in executing a digital transformation requires companies be prepared and committed to:

- Change and evolve their culture through education, training, and reskilling of their workforce.
- Invest in updating and/or changing the tools and applications used throughout the business.
- Update and/or change the operational model and methods currently in use.
- Do these activities repeatedly as technology and market demands change over time.

## Digital Transformation Lessons Learned

CIMdata has worked with many companies to assist them with their digitalization and digital transformation programs. From these experiences we have compiled a set of lessons learned for successful digital transformation. The following are a sampling of the Dos and Don'ts—the lists are not inclusive. There is no “one size fits all” digital transformation project. Every business has a different business model, strategy, objectives, and starting points (i.e., current and planned technology environment), and each needs to establish its unique digital transformation initiative based on those factors.

**DO**—the things a company should do to execute a successful digital transformation:

- Establish broad vision and approach—have a clear definition and understanding of why you are doing a digital transformation. Trying do “digitize” a single area will not work.

- Educate senior management and get their commitment and involvement—digital transformation is a business initiative that spans multiple domains and must be supported and managed at a senior level.
- Scope (and boundaries) should be well defined and understood up and down the organization—continually communicate the initiative, schedule, and objectives to all levels of the organization (and appropriate value chain participants) so that everyone is aware of what and why things are being done.
- Identify intended objectives and their value to receive buy-in. Then communicate it throughout the organization. It is important for personnel at all levels to understand why this needs to be done and “what’s in it for me.”
- Seek and obtain multi-phase, multi-year funding—true digital transformation will take time and money. If you are committed to digital transformation, you must commit the resources needed over time. Short-changing the program will lead to failure.
- Break the process into manageable phases and use pilot projects to validate process, technology, and organizational changes before going live. Phased programs are easier to implement, reduce risk of failure, and, while taking time, place less strain on valued resources and staff.
- Be agile in your approach—things will change, and you need to be ready for it. As with any multi-year program, be flexible and adaptable to the need to change, but do change in a controlled, governed manner.
- Proper planning is key to success—this cannot be done “on the fly.”
- Establish an organizational change management program early—communication, education, and training are key.
- Set and align on measurable goals throughout the organization.
- Coordinate with partners, suppliers, and customers. They have to work with your digital enterprise.
- Evaluate and select the technologies and applications that can best support your go-forward plan and environment.
- Educate, train, and provide support for users and workers at all levels. Individuals will need to improve their digital skills knowledge and expertise (and this will be a continually evolving effort)—digital skills transformation of the workforce is a key to successful digital transformation of the business.
- Foster a culture that rewards change and process improvements. Showcase results that lead to greater productivity and business outcomes.
- Establish end-to-end connectivity of information and processes—part of effective digital transformation is establishing a comprehensive digital thread throughout the value chain.
- Establish effective, comprehensive configuration management of all data. As more and more digital data is used by a wider range of users, ensuring that the data is correct, properly linked, and secure is critical to success in the digital world.
- Identify metrics to measure process improvements that will show management a return on investment. Management wants to see the return on investment and improvement in the business and users and other workers want to see what is changing and how it is helping users and the organizations in which they contribute and work.

- Establish effective data and process governance—managing change and controlling scope creep are critical.

**DON'T**—the things that need to be avoided or minimized.

- Don't undermine the company culture—a key objective of a digital transformation is to evolve that culture over time. This minimizes conflict and improves adoption of new technology, tools, and processes.
- Don't be too broad—think and plan big but execute in manageable chunks. People and organizations absorb only so much change at a time. Trying to do too much, too fast will cause confusion, rejection of the new environment, and unhappy employees.
- Don't forget you are transforming not only technologies, but also people and processes. Education, training, support, and patience are all key factors for success.
- Don't underestimate the effort—transformation is a journey that takes time and resources—both human and financial. Not understanding the time required, and budgeting appropriately leads to certain failure. Not allocating needed resources (often some of your most highly skilled and in demand workers) in a timely way is also a major failure point.

## Autodesk Solutions for Digital Transformation

Autodesk offers a broad portfolio of technology solutions that support and enable digital transformation. Autodesk's digital transformation vision and strategy are built around three key elements: convergence, collaboration, and automation. Autodesk states that the Convergence of technologies, of industries, and of design and manufacturing is the cornerstone of digital transformation. They note that Collaboration enables people throughout the value network to share data and work concurrently, and Automation accelerates performance and eliminates non-value-added work.

Autodesk believes that digital transformation begins with the convergence of design and manufacturing disciplines, putting data at the center to connect the entire organization, enable collaboration across the value network, and unlock the power of automation. Their data management and product lifecycle management solutions are designed to break down silos between departments and make sure the right people have the right information at the right time. Their solutions enable workflows that can help keep internal and external stakeholders connected at all times, including throughout the supply chain.

Autodesk believes the key to better collaboration is built on intelligently connected data that ensures the right people have the right information at the right time. Collaboration helps shorten the—traditionally linear—product development process and enables companies to get to market faster. They state that by using data management tools like Upchain and Autodesk Vault PLM and its intelligent search capabilities, a user can quickly find and reuse data. Autodesk cloud-delivered PLM solutions are designed to help bring teams together in a virtual collaborative environment regardless of their physical location or where they sit in the product lifecycle. When everyone is working from a secure cloud platform, users can stay connected 24/7 across the entire supply chain.

Connected data creates the digital thread that ties it all together and drives convergence and collaboration. Creating a common data experience gives users a complete view of a company's products and processes. It creates transparency at a global scale to offer actionable insights

across the entire organization so everyone can make better decisions, faster. The digital thread provides the data integration and flow that enables creation and use of up-to-date, complete digital twins.

Autodesk (and CIMdata) believes that the cloud is a critical component for keeping global teams connected and a business operational. Autodesk continues to build a cloud platform where different disciplines and teams can converge into one product development and manufacturing environment. Connected data creates the digital thread, that ties the digitally transformed business together, and drives convergence. CIMdata believes that creating a common data experience provides a more complete view of products and processes. Such a common experience creates transparency at a global scale to offer actionable insights across the entire organization, enabling everyone to make better decisions, faster. For more information about how Autodesk enables digital transformation please read “Digital Transformation: Driving Competitive Advantage,” a CIMdata eBook sponsored by Autodesk.<sup>2</sup>

## Conclusion

Manufacturers are under continuous pressure to evolve, improve how they operate (i.e., develop, produce, and service their products), and deliver value to their customers and their stakeholders. Customers are demanding smarter, more connected, and more eco-friendly, products and solutions tailored to their unique needs. Addressing these challenges requires manufacturers to digitally transform themselves and their processes to succeed in an increasingly competitive landscape or fall victim to competitors that are transforming their businesses. Digital transformation enables companies to challenge the status quo, define new business models, support new methods of operating, and strengthen their competitive advantage.

Successful digital transformation impacts all areas of a business: culture, technology, processes, information, and people skills. As a result, it needs to be carefully planned and executed. A few critically important Dos and Don'ts for successful digital transformation include:

- Establish broad vision and approach and get senior management commitment and involvement.
- Seek and obtain multi-phase, multi-year funding and break the process into manageable phases.
- Establish data and process governance—manage scope creep.
- Educate and train the organization at all levels.
- Don't underestimate the effort—transformation is a journey that takes time and money.

CIMdata firmly believes that digital transformation is critical to long-term success in today's complex, rapidly changing manufacturing world. Companies preparing to and/or currently undergoing a digital transformation should consider Autodesk's solutions as they evaluate and select their technology and application options.

## About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design, deliver, and support innovative products and services by identifying and implementing appropriate digital initiatives. For nearly forty years,

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<sup>2</sup> See: Digital Transformation: Driving Competitive Advantage. 11 May 2021. <https://www.cimdata.com/en/resources/complimentary-reports-research/white-papers>

CIMdata has provided industrial organizations and providers of technologies and services with world-class knowledge, expertise, and best-practice methods on a broad set of product lifecycle management (PLM) solutions and the digital transformation they enable. CIMdata also offers research, subscription services, publications, and education through certificate programs and international conferences. To learn more, visit [www.CIMdata.com](http://www.CIMdata.com) or email [info@CIMdata.com](mailto:info@CIMdata.com).