

Whitepaper

Where Is Your Organization on the Digital Transformation Journey?

Digital Transformation Series

Dr. Deborah Soule



Companies around the globe are collectively investing hundreds of millions on “digital transformation” initiatives, but often invest far less on the employees responsible for fulfilling these new digital strategies. Leveraging technology to accelerate business processes and gain competitive advantage is important, but without a clear understanding of the human impact of digital transformation, these investments are unlikely to deliver the anticipated return.

To seize new opportunities and successfully transform into a 21st century operation, organizations must first understand the fundamentals of digital transformation and how this has the potential to impact their business and their people.

At Copyright Clearance Center, we help organizations of all sizes clear the path to integrated data and information, accelerate knowledge and advance copyright. And though we’ve built our brand around creating innovative, award-winning software and licensing products and integrating complex technology solutions, we’ve built strong, enduring customer relationships by designing what users need. Whether creating a knowledge management workflow solution for one of the world’s largest pharmaceutical companies or helping a century-old scientific publisher design and build a new content publishing system, we begin each engagement at the same point: understanding how people need to integrate, access and share information.

Throughout the course of this white paper series, we provide the “why does this matter” foundation for organizations undergoing digital transformation. Dr. Deborah Soule brings decades of experience and targeted research to answer questions like:

- Why is the process of “becoming digital” so difficult?
- How should leadership teams approach digital transformation?
- How are employee needs evolving as they experience digital transformation?

As we move toward this new frontier of digital dexterity, CCC is committed to partnering with organizations in all stages of the digital transformation journey, delivering human-driven solutions that turn information and insights into knowledge.

What digital transformation means to different companies

- Some older companies may focus primarily on the need to strengthen and consolidate their technical platforms to support digital products and business models.
- Consumer-facing companies may feel compelled to transform their marketing practices to meet the expectations of customers accustomed to the immediacy and intimacy of social and mobile interactions.
- Manufacturing organizations may feel pressured to improve their data and communications capabilities to interact more seamlessly with their supply-chain partners.
- Research-intensive organizations may be concerned about accessing, securing and effectively using vast sources of digital information now available from both internal and third-party sources.

Digital is everywhere, and there is seemingly no way to escape technologies like social media, mobile devices, smart embedded digital sensors, and cloud-based computing. These technologies fundamentally alter how we make decisions, because our wealth of information helps unlock new insights.

Digital technologies open a wealth of new possibilities for what companies do, but they also create both challenges and opportunities for how that work gets done. As a result, companies need to consider new roles and responsibilities, skills, relationships, and organizational and management practices.

Becoming digital involves multiple dimensions of change

Our research¹ suggests it can be helpful to characterize the organizational journey of digital transformation in terms of interdependent and iterative changes in mindsets, practices and resources.

Changing mindsets: becoming open to learning with digital resources

At the heart of the transition from “industrial organization” to “digital organization” are new attitudes, beliefs, and values towards digital tools, information, organization, management, workers and the work itself. How employees think about digital changes is important, because people will resist changes that feel threatening rather than enabling. In contrast, a “digital-first” mindset is an instinctive, positive and proactive attitude toward digital possibilities.

When is a digital-first mindset evident?

1. Employees throughout an organization tend to explore digital solutions before manual ones, use digital tools to seek out expertise, seek opportunities to use technology for advantage, and approach data systematically.
2. Employees understand the opportunities and risks of engaging with digital solutions, and proceed confidently.

Changing practices: Becoming Skilled at innovating with information

As enterprises digitize their operations, new behavioral norms and routines need to become widespread and consistent.

Two complementary practices make a difference:

- **Data-driven decision-making** means consistently using data — rather than intuition or the highest paid person’s opinion (“HiPPO”) — to guide decisions. Data-driven decision-making ensures policies and processes are rigorously developed and information-based, expanding the explicit knowledge of the organization.
- **Collaborative learning** involves teamwork and partnering without regard to discipline, geography, ownership or other traditional parameters. Collaborative learning enables people to access and apply tacit knowledge, and ensures that insights and solutions move rapidly and readily across boundaries.

Changing resources: Enabling insights through collected and connected information

Organizational capability also depends on structural and concrete elements, such as digital and physical tools, skills, formal structures and infrastructures.

Instrumental resources in the digital journey include:

- **A digital-ready workforce** of engaged and self-directed workers who can take on the challenges that automation cannot (yet) address.
- **Broad-based access** to digital communication, collaboration and coordination tools to enable collaborative learning and exchange across internal and external boundaries.
- **Integrated** operations data to enable employees to actively monitor, measure, and improve operations.
- **Real-time** customer data to help workers customize services while also supporting them in sensing subtle but important external shifts.

Collectively, these digital and human resources support intense information processing and broad social connections. This combination of capabilities enables an organization to quickly sense, successfully shape, and powerfully respond to a constantly changing external environment.

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Why is becoming digital so difficult?

Change is always difficult but becoming digital is particularly challenging because it requires concurrent change on multiple interrelated fronts. Here are some challenges that organizations commonly face:

- Technology choices must be made while the technologies are still advancing rapidly and today's popular devices, successful applications, or up-and-coming technology partners are not guaranteed to remain successful in the future.
- Technology skills are not available where needed or are untested in parts of the organization.
- Customers or suppliers have expectations or needs that exceed or lag the company's current digital capabilities.
- Data, information and people are still siloed but digital business processes depend on integration.
- Different groups and teams start their own digital transformation efforts but their efforts are uncoordinated and compete for attention.

Stages of transition in becoming a digital organization

There are few truly digital organizations, but there are many organizations in the process of becoming digital. Many companies struggle with this process. Thus, while the end-state is important, it is interesting and useful to understand the transition to "becoming digital."

From our research² with a variety of organizations, we identified distinct stages in the process of becoming digital. This characterization of different stages of digital transition can help practitioners make sense of their experiences and understand that their challenges and difficulties are not unusual, but an inevitable part of the journey.

Stage 1: Early transition — marked by inconsistencies among mindsets, practices and resources

Organizations early in their digital transitions are just starting to grapple with the possibilities and opportunities of digital solutions. Initially, this change can seem threatening and people are not yet fully committed to move forward with the necessary effort.

Often the impetus for change is external — coming from new customer expectations or new competition in the field. Employees may recognize the need to adapt to these external changes, but they may also feel overwhelmed by the gap between the skills they have and the skills they need. Sometimes, existing internal structures hamper efforts to adapt organizational practices to meet new client expectations. It can also be disconcerting to discover that certain practices and ways of working, which served the organization well in the past, are now misaligned with the organization's current values and hinder its present efforts.

Often, technology to support new client expectations is still lacking or new to the organization. In addition, making commitments to technologies that are still evolving rapidly can seem too risky.

At this stage, an organization's experience of becoming digital may be marked by dissonance, inconsistency, and uncertainty. Digital-driven change is still seen as a threat. Despite their efforts, employees and groups are not ready to seize digital opportunities fluidly and effectively.



Stage 2: Later transition — marked by more alignment of mindsets, practices and resources but inconsistencies remain

Organizations further in their transition are progressing toward building digital mindsets and practices, and supporting cognitive and behavioral changes with appropriate resources. Now, thinking about digital change becomes more aspirational, reflecting a view of digital as a source of opportunity rather than risk or threat. People are less concerned about uncertainty around technology and their digital tools. Instead, they place more value on learning, experimentation and innovation.

By this stage, the organization uses its digital technologies to inform operational improvements, enable faster, more fluid problem-solving, and to share knowledge discovery across boundaries — especially in service of solving customer issues. Both behavioral practices and organizational structures shift to align with the ability to communicate and exchange information fluidly and flexibly.

Learning and experimentation efforts are supported both by digital tools and broader access to information, as well as by the new norms for connecting with diverse sources of expertise both within and beyond the organization. As digital connections and communications promote cross-boundary transparency and enable boundary-crossing exchanges, internal and external workers can develop levels of trust to support co-experimentation and co-creation of new products.

At this stage, organizations still experience some inconsistency as mindsets, practices and resources evolve at different rates. New tensions can emerge as the result of unforeseen digital possibilities. For example, some roles may be marginalized or reconfigured through digitization.

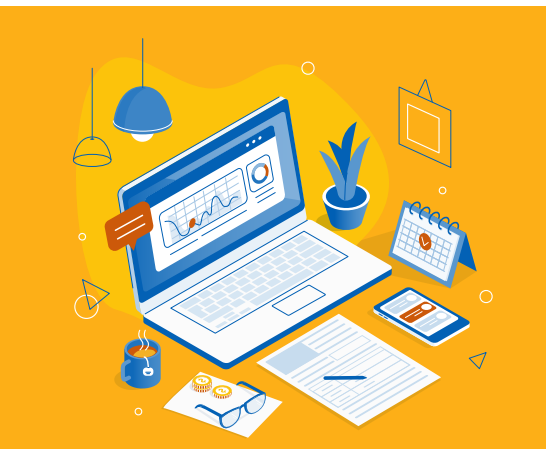
Overall, however, organizations at this stage of transition have established a base of digital mindsets, practices and resources to underpin and reinforce their digital capability building.

Stage 3: On the threshold of digital mastery — benefitting from highly aligned digital mindsets, practices and resources

Organizations on the threshold of digital mastery benefit from the full alignment of digital resources, practices and mindsets. A digital-first mindset prevails, and a robust digital platform has become the foundation for all business processes. Important and well-established practices include agile experimentation, using both manual and digital tools, and collaboration with internal and external resources to take quick advantage of new business opportunities. Systematic data analysis routinely precedes important decisions.

Organizational structures are fluid and complemented by an appreciation for boundary crossing and community building among customers, employees, partners, and other members of the organization's digital ecosystem. Despite an intense focus on speed and scale, the value of uniquely human expertise is still recognized, and integrity remains an important pillar of the human side of the organization. In addition, information transparency drives further consistency in the attitudes, values and behaviors towards all organization stakeholders.

At this stage of transition, organizations' digital mastery is evident in their dexterity, flexibility, fluidity and self-awareness as they respond to digital opportunities. At the same time, they remain mindful that becoming digital is an ongoing journey.



4 tips for leadership while undergoing digital transformation

As a leader at any level of an organization, recognize that you're not alone in experiencing uncertainty, inconsistency, or dissonance in your digital journey. This is not a linear process. Here are some themes to help successfully transition your organization and keep it moving forward.

1 Lead with the focus on your customers.

Seek tangible and visible opportunities to use digital tools or techniques to solve a customer need. Start small and try for quick customer successes.

2 Follow the energy.

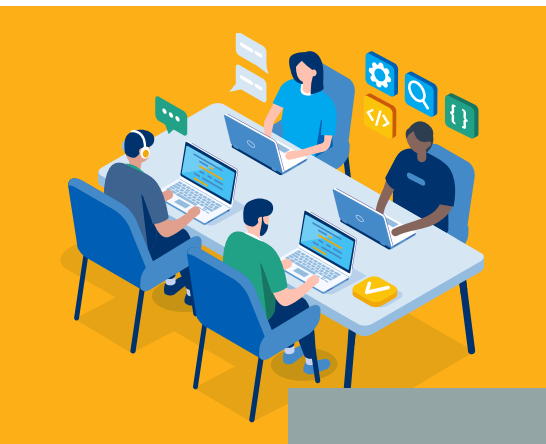
In some companies, the adoption of new beliefs can drive behavioral change but, in many settings, the reverse is easier. Introducing new practices is more likely to shift ways of thinking. Set clear expectations for the digital behaviors you want, visibly model these, and require others to practice them as well.

3 Use your digital technologies to get practical, short-term wins internally, too.

For some companies, streamlining operations may be most urgent. For others, the greatest benefit may lie in strengthening collaboration or in making critical information more readily accessible.

3 Leverage digital-enabled learning and leadership development resources to quickly update operational and management skills.

Your goal is to develop more leaders who recognize and can use digital capabilities to address future customer needs.



The path from traditional to digital modes of organizing is typically not intuitive to organizational leaders steeped in the more control-oriented practices of bureaucratic firms. This paper has presented a research-based framework of the elements and stages of the digital transformation journey. Leaders can use these insights to diagnose where they are on their digital journey and to decide on logical next steps as they attempt to transform their organizations to operate effectively in an intensively digital (and digitized) world.



Dr. Deborah Soule

Dr. Soule conducts research on the interaction between technology and organizations, with particular attention to the dynamics of learning, collaboration and change. She has over 15 years of experience leading research and development projects in both industrial and academic settings, including MIT and Harvard, plus ten years of client-facing responsibility as an organizational and technical subject matter expert. Earlier in her career, she worked on product development programs for a large chemical company in Europe.

¹ At MIT, we conducted a multi-method study to investigate the experience of digital transformation from an organizational perspective. Our qualitative study revealed that iterative shifts in mindsets, key practices and critical enabling tools help to move traditional organizations toward becoming digital organizations. Our quantitative studies confirmed relationships between these characteristics and important organizational performance outcomes. Findings from this research are summarized in: *Fostering a Digital Organization: building sustainable digital advantage in traditional companies*, Deborah Soule and George Westerman, MIT IDE Research Brief Vol. 2016/08- <https://bit.ly/2JMKxmF>

² As part of our qualitative research, we interviewed 45 senior representatives of 27 organizations from different industries and sectors.

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