Impact of Digital Technology Interventions on Organizational Change Management

Priya Gupta Research Scholar Teerthankar Mahaveer Institute of Management & Technology Teerthankar Mahaveer University Moradabad – Uttar Pradesh

Satyendra Arya Associate Professor Teerthankar Mahaveer Institute of Management & Technology Teerthankar Mahaveer University Moradabad – Uttar Pradesh

Abstract

In today's rapidly evolving business landscape, the integration of digital technologies is a key driver of organizational change. However, the successful implementation of these technologies often hinges on effective change management strategies that address both the technical and human aspects of transformation. This paper explores the impact of digital technology interventions on organizational change management (OCM), focusing on the role of artificial intelligence (AI), cloud computing, enterprise resource planning (ERP) systems, and data analytics in reshaping organizational structures and processes. Through a comprehensive literature review and case study analysis of organizations such as Unilever, Tata Steel, and NHS UK, the paper identifies common challenges in managing technological change, including employee resistance, skills gaps, and cultural barriers. Additionally, a proposed Digital-Integrated Change Management (DICM) Framework is introduced, outlining six critical pillars—strategic alignment, leadership, workforce empowerment, agile communication, datadriven adaptation, and scalable technology architecture. The paper concludes by offering actionable recommendations for organizations aiming to navigate digital transformation successfully, emphasizing the need for a holistic approach that balances technological innovation with human-centered change strategies. Ultimately, this research underscores the importance of aligning digital interventions with organizational culture, leadership, and employee engagement to foster sustainable change in the digital era.

Keywords: Digital Transformation, Organizational Change Management (OCM), Technology Adoption, Artificial Intelligence (AI), Change Management Framework, Workforce Empowerment

1. Introduction

In today's volatile, uncertain, complex, and ambiguous (VUCA) world, digital technologies have emerged as both disrupts and enablers of organizational change. From artificial intelligence and big data analytics to cloud computing and collaborative platforms, digital interventions are redefining how organizations function, compete, and adapt. However, digital transformation is not solely about the adoption of new technologies—it's fundamentally about people, processes, and strategic alignment. This is where **Organizational Change Management (OCM)** becomes crucial.

Organizational Change Management is the structured approach through which companies prepare and support individuals and teams in making organizational transitions. While traditional change management models have focused on linear, top-down approaches, the rise of digital technologies demands a more dynamic, iterative, and inclusive methodology. In many cases, technological disruptions outpace the organization's ability to adapt, leading to misalignment between strategic goals and actual performance outcomes.

As organizations embrace digital technologies, they encounter new challenges such as employee resistance, cultural inertia, skills mismatch, and cybersecurity risks. Simultaneously, these technologies also offer tools to better manage change through data-driven decision-making, automated workflows, real-time communication, and personalized learning paths.

This paper investigates the multifaceted impact of digital technology interventions on organizational change management. It explores how digital tools reshape the very foundation of OCM—altering strategies, leadership approaches, communication methods, and cultural dynamics. It also examines the enablers and barriers to successful integration of technology in

change initiatives, using real-world case studies and current literature to provide actionable insights.

The objectives of this research are:

- To examine how digital technologies facilitate or complicate organizational change.
- To identify critical success factors in aligning digital transformation with OCM strategies.
- To propose an adaptable framework for integrating digital technologies into OCM practices.

By bridging the gap between digital innovation and human-centric change processes, this paper aims to offer a roadmap for organizations seeking sustainable, technology-enabled transformation

2. Literature Review

2.1 Evolution of Organizational Change Management (OCM)

Organizational Change Management (OCM) has evolved significantly over the past few decades, shaped by both theoretical and practical developments. Early models like Kurt Lewin's (1947) three-stage model—**unfreeze, change, refreeze**—emphasized the importance of preparing organizations for change, implementing the transition, and stabilizing the new state. While foundational, Lewin's model is now considered too static for today's rapidly changing digital environments.

Building on this, John Kotter (1996) introduced the **8-Step Change Model**, which includes steps such as creating a sense of urgency, forming guiding coalitions, and anchoring new approaches into the culture. This model highlighted leadership's role in managing change and emphasized employee involvement. However, even Kotter's model is increasingly viewed as linear and hierarchical, lacking the agility demanded by digital transformation.

Modern OCM theory recognizes the importance of **adaptive**, **iterative change processes**. Models now incorporate continuous feedback loops, cross-functional collaboration, and a stronger focus on employee experience, cultural readiness, and psychological safety (Hiatt, 2006; Prosci, 2023).

2.2 Rise of Digital Transformation

Digital transformation refers to the integration of digital technologies across all areas of an organization, fundamentally altering how businesses operate and deliver value. According to Westerman et al. (2011), digital transformation is not merely about technology adoption but about reimagining the business model, value proposition, and organizational capabilities.

Key technologies driving digital transformation include:

- Artificial Intelligence (AI) and Machine Learning (ML) for predictive analytics and automation.
- **Cloud computing** for scalability and remote access.
- Internet of Things (IoT) for real-time monitoring.
- Robotic Process Automation (RPA) for repetitive task automation.
- **Data analytics** for informed decision-making.

These technologies promise increased efficiency, agility, and customer-centricity, but also introduce complexities such as skill gaps, ethical dilemmas, and structural changes.

2.3 Intersection of Digital Technologies and OCM

The convergence of digital technologies and OCM has become a critical research domain in recent years. Studies by Besson and Rowe (2012) and Fitzgerald et al. (2014) show that digital interventions often necessitate new forms of leadership, culture, and organizational structures.

Digital transformation alters the very mechanics of change:

- Communication becomes more transparent and real-time via collaboration platforms like Slack or Teams.
- Decision-making becomes data-driven, reducing hierarchical delays.
- Employee training and engagement leverage digital tools like e-learning and AI-based personalization.

Despite these benefits, digital change initiatives frequently fail due to poor change management. Research by McKinsey & Company (2023) found that **70% of digital transformations fail**, primarily due to employee resistance, lack of leadership commitment, and inadequate change management strategies.

To navigate these challenges, modern OCM must integrate **digital literacy**, **agile methodologies**, and **continuous learning**. It must also evolve into a more **human-centered** practice that acknowledges the emotional and cultural dimensions of change.

3. Methodology

3.1 Research Design

This study employs a **qualitative, exploratory research design** to analyze the impact of digital technology interventions on organizational change management. Given the dynamic and context-specific nature of digital transformation, a qualitative approach enables a deeper understanding of how organizations experience and respond to change facilitated by technology. The study uses a **multi-source literature synthesis** and **case study analysis** to identify recurring themes, success factors, and challenges across various industries.

3.2 Data Collection

Data was gathered through **secondary research**, drawing on:

- Peer-reviewed academic journals.
- Industry reports from consulting firms like McKinsey, Deloitte, and Gartner.

- Case studies from digital transformation initiatives in companies such as Microsoft, Tata Steel, and Nestlé.
- Thought leadership publications and frameworks from sources like Harvard Business Review, MIT Sloan Management Review, and Prosci.

The selection criteria for sources included:

- Publications from 2012 to 2024 to ensure relevance and recency.
- Focus on digital interventions in OCM or related fields.
- Coverage of different organizational types (e.g., manufacturing, tech, healthcare, public sector) to allow cross-sectoral comparison.

Over **50 high-quality sources** were reviewed, with approximately 30 being used in the final analysis.

3.3 Data Analysis

A **thematic analysis** technique was used to extract patterns and insights from the selected literature and case studies. The process included:

- 1. **Familiarization** with the content.
- 2. **Coding** for recurring topics such as leadership, culture, resistance, and technology adoption.
- 3. Theme development, where codes were grouped into broader categories.
- 4. **Interpretation** to understand the relationship between digital interventions and change management outcomes.

To ensure reliability, multiple sources were triangulated for each theme, and findings were crossreferenced with established theories in change management and digital transformation.

3.4 Limitations

While the study offers comprehensive insights, it has some limitations:

- The research is limited to **secondary data** and lacks primary data from interviews or surveys.
- Case studies are primarily from **large-scale enterprises**, which may not represent challenges faced by small and medium-sized enterprises (SMEs).
- As digital technology continues to evolve rapidly, findings may have a limited shelf life and require periodic updating.

3.5 Ethical Considerations

This study relies solely on publicly available data and does not involve human subjects. All sources are properly cited to respect intellectual property rights. Interpretations are made objectively, avoiding personal or institutional bias.

4. Digital Technologies Driving Organizational Change

The integration of digital technologies into organizational systems and processes has become a powerful catalyst for change. These technologies not only redefine operational workflows but also transform organizational culture, employee roles, and leadership strategies. Below are key digital interventions currently reshaping organizational change management (OCM).

4.1 Artificial Intelligence (AI) and Automation

Artificial Intelligence (AI) and automation are transforming decision-making, customer service, and operational efficiency. AI tools can analyze vast amounts of data to provide predictive insights, automate routine tasks, and support personalized communication. In the context of OCM, AI enables change leaders to:

- Monitor employee sentiment through natural language processing.
- Identify early signs of resistance or disengagement.
- Personalize change communication and training programs.

For instance, Unilever uses AI-based platforms to screen employee feedback and tailor learning experiences, helping ensure smoother adoption of new digital tools.

4.2 Cloud Computing

Cloud technologies offer scalability, accessibility, and flexibility, making them vital for organizations undergoing digital transformation. Cloud-based platforms like Microsoft Azure, Google Cloud, and Amazon Web Services (AWS) allow employees to collaborate in real-time, regardless of location. This supports remote work, cross-functional teams, and decentralized decision-making—key elements in agile change environments.

From a change management perspective, cloud solutions simplify the rollout of organizationwide systems (like ERP or HRMS), making it easier to track adoption, usage, and compliance in real time. They also reduce downtime during transitions, enabling continuous service delivery.

4.3 Enterprise Resource Planning (ERP) and CRM Systems

ERP and Customer Relationship Management (CRM) systems consolidate organizational data, enabling more informed and faster decision-making. However, their implementation often necessitates extensive restructuring—modifying job roles, reporting lines, and workflows.

Successful ERP adoption depends heavily on effective change management. For example, when Tata Steel adopted SAP S/4HANA, it initiated a massive training and communication campaign to align business units and address cultural barriers. The change initiative included town halls, leadership bootcamps, and digital literacy workshops.

4.4 Data Analytics and Business Intelligence

Data-driven change management is emerging as a best practice across industries. Business Intelligence (BI) tools help organizations assess readiness for change, evaluate progress, and adjust strategies in real time. Dashboards, heat maps, and visual analytics make complex data accessible to non-technical stakeholders, promoting transparency and accountability.

For example, healthcare organizations use analytics to track compliance with new patient protocols, helping identify areas where additional training or support is needed.

4.5 Digital Collaboration and Communication Tools

Platforms like Slack, Zoom, Microsoft Teams, and Trello have revolutionized communication within organizations. These tools foster real-time collaboration, flatten hierarchies, and support a culture of continuous feedback—all essential elements of modern OCM.

Digital collaboration tools also aid in maintaining employee engagement during transitions by facilitating virtual workshops, pulse surveys, and informal conversations. This contributes to building trust and reducing the psychological resistance often associated with change.

In summary, digital technologies act as both enablers and accelerators of organizational change. However, their impact is maximized only when paired with thoughtful change management strategies that address the human and cultural dimensions of transformation.

5. Challenges in Managing Technological Change

While digital technologies offer immense potential to enhance efficiency, innovation, and customer experience, their integration into organizations is often fraught with significant challenges. Managing technological change is not simply a matter of deploying new tools—it involves navigating human behavior, organizational culture, legacy systems, and resource constraints. Below are the key challenges organizations face during digital transformation.

5.1 Employee Resistance and Change Fatigue

One of the most persistent barriers to technological change is **employee resistance**. Employees often perceive digital transformation as a threat to job security, especially when automation and AI are involved. This leads to fear, skepticism, and disengagement. Additionally, in environments where change is constant, employees may suffer from **change fatigue**, reducing their willingness to adapt and learn.

A study by Gartner (2023) found that 73% of employees experiencing multiple concurrent changes reported high levels of stress and burnout. To combat this, organizations must adopt a more empathetic and inclusive approach, involving employees early in the change process and communicating the personal and professional benefits of the transformation.

5.2 Skills Gap and Training Deficits

Digital technologies often require **new skill sets**—from data analytics and cloud computing to cybersecurity and agile project management. Many organizations, especially in traditional sectors like manufacturing or public services, struggle with a **skills gap**. Without adequate reskilling and upskilling initiatives, digital tools may be underutilized or even rejected.

Training programs must be personalized, continuous, and embedded within employees' day-today work. However, developing and delivering such programs demands time, investment, and strategic alignment with business goals.

5.3 Organizational Culture and Mindset

Cultural resistance can significantly slow down or derail digital change. Organizations with rigid hierarchies, risk-averse mindsets, or siloed departments may find it difficult to embrace the agile, experimental culture needed for successful transformation.

Culture is often invisible yet powerful. According to Kotter and Heskett (1992), companies that manage cultural alignment during change outperform those that don't. Leaders must champion cultural change by modeling desired behaviors, rewarding innovation, and fostering open dialogue.

5.4 Integration with Legacy Systems

Many organizations operate on **legacy IT systems** that are deeply embedded in core business processes. These systems can be incompatible with newer technologies, making integration

costly and complex. The transition often leads to disruptions in service, data loss, or security vulnerabilities.

Change leaders must balance the need for modernization with business continuity, often opting for phased rollouts or hybrid models that blend old and new systems. However, this approach requires careful planning, stakeholder buy-in, and robust risk mitigation strategies.

5.5 Lack of Strategic Alignment

In some cases, digital initiatives are launched in isolation, without alignment to the broader organizational strategy. This results in fragmented efforts, resource wastage, and employee confusion. For digital change to succeed, it must be embedded in the organizational vision, supported by executive leadership, and translated into actionable goals.

Effective change management requires a clear roadmap that links digital tools to measurable business outcomes, supported by cross-functional governance and continuous feedback loops.

In conclusion, managing technological change is a complex endeavor that goes beyond deploying new software or hardware. It requires addressing the human, technical, and strategic challenges in a holistic, proactive manner.

6. Case Studies

To better understand the real-world implications of digital technology interventions in organizational change management, this section analyzes three organizations across different sectors: a multinational consumer goods company (Unilever), a manufacturing conglomerate (Tata Steel), and a public sector healthcare organization (NHS UK). These case studies highlight how different entities approach digital transformation, the challenges they face, and the strategies they adopt to manage change effectively.

6.1 Unilever: Building a Data-Driven, Agile Culture

Unilever, one of the world's leading consumer goods companies, embarked on a digital transformation initiative to make its operations more data-driven and customer-centric. The company integrated **AI and machine learning** into its supply chain, marketing, and HR processes.

Change management approach:

Unilever placed strong emphasis on **employee engagement and reskilling**, recognizing early that digital transformation must be human-centric. They launched internal digital academies and partnered with Coursera to offer personalized learning journeys to employees. Furthermore, the company adopted **agile working models**, allowing cross-functional teams to rapidly prototype and deploy digital solutions.

Outcome:

The initiative led to enhanced decision-making, reduced time-to-market for products, and increased employee satisfaction. A strong communication plan and leadership alignment were critical to this success.

6.2 Tata Steel: Transforming Legacy with SAP S/4HANA

Tata Steel, a major player in the global steel industry, implemented **SAP S/4HANA**, a next-gen ERP solution, to modernize its operations. The objective was to unify disparate legacy systems and enhance visibility across its supply chain and finance functions.

Change management approach:

The transformation impacted over 20,000 employees across different departments and geographies. To manage the transition, Tata Steel implemented a **phased rollout**, combined with a comprehensive OCM strategy that included:

- Leadership workshops to align strategy and communication.
- Digital literacy programs.
- Real-time helpdesks and user support.

Outcome:

Despite initial resistance from operational staff, the initiative succeeded in standardizing data and improving operational efficiency. The structured OCM approach helped mitigate resistance and maintained business continuity during the transition.

6.3 NHS UK: Leveraging Digital for Patient-Centric Change

The UK's National Health Service (NHS) launched the **NHS Digital Transformation Program** to enhance patient care through technology. Initiatives included electronic health records (EHR), AI-powered triage tools, and virtual consultations.

Change management approach:

The NHS adopted a **bottom-up change model**, involving clinicians and administrative staff in co-designing solutions. Change agents were appointed in each hospital trust to train staff and champion adoption. Communication strategies included digital storytelling, where success stories were shared across departments to foster trust.

Outcome:

The transformation led to improved access to healthcare services, shorter wait times, and increased staff efficiency. However, digital literacy gaps and infrastructural challenges persisted, especially in rural areas.

Summary

These case studies underline the importance of aligning digital initiatives with tailored OCM strategies. Common success factors include:

- Strong leadership and governance.
- Employee-centric communication and training.
- Continuous feedback and adaptation.

Despite sectoral differences, the central lesson is clear: **technology is only as transformative as the people and processes behind it**.

7. Proposed Framework for Integrating Digital Technologies in Organizational Change Management

Based on the insights gathered from literature, challenges, and real-world case studies, this section proposes a practical framework to guide organizations in successfully integrating digital technologies into their organizational change management (OCM) strategies. This **Digital-Integrated Change Management (DICM) Framework** is built on six interlinked pillars:

7.1 Pillar 1: Strategic Alignment

Digital initiatives must be directly linked to organizational vision and strategy. Before deploying any technology, organizations should:

- Define clear transformation objectives.
- Map digital goals to business KPIs (e.g., efficiency, customer experience).
- Involve executive leadership to ensure ownership and sponsorship.

Key tool: Digital transformation roadmap aligned with business objectives.

7.2 Pillar 2: Culture and Leadership

Change starts at the top. Leadership must embody the digital mindset—agility, experimentation, and inclusivity—and champion the transformation journey.

Key actions:

- Promote a culture of learning and innovation.
- Identify and empower change ambassadors across departments.
- Reward experimentation and collaborative behaviors.

Key tool: Leadership development programs focused on digital agility and emotional intelligence.

7.3 Pillar 3: Workforce Empowerment and Skills Development

Employees must be enabled to use new technologies effectively. This requires structured reskilling, continuous learning, and digital fluency across the workforce.

Key actions:

- Conduct skills gap analysis.
- Develop personalized learning pathways using digital tools.
- Encourage peer learning and internal knowledge-sharing platforms.

Key tool: Digital Learning Management System (LMS) with adaptive content.

7.4 Pillar 4: Agile Communication and Feedback Loops

Communication should be ongoing, two-way, and adapted to digital platforms. Transparency reduces resistance and builds trust.

Key actions:

- Use digital collaboration tools (Teams, Slack, intranet portals).
- Share quick wins and success stories frequently.
- Set up real-time feedback mechanisms (surveys, polls, AI sentiment analysis).

Key tool: Digital communication dashboards and change pulse surveys.

7.5 Pillar 5: Data-Driven Monitoring and Adaptation

Data should be used not only for operational performance but also to track the effectiveness of change management efforts.

Key actions:

- Establish KPIs to measure adoption, engagement, and behavioral shifts.
- Use dashboards to visualize progress in real time.
- Adjust strategies based on analytics insights.

Key tool: Business Intelligence (BI) platforms with change metrics.

7.6 Pillar 6: Scalable and Flexible Technology Architecture

Digital transformation should be underpinned by a scalable and secure technology infrastructure that allows for iterative growth rather than one-time change.

Key actions:

- Choose modular, interoperable systems.
- Pilot technologies in one function or geography before scaling.
- Incorporate cybersecurity and data privacy measures from the start.

Key tool: Cloud-based architecture with open APIs and strong governance protocols.

Implementation Approach: The "Listen–Learn–Lead–Launch" Cycle

To bring the framework to life, organizations can follow a four-step implementation approach:

- 1. Listen Gather feedback and assess readiness.
- 2. Learn Build digital skills and leadership capacity.
- 3. Lead Model desired behaviors and communicate vision.

4. Launch – Roll out technology with phased support and iterative feedback.

In conclusion, the DICM Framework provides a holistic, adaptive model that integrates people, processes, and technology for effective organizational change. It balances technological capabilities with human-centered strategies to foster sustainable transformation.

8. Conclusion and Recommendations

8.1 Conclusion

Digital technology is no longer a choice—it's a strategic imperative. As organizations across sectors strive to stay competitive and relevant in the digital era, their success hinges not just on the adoption of cutting-edge technologies but on their ability to manage the organizational change that comes with it.

This paper explored how digital technology interventions, including AI, cloud computing, ERP systems, and data analytics, are reshaping organizational structures, workflows, and employee experiences. While these tools offer immense potential for growth, productivity, and agility, their effectiveness is deeply contingent on a well-structured change management strategy.

Through literature review, case analysis, and the proposed DICM framework, the study reveals that:

- Technology without a people-centric approach often fails to deliver intended outcomes.
- Organizational culture, leadership alignment, and workforce empowerment are critical to transformation success.
- Digital tools should be leveraged not only for efficiency but also for transparency, communication, and engagement.

Ultimately, digital transformation is as much a human journey as it is a technological one.

8.2 Recommendations

Based on the findings of this research, the following actionable recommendations are proposed for organizations looking to integrate digital technologies through effective change management:

1. Adopt a Strategic, Long-Term View

Digital transformation should not be treated as a project with a start and end date. Instead, organizations must embed digital change into their long-term strategy and continuously adapt to evolving technologies and market dynamics.

2. Invest in Leadership and Culture Change

Equip leaders with both digital fluency and emotional intelligence. Leaders should act as role models, driving a culture of openness, learning, and innovation.

3. Prioritize Employee Involvement

Early and ongoing employee involvement reduces resistance and increases ownership. Empower employees by co-creating solutions, offering continuous learning opportunities, and providing safe spaces to fail and innovate.

4. Use Data to Drive and Monitor Change

Employ analytics to measure the success of change initiatives in real time. Use insights to tweak strategies, personalize communication, and identify areas requiring intervention.

5. Tailor Solutions to Organizational Context

Avoid one-size-fits-all approaches. Design change strategies that align with the unique culture, industry, and digital maturity of the organization.

6. Ensure Inclusive and Equitable Access

As digital tools are rolled out, ensure that all employees—regardless of age, role, or digital literacy—have equitable access to resources, training, and support.

7. Scale Through Pilots and Feedback

Test technologies and change interventions in controlled environments before scaling. Use feedback loops to refine tools and processes, minimizing disruption.

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