
Digital Transformation in Healthcare: Balancing Innovation and Challenges



KPMG's *Global Tech Report: Healthcare Insights* highlights the ongoing digital transformation in the healthcare sector, which is driven by technological advancements, data integration and artificial intelligence. These innovations offer opportunities to enhance patient experiences, improve operational efficiency and reduce costs. However, healthcare organisations face several challenges, including cyber security risks, workforce shortages and difficulties in managing data effectively. Striking a balance between innovation and sustainability is essential for maximising the benefits of digital transformation while addressing these obstacles.

Strengthening Healthcare's IT Foundations

Healthcare organisations often operate on outdated IT infrastructures that create inefficiencies and disrupt business operations. According to KPMG's research, 57% of healthcare technology leaders report that flaws in enterprise IT systems cause disruptions on a weekly basis. These inefficiencies affect critical processes such as electronic health records, patient discharge systems and revenue cycle applications. Ensuring the stability of these foundational systems is crucial to maintaining patient safety and operational continuity.

Additionally, healthcare organisations face transformation fatigue, with more than one-third of technology leaders expressing concerns about the sector's ability to sustain long-term digital transformation efforts. Skills shortages further complicate these challenges, particularly in the fields of AI development, data science and system integration. Many organisations lack the maturity needed to develop and test AI algorithms effectively, and IT professionals with expertise in configuring complex healthcare systems are in high demand. To address these barriers, healthcare leaders must prioritise investments that enhance IT resilience, integrate digital transformation with existing systems and ensure staff have the necessary skills to manage and implement new technologies effectively.

Scaling Enterprise-Level Value from Data and AI

AI adoption in healthcare is progressing, with 66% of surveyed technology leaders stating that their organisations derive business value from AI applications. AI is being leveraged in various use cases, such as pattern recognition for diagnostics and treatment planning. However, despite these advancements, healthcare lags behind other industries in using AI to improve operational efficiency. Many repetitive administrative tasks remain unautomated, representing a missed opportunity to alleviate workforce pressures and improve productivity.

Another critical issue is the slow adoption of cloud and XaaS (Anything-as-a-Service) technologies in healthcare. While other industries benefit from cloud computing's scalability and efficiency, healthcare organisations remain cautious due to concerns over data security and regulatory compliance. This hesitancy limits the sector's ability to improve interoperability, enhance data management and streamline processes. Without clear regulatory guidelines on cloud data security, many organisations struggle to advance their digital transformation efforts.

Recommended Read: [*The Future of Global Healthcare: Challenges and Opportunities*](#)

KPMG's research highlights that healthcare organisations must shift from isolated AI applications to a more integrated, enterprise-wide approach. While AI has demonstrated success in specific areas, its full potential remains unrealised due to inconsistent implementation across organisations. A strategic focus on scaling AI adoption, improving interoperability and ensuring compliance with security regulations will be crucial in unlocking greater value from technology investments.

Maintaining Patient and Stakeholder Trust

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Cyber security remains a top priority for healthcare organisations as they navigate digital transformation. The sector is highly vulnerable to cyber threats such as ransomware attacks and data breaches, with many organisations struggling to implement robust security measures. Outdated security frameworks, complex IT ecosystems and inconsistent security standards across vendors exacerbate these risks. KPMG's research indicates that 70% of healthcare technology leaders integrate cybersecurity considerations into early project planning, reflecting the sector's increasing focus on security.

To strengthen cyber resilience, healthcare organisations are exploring Web3 technologies, including blockchain and tokenisation. These technologies provide enhanced security by ensuring data immutability and controlled access to sensitive information. Additionally, many healthcare organisations are adopting DevSecOps practices, which embed security into every phase of technology development. Nearly half of surveyed healthcare organisations now implement DevSecOps strategies, surpassing other industries in proactive security measures. These efforts are essential in maintaining patient trust, complying with regulatory standards and protecting sensitive healthcare data from emerging cyber threats.

Healthcare's digital transformation presents significant opportunities for improving patient care, optimising operations and reducing costs. However, the sector must overcome challenges related to IT infrastructure, workforce capabilities, AI integration and cybersecurity. Strengthening IT foundations, expanding AI applications beyond isolated use cases and prioritising security measures will help healthcare organisations extract greater value from their technology investments. By adopting a strategic and evidence-based approach to digital innovation, healthcare leaders can enhance operational resilience, improve patient outcomes and build a more sustainable and secure healthcare ecosystem.

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