

Strategies for Sustainable IT Management in Healthcare



Technical debt, a challenge faced by organisations across all industries, is particularly complex in the healthcare sector. This refers to the inefficiencies and costs incurred when outdated IT systems remain in use instead of being retired or upgraded. The increasing frequency of mergers and acquisitions (M&A) further compounds the issue for hospitals and health systems. These transactions often bring an influx of inherited systems that add to the technical debt burden. Effectively managing this issue is crucial for ensuring operational efficiency, data security and continued innovation in healthcare delivery.

Assessing the Software Landscape

Hospitals depend on hundreds, sometimes thousands, of IT applications to support patient care, manage financial operations and oversee infrastructure. Over time, many of these systems become outdated or redundant, but they remain operational due to historical data needs or compatibility issues with newer technologies. Understanding the full scope of the current and historical software landscape is an essential first step in managing technical debt.

This task is particularly challenging in healthcare because different systems often serve specialised purposes. For example, diagnostic imaging software may be used exclusively by radiologists, making it easier to overlook during assessments. Additionally, older Picture Archiving and Communication Systems (PACS) or other legacy software may persist in isolated departments despite the implementation of newer, more efficient solutions.

During M&A transactions, the complexity increases. Acquiring organisations inherit the IT systems of the acquired entity, which may include numerous overlapping or incompatible applications. A comprehensive audit of the software landscape is essential to identify redundancies, determine which systems should be integrated and decide which ones to retire. Although this process is time-consuming, it is crucial for reducing inefficiencies, minimising risk and ensuring a seamless transition.

Establishing Data Retention Policies

Healthcare organisations must comply with stringent data retention requirements, which can vary widely based on regulations, the type of data and operational needs. For example, medical records are often required to be retained for a decade or more after a patient's last encounter, and for minors, this timeframe can extend well beyond adulthood. Similarly, financial and operational data may need to be preserved for regulatory compliance or organisational purposes for up to 10 years or more.

Beyond regulatory compliance, data in healthcare is increasingly seen as a strategic asset. The growing use of artificial intelligence and data analytics highlights the importance of preserving patient and operational data. These datasets can be used to uncover trends, improve treatment outcomes and inform strategic decision-making. Establishing clear data retention policies ensures that critical information remains accessible while enabling the organisation to retire outdated systems without risking the loss of valuable data.

By defining these policies early, healthcare organisations can guide thoughtful decisions about data migration and system retirement. Retention policies should consider not only legal and regulatory requirements but also organisational goals and future data needs. This clarity helps organise archiving efforts and ensures alignment with broader strategic objectives.

Building Archiving Competency

Managing technical debt in healthcare requires a robust and proactive archiving strategy. While many organisations prioritise the archiving of high-value systems such as electronic health records (EHRs) or financial applications, smaller, older systems are often neglected. These neglected systems can pose significant risks, particularly if they are no longer supported by vendors and lack the latest security updates.

A comprehensive approach to archiving involves recognising the importance of all systems, regardless of their size or perceived value. Each application may contain critical historical data or have dependencies that impact broader system operations. By systematically archiving outdated systems, healthcare organisations can reduce vulnerabilities, free up IT resources and ensure compliance with data retention policies.

Building this competency does not necessarily require extensive in-house expertise. Partnering with experienced archive vendors can be an effective solution. These partners can provide the technical expertise needed to prioritise systems, manage data transfers and ensure security compliance. They also help organisations navigate the complexities of archiving during M&A transactions, where timelines for system migration are often tight. This approach allows healthcare organisations to address technical debt efficiently while focusing their internal resources on core operations.

Technical debt is a significant challenge for hospitals and health systems, particularly in the context of mergers and acquisitions. By thoroughly assessing the software landscape, establishing clear data retention policies and building a robust archiving strategy, healthcare organisations can tackle technical debt effectively. These efforts enhance operational efficiency and security and free up resources for innovation and long-term growth. Managing technical debt is not just about retiring outdated systems but about creating a sustainable foundation for future healthcare advancements.

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