

6 Key IT Challenges in the UK Pharmaceutical Sector



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Introduction

The pharmaceutical industry in the UK is experiencing a transformative phase, driven by technological advancements and evolving regulatory landscapes. However, several IT-related challenges persist. We've compiled six key challenges in the UK pharmaceutical sector:



1. Cybersecurity Threats

Pharmaceutical companies are prime targets for cyberattacks due to the sensitive nature of their data, which includes research and patient data. The sector faces sophisticated cyber threats, including ransomware attacks and industrial espionage. Implementing robust cybersecurity measures is crucial to protect against unauthorised access and data breaches.

For example, in April 2025, cybersecurity researchers disclosed “Resolver RAT,” a new remote access trojan (RAT) which targeted particularly organisations within the healthcare and pharmaceutical industry across Europe. The malware spread via phishing emails which lured staff into downloading and executing .exe files which were named to seem like required driver updates. To mitigate these attacks, it’s crucial to invest in best-in-class malware protection and ensure your staff are trained to spot suspicious activities such as phishing emails.

2. Data Integrity and Compliance

Maintaining data integrity is paramount in the pharmaceutical industry. In the UK, businesses are required to comply with strict standards, including Good Manufacturing Practice (GMP) and Good Clinical Practice (GCP), which involve careful data management and validation. Therefore, it’s imperative to choose an IT service provider to guarantee that your organisation adheres to regulatory standards, ensuring legal and secure operations.

3. Supply Chain Disruptions

The complexity of pharmaceutical supply chain makes the industry vulnerable to disruptions in many areas. Issues such as Brexit-related changes to batch testing requirements have introduced additional complexities, potentially leading to short-to-medium-term disruptions in the availability of medicines. In 2025 BlueVoyant conducted research and found that 98% of UK healthcare and pharmaceutical organisations reported being affected by a cyber incident originating from a third party.

Statistics have shown pharmaceutical companies have faced the longest periods of disruption, with each downtime averaging over 8 hours and losses in some cases leading to an astonishing £5 million per hour.

4. Investment Challenges

The UK's pharmaceutical sector has faced challenges in attracting investment. Research indicates that UK pharmaceutical investment has underperformed against global trends since 2018, with a significant decline in foreign direct investment and a decrease in R&D investment.

Underinvestment could lead pharmaceutical organisations to cut their IT expenditures, and as a result, leading to significantly heightened cyber security risks and amplified concerns surrounding potential unpatched vulnerabilities.



44%

UK healthcare & pharmaceutical companies state they have no way of knowing when a cyber issue arises within one of their third parties.

5. Regulatory and Policy Uncertainty

The pharmaceutical industry operates in a highly regulated environment, with policies and regulations subject to change. Uncertainties surrounding regulatory frameworks can impact strategic planning and decision-making.

Selecting an IT partner that is committed to proactively collaborating with your team during potential regulatory changes. This will help your business to avoid the frantic rush to modify your IT infrastructure and ensure compliance deadlines are met.

Between 2023 and Q1 2025, the UK health sector recorded 3,820 self-reported personal data breaches; the most of any sector.

6. Digital Transformation and Innovation

The adoption of digital technologies, such as Artificial Intelligence (AI) and Machine Learning (ML), is transforming the pharmaceutical industry. While these technologies offer opportunities for innovation, their implementation presents challenges related to data integration, system interoperability, and the need for specialised skills.

Ensuring that your IT infrastructure can support these technologies is essential for leveraging their full potential and mitigating risk.

Recommendations for Addressing IT Challenges

To navigate these challenges, pharmaceutical companies can consider the following strategies:

Enhance Cybersecurity Measures:

Implement advanced cybersecurity protocols, including encryption, multi-factor authentication, and regular security audits, to protect sensitive data.

Invest in IT Infrastructure:

Upgrade legacy systems and invest in scalable IT infrastructure capable of supporting digital transformation initiatives.

Strengthen Data Management Practices:

Adopt robust data management and validation processes to ensure compliance with regulatory standards and maintain data integrity.

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