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NTT DATA | Guy's and St Thomas' and King's College Hospitals

The Apollo Programme: Powering the world's largest Epic implementation in London NHS Trusts

NTT DATA's partnership with Guy's and St Thomas' NHS Foundation Trust and King's College Hospital NHS Foundation Trust in the Apollo Programme, the largest ever single go-live of the Epic Electronic Patient Record (EPR) system worldwide, is a significant milestone in the digital transformation of London's healthcare system.

Supporting more than 40,000 staff, with almost 3,000 beds, and serving 3.6 million citizens, the Apollo Programme, led by the Trusts, introduced the Epic EPR system across their hospital network, marking one of the world's largest Epic implementations. Epic replaces outdated IT and paper records, improving access to patient data. Clinicians access patient information in the Epic application with associated documents presented from the Civica Document Management system in context within Epic.

Guy's and St Thomas' Hospitals, a network of five NHS hospitals in London, together form the largest centre for clinical research in England, with a particular focus on cancer research and treatment at the Guy's Hospital Cancer Centre. St Thomas' Hospital has specialised units for cardiovascular, respiratory, women's services, and more, serving patients across the region for specific illnesses.

King's College Hospital is one of London's foremost teaching hospitals. The hospital offers specialist services that attract patients nationally and internationally, with recognised expertise in liver disease and transplantation, neurosciences, haemato-oncology, and foetal medicine. King's is committed to excellence and compassion in patient care and medical education. Combined, this group of hospitals is amongst the largest in the world.

Introducing a Clinical Patient Document Migration Approach for the Apollo Programme

The Apollo Programme wanted to introduce the Epic EPR system with the embedded Civica platform across the organisations, comprising a vast network of hospitals and community sites in south London. The migration of nearly 100 million clinical patient documents presented a formidable challenge, necessitating meticulous planning, execution, and cross-team collaboration. Tasked with the critical responsibility of this clinical patient document migration, NTT DATA played a pivotal role in supporting the seamless integration of Epic across multiple healthcare facilities.

To help the hospitals migrate these documents efficiently and quickly, NTT DATA designed a comprehensive data and document migration solution tailored to the unique requirements of the Apollo Programme. Leveraging its deep expertise in healthcare IT solutions, NTT DATA orchestrated the transfer of clinical patient documents into the Civica platform so that clinicians can access patient records and relevant documents from within the Epic EPR system. This approach prioritised data integrity, security, and continuity of care, ensuring no disruption to healthcare operations during the transition phase and beyond.

To ensure a smooth migration of clinical documents, NTT DATA worked in collaboration with the NHS teams across the Apollo Programme to:

- **Define Bespoke Inclusion Criteria:** Many of the systems were end of life or unsupported, and there was a high degree of focus on customising the inclusion criteria for documents sourced from these systems.

- **Mitigate Technical and Clinical Risks:** Early-stage risk evaluations focused on the potential impacts of any data loss, corruption, or incompatibility, guiding transformation and testing requirements throughout the project.

- **Engage Stakeholders:** Clinicians, IT professionals, and others were involved in planning, to address technical and clinical needs.

- **Perform Rigorous Data Validation and Testing:** Standardised pre-migration dry runs, and post-migration tests ensured data integrity and system functionality.

- **Conduct Post-Migration Reviews:** Thorough assessments identified unresolved issues early and ensured safe clinical care post-implementation.

Additionally, in the migration project, NTT DATA supported:

Planning and Preparation: Defined objectives, scope, and delivery plan, developed migration tools, and projected timelines accurately.

Business Analysis: Ensured that business requirements were fully understood and clearly defined.

Data Mapping and Analysis: Deployed data architects to align and optimise resources, ensuring seamless integration of complex data ecosystems.

Risk Management: Ensured alignment with clinical safety requirements by contributing to project managers' risk management matrices.

Communication and Engagement: Kept stakeholders informed and engaged throughout the process to address concerns promptly.

System Discovery and Development: Created bespoke software for extraction and transformation of documents from legacy clinical systems.

Execution and Oversight: Managed the migration process carefully, continuously monitoring for issues and adjusting plans to mitigate risks.

Validation and Testing: Supported extensive testing to ensure the new system accurately reflected migrated data and met all clinical requirements without compromising patient safety.

The extraction process implemented by NTT DATA involved gathering metadata for documents within the existing 25 clinical information systems, writing bespoke software, and extracting those documents for transfer to the Civica platform.

Metadata collection helped ensure comprehensive tracking of document attributes crucial for seamless migration. Subsequently, documents were extracted and ready for transfer to the Epic platform.

Throughout this process, all data and progress was logged within an extraction database. This database served as a repository, enabling real-time verification of document status and facilitating seamless cross-referencing throughout the process.

Collaboration Across Partner Organisations on Patient Outcomes

The Apollo Programme's success was largely driven by the seamless collaboration between NTT DATA, NHS clinicians, Civica, Epic, and other Apollo IT partners, fostering a harmonious environment that encouraged shared responsibility among those involved, resulting in the delivery of the biggest ever single go-live of Epic's EPR system anywhere in the world, with agility and pace.

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NTT DATA was an integral part of the Apollo team, supporting the delivery one of the world's largest and most complex clinical systems programmes. Throughout the project, NTT DATA's clinical data migration team demonstrated their expertise, resilience, and dedication. Their professional, collaborative, and agile approach, combined with a deep understanding of healthcare, was pivotal. The team's ability to adopt proactive problem-solving strategies and stringent quality assurance practices ensured the accurate and timely migration of clinical patient data, which was an essential step in making the Apollo Programme a success."

Denis Lafitte
Joint CDIO, Guy's & St. Thomas' FT and King's College Hospital FT.

NTT DATA's Commitment to Advancing Healthcare via Innovative IT Solutions

NTT DATA's execution of document migration services played a pivotal role in the largest ever single go-live of the Epic EPR system within the Apollo Programme. Our approach ensured transparency, accuracy, and efficiency throughout the entire document migration process, playing a key role in the success of the Apollo Programme.

As a result of the Apollo Programme's partnership with NTT DATA, the programme achieved its objectives of enhancing operational efficiency, improving patient care outcomes, and empowering healthcare professionals with a state-of-the-art digital platform.

NTT DATA's partnership with the hospitals exemplifies its capability to deliver mission-critical solutions at massive scale, enabling healthcare organisations to realise their vision of a digitally enabled future. As NTT DATA, alongside the hospitals, celebrate the success of the Apollo Programme, it remains steadfast in its commitment to advancing healthcare through transformative IT solutions.
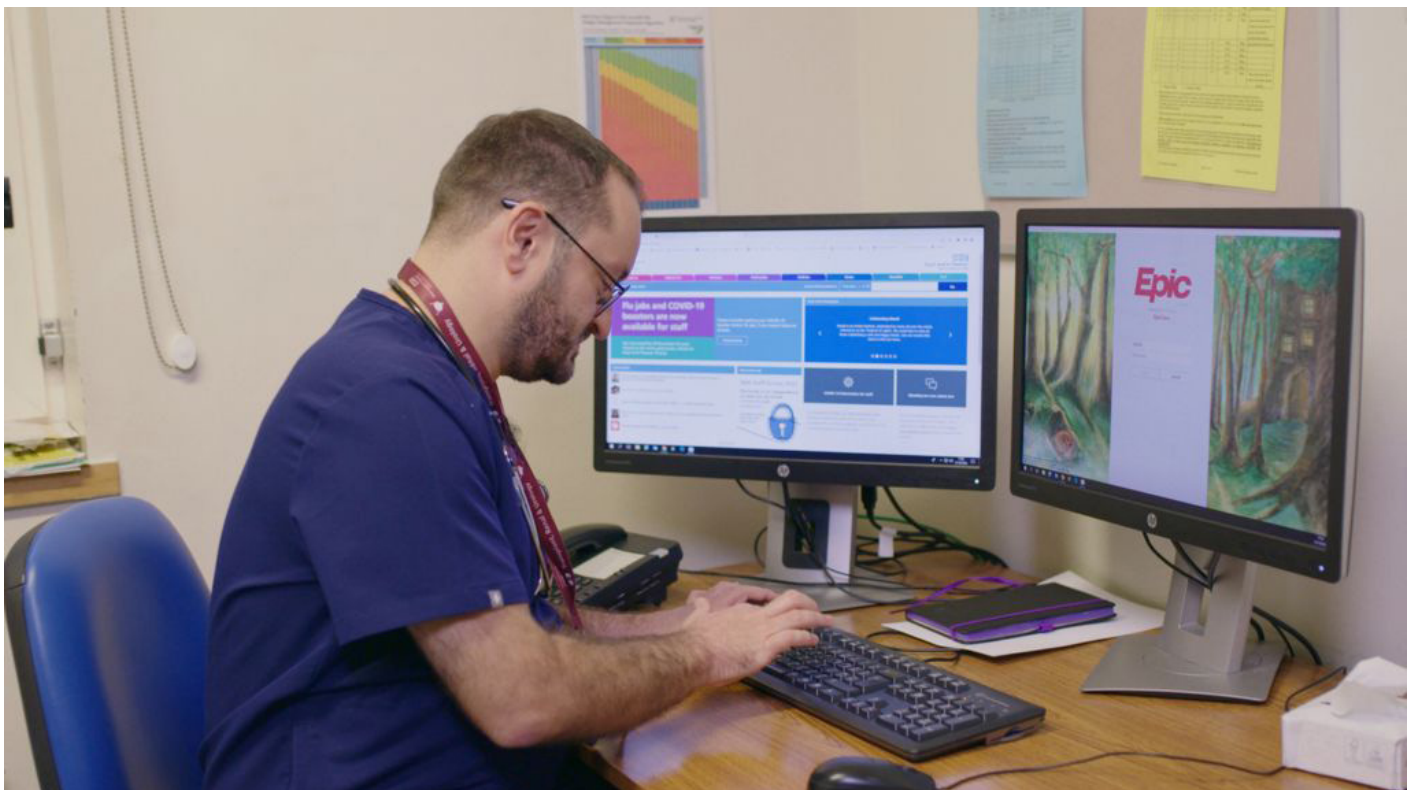
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