

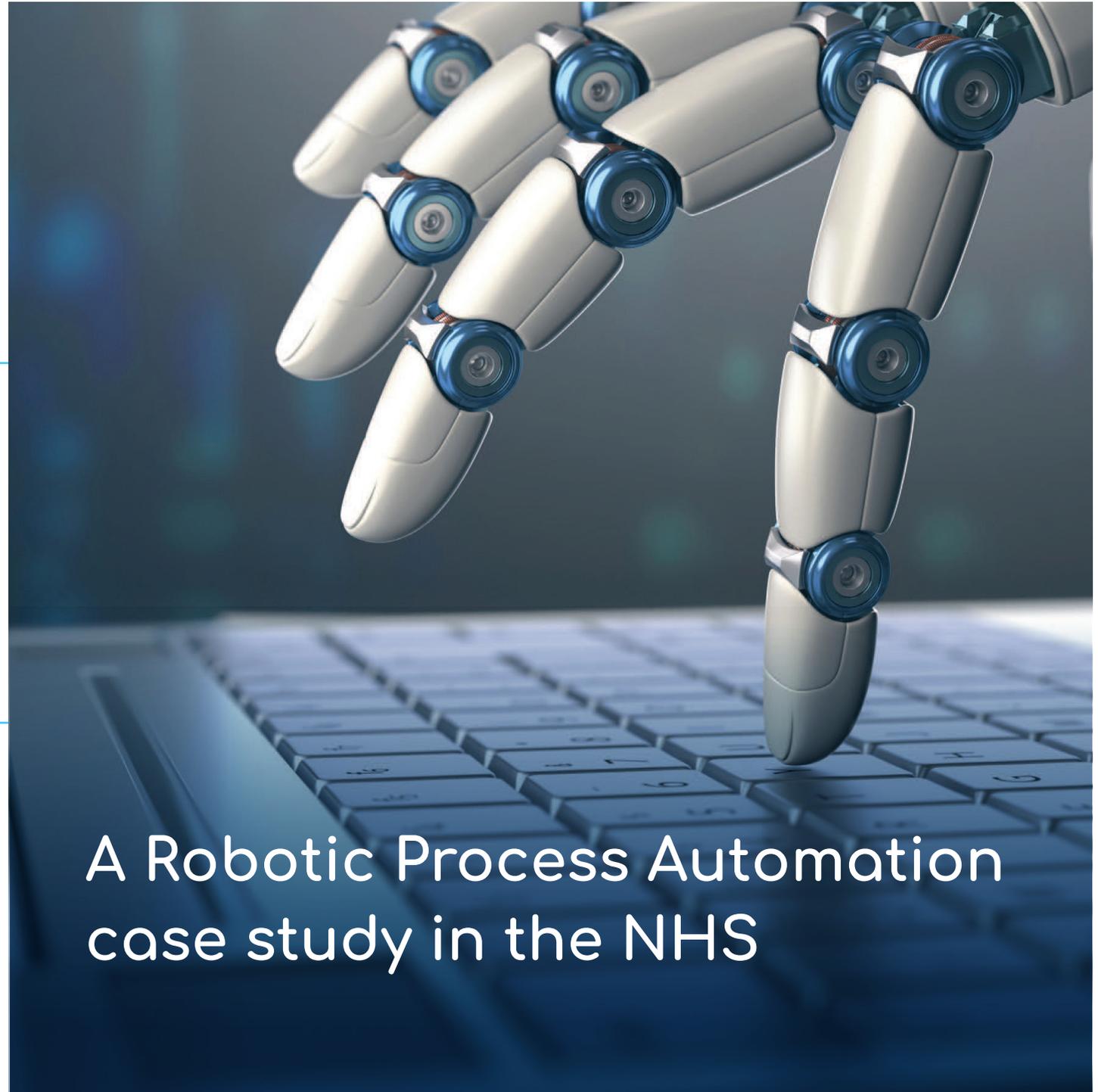


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**Warrington and
Halton Hospitals**
NHS Foundation Trust

blueprism®



A Robotic Process Automation
case study in the NHS

Warrington and Halton Hospitals NHS Foundation Trust is an acute care organisation providing services across three hospitals on two major sites. Employing over 4,200 staff and providing access to care for over 500,000 patients with a capacity of 600 beds the Trust continues to modernize its hospitals, invest in its staff and, most importantly, deliver quality and safety improvements to its patients.

Project Context

In 2014 Warrington and Halton Hospitals NHS Foundation Trust embarked on a major transformational programme to deliver a new Electronic Patient Record (EPR) system. At the heart of this was the deployment of the new PAS and combined Clinical system, Lorenzo. The first phase of Lorenzo was successfully delivered in November 2015.

The Challenge

In order to achieve a successful EPR deployment a major part of this Programme was to migrate approximately 60,000 outpatient appointments from the legacy PAS system to Lorenzo. This migration consisted of all future patient appointments; it was critical from a clinical and business perspective to ensure data was correctly recorded on the new system. The migration was compounded by a short window of deployment opportunity that required clearly defined critical activities to be completed before appointments could be migrated. This meant that 60,000 appointments had to be migrated in a little over 3 days. To add further complication the migration had to be able to cope with a 6 hour planned interruption part way through to allow other cutover activities to progress.

The Results

The Trust worked in partnership with Blue Prism experts from Enovation to create the necessary software processes and associated rules. After a series of prototype sessions a Dress Rehearsal was conducted with 10,000 appointments. This rehearsal provided the project with the necessary timings for data elements and refinements required to infrastructure setup to ensure all 60,000 appointments could be migrated within the designated time. Contingency plans were also finalised during this rehearsal. Blue Prism processing commenced on time on Thursday immediately preceding Go-Live and managed to complete 60% of appointments in just 24hrs. Automation activities were then paused for 6 hours whilst other cutover activities were undertaken. Once automation was resumed Blue Prism was able to complete the remaining 40% by the Saturday afternoon nearly 40 hours ahead of schedule.

The mitigated risks

Appointments incorrectly migrated with wrong appointment times leading to:

- Potential clinical risk associated with delays to treatments
- Increased DNA rates
- Lower utilisation of clinic capacity & reduced efficiency
- Reduced Trust activity leading to financial implications
- Reputational damage due to patients not being seen in a timely manner
- Potential to lose sight of patients if incorrect date was in the past

Appointments not migrated in time for Outpatients going live leading to:

- Patients not receiving their appointments leading to DNA's
- Patients having delays to their appointments
- Lower utilisation of clinic capacity & reduced efficiency
- Reduced Trust activity leading to financial implications
- Lower adoption rate of new processes and systems
- Reputational damage due to patients not being seen in a timely manner
- Potential impact on 6 week Diagnostic targets

Looking to the future

This was a fantastic first step and the potential uses for this technology are exciting. The success of Blue Prism automation has led the Trust to invest further in Robotic Process Automation pushing more boundaries, and these include:

- Automate demographics data from ED Kiosks into Lorenzo. (Now live running 24 x 7 saving cost and admin time)
- Automate data from Outpatient mobile devices into Lorenzo for updating patient demographics
- Adding patients to waiting lists for Inpatient listings
- Departing patients from Clinics that do not require follow-up appointments
- Automate recording of clinic procedures performed into Lorenzo
- Automate recording of RTT status into Lorenzo
- Closing down the referral after the patient has been discharged

“The Trust Board approved the use of Robotic Process Automation - this would be the first time Blue Prism will have been used for such volumes and complexities in Healthcare.”

Project update: 05-2017

Since the completion of the data migration project at Warrington, Blue Prism has been used to support a number of other very successful migrations to Lorenzo, including The Royal Brompton and Harefield NHS Foundation Trust and North Staffordshire Combined Healthcare NHS Trust. The migration at The Royal Brompton benefitted from the process developments undertaken at Warrington whereby the processes were re-deployed into the Blue Prism environment at The Royal Brompton, reducing the development time and associated costs.

In addition, progress continues to be made in Warrington to increase the value of the Digital Workforce.

“We strongly believe Automation will save hundreds of man hours of effort & reduce administrative costs significantly.” Jason Da Costa - Executive Director of IT

Removing duplication of effort recording patient outcomes & increasing Trust income by £1M per annum

Warrington, like many Trusts, capture patient outcomes and procedures performed in a separate system to the PAS/ EPR in order to present a more clinician friendly, and often clinic specific, set of outcomes & procedures relevant to the patient encounter. There is no question that presenting only relevant choices improves accuracy and having a digital solution improves the patient audit history.

Warrington are taking this one step further, automating the data flow into the necessary financial processes with minimal manual intervention to eliminate the risk of human error in the transcription process. A phased roll-out across specialties is now underway automating the recording of over 4,000 outcomes and procedures per month into the Commissioning Data Set via the EPR and is expected to recover ~2 FTE's of time each month for patient care.

Critically the project is anticipating delivery of an increased income of c. £1,000,000 per annum resulting from process standardisation where possible and the elimination of human error associated with the manual transcription process.

Empowering outpatients to check-in and update their personal details at any time.

Patient self-check in kiosks are yesterdays news... or are they? Featuring extended mobile capability the solution being implemented at Warrington extends the self check-in and demographic update functionality beyond the 4 wall of the hospital. Patients can access, and indeed update, their personal details online at their convenience.

With the help of Enovation up to date patient demographics and patient arrival notifications are automatically applied into the EPR from the mobile enabled self-check in solution. Empowering patients to access and update their personal information, and for that to be disseminated into Trust administrative systems, is a clear example of how making use of technology familiar to patients can ultimately benefit the service being provided to them.

“All appointments were migrated with 100% accuracy which meant contingency plans were not required.”

Amar Hafiz - Lorenzo Project Manager

What were the options?

“We are thrilled to be at the leading edge of innovation & excellence in healthcare I.T. benefiting our patients from our use of technology investments for quality, safety and operations.”

Jason Da Costa - Executive Director of IT

option 1

Manual Data migration

Taking a manual approach would have required in excess of 600 mandays of effort, or a team of 200 staff per day for 3 days to input appointments into Lorenzo. And this was just for the go-live weekend. Resourcing would be difficult particularly given the volume of manpower required. Resources would also need orientation and training to minimise data input errors. Logistical planning with rooms and IT equipment would prove very difficult even if shift patterns were arranged. This would be a prohibitively expensive option with risks associated with human error.

viability | Considered low due to large scale manpower required, associated resourcing costs, logistical planning and management and risk of human error.

option 2

Robotic Process Automation

Utilise Blue prism, a Robotic Process Automation solution, to load all appointments via the Lorenzo user interface. This option would require between 60 and 100 virtual staff (software robots) running around the clock replicating users inputting appointments.

viability | Considered high due to reduced timescales to load the data, reduced logistical complexities, reduced possibility of errors through automated error handling, accurate view of progress throughout the migration, contingency in place to accelerate loading of appointments through additional software robots.



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Enovation is Blue Prism's partner for healthcare and the solution is currently installed in over forty NHS Trusts. To find out more about how Blue Prism can help automate processes in clinical and back office settings to improve operational efficiency and release valuable staff time please contact us at the address below.

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