

Automation Accelerator Overview

About Us

Origin and History



Part of UHN

Structurally integrated within University Hospitals of Northamptonshire, we are deeply embedded in the day-to-day operations encompassing Finance, Procurement, Governance, Compliance, Marketing, and Delivery.



NHS Centre of Excellence

With a dedicated team of experts specializing in AI, automation, and emerging technologies, we drive hyper-automation initiatives as an NHS Centre of Excellence at UHN.



Solving the most challenging problems

We use the latest advancements in technology to address challenges deemed too complex or costly under traditional approaches within the NHS

2021

Received funding from NHSX to establish a Center of Excellence for RPA (Robotic Process Automation) to offer automation services to organizations at the height of COVID

2022

Built a team to support in significant discovery, infrastructure set up, and deployment to enable 20+ NHS Trusts to adopt RPA

2023

Added Process-Mining to our digital toolkit – an advanced analytics tool that enables hospital to target critical bottlenecks & introduce high-impact interventions & automations

2024-25

Exploring end to end transformation of workflows (clinical and non-clinical) using hyper-automation technologies (combination of RPA, Process Mining, AI/ML) to continue improving productivity

Our Customers

NHS Trusts

Trusted by 20+ NHS Organisations across the country...

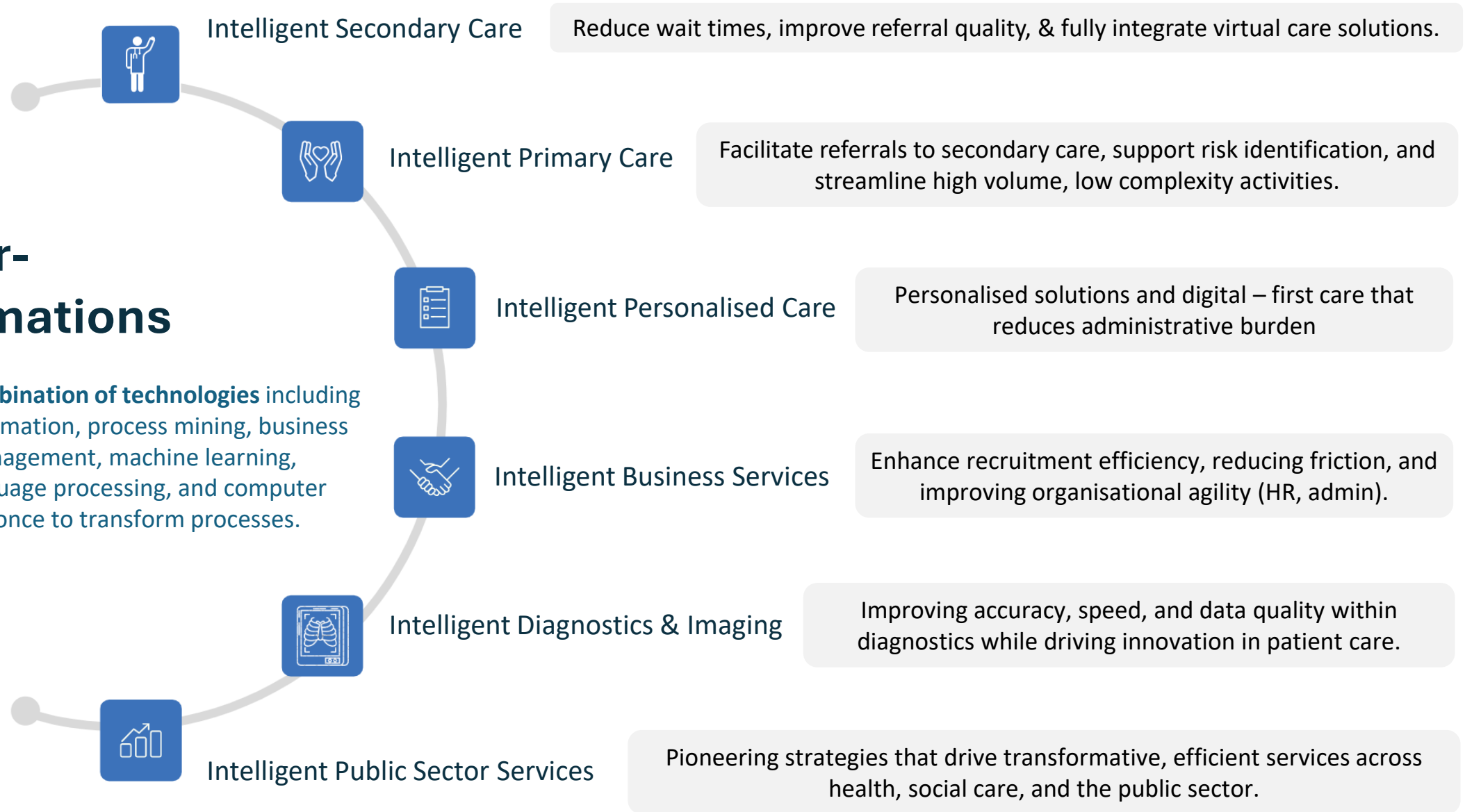


Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board



Hyper-Automations

Using a **combination of technologies** including robotic automation, process mining, business process management, machine learning, natural language processing, and computer vision all at once to transform processes.




Non-Clinical

Clinical Coding



Automate your clinical coding process using intelligent automation & AI. To reduce time to code/ patient. Primary pilot in endoscopy.

- 3 Trusts**
- Scope:** Endoscopy
- Exp. Benefit** – Reduce time to code by >50%


 **Intelligent Business Services**

HR Transformation



Automate your HR processes end-to-end: from hiring till retiring. Improve spending on temp staff, manage sickness absence rate, overpayment, etc.

- Sites:** 2 Trusts
- Scope:** End to end HR Processes: Hire – Retire
- Exp. Benefit** – Reduce time to hire (1 day = £18K in savings)

 **Intelligent Business Services**


Clinical

Waiting List Validation



Automate the manual process of updating your Patient Admin System/ EPR after receiving patient response from Patient Engagement Portal (PEP).

- Sites:** 9 Trusts
- Scope:** Cerner, System C, Lorenzo, & CAMIS
- Exp. Benefit:** Reduce list by 10%

 **Intelligent Secondary Care**

Cancer Treatment Summary



Automate the manual process of generating end of treatment summaries for cancer patients. Currently only 8% of patients receive this critical document.

- Sites:** 4 Trusts
- Scope:** Breast, prostate, and gyno cancers
- Exp. Benefit:** Improve compliance (>80%)

 **Intelligent Personalized Care**

Problem

- Clinical coding is a challenging job, requiring high levels of sustained concentration, a strong knowledge of medical terminology and health data standards. It takes an average of 4 years to reach full accreditation
- Coders are currently burdened by a laborious, repetitive manual process to code large patient numbers
- To meet growing demand, the service is projected to need a further 6 FTE Band 5 coders in the next 5 years

Solution

Functional Automation for HVLC Processes

- ✓ Implement an automated coding solution for high volume, low complexity (HVLC) clinical areas (e.g. Endoscopy, chemotherapy)
- ✓ Code primary / secondary procedures and diagnoses for >90% of patients in those areas

Expected Benefit

- 5-year cost avoidance of **c. £470,000** from not hiring additional coding staff
- Allow existing coders to focus on more complex and engaging cases, reduce the need for overtime and **improve staff retention**
- Improve accuracy of coded data, thereby increasing the mean allocated tariff for elective activity
- Shorten the timelines of clinical coding output, improving the availability of data to internal and national clinical audit programs

Problem

- Current average time to hire is **60-78 days** significantly above the target of **56 days**
- Every day of delay costs the trust **£18,000** due to reliance on temporary staff (agency).
- Poor visibility across the hiring process leads to confusion and **inefficiencies**.
- Over-reliance on **non-digital documents** results in repeated data entry and slow processing.

Solution

Workflow Automation

- ✓ Implement an automated digital workflow tool to monitor and track candidate progress in real-time

Digital Integration

- ✓ Develop and integrate e-forms at each hiring stage, along with automation between existing HR systems

Expected Benefit

- For every day reduced in the time to hire, the trust saves **£18,000** on temporary staffing.
- **c.£230,000** in annual cost avoidance through reducing time to hire to 68 days at NGH and 56 days at KGH
- Free up staff from manual activities and internal chasing to **focus on higher value activities** such as L&D and retention
- **Improved candidate experience** throughout the process

Problem

- NHS England's **long-term plan for cancer care** mandates that every person diagnosed with cancer has access to a personalised End of Treatment Summary (EOTS) to understand their treatment, side effects, and next steps
- The national median rate of EOTS completion is 8%; East Midlands – 6%, West Midlands – 15% and best performing – 18%
- There is widespread patient dissatisfaction with the quality and clarity of information provided
- Clinicians lack the time to complete EOTS, contributing to low completion rates and impending mandate compliance pressures

Solution

Database Monitoring

- ✓ Automation checks the database for new treatment completions and identifies patients requiring an EOTS.

Template Selection and Population

- ✓ Using the logic file, the system selects the appropriate template and populates it with the relevant data.
- ✓ A draft EOTS is generated, containing all necessary patient and treatment details.

Approval Process

- ✓ The EOTS is sent to the clinician for approval.
- ✓ The clinician either approves the summary or requests manual intervention for modifications.

Patient Notification

- ✓ Once approved, EOTS is sent digitally to patient.
- ✓ The patient receives a clear and personalized summary of their treatment.

Expected Benefit

- Saves **32p/letter** by avoiding physical postage and **£12.19/letter** in manual labor costs.
- Manual production of summaries for all patients would take **51,533** hours at a cost of **£4 million**



Problem

- NHS waiting lists currently stand at **7.6 million** creating a significant backlog.
- Current manual processes delay the removal of patients from waiting lists, leading to wasted appointments and increased costs.



Solution

Blueprint Development

- ✓ Creation of platform-agnostic blueprints (SDDs) that align with Trust-specific Patient Engagement Platforms (PEP) and Patient Administration Systems (PAS).

Key Workflows

- ✓ Workflow 1: Automate the link between patient responses in PEP and updates in PAS
- ✓ Workflow 2: Optional downstream automation for discharging patients from PAS, customizable on a specialty-by-specialty basis.

Implementation & Rollout

- ✓ Initial rollout at selected Trusts
- ✓ Free blueprint (live) access, with added value through our tailored implementation services.

Expected Benefit

- Platform-agnostic blueprint available for immediate integration or RPA implementation, with optional auto-discharge functionality.
- Full deployment of automated integration between PEP and PAS, leading to a **12%** reduction in waiting lists, fewer DNAs, and significant cost savings across NHS Trusts.



Blueprint

Build

Testing

Hypercare

Available

8 – 12 weeks from blueprint procurement

2 weeks



Our Learnings for Successful Deployment of Automation in the NHS

Automation
Accelerator >



Early Stakeholder Engagement

- Local process SMEs
- Clinician support (if relevant)
- IT leads
- **Executive sponsorship (CIO)**



Define Outcomes Upfront

- Clearly state the expected benefits delivered by the programme, **especially financial**, and track KPIs after delivery
- Highlight the assumptions that underpin modelling



Adapt To The Organisation

- The NHS is not one single body but a **diverse set of individual organisations**
- Processes have overlap but they are not identical; **solutions must be adapted** to the local ways of working and systems