

Berkshire Healthcare

Intelligent Automation Programme

Blueprint

Public blueprint for NHS organisations building a safe, scalable in-house automation and agentic development capability

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Blueprint purpose This document shares the practical approach Berkshire Healthcare has taken to move from early robotic process automation into an established Intelligent Automation service, and now towards governed agentic development using Microsoft Power Platform, Copilot Studio and GitHub Copilot-assisted development. It is intended to help other NHS organisations understand the operating model, controls, delivery lifecycle, governance, staffing and lessons learned.	

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1. Executive summary

Berkshire Healthcare has moved beyond proof of concept and now operates Intelligent Automation as an established digital productivity service. The programme began in late 2021, built the required governance and technical foundations during 2022, scaled delivery through 2023 and 2024, and has since shifted towards larger pathway improvements, better data quality, resilience, clinical safety and safe use of AI-assisted development.

- **Established service:** The programme has delivered more than 30 automations across more than 60 key processes, releasing significant staff time back into services and creating a repeatable delivery capability.
- **Direction of travel:** The programme is moving from isolated task automation to organisation-wide Intelligent Automation, including Smart Referrals, Power Platform-enabled workflow redesign and governed agentic development.
- **Agentic development position:** AI and agentic tools may be used to help design, generate, document and test workflows. Once a workflow is in production, no agent is permitted to make autonomous changes to that live workflow. Production change remains controlled through human review, environment separation, and formal change approval.
- **For other NHS trusts:** The main lesson is that automation should be treated as a governed digital service, not a collection of bots. The safest model combines clinical ownership, information governance, cyber controls, finance-validated benefits, business analysis, reusable patterns, and clear support arrangements.

2. What has changed since the previous version

Area	Previous emphasis	Updated blueprint emphasis - July 2026
Terminology	Robotic Process Automation as the dominant term.	Intelligent Automation as the main programme term, with RPA retained only where it describes UI-based automations or national guidance language.
Development model	Traditional Power Automate/RPA build and peer review.	Governed agentic development, GitHub Copilot-assisted engineering, prompt engineering, generated documentation, and human-controlled production release.
Programme maturity	Growth phase and delivery acceleration.	Established digital productivity service with focus on larger pathways, resilience, data quality, benefits assurance and retirement/sunset of automations where better technology becomes available.
Delivery scope	Individual automation opportunities.	End-to-end pathway improvement, Smart Referrals, APIs/integration-first patterns, user-centred digital forms, exception handling and digital workforce management.
Governance	ISO, GDPR, DCB0160, DPIA and change controls.	Additional emphasis on AI governance, model access, prompt controls, transaction budgets, environment strategy, production access restrictions and clinical safety review of AI-enabled workflows.

3. Programme journey and updated roadmap

The programme should be viewed as a staged capability build. Each stage adds more maturity, more reuse, and stronger governance. The updated roadmap below reflects the current position in July 2026 and the planned direction through 2027.

Period	Stage	Primary focus	What trusts should learn
Nov 2021-Mar 2022	Foundation	Programme design, early team structure, governance, policies, platforms, and proof-of-concept	Do not start with technology alone. Establish auditability, ownership, and service model

Period	Stage	Primary focus	What trusts should learn
		automations.	from the outset.
2022-2023	Build and prove	Business analysis approach, scoring model, first reusable patterns, early benefits tracking and stakeholder engagement.	Use a formal intake and prioritisation model. Validate benefit assumptions with Finance.
2023-2024	Scale and stabilise	Larger intake, production support model, environment separation, peer review, ISO-aligned controls, and service communications.	Support and maintenance capacity becomes material. Plan for 20-30% capacity to sustain existing automations.
2024-2025	Pathway transformation	Shift toward larger processes, including referrals, better data quality, API-first thinking, and resilient digital pathways.	The biggest value often comes from redesigning pathways rather than automating an old process unchanged.
2026	Agentic enablement	Controlled use of Copilot, GitHub Copilot and Power Platform AI capabilities to accelerate analysis, build, testing and documentation.	Agentic tools should support development, not bypass governance. Human accountability remains essential.
2026-2028	Sustainable IA service	Digital workforce management, service catalogue, automation lifecycle management, retirement planning and cross-NHS sharing.	Treat automations as live digital products with owners, run books, metrics, risks and end-of-life plans.

4. Strategic shift: from RPA to Intelligent Automation and agentic development

The programme now uses Intelligent Automation as the umbrella term. RPA remains part of the toolkit, but the strategic direction is broader: workflow automation, data integration, digital forms, Power Apps, Power Automate cloud flows, desktop automation where necessary, Dataverse, APIs, reporting, AI-assisted analysis and AI-assisted development.

Capability	Traditional RPA	Intelligent Automation	Agentic development
Purpose	Automates repetitive, rule-based tasks, often through the user interface.	Combines workflow, integration, analytics, rules, low-code apps and automation to improve whole processes.	Uses AI tools to accelerate how solutions are analysed, designed, generated, tested, and documented.
Best fit	Stable, high-volume processes with structured inputs.	End-to-end pathways, data quality, triage, notifications, referrals, and cross-system orchestration.	Developer productivity, documentation, code generation, prompt-assisted testing, design review and backlog refinement.
Governance risk	Robot failure due to screen or system change.	Data, integration, clinical safety, ownership, and change impacts.	Over-reliance on generated output, unmanaged prompts, accidental change, cost control, and production control.
BHFT control	Run books, exception reports, support priorities, and schedule reviews.	Environment separation, DPIA, clinical safety review, peer review, CAB, and benefits tracking.	No autonomous production change; all generated workflows/code are reviewed, tested, and promoted through controlled environments.
Design principle Use RPA when it is the safest and most practical option, but do not default to it. Prefer APIs, supported integration patterns, and reusable Power Platform components where they improve resilience, auditability, and long-term supportability.			

5. Operating model and staffing

The operating model is built around three workstreams: Designing, Delivering, and Sustaining. This keeps business analysis, building activity, and production support visible as separate demands, even where roles are combined in a small or growing team.

Designing	Delivering	Sustaining
Programme leadership and portfolio management	Delivery manager and sprint coordination	Service manager and operational support
Business analysis and process mapping	Automation developers and Power Platform makers	Digital workforce controller/administrator
Clinical engagement and pathway ownership	Quality assurance, testing and peer review	Break/fix triage and root cause analysis
Information governance, clinical safety and cyber input	Change management and release management	Reporting, monitoring and benefits validation
Architecture and reusable design patterns	Agentic development and prompt engineering capability	Lifecycle, retirement and continuous improvement

- **Key lesson:** As the number of live automations grows, support demand grows. Plan explicitly for 20-30% delivery capacity to maintain and improve existing solutions.
- **Future skills:** The team needs a blend of business analysis, Power Platform engineering, API literacy, prompt engineering, quality assurance, cyber awareness, clinical safety understanding, and change management.
- **Citizen development:** Use citizen development for local innovation, but keep higher-risk clinical, operational or data-heavy automation within a governed professional delivery pathway.

6. Technology and architecture

Berkshire Healthcare is Microsoft-centric, so the programme is aligned around Microsoft 365, Power Platform and Azure. The strategic technology principle is to use standard, supportable and governed Microsoft services wherever possible, reducing supplier lock-in and improving adoption across services already familiar with Microsoft tools.

Component	Use in the IA programme	Governance consideration
Power Automate	Cloud flows, approvals, integration, orchestration and desktop automation where required.	DLP policies, connector governance, owner controls, run history review and solution-aware ALM.
Power Apps and Power Pages	Service-facing apps, external forms, and structured data capture.	Authentication, file upload controls, accessibility, data minimisation and security review.
Dataverse	Structured storage, auditability, and common data services for managed solutions.	Role-based access, data retention, environment strategy, and audit logging.
Power BI	Benefits tracking, operational dashboards, exception trends, and service reporting.	Data access, publication controls, and single versions of the truth.
Azure Key Vault	Secure storage of secrets, credentials, and keys.	No secrets are hard coded in flows, apps or scripts; privileged access tightly controlled.
Azure VMs	Unattended desktop automation where browser or legacy-system interaction remains necessary.	Patch management, least privilege, service accounts, and monitoring.
Copilot Studio / Microsoft 365 Copilot	Agent interfaces, knowledge access, and user assistance where appropriate.	Permission inheritance, sensitivity labels, content boundaries, monitoring and safe response design.
GitHub Copilot / agentic development tools	Assisted workflow generation, test generation, documentation, refactoring and developer productivity.	Licensing, prompt hygiene, code review, no production autonomy, and transaction/cost monitoring.

7. Governance, compliance and clinical safety

Governance has been the most important success factor. The programme operates within the Trust digital governance framework and aligns information governance, cyber security, clinical safety, change management and audit requirements. The governance model is intentionally proportionate: low-risk efficiencies can move quickly, while clinical, patient-facing, or high-volume processes receive deeper assurance.

- **Information governance:** DPIA screening, data minimisation, retention rules, lawful basis, privacy review and clear data controller/processor considerations.
- **Clinical safety:** Clinical safety assessment is applied where automations influence clinical workflow, access to care, patient communication, prioritisation, documentation or decision-support.
- **Change control:** Production releases require controlled promotion and, where applicable, CAB approval. Developers do not directly alter production solutions.
- **Auditability:** Each automation should have a statement of work, process definition, testing evidence, peer review record, run book, support model, exception handling and ownership.
- **Benefits:** Expected and realised benefits are validated with Finance or a nominated benefits owner, using transparent assumptions and post-production review.

ISO / security policies	Operating policies	Gateway controls	Lifecycle controls
Access to source code	Process mapping	Agreement to Proceed	Post-production review
Application security	DPIA decision tree	Risk assessment	Break/fix prioritisation
Secure development lifecycle	Peer review	Statement of Work	End-of-life management
Environment separation	Reusable components	Testing plan and report	Change freeze
Privacy and personal data	Using artificial intelligence	Clinical safety review where required	Programme data retention

8. Secure development lifecycle and agentic controls

The secure development lifecycle applies to all Power Platform, automation and agentic development activities. Agentic tools can accelerate delivery but do not remove the need for professional judgement, testing, documentation, or approval.

Control	How it works	Why it matters
Environment separation	Development, User Acceptance Testing, and Production are separated. Promotion is one-way and controlled.	Prevents accidental production change and supports audit.
No developer production access	Developers do not directly modify production solutions. Production release is managed by controlled transport/change processes.	Reduces risk, protects service stability and strengthens segregation of duties.
Human-in-the-loop agentic development	AI assists with workflow generation, documentation and testing, but humans review and approve all outputs.	Maintains accountability, quality, and clinical safety.
No autonomous production modification	Agents must not change production of workflows, rules, connectors, credentials, or data structures.	Prevents uncontrolled behaviour and protects live services.
Prompt and output review	Prompts should avoid unnecessary patient-identifiable data. Generated outputs are reviewed for accuracy, data exposure, and security.	Supports GDPR, confidentiality and safe engineering.
Code and solution review	Peer review checks logic, error handling, security, maintainability, naming, documentation and rollback plans.	Improves quality and reduces operational defects.
Cost and transaction controls	Solutions are reviewed for trigger frequency, loops, connector usage, AI Builder/Copilot consumption, and licensing assumptions.	Supports predictable costs and avoids avoidable transaction growth.
Model access governance	Access to Copilot, GitHub Copilot and advanced AI models is role-based and aligned to organisational needs.	Controls the risk, cost, and capability of maturity.

Agentic development guardrail

AI can help create the workflow; it must not become the uncontrolled operator of the workflow. Once live, production changes require the same controlled change, testing, clinical safety and release pathway as any other digital solution.

9. Opportunity identification and prioritisation

The programme uses proactive engagement rather than waiting for ideas to arrive. High-value opportunities are found through service conversations, pathway reviews, workforce pressure points, clinical leadership engagement, data analysis, and operational pain points.

1. **Submit or identify opportunities:** Ideas can come through formal submission, service workshops, strategic initiatives, data quality issues or known operational pressure.
2. **Initial triage:** Check volume, rules, data availability, system stability, patient or clinical impact, complexity and obvious blockers.
3. **Scoring:** Score against benefit, complexity, Trust priorities, clinical priorities, readiness, risk, reusability and strategic alignment.
4. **Discovery:** Business Analyst, service, Finance and technical representatives validate the process, volumes, exceptions and ownership.
5. **Prioritisation forum:** Senior operational and clinical insight is used to test whether the shortlist is realistic and aligned to current pressures.
6. **Approval to proceed:** A documented gateway confirms scope, ownership, benefits, risks, support model and conditions before building begins.

10. Delivery lifecycle and release model

The delivery lifecycle has evolved from a simple RPA pipeline into a product-style lifecycle for digital workflow improvements. The aim is still to deliver a Minimum Usable Product quickly, but with stronger emphasis on reusable design, accessibility, integration, monitoring and service readiness.

1. Intake	2. Discover	3. Design	4. Build	5. Test	6. Release and learn
Idea, problem, volume, owner, strategic fit.	Process map, data, systems, exceptions, risks.	Target workflow, controls, UX, integration, support model.	Power Platform solution, reusable components, documentation.	Developer, peer, UAT, early, end to end, hypercare, regression, clinical safety and security testing.	CAB where required, go-live support, audits, benefits review.

- **Minimum Usable Product:** Deliver the smallest usable solution that provides real operational value, then improve iteratively based on evidence.
- **Testing expectations:** Each environment should have its own test evidence. Test records should cover exception handling, audit records, permissions, failure modes, and business continuity.
- **Release readiness:** No automation should go live without a named process owner, support route, run book, exception process, business continuity fallback and post-production review schedule.

11. Support, resilience and continuous improvement

A mature automation programme must be able to keep live automations safe and stable. Support is therefore treated as a core programme function rather than an afterthought.

Priority	Typical trigger	Target response approach	Review
P1	Patient care access, triage, notifications, high-volume or KPI-critical process disrupted.	Stop-the-line restoration focus; immediate triage; manual workaround if required.	Root cause analysis and service review.

Priority	Typical trigger	Target response approach	Review
P2	Non-critical or lower-volume processes are affected.	Prioritised alongside planned work; restoration and fix scheduled according to impact.	Trend review and backlog improvement.
Enhancement	Improvement of requests, minor changes, or usability issues.	Assessed through backlog and prioritisation process.	Post-production or quarterly review.
Retirement	Automation is no longer needed or replaced by better system capability.	Controlled decommissioning, data retention checks, and service sign-off.	End-of-life record and lessons learned.

Continuous improvement mechanisms include peer review, stakeholder feedback, exception trend analysis, monthly reviews after go-live, quarterly reviews for mature automations, Microsoft/Power Platform assessments, benchmarking with other NHS organisations and lessons learned from incidents or service changes.

12. Communications, adoption and external sharing

The programme uses communication as a delivery tool. Services are more likely to engage when automation is explained in plain English, with realistic examples, visible governance and clear service responsibilities.

- Maintain a public-facing awareness site for NHS colleagues that explains what has been automated, what was learned, and which tools are being used.
- Use internal channels, webinars, service meetings, intranet stories, executive updates, and clinical leadership briefings to identify opportunities and manage expectations.
- Use case studies to show both benefits and limitations. Include what changed in the process, not just the robot or flow that was built.
- Be clear that automation is not a way to bypass governance, clinical judgement or service ownership.
- Share reusable templates with other trusts where possible: intake form, scoring model, statement of work, testing plan, run book, post-production review and end-of-life checklist.

13. Current position and forward plan

As of July 2026, the programme is an established digital productivity service. The focus is on scaling safely, increasing resilience, improving data quality, supporting larger pathway changes, and preparing the team for AI-assisted delivery methods.

- **Current position:** More than 30 automations and more than 60 automated processes have been delivered since the programme started, with substantial staff time released back into services.
- **Smart Referrals:** A major strategic priority is automating and improving referral pathways at scale, reducing duplicate entry, improving referrer experience and improving data quality.
- **Large pathway improvements:** The programme is shifting towards whole-pathway redesign, including notifications, referral management, administrative workflow reduction and service-specific productivity improvements.
- **Agentic development rollout:** 2026-2027 will focus on controlled adoption of Copilot-assisted analysis, generated workflows, generated test material, generated documentation, and developer productivity improvements.
- **Sustainability:** The programme will strengthen lifecycle management, support metrics, automation of retirement, reusable components, and service-level reporting.

14. Practical guidance for other NHS trusts

The following checklist summarises what another NHS organisation should put in place before scaling an Intelligent Automation programme.

Foundation	What to put in place	Common pitfall to avoid
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Foundation	What to put in place	Common pitfall to avoid
Executive sponsorship	Named senior sponsor, clinical support and visible operational ownership.	Seeing automation as a technical experiment only.
Governance	DPIA, clinical safety assessment, cyber input, change control and audit records.	Retrofitting governance after automations are already live.
Benefits model	Finance-validated assumptions, realised benefits tracking and service-owned measures.	Counting theoretical hours without checking whether they can be released or reinvested.
Team capability	Business analysis, development, QA, support, governance and change management.	Hiring only developers and expecting them to find, design, govern and support everything.
Platform strategy	Environment separation, DLP, Key Vault, ALM, monitoring and role-based access.	Building in the default environment or relying on shared credentials.
Service ownership	Named process owner, SME availability, UAT commitment and business continuity plan.	Automating a process the service is not ready to change.
Lifecycle management	Run books, support model, monitoring, reviews and end-of-life criteria.	Letting old bots remain live with no owner or retirement route.
Agentic controls	AI use policy, human review, no production autonomy and prompt/data rules.	Allowing generated output to bypass testing or change control.

16. Eight steps to build an in-house IA programme

- Establish governance first:** Define security, information governance, clinical safety, change control, audit requirements and escalation routes before scaling delivery.
- Build a blended team:** Combine programme leadership, business analysis, development, QA, support, governance, clinical input and change capability.
- Choose a platform strategy:** Select tools that fit your estate, skills, and compliance needs. For Microsoft-centric trusts, Power Platform and Azure provide a strong foundation.
- Create a structured intake model:** Use scoring to prioritise high-value, low-complexity and strategically aligned opportunities.
- Deliver a Minimum Usable Product:** Validate quickly, learn from real use and avoid over-engineering for the first release.
- Separate environments and control release:** Use development, UAT and production environments, with one-way promotion and restricted production access.
- Treat automation as live services:** Provide monitoring, run books, support priorities, root cause analysis, post-production reviews, and retirement plans.
- Adopt agentic development safely:** Use AI to accelerate analysis, build, testing and documentation, but keep humans accountable and prevent autonomous production change.

17. References and useful resources

- NHS England Digital: Guidance for designing, delivering and sustaining RPA within the NHS.
- NHS England Digital: Understanding RPA, including the distinction between RPA, Intelligent Automation and AI.
- NHS England: Digital clinical safety assurance and DCB0129/DCB0160 guidance.
- Microsoft Learn: Establish a Microsoft Power Platform Center of Excellence with governance patterns and practices.
- Microsoft Learn: Power Platform Center of Excellence overview and guidance.
- Local Berkshire Healthcare IA governance documents, including DPIA decision tree, secure development lifecycle, peer review, testing, break/fix, post-production review and AI-use policies.

Note for public sharing

This blueprint intentionally avoids service-sensitive configuration detail, credentials, patient data and internal-only security design. Trusts adopting a similar model should adapt the governance artefacts to their own local policies, systems, risk appetite and clinical safety arrangements.