Robotics process automation for administrative tasks

Introducing robotic process automation (RPA) to complete repetitive administrative tasks to decrease the amount of resource required from the workforce.

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Key details

Stage of practice	Untested
Purpose	Organisational
Topic	Digital, data and analytics Criminal justice Productivity
Organisation	West Midlands Police
HMICFRS report	**PEEL 2023–25 Police effectiveness, efficiency and legitimacy: An inspection of West Midlands Police**
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Key details

Partners	Police Criminal justice (includes prisons, probation services) Government department Private sector
Stage of implementation	The practice is implemented.
Start date	November 2018
Scale of initiative	Local
Target group	General public Offenders Victims Workforce

Aim

Utilising software to complete repetitive administrative tasks that previously required manual resource to reduce demand.

Intended outcome

- Reduction in workforce time on repetitive administrative tasks.
- Increased data accuracy.

Description

The digital workforce

The force has implemented RPA to complete some repetitive administrative tasks. The nature of the repetitive administrative tasks is varied, meaning the force have RPA processes running across

their shared services function, IT, custody, data quality, witness care, front-line response and neighbourhood teams.

The RPA sits in West Midlands Police's ‘digital workforce’. The digital workforce improves productivity and efficiency across the organisation. The robotics are seen as digital employees and are given an identity, employee number. They are featured in the force’s corporate directory and when they perform tasks within systems, the entries and audit logs appear the same as if they were human workers.

Establishing RPA

The RPA was established in West Midlands Police in 2018, as an emerging technology that could help improve efficiencies and assist in reducing under resourcing.

RPA was established through a small-scale proof of concept based on a single repetitive process. This helped justify a business case to license the technology required for 12 months, whilst further processes were developed and automated to further prove the benefits of the software. The force negotiated and received a discounted rate for the RPA software licensing. UiPath is used which is a global software company for their software tools. These tools help West Midlands Police identify, analyse, develop, test, deploy and monitor automated processes.

RPA improving data quality and accuracy

RPA is rules and logic-based, therefore it is not open to human conscious, unconscious bias or inaccuracies that can damage data quality. A correctly developed and tested RPA process will give you consistency and accuracy. The force’s conversion from legacy systems to new systems and the merging of duplicate nominal records on the record management system (RMS) have been improved through using RPA, as the tasks have been done robotically and quickly.

The centre for applied automation

The centre for applied automation is an internal team that develop and support the RPA process. It has been established since 2019 and has grown in size and resource as the RPA has expanded. At the start of the development, the team consisted of contractors. However, now the team is fully

staffed by West Midlands Police staff. The team is made up of:

- 1 team manager (0.5 FTE as they also manage a separate technical discipline)
- 1.5 FTE x process analyst
- 2 x senior RPA developers
- 2 X RPA developers

Developing RPA

West Midlands Police identify themselves as unconventional in their approach to RPA development. Many other organisations, public and private, have adopted looser processes where members of departments outside of the core IT function can develop and deploy RPA processes, for example staff in HR or finance. West Midlands Police decided to apply traditional software development methodologies to develop RPA to ensure quality, sustainability, supportability, and scalability.

The RPA can be applied to multiple tasks across the organisation and individuals can suggest areas where an automated process could be helpful. Below outlines the typical process taken to establish an RPA in a new area:

1. Process identification: either by a member of IT or proactively by a member of staff outside of IT within their own department.
2. Process capture: a process analyst captures and documents the current process. Working with the business subject matters experts, often process improvements are identified and implemented up front, independent of the introduction of any RPA.
3. Process analysis: this is where the captured process is analysed for suitability for RPA to be applied and estimates are made around volumes, and likely savings in terms of time and money.
4. Prioritisation and governance: a monthly governance session is held, in these sessions a decision is made about whether the process should be added to the roadmap for development and if so, where it features in the priority order.
5. Process design document: if it is agreed to commission the process, a detailed process design document (PDD) is produced by the process analyst and developer. This is signed off by the business owner of the process for accuracy.
6. Development: the process goes into development.
7. Testing: the process is thoroughly tested by IT and by the business via UAT in non-production environments.

8. Controlled go live and early life support: following testing sign off and change and release governance, the process is put live but often only during business hours or on a set number of records so that further final human validation can take place.
9. BAU: the process enters business as usual and is subject to usual automated log checking and exception handling that is developed as part of the process.
10. Continuous improvement: existing processes are constantly monitored and reviewed by staff to identify repetitive exceptions that are requiring human intervention which can be further automated or performance improvement so that records can be processed quicker or more efficiently.

Overall impact

- The implementation of RPA has saved the force £3.14 million so far. This is calculated by the amount of money saved in having a member of staff, or officer, manually complete the task.
- 123,000 hours saved.
- 1.46 million transactions successfully processed.
- RPA has a 99.73% success rate. This is based on the number of robot processes that have no issues and do not require human involvement.
- Staff are seen to find RPA helpful and now invite the process analysts into their teams to observe their processes with the desire to automate some of their tasks.

Across 2023, a total of 24 RPA processes were created and achieved outcomes such as:

- updates to 614,000 nominal records within RMS, otherwise preventing around 280,000 duplicates
- 87,000 witness statements were automatically uploaded and linked to the relevant record in RMS, resulting in approximately 11,000 hours of saved officers time or £333,000 on budgeted pay averages
- quality assured 85,000 investigation records within RMS to ensure accurate crime classification and assignment to the relevant team for further investigation or closure
- the processing of 45,000 victims to Victim Support charities, within 1 working day of them consenting to support and their data being shared

Learning

- West Midlands Police have 10 robot licenses that can perform all of the processes the force has developed. This ensures that all 10 robots can be used constantly throughout the day to perform

any task designed.

- Positioning the RPA within IT has meant that the RPA developers sit alongside IT's traditional software developers. This means that they can collaborate on solutions and ensure they come up with the most efficient results.
- UiPath (amongst other software providers) offer on-premises, Cloud, and hybrid deployment methods. In the specific case of RPA this can be helpful, as demand and volume of tasks is variable. Cloud contracts can provide more flexibility as you can increase and decrease the number of servers you need, rather than buying more permanently. This is something that West Midlands Police are actively investigating as their use of RPA expands and they realise the limitations and costs associated with their current on-premises hosting model.
- Some barriers were encountered when deploying alongside third-party solutions owing to nervousness around impact on system performance. The force found there can be misplaced nervousness that robots put undue strain on systems, and access screens at a rate significantly quicker than humans therefore resulting in system crashes or performance issues. In reality, a robot can only access and input to the screens as quickly as the system will allow it through load speeds. These barriers were overcome via technical discussions, testing and demonstrations between the RPA team and the wider force.
- Some barriers that the force could not overcome were in relation to national systems and their code of connections which did not allows for robot connectivity. National systems have strict code connections associated with them, which are based around a human user so do not support the notion of a robot accessing them.
- The resourcing and ongoing sustainability of RPA is important to consider. Engagement with a System Integration Partner (SIP) or Innovation and Integration Partner (IIP) should only be made with an exit strategy to be self-sufficient. RPA processes naturally require changes to continue to run when systems they interact with change or are upgraded. RPA being self-sufficient means that running costs, including licensing and staff costs, are covered by the amount of time saved from officers and staff carrying out the processes manually.

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