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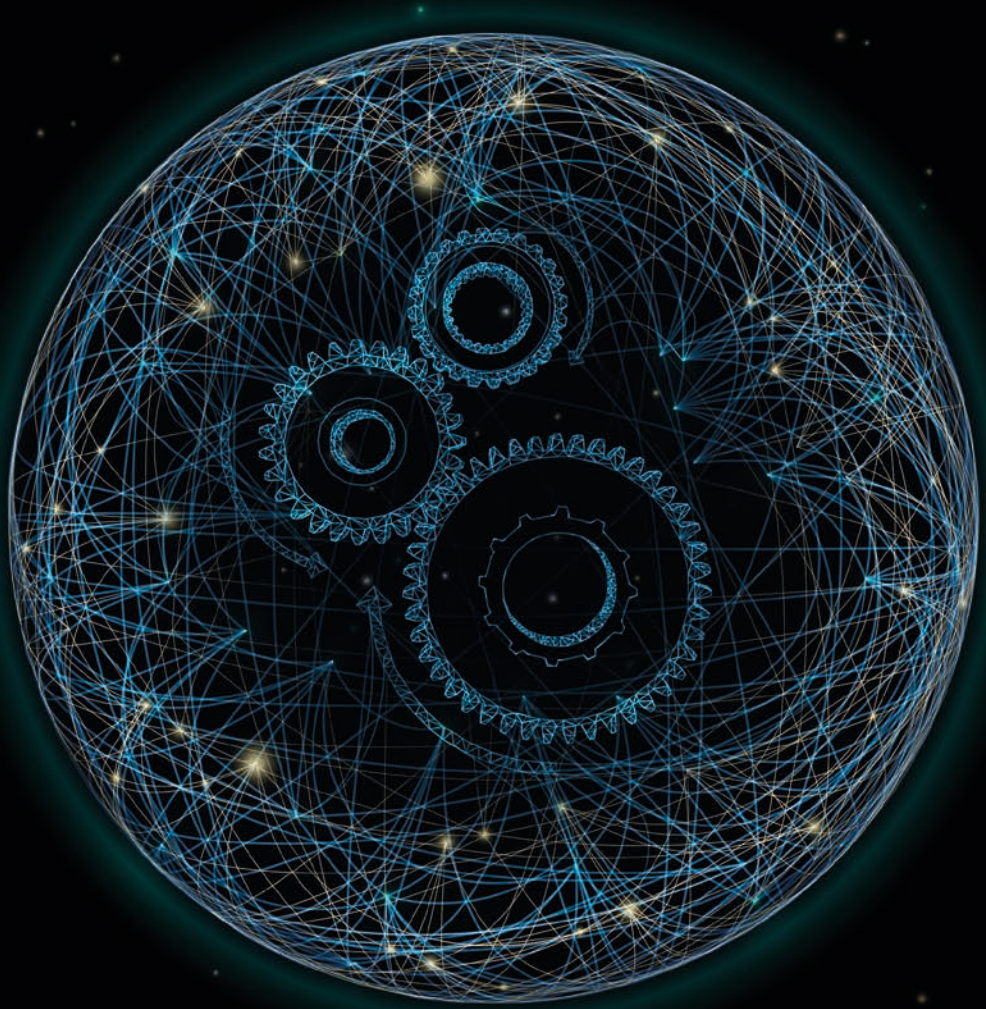


The new machinery of government

Robotic Process Automation in the Public Sector

“Improved productivity means less human sweat, not more.”

Henry Ford

Introducing the virtual workforce

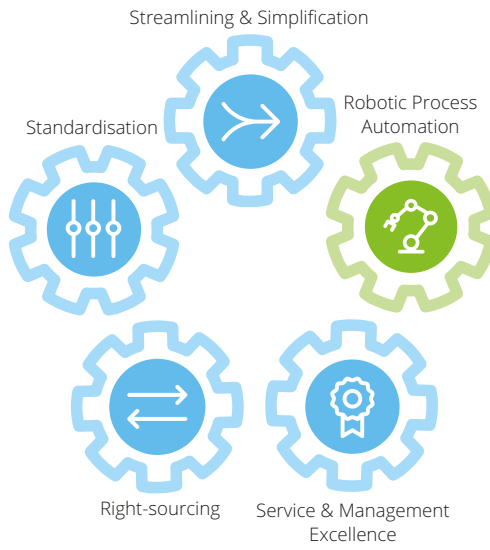
In this environment of unprecedented budgetary pressures and rising demand on public services, where more is increasingly demanded from less, advances in robotics have made automation a viable and innovative way to address the challenges facing the Public Sector today.

The past 18 months have seen significant growth in the use of automation tools throughout the commercial sector. At the vanguard is Robotics Process Automation (RPA), a technology that has existed for over a decade, but is finally coming into its own with recent advances. At its heart, RPA is a software tool that can replicate and automate transactional processes while improving process accuracy and speed. It is a new and untapped lever in the pursuit of efficiency gains.

RPA enables organisations to free up capacity to tackle their tactical priorities. Many commercial sector organisations that have established an automation strategy have done so in response to the same issues the Public Sector is grappling with:

- hiring freezes or headcount reductions
- a growing backlog of work, and limited capacity to tackle it;
- a pile up of caseloads,
- frequent policy changes that need to be integrated into business practices; and
- a lack of bandwidth amongst teams to tackle their daily whirlwind whilst also trying to move their organisation forward.

Efficiency drivers



In many cases, Public Sector organisations have delivered traditional efficiency opportunities and now need a more innovative solution. In others, the size of the savings that can be achieved through automation make for a compelling business case. In fact, it's the size of potential savings that makes us believe RPA has the greatest potential to deliver gains amongst the five key efficiency drivers.

In the Public Sector, there is the scope for RPA to realise substantial benefits: 861,000 Public Sector jobs are forecast to be displaced by automation by 2030; a saving of £15 billion off the wage bill compared to 2015. RPA can reduce the amount of time staff spend on repetitive and routine activities, allowing more time to be spent on interaction with the public and jobs requiring a greater degree of complex problem solving or human judgement. Data improvements driven by RPA can also improve the quality of information available for management decision-making. RPA can therefore contribute to cost reduction targets, drive productivity and allow organisations to refocus on delivering critical public services.

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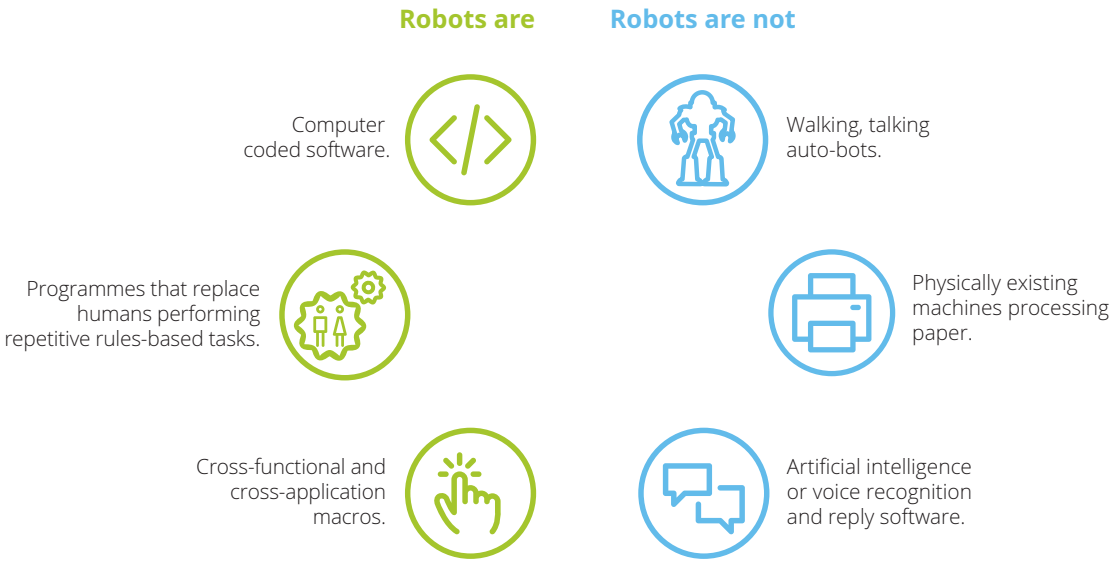
What is Robotic Process Automation?

You may be more familiar with the word robot being used to describe physical robots, be they the robotic arms ubiquitous to car manufacturing or the androids of Hollywood movies. By contrast, RPA uses software robots – also known as bots – which have no more physical presence than your operating system. Put simply, RPA robots are software programmes, designed to automate transactional, rules-based tasks by mimicking our user interactions.



With robots typically costing significantly less than a permanent or outsourced staff member, the financial attractiveness of an RPA approach is clear. Robots can also assist in the drive to rationalise the Public Sector estate; while space may need to be reconfigured for RPA technology, office space currently occupied by administrative staff could be considerably reduced.

There are compelling non-financial benefits too, as robot-based process performance is designed to be more predictable, more consistent, and less prone to errors than a human process. Once the robots are in place, new processes can often be assigned to them in days, if not hours. Thus, RPA solutions generally have lower implementation costs, require shorter implementation time, can operate on a 24/7 basis, and carry far less risk than large IT transformations.

In most organisations, there are many routine processes performed manually that lack the scale or value to warrant automation via IT transformation, but for which macros and other such desktop automation tools are too limited to effectively address. RPA can help address this gap, reducing the 'minimum viable scale' of process automation compared to other traditional options. In the Public Sector, the pace of transformational change in many organisations is constrained by the presence of large, complex and costly to change IT legacy systems that do not easily lend themselves to integration or wholesale digitisation. RPA solutions can enable Public Sector organisations to make rapid and cost effective improvements without an end to end system overhaul.

Case Study: Deloitte Shared Services Centre

Deloitte itself recognises the potential of RPA, and we are already embracing the use of robots within our own business. Most notably, we have already invested in an RPA solution at our internal Shared Services Centre (SSC). The case for deployment was simple: RPA would ensure faster and more accurate service delivery at a lower cost; and it was consistent with our strategy of being a leading adopter of this disruptive technology.

An initial assessment of 81 SSC processes identified a long list of 33 potential projects that:

- Qualified as RPA candidates in terms of complexity and business rules; and
- Provided a return on the investment to design, build and operate as automated processes.

To minimise operational disruption across the SSC service lines, the 33 projects were grouped into phases of delivery. This enabled the SSC to continue to meet SLA targets. A headcount saving of 8 FTEs has been realised to date, but the most significant improvements were to the quality, speed, and accuracy of outputs, all with much-reduced costs to achieve these enhancements; with RPA solutions, you really can *do more with less*.

Case Study: UK police force

RPA has great potential to solve challenges faced by police officers and staff every day.

There are a range of repetitive, transactional and time-consuming processes. These often require little judgement and are demotivating, leading to inaccuracy. Most importantly, these processes divert the police away from their core roles – serving communities, catching criminals and protecting the vulnerable.

Deloitte led the first major review of RPA in the sector, in partnership with a major UK police force. We found a range of potential opportunities, like the automation of traffic offences, updating alcohol licenses, completing character enquiries, supporting crime reporting, auditing intelligence systems, and supporting the fight against cyber-crime.

RPA will play an important role for forces over the next decade, particularly as crimes become increasingly complex and costly to investigate.

It also contributes to the policing workforce of the future. Automating admin tasks empowers officers and staff, giving them more time on the frontline. It helps provide them with the tools they need to police efficiently and effectively.

RPA provides opportunities to accelerate technology transformation in the sector, as forces update their varied and complex systems. With the move towards digital services and rising volumes of electronic data, RPA can support better risk management and 24/7 continuous service delivery.

Finally, as well as improving system integration, RPA can help the police meet the challenge of the austerity era. Our experience suggests a typical force could save millions of pounds, with rapid payback on what is a low capital investment.

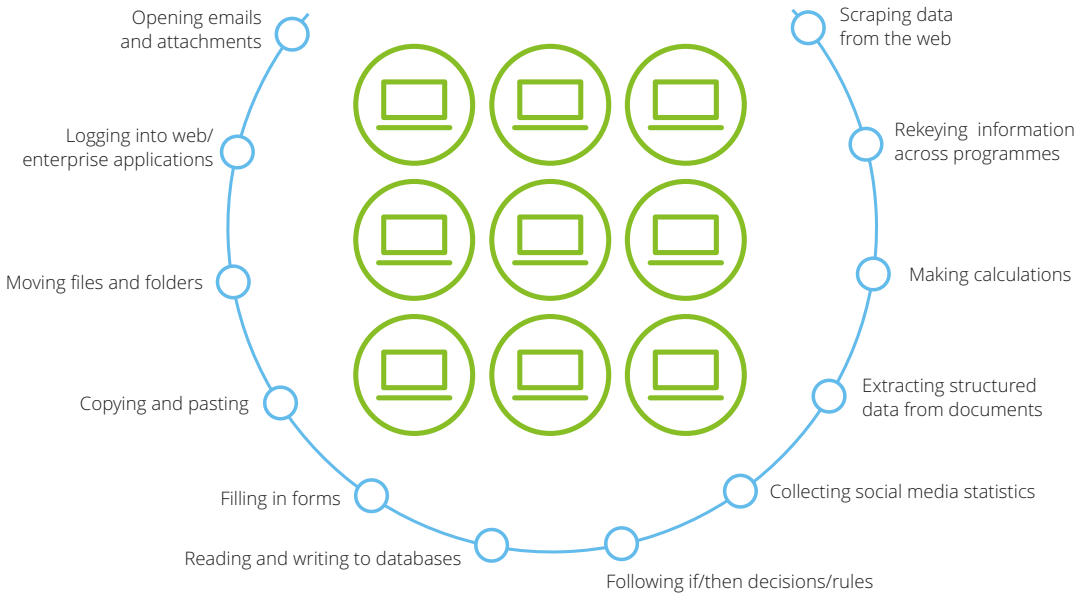
What can be automated?

Although highly adaptable, RPA technology is constrained in the types of processes it can automate. There are specific characteristics that make one process more appropriate for automation than another. Fortunately, these characteristics are well defined and it is relatively simple to identify processes that are suitable for automation. Ideally, they possess some or all of the following characteristics:

- they are rules-driven processes, requiring no human judgement;
- they are repetitive in nature;
- they can be performed out of hours;
- they involve data manipulation, such as calculations and data migration;
- they are data intensive;
- they are electronically triggered;
- they have a high error rate; and
- they involve reconciliations.

It is critical to note that RPA doesn't have to be applied to an end-to-end process and, in most cases, won't be. A more typical scenario is one where a sub-process can be automated, resulting in automation that is bookended seamlessly by human interaction.

In an RPA solution, robots are capable of mimicking most user actions



How does RPA integrate into your operation?

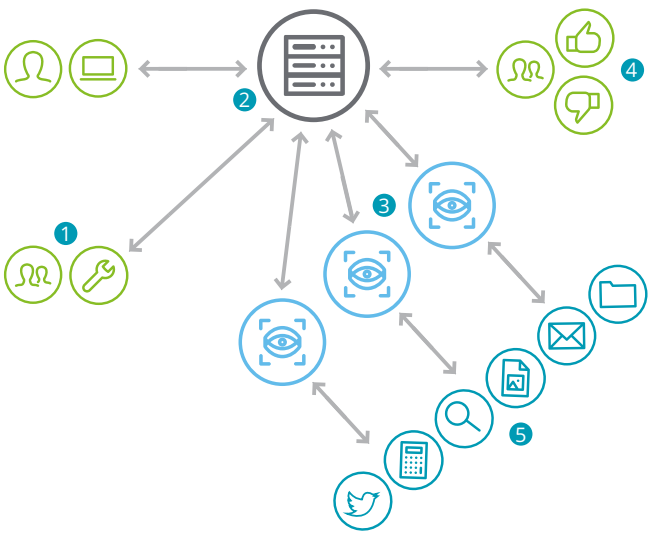
Integration begins with a discovery phase. This involves reviewing the processes you aspire to automate and conducting a process mapping exercise. This enables you to identify the component parts of each process that are suitable for automation, and to build a business case for the subsequent implementation. Crucially, RPA should not be seen as a quick fix for suboptimal or broken processes – processes should be optimised before or as part of the move to RPA. Concurrently, consideration also needs to be given to which RPA vendor to work with.

Once discovery is complete, implementation can begin. Here we often find a pilot deployment to be useful. Since the timeframes for deployment of a robot are measured in days or weeks, this can be a cost-effective way to build confidence in the technology and validate the analysis behind the business case.

The actual coding for the robots is completed using vendor-supplied Developer Tools. For each process being automated, a qualified developer writes an instruction set that replicates the human steps of the process. These detailed instructions are then published to the robot controller repository.

The robot controller is used to assign jobs to robots and monitors their activity; each robot is deployed in a client environment – real or virtual – where it interacts directly with business applications, just like a human does. Any exceptions or escalations are reviewed and resolved by an experienced business user.

How RPA project elements work together



1. Developer Tools are used to write the robot's detailed instructions sets, which are stored in the robot controller repository.
2. The robot controller is used to assign jobs to robots and to monitor their activities.
3. Each robot is located on a client environment – which may be virtual or physical – where it interacts directly with business applications.
4. Business users review and resolve any exceptions or escalations.
5. Robots are capable of interacting with a wide range of applications.

Automation in the Public Sector

RPA opportunities in the frontline

For frontline workers in the Public Sector, RPA has the potential to free up their time, make strides in their productivity and improve their responsiveness to the public. In many cases, the technology is complementary to current activity, allowing time to be redirected from repetitive, mundane tasks into activity that is more interesting, more highly valued and makes better use of skills.

With RPA only just catching on in the Public Sector, there are a wealth of frontline opportunities to explore. We have highlighted potential use cases in just four areas of the public sector, however this list is by no means exhaustive.

Our clients are regularly finding new opportunities as they look more broadly across their teams.

Central Government – Universal Credit and benefits calculations, tax calculations, anti-fraud checks, licensing applications processing.

Local Government – revenue collection, permit applications, incident reporting, case management, contract administration.

Policing – fixed penalty processing, intelligence reporting, crime reporting, firearms licence processing and replacing the need for officers to double key the same information into different systems.

Health – coding, diagnostics, discharge processing, outpatient clinic outcomes, cashing up.

Education – managing admissions and enrolments, student timetabling and estates utilisation, student finance management, course assessment data handling, alumni database maintenance.

Support Service RPA opportunities

Moving into support services takes us to the functions where RPA first gained a foothold in the private sector. Here we are beginning to see RPA maturity, particularly in shared service operations. We have seen large robotic workforce rollouts spanning HR, IT and Finance functions. These provide a blueprint for similar implementations in Public Sector.

HR functions – payroll, benefits management, education and training, recruitment and new joiner processes.

IT functions – infrastructure/application monitoring, folder and file management, user/directory and release management, network monitoring and desktop support.

Finance functions – Reconciliations, claims processing, expense payments, returns management and inventory processing.

How Deloitte can help

Deloitte is at the forefront of the RPA revolution, driving innovation, informing public policy and supporting our clients to adopt and manage this new technology. At the heart of our offering is a comprehensive methodology for RPA implementations called Deloitte Process Robotics, which has been shaped by our client experience both here in the UK and globally.

For organisations beginning their RPA journey, we are able to provide up front strategic guidance, answering questions such as:

- What is the potential size of the opportunity, and how can the benefits be maximised?
- Who are the leading vendors, and what differentiates their products?
- What deployment and robot management strategy should be pursued?

Many clients will also ask us to demonstrate the capability of RPA through a simple proof of concept test, or by piloting a process in their live environment. Both of these services can help clients understand what a full scale deployment will feel like, what technical skills are required to code a robot, and what the change management implications are for larger scale implementations.

Finally, we have extensive experience assisting clients with full-scale implementations. Our team of developers and testers can build a robotic workforce, and once deployed, monitor and enhance it from afar as a managed service. Now, more than ever, is the time to take advantage of the new machinery of government.

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