Introduction to robotic process automation

Government departments are implementing robotic process automation (RPA) to streamline their processes. In some cases the programmes are relatively mature and have involved a significant investment of time and resources. Other organisations are less advanced in adopting the technology but are interested in developing their use of it.

Although there is considerable enthusiasm around RPA across government, there is also some misunderstanding of the extent and nature of its capabilities. This introduction will briefly introduce the technology, outline some user cases, and suggest a number of potential unintended consequences of adopting it.

What do we mean by RPA?

In the broadest sense, RPA involves a computer mimicking human actions to complete a process without human intervention. This often involves using software to capture and manipulate data from other computer programs, according to pre-set rules. It is used to automate workflows consisting of highly repeatable tasks where data will conform to predefined characteristics. If a human operator has to carry out the same set of steps many times (down to the same sequence of clicks or keystrokes), these steps can be programmed using RPA. In some cases, RPA can learn by ‘watching’ a human perform the task instead of being explicitly programmed to perform each step in the process.

RPA can accomplish these sorts of tasks in a fraction of the time it would take a person, freeing up employees to spend longer on activities that cannot be automated, such as those involving evaluation or customer service. It can be particularly beneficial where users must adopt a so-called ‘swivel-chair’ approach to complete their work: moving between older legacy installations and new systems. Automation can reduce the time individuals have to spend shifting between systems, thereby raising their productivity. RPA is not suitable where business processes are subject to change or a programme is in development, because the automation must be reprogrammed if there is even the slightest change to the sequence of tasks. It also cannot be used to make complex decisions, although it can aid a human in doing so.

Attended versus unattended RPA

An important distinction is between attended and unattended automation. Attended RPA is a process that a person oversees and often interacts with. For example some parts of a workflow might be automated, such as compiling a document from different sources, while others are carried out by a person, like explaining the contents of the document to the recipient. This kind of RPA tends to be installed locally on a user’s computer, and is called upon when required.

Unattended RPA does not require any human oversight and tends to be used where a very large amount of data needs to be processed or the collection of information is continuous. This kind of automation is used for back-office processes and often runs 24/7. It is usually hosted in the cloud and can be accessed from different locations if necessary.

The type of automation in use has consequences for an organisation's training and development needs. While unattended RPA might never be noticed by operational staff, they will need to learn new skills to use attended automation.

Strategic uses of RPA

Automation can perform repetitive clerical functions that would otherwise take up a large amount of workers' time. This frees up staff to spend more of their days on higher value, professionally rewarding work, such as customer service. Therefore RPA may be able to improve organisational cohesion and the personal satisfaction of employees. As a targeted approach, it can also support a staged transition in the longer term by driving efficiencies in legacy systems.

Things to consider

If you are looking at RPA, make sure you bear in mind that:

- Technology adoption should always be driven by user need, rather than market pressure.
- RPA on its own will not fundamentally transform services or departments, or fix poorly designed processes, so should not come at the cost of investing in wider transformation.
- RPA can create a dependency on a single service provider for the automation processes, as well as dependencies on the underlying legacy systems.
- As RPA adoption requires change that encompasses people, process, technology and governance, departments will need to plan for staff to be upskilled.
- Automated processes can require very thorough, detailed documentation, which lengthens the time it takes to implement them.