
NDL
Transforming Data
Migration with RPA

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Navigating data migration in the public sector

As technology continues to evolve, the UK Government's National Data Strategy aims to steer the public sector towards a more digitised approach. Due to the complexities involved with IT infrastructures and data kept by public services, many working processes still feature repetitive and laborious manual procedures - despite the better methods, systems, and software available.

Factors such as aged legacy systems, complicated data sets, and the sheer volume of data stored often stand in the way digital transformations. The reason many departments across the public sector still rely on the older systems originally adopted, is often the challenge posed by the migration process. The segmented nature of the UK public sector's technical infrastructure means a wide range of processes and departments were built around seperate systems, resulting in mass volumes of disconnected, unstructured data.

Due to this, departments across the public sector often face similar obstacles when attempting to implement IT upgrades. Whether organisations decide to upgrade their infrastructures to remove end-of-life legacy systems, or in pursuit of more secure, streamlined processes - mass data migration projects required often pose the following challenges:

Costs - Particularly when migrating from aged legacy systems, the costs involved with migrating to a new system can be significant. Vendors often charge fees to remove and collate data stored in their systems, and manual migration oftern requires hundreds of paid working hours, based on data volume alone.

Resourcing - As previously mentioned, manual migration could take hundreds – sometimes thousands – of valuable working hours away from essential public workers. Event if delegated, employing a temporary team to complete this task presents time and cost challenges of its own.

Risk - If a department were to pay multiple vendors to handle this data for them, confidentiality implications and data loss could be of high risk. If a manual approach were taken, the volume and repetitive nature of the migration process would be particularly vulnerable to human error.

To avoid these roadblocks - enabling improved public services - this whitepaper demonstrates an alternate digital solution. Robotic data migration (RDM), the extraction and integration of data using robotic process automation (RPA), can help to significantly reduce costs, errors, duration, and resources required during data migration.

How can RPA assist in data migration?

When RPA is used in mass data migration, the process becomes robotic data migration (RDM). In this section, we'll explore the mechanics of RDM in detail.

Robotic process automation

Known as RPA, robotic process automation refers to software that emulates digital interactions within digital processes. Involving the deployment of a single, or team of bots - also known as digital workers – that function independently (unattended) or alongside a human worker (attended). RPA conducts virtual processes as a person would, completing of a wide range of functions from keystrokes and clicks, to data identification and extraction. The method is applied to repetitive, yet structured and rule-based tasks that don't require complex intervention.

Find out more about RPA >

Robotic data migration

The use of RPA facilitates a fast, accurate and cost-effective data migration. As previously mentioned, digital workers can be instructed to identify and extract data according to predetermined criteria. Depending on the scale and nature of your project, a bot – or team of bots – will work attended or unattended to extract data from a target system, ensure its transferable format, and complete population into the chosen destination. This process is known as robotic data migration (RDM).

How does robotic data migration work?

RDM follows the same principles of Extract, Transform, Load (ETL) migration, in collaboration with or independently from a human workforce.

EXTRACT

According to its configuration, the bot (or digital workforce) will systematically identify and extract data from its target system.

TRANSFORM

Bots then format this information accordingly, ensuring successful integration into the new system or destination. Data that doesn't fit these new parameters is flagged during this stage, and RPA can assist in data cleansing independently, or alongside staff.

LOAD

After data is extracted and cleansed, it can then be loaded into the new system or destination.

Project suitability and requirements

Depending on the nature of your migration project, RPA can deliver significant value in terms of cost, resource, and time savings. With regards to project requirements and suitability, the ideal RDM candidate would meet criteria such as the following:

High data volume

RDM is particularly helpful for those with large quantities of data pending migration, as this makes the process extremely difficult to complete manually.

Inadequate capacity

If your data migration project is subject to tight deadlines - or the resources required for manual completion are inaccessible - RPA's scalable nature and 24/7 capabilities can offset these challenges.

Financial challenges

RDM can save costs charged by vendors to extract data on your behalf, as well as the need to identify, recruit and pay a temporary or full-time workforce to complete this manually over a significant number of working hours.

Programmatic, rule-based extraction applicable

If the data extraction task can be completed using a sequence of rule-based actions, it's very likely this process can be replicated by RPA bots too.

Personally Identifiable Information (PII) & GDPR implications

If the data in question includes sensitive information or PII, using a manual workforce for migration may have GDPR implications – this is eradicated by RPA bots.

Requires accurate reconciliation

If your data set is unstructured, contains multiple file types or holds obsolete information, you may want to undertake data cleansing and reconciliation as you populate your new system – and RPA can greatly assist with this process.

Requires high accuracy

Data migration can be a laborious, repetitive task when completed manually – and is therefore prone to human error. Bots are configured based on logic. They simply don't make mistakes, or tire after concentrating for long periods - making them highly reliable in terms of precision.

Requires transparency

If your project involves sensitive data, or simply benefits from full traceability, RDM offers automatically generated audit trails to track programmatic steps – including data such as activity information, bot details and job identifiers.

Robotic data migration in action

Demonstrating RPA's value in data migration, the following use cases illustrate the range of industries, systems and data volume robotic workforces can assist with.

NHS North West Boroughs Healthcare NHS Foundation Trust

2.6 million unstructured records migrated over 3 months

When North West Boroughs Healthcare NHS Foundation Trust's (NWBH) legacy clinical systems were deemed end-of-life, unsupported servers put 2.6 million clinical records at risk of loss. These records included unstructured data for approximately 300 different types of case notes, as well as assessment forms for 30,000 patients. Therefore, it was essential this data was extracted in its entirety as quickly as possible, without putting strain on the legacy system's unstable infrastructure.

Using NDL's RPA platform, NWBH were able configure a digital workforce to extract the data for them. The project began with a single a bot, scaling up to a workforce of 10 bots working 24/7, completing the migration within three months. *Read the case study >*

Medway Council Serving You

50-70,000 working hours saved as 6 million records migrated

When one of Medway Council's legacy systems was due to expire, the council's Revenues and Benefits team decided to pursue a new system. In the hopes of gaining access to an updated, more efficient way of working, Medway needed to migrate around 6 million records – with each containing up to 40 individual pages.

To conduct this process manually, it would have taken a person up to 70,000 hours – and only if they spent a maximum of 40 seconds on each action required. For a single employee, this is equivalent to around 30 years of work. Instead, Medway employed a digital workforce to complete the migration in two months – scaling the operation down during working hours to avoid network overload. *Read the case study >*

Almost **12 million social care records** migrated over 3 months

With the imminent expiry of Conwy Council's legacy system, it was essential that almost 12 million social care records were successfully migrated into the Wales Community Care Information System (WCCIS). The new, country-wide WCCIS system allowed Social Care workers better access to resident records – paving the way for better care in the community.

With each record containing a range of unstructured data, it would have taken an estimated 2,000 working days to complete this migration project manually. With the use of RPA, all records were migrated without error in three months. Scaling its digital workforce from 10 to 40 bots throughout the process, NDL's RPA platform allowed Conwy to hit its tight deadlines. *Read the case study* >

Admin **overheads reduced by 75%** as 6.5 million records migrated

After Staffordshire and Stoke-on-Trent Partnership NHS Foundation Trust and South Staffordshire and Shropshire Healthcare NHS Foundation Trust merged to become Midlands Partnership NHS Foundation Trust (MPFT), their two separate EPR systems were deemed incompatible. It was essential that every record kept by each former Trust was available freely to all healthcare workers within MPFT, and so it took this opportunity to move all data to an updated system.

It was estimated that the task would take a dedicated team of 20 people working on the project full-time to complete the migration within 6 months – a completely inviable option for the Trust. Instead, the MPFT team worked alongside NDL to configure a digital workforce, which migrated 6.5 million records into their new Electronic Patient Records (EPR) system over a much shorter period.
Read the case study >

The benefits of robotic data migration

Within data migration projects, the following benefits of RPA have proven to bolster a wide range of digital projects in each corner of the public sector.

COST REDUCTIONS

An RPA based approach to data migration can eliminate the need to pay costly data exit migration fees to vendors, or the salaries of a temporary team. With outgoings reduced, budget can be directed towards more valuable investments in public processes.

RISK REDUCTION

Bots don't make mistakes – they simply follow predetermined rules. With a streamlined process, RDM eliminates the risk of error in a migration project. This is an essential benefit, as it's often crucial that public data is handled with complete accuracy.

TIME FLEXIBILITY

Whether to protect the functionality and accessibility of systems throughout working hours, or simply to speed up the migration process overall - bots can work outside of normal business hours. In fact, they can work round-the-clock 24/7, alone or parallel to working teams.

SCALABILITY

Another unique benefit of RDM is its scalable nature. In terms of workforce, you can add and remove bots to suit the requirements of any project – and you can then apply that workforce to an infinite number of new projects too.

SECURITY

Manual mass migration projects put confidential records at risk of unauthorised exposure. When using robotic process automation, only your digital workforce needs to view and handle the information exported – ensuring GDPR compliance at all times.

DATA CLEANSING

Due to the nature of its services, the public sector is one that often holds a lot of historical data. RDM is a fantastic opportunity to easily cleanse and reconciliate large volumes of data, allowing for a more congruent, universal dataset going forward with your new system.

Robotic data migration with NDL

If you have a project that could benefit from the application of RDM, here's how NDL excel in delivery with our RPA platform.

Licensed for future projects

NDL's RPA platform is a licensed product, compatible with a multitude of digital transformation projects.

As well as data migration, RPA can be applied to several other processes subject to repetitive tasks, such as:

- Updating key systems
- Back-office system data population
- Data cleansing & management
- Cross system recording updating and synchronisation
- Service request automation
- Record recognition routing

The NDL Community

Our customers make up the NDL Community – an innovative group of healthcare, local authority, policing, housing and education organisations championing digital transformation. As a customer, you'll have access to exclusive training and events, as well as the member's only area of our website – the Community Portal. Here, you'll be able to share ideas with peers, access helpful documentation and resources, chat and get support on our Forums, and more.

Seamless integration

As many public sector organisations continue to face challenges with legacy systems, APIs, and data migration - NDL have yet to find a system incompatible with NDL's RPA platform. As RPA runs through a separate application used alongside existing programs and systems, integration is often seamless. Using the most suitable of many different configuration methods, your digital workforce will interact with its chosen application just as a human would - simply mimicking actions such as keystrokes and mouse clicks as an external user.

Support when you need it

At NDL, we believe in providing the public sector with the tools they need to create limitless solutions for their businesses processes. However, we're always on hand to help our customers get the very best from our software – we endeavour to help our community in any way we can.

Professional Services

If your organisation doesn't have access to all of the resources required to deliver your RDM project, NDL can provide a number of professional services to provide a helping hand. From business analysis and system integration, to training and installation, our experienced Delivery Team is always prepared to aid the acceleration of your projects.

NDL Training Academy

Every NDL customer gains access to the exclusive NDL Training Academy, where you'll find a number of helpful courses led by our Technical Consultant team. Fostering inhouse skillsets from foundation to advanced levels, our courses and tailored mentorship programmes are designed to promote technical fluency and project independence within your organisation.

NDL Service Desk

Our Service Desk is open NDL customers during normal business hours, Monday to Friday. This inhouse service provides help and best practice advice around any aspect of our products or your project. Whether that be technical, configuration or professional support, a quick call directly to our team can help propel your RDM project at any time.

NDL Product Development

Though our RPA platform provides everything you need to configure your own digital workforce, our Development Team can provide bespoke assistance with your digital solution. From guidance and advice, to the full development of your RDM solution, our development services can bolster any RPA project.

Scalability

With the NDL RPA platform, it's easy to scale up from a single bot, to a whole team of digital workers. No matter your project – be it data migration or otherwise – you'll be able to adjust your automated workforce in order to complete processes more quickly or slowly – a great advantage if you'd like to scale up working out of hours and scale down during the working day to avoid added system pressures.

Attended and unattended bots

NDL offer both attended and unattended bots, allowing you to calibrate the best course of migration for your specific requirements. Depending on the nature of your project, you can use bots that work alongside your team or independently, or even a combination of both.

Experts in robotic data migration

With almost 40 years in the industry, and a large number of successful RDM projects achieved, we're experts in the field. If you're in search of a viable data migration solution for your public sector organisation, or are interested in facilitating digital transformations with transformative RPA technologies, visit www.ndl.co.uk or email info@ndl.co.uk.

Get in touch

+44 (0) 1937 543500

www.ndl.co.uk

info@ndl.co.uk

Connect with us

@NDLSoftwareLtd

NDL Software Limited