

REPORT OF THE BUSINESS PROCESS AUTOMATION PROJECT BOARD

An outline of the work of the Project Board in implementing business process automation using robotic software: the benefits, challenges, conclusions and recommendations of the Project Board

December
2017

Foreword and Introduction



Continuous innovation in business process management enables Government to deliver better, more effective and more responsive services to the public. As new technologies emerge, it is incumbent upon civil and public servants to explore, understand and test these solutions.

We must seek to understand how to exploit new technologies without adding unduly to the cost of service delivery and, where possible, by reducing our overheads. Rules-based and repetitive ‘back office’ processing, is a necessary feature of public services and automating these processes could add significant value to an organisation’s workforce by freeing up individuals to concentrate on more interesting and engaging work.

For these reasons the Department of Public Expenditure and Reform embarked upon this pilot project. We wanted to examine the potential of Business Process Automation to drive innovation and efficiencies in the delivery of public services. Through their piloting, the organisations under the scope of this project gained insights into, and understanding of, this technology and tested some of the claims being made about this emerging solution.

Business process automation (“BPA”), using robotic software, has shown itself to be a useful tool in tackling smaller processes that are high in volume, computer-based and rules-driven. The solution appears to work best where systems are not integrated or cannot be integrated through standard IT methods.

Business Process Automation should not be considered a panacea for the automation of back office functions – it represents one tool among a suite of business modernisation solutions in addition to conventional information technology solutions that are available to public service managers.

The findings of the Project Board on Business Process Automation indicate that the solution can work very well in the right circumstances. However, it takes time to embed the technology, to generate support from the IT function, to train staff and, crucially, to find the right processes to automate using BPA.

I wish to record the Department of Public Expenditure and Reform’s appreciation to the four pilot bodies, PeoplePoint, the Public Appointments Service, the Property Registration Authority of Ireland and the Office of the Revenue Commissioners, for their participation in this project. I want to thank David Satelle, Lisa Keyes, Henry Sullivan, Paddy Purtill and Katie Clair for the dedication and skill that they brought to this project from commencement to conclusion. I would also like to pay special tribute to the teams of practitioners within the in-scope bodies who painstakingly implemented this solution on the ground.

Finally, I would like to take this opportunity to encourage leaders from across Government to begin piloting and testing BPA to ensure that the Irish Civil and Public Service is a leader in this field.

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Chairperson, Business Process Automation Project Board
December 2017

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Executive Summary

Business Process Automation (BPA) using robotic software has been hailed as a game changer within a number of industries¹. Many claims have been made about this technology. These include its potential to make savings, the solution's ease of use, the removal of mundane workload from the employee, decreased processing times, around the clock usability and relatively inexpensive cost of implementation.

Sourcing Candidates for pilot study

In 2016 the Department of Public Expenditure and Reform began investigating the potential of BPA to drive both efficiencies and innovation in the Public Service. Applications were sought from Civil Service organisations to participate in a project to test this technology. This project sought to better understand the solution, gain insights into this technology and test some of the claims being made about BPA. The quality of the outcomes achieved could then be used to inform a discussion around the wider rolling out of this technology across the Civil and Public Service.

Successful candidate organisations were issued with business process automation licences and their staff were given training and further supports to enable them to use the technology. Each organisation was requested to automate a certain number of processes per licence issued. This proved not to be possible in all cases due to unobtainability of processes in one of the organisations. Oversight and governance of the project was managed by a Business Process Automation Project Board. The Project Board's composition and details of meetings are available at Appendix A to this report.

Findings from pilot study

The Project Board generally agrees that Business Process Automation, using robotic software, is effective in the automation of processes that:

- Are relatively small in scale
- Are reliant on a number of different systems or inputs
- Involve applications and systems that cannot be integrated through standard automation (or it may be too costly to do so)
- Are computer and rules based (i.e. no paper elements to the process)
- Are mature and well established

The Board also noted a number of limitations associated with BPA/RPA. This was especially the case where the solution relies on external data which is unstructured.

The Board is satisfied that savings are attainable through the use of this solution. However, upfront investment from organisations is required if the solution is to be successful. This investment will include monetary outlay as well as a significant amount of people time to engage in the following activities:

¹ <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/finance/deloitte-uk-finance-robots-are-coming.pdf>

- Streamlining the process to be automated.
- Possible data cleansing in advance of the automation.
- Initial training and practising using the technology.
- Becoming proficient in the relevant software.

It was also found that scale, in terms of available process numbers, is required in order to achieve the best return on investment for an organisation.

The Project Board also found that, while the solution is likely to have some meaningful application in many public service organisations, it will not be equally worthwhile for all organisations. This is because of a number of key factors: level of existing automation in an organisation; number of processes conducive to BPA to warrant the investment, and; lesser reliance on external data, systems or applications to execute an organisation's processes.

The Board noted that senior sponsorship within a piloting organisation is essential if the implementation of BPA is to be successful.

An important aspect to BPA is that it is led by the business area with input from process owners/managers and subject matter experts; but with the vital assistance of the ICT function to enable it to be implemented and supported.

Processes must be well understood and agreed upon if they are to be automated; a number of the organisations recommended that the agreement of a number of subject matter experts on how a process is completed was essential to ensuring that there is no inconsistency in process execution or duplication of effort.

The Board also found that, in some cases, conducting evaluations of processes that were automated less than one year into the project was not fully feasible, as benefits realisation were not fully measurable within that timeframe.

The Project Board did not seek to estimate the potential of BPA to generate savings across the wider Civil and Public Service mainly due to the fact that the unique circumstances of each public body would render it very difficult to come to a general conclusion on this matter. Another factor was time constraints. Furthermore, the Project Board are making no recommendations as to a future model for Business Process Automation across Government. The Project Board maintains that the level of skills, experience and knowledge of this solution is not yet mature enough to make an informed recommendation. Instead, the Board recommended the establishment of a procurement framework to better enable public organisations to test and pilot BPA.

At the conclusion of the Project Board, there were 24 processes identified for automation using this solution across the four in-scope bodies (Appendix C). Of those, 16 were in full production. The remainder were in development, in testing, on hold for redesign or else awaiting deployment.

Explanation of Business Process Automation

Business Process Automation involves the deployment of a software robot to perform computer-centric, rules-based tasks. BPA employs intelligent software to connect existing applications at a user interface level. As the work is done at user interface level, there is generally a reduced requirement for coding, programming or specialist ICT skills.

A software robot simply mimics the actions that a human employee would take if they were to perform a task, following a decision tree and based on set rules. The tasks carried out by the 'robots' are scheduled/assigned by trained employees on the basis of need using a scheduling tool in the software.

Robotic software is:

- ✓ Computer coded software
- ✓ Programmes that replace tasks that are computer-based, repetitive and rules-based
- ✓ Cross-functional and cross-application macros

Robotic Software is not:

- × A physical machine that can handle paper
- × Autobots that can walk or talk
- × Artificial intelligence
- × Voice recognition applications

BPA improves operational efficiency by automating tasks that usually require people to conduct repetitive tasks such as copying, pasting, opening applications, sending emails, checking data against rules and transferring data between applications/systems.

A benefit of BPA is that it can enter all applications in the same way that a user would; instead of the expensive (and time-consuming) business of integrating systems at a programmer's level.

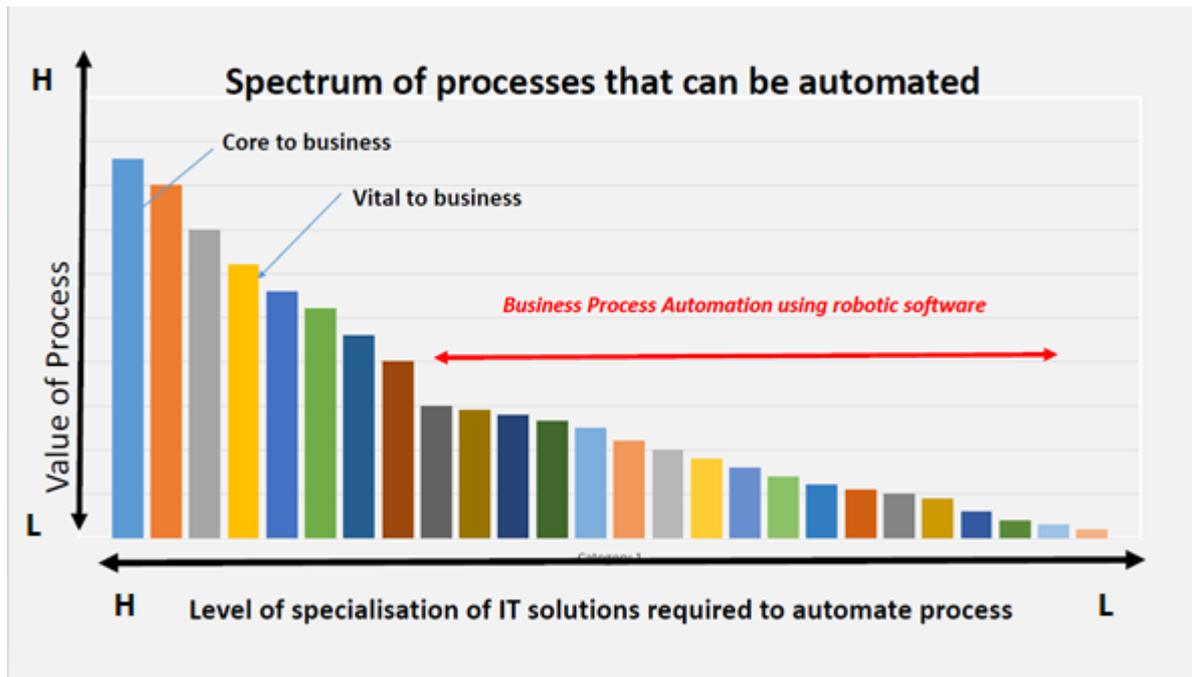
BPA is considered an innovative solution for functions that are currently subject to business process outsourcing². It is also cited as a major disruptive force to global labour arbitrage, as private sector companies that once offshored many processes now elect to execute these functions onshore using BPA³ at a fraction of the cost.

Processes that are generally considered suitable for BPA

BPA can be applied to any business process that involves high volume computer-centric, rules-driven tasks. At a basic level, BPA is applied to 'swivel chair' tasks as workers pivot from one system to another transferring, updating or reporting on data.

² <https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/operations/lu-intelligent-automation-business-world.pdf>

³ <http://www.kpmg-institutes.com/content/dam/kpmg/sharedservicesoutsourcinginstitute/pdf/2015/bots-back-office-outsourcing-to-robotic-process-automation.pdf>



BPA can provide a solution to clerical processes that involve accessing and interrogating multiple applications and platforms to perform functions (e.g. screen-scraping, creating reports, creating invoices, pay invoices, pay salaries, generate emails, generate statistics, change addresses, issue grants, execute direct debits, update systems, save files, provide refunds, create alerts, change customer details/payment details etc.).

BPA software providers:

Provider	Latest Version
Automation Anywhere	10 LTS (Automation Anywhere Enterprise)
Blue Prism	v6
UIPath	2017.1
PegaRobotics	8.0
NICE	6.5
WorkSoft Certify	10
WorkFusion –RPA Express	1.1.0
AutomationEdge	Unavailable
Kryon Sys-Leo	4.0.9

Overview of the Business Process Automation Project:

Preparatory work:

The Reform and Delivery Office of the Department of Public Expenditure and Reform undertook a programme of research and analysis of Business Process Automation using robotic software as part of its remit in testing alternative models of service delivery. The findings of that analysis led to a recommendation to the Programme Director for Public Service Reform to fund a programme of piloting of this emerging technology. It was recommended that the approach adopted would involve training and upskilling civil servants in using this technology, as opposed to relying on an external provider to conduct piloting on behalf of Civil Service bodies.

Selection of organisations:

An application process commenced in September 2016 through a circular issued to all Civil Service Personnel Officers seeking participants from organisations to put themselves forward for piloting.

A number of organisations put themselves and their staff forward for piloting. The in-scope bodies were selected by the Department of Public Expenditure on the basis of their potential to identify processes, the suitability of the staff nominated and the need to reflect different organisational size.

Licence acquisition and training:

The Department of Public Expenditure and Reform procured, through a competitive process, five robotic process automation software licences from the market in addition to advisory services from an implementation partner to provide training, coaching and mentoring.

Initial training was provided by a UK-based robotic process automation training company, Robiquity. The licences and further implementation support, training, coaching and mentoring was procured from the market from Genfour Limited (which has since been acquired by Accenture PLC). Licences were purchased for one year (with no commitment to renew) by the Department of Public Expenditure and Reform for the purposes of testing

The initial staff training occurred in November 2016. The robotic software licences were issued to the in-scope bodies in December 2016 and a further training exercise was conducted in March 2017. Off-site and on-site coaching and mentoring of trained employees took place periodically throughout 2017.

Formation of the Business Process Automation Project Board:

A Project Board was convened to provide leadership, governance and oversight to the project. The Project Board was chaired by the Programme Director for Public Service Reform at the Department of Public Expenditure and Reform. The Board had membership from management representatives of each of the in-scope bodies in addition to representatives of the Office of the Government Chief Information Officer and the Office of Government Procurement. A list of the Board's membership is attached at Appendix A.

Aims and expected output of the Project Board:

The high-level objectives of the Project Board were to:

- 1) Measure the effectiveness of BPA and the efficiencies derived through BPA pilots at the 'in-scope' organisations;
- 2) Examine the feasibility of using Business Process Automation to generate efficiencies, support reform and drive innovation across the public service;
- 3) To support and develop a BPA Practitioners' Network to share expertise across organisations in accordance with Action 6 of the Civil Service Renewal Plan;
- 4) Drive additional projects at in-scope bodies to maximise the capacity of licences that are in situ, and
- 5) Propose future models for governance of BPA if it becomes a widespread Business-As-Usual (BAU) tool;

The expected output of the Project Board and the result of these expectations were:

EXPECTED OUTPUT	Status	Comment
To agree the number of pilot processes per licence		24 processes in production or in preparation
To agree a common process selection mechanism		Issued to in-scope bodies
To agree a common base-lining technique for pre-process automation		Issued to in-scope bodies
To agree a common evaluation model using mechanisms outlined in the Public Spending Code		Issued to in-scope bodies
To create a common methodology for process automation (pre-development documents, stages of design and automation, non-live testing, live testing etc.) for processes that use two or more non-integrated systems		Issued to in-scope bodies
To share knowledge and troubleshoot difficulties experienced by in-scope bodies		Establishment of Developers' Network
To make recommendations on training requirements for personnel within in-scope bodies		Further training provided in March
To publish case studies of pilots, including learnings and recommendations for future pilots to consider		These will be scoped and completed once processes are embedded
To estimate, using extrapolation techniques on the basis of evidence adduced through piloting, the potential of BPA to generate savings across the Civil and/or Public Service over the medium term (potentially delegated to IGEES)		This was not considered possible. Board members considered that this would require process audits across all Public Service organisations
To report to the Civil Service Management Board, CSMB, (subject to agreement) on the outcome of the pilots and to outline the costs, benefits and potential (if any) of		This report will be issued to members of the CSMB for information (subject to agreement of CSMB secretariat)

BPA and how it may impact on the provision of public services		
To recommend a suitable future model for the Irish Civil and Public Service (if any)		The Board felt this action would be premature. As an alternative, the Board commenced the preparation of a procurement framework to facilitate further piloting and make BPA more accessible to PSBs
To monitor new pilot processes within in-scope organisations		New processes are being identified by in-scope bodies

Not all of the expected outputs of the Project Board were achieved. This was due to time constraints on members of the Board and dependencies involved.

The project was managed using the guidelines outlined in the Civil Service project management handbook.

Meetings of the Project Board:

The Project Board met on seven occasions. The dates of the meetings were as follows:

- 2nd February 2017
- 23rd March 2017
- 22nd June 2017
- 27th July 2017
- 4th October 2017
- 7th November 2017
- 7th December 2017

BPA Practitioners' Network:

The BPA Practitioners' network was formalised by the Project Board. The members of the network comprised of individuals that have been trained in the use of BPA software under the auspices of the project. The network met formally on a visit to the Bank of Ireland Robotic Process Automation Centre of Excellence in Cabinteely. The network operates in reality in an online setting. Practitioners can contact one another to troubleshoot issues in relation to BPA prior to escalating and item to the implementation partner.

Implementation of BPA within the in-scope bodies:

Office of the Revenue Commissioners, Collector General's Division:

The Office of the Revenue Commissioners put forward a number of staff members for training in the use of the BPA software (Blue Prism). The primary officials that were trained at the Revenue Commissioners were all based in the Management Information Services Unit at the Collector General's Division in Limerick city. Many of the individuals involved had significant technical skills that were highly conducive to the implementation and use of this software.

The Office of the Revenue Commissioner installed the software licence on their servers, which are located in a centralised setting. The team working on RPA in Revenue consists of 0.2 Assistant Principal, 0.4 Higher Executive Officer, 2.6 Executive Officer, 1 Clerical Officer.

By December 2017 the Revenue Commissioners had automated a significant number of processes using BPA software with six processes in full production, three in development and one which is not subject to reporting.

The majority of these processes are related to the work of the Management Information Services of the Collector General's Division.

An innovative aspect of the work undertaken by the Office of the Revenue Commissioners was their effort to expand the use of BPA to other areas of the organisation. For example, officials in the Revenue Commissioners approached the Office's Corporate Services Division (located in Dublin) to propose automating a process within that division.

Although the Revenue Commissioners had a significant number of processes in production, the Office considered that the processes were not mature enough, and in some instances did not have the requisite scale, to warrant full evaluations to be conducted at the time of the conclusion of the Project Board.

The Revenue Commissioners submitted one evaluation in relation to the process that was automated in the Corporate Services Division. This process related to the extraction of key data from applications for competitions for promotion or external recruitment run by the Office of the Revenue Commissioner.

"The BPA software captures and extracts information from application forms, creating a spreadsheet with the relevant data. This has greatly reduced the manual workload in this stage of the competition process, thus improving the efficiencies of the Revenue Recruitment Unit."

The Office notes that, although this evaluation is very positive in relation to the implementation of the solution, officials warn that the process is not yet in the steady state. This is because the process has only been used in connection to six competitions that have been completed.

This BPA process is expected to be run in relation to all future competitions undertaken by the Corporate Services Division. The process runs with an exception rate of approximately 2% (i.e. 2% of the process must be referred back the process owner for completion). The process execution time has improved remarkably and is now completed approximately 25 times faster than the original rate.

The development of this process consumed approximately 15% of a whole time equivalent Executive Officer. However, this automation replaces 22% of a whole time Clerical Officer, 22% of an Executive Officer and 5% of a Higher Executive Officer.

On the basis of this process alone (which has yet to be fully scaled), the savings accrued from the deployment of the CSD process covers the entire cost of the licence. This is noteworthy as the licence is now in operation for 5 other processes that are in production, three in development and one which is not subject to reporting.

In their concluding remarks on this process, the Office of the Revenue Commissioners noted that “the solution has been very worthwhile and has worked well for the Corporate Services Division. It is anticipated that it will provide greater benefits when scaled. Evaluation at this stage is premature, however value for money is expected.” The Office of the Revenue Commissioners also noted that this particular process could be shared with other Departments in the Civil Service who run similar competitions, thus further increasing the return on investment in automating the process.

Interestingly, the Revenue Commissioners note that savings on the smaller processes extend beyond the time saved in executing the process as new team members have built bespoke objects that they will be able to re-use in the creation of newer processes. This has the knock-on effect of saving additional time in creating future processes. In essence, the smaller processes served as an excellent training tool for the team and the knowledge that they have derived from the creation of these processes is considered more valuable than the time saved in the automation of the actual processes themselves.

[Synopsis of Revenue Staff Reaction to BPA](#)

The general trend of the comments sought from Revenue staff involved in this BPA pilot project was very positive. While admitting to the challenges of having to fully understand and in cases improve current processes, the perception is that this work has been very value adding and rewarding, and also that the future rewards are easily visualized.

Public Appointments Service:

The Public Appointments Service (PAS) initially nominated one individual for training in the use of the BPA software (Blue Prism). The nominated official is based within the Large Volume Campaigns Clearance and Assignments section of the PAS. The official had experience and interest in computer hardware, although the individual did not have a background in software or programming. This was an important test of the claim that the software could be operated by persons without a programming background.

At the conclusion of the Project Board, PAS had four processes in full production. The Public Appointments Service installed their BPA licence on a desktop computer (as opposed to on a server). PAS provided three evaluations in relation to processes they have in production.

The first process evaluated after automation by PAS was in relation to panel management. This process involved the transfer of data between a comprehensive excel spreadsheet (in relation to large volume campaigns) to the organisation's bespoke web-based application STAR. This process was previously undertaken by approximately one full time equivalent Clerical Officer. The process took 4 weeks for PAS's official to understand, develop and implement. The process runs with an exception rate ranging from 0-5% (i.e. up to 5% of the process must be referred back the process owner for completion). The process is now completed approximately 15 times faster than its execution prior to automation using BPA.

The second process evaluated after automation was in relation to candidates reporting for duty to client organisations of PAS. This follow-up process monitored the uptake of positions offered to candidates following their assignment to civil service offices as part of a large volume campaign. The baselining exercise estimated that this process involved 50% of a full time equivalent Clerical Officer role. The process took approximately one week to understand, develop and implement the process in full. The process has an exception rate of zero however the process does require periodic re-engineering (for example where Departments'/Offices' names change). The process was never fully implemented manually prior to the introduction of BPA. Therefore the baseline processing time could not be measured for the increased speed generated through automation. The automation of this process has filled a significant data analytics and reporting gap which has generated significant business insights for PAS.

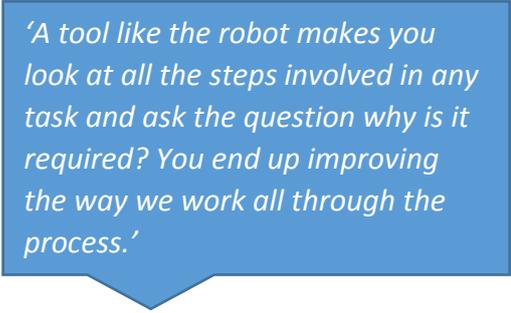
The third process evaluated following automation facilitated better data analytics in tracking general grade candidate assignments. The automated process generates a unique identifier for the candidate and then tracks that identifier to each assignment request. Prior to automation this process was conducted in an unstructured manner, however it has since been consolidated and streamlined and is now performed in a uniform fashion using the robotic software. The baselining exercise indicated that execution of this process totalled approximately 50% of a full time equivalent Clerical Officer role. The process has an exception rate of 0-10% (i.e. up to 10% of the process must be referred back the process owner for completion). Similar to the 'Report for Duty' case, the process does require periodic re-engineering (for example where Departments'/Offices' names change).

At December 2017 PAS had three substantial processes and one smaller one in production. Given that this was undertaken by one trained individual (undertaking the roles of analyst, developer and operator of the BPA software) this is a remarkable outcome for the organisation. The reliance on one member of staff was noted during the project as a risk to the organisation. PAS has taken steps to address this risk.

The Public Appointments Service noted that the automation process helped to standardise and streamline a number of processes. Crucially for PAS, the automation of these smaller processes has greatly improved their data analytics and capacity to produce live statistics, especially in relation to the journey of a candidate through a large volume campaign. This impacts significantly on PAS's management information systems and business insights.

Synopsis of PAS Staff Reaction to BPA

Staff reaction reflected a sense of empowerment that BPA gave them but also on the need to fully understand and improve where possible the process behind the job of work that was to be automated.



'A tool like the robot makes you look at all the steps involved in any task and ask the question why is it required? You end up improving the way we work all through the process.'

Some staff also recommended caution so as to mitigate risks in deploying new technologies, but even these comments were positive about BPA's potential to be value adding.

One Manager commented on their "*delight*" that such mundane work was now being taken away from clerical staff.

Peoplepoint

Peoplepoint initially nominated one individual for training in the use of the BPA software (Blue Prism). The nominated official was based within the HR management information service of Peoplepoint. The official had some development experience, although the individual did not have a background in software or programming. This individual was subsequently supported by the creation of a Robotic Process Automation team of two others who received full training. The team implementing BPA at the conclusion of the Project Board stood at three.

Peoplepoint were assigned two licences. These were installed initially on desktop computers, however as the organisation began to scale the solution it became clear that this would not be sustainable going forward. Consequently, the organisation decided to purchase servers to host the robotic licences and began migrating their processes over. At the conclusion of the Project Board, Peoplepoint had five processes in full production, one awaiting deployment (a seasonal process), one in testing environment, one in final evaluation for development and another on hold (pending process redesign).

Peoplepoint provided three evaluations in relation to processes they have in production.

The first process evaluated after automation by Peoplepoint was the *General Absence - Update Case Status Process*. This process involves updating a case status on an internal system. This update allows the system to pause other processing until (a) the officer has returned to work and completed their Resumption of Work e-Form and their manager has approved it or (b) intervention is necessary on the case, such as medical certs have been received by PeoplePoint. This process interacts with one system the Case Management System (CMS) and two applications MS Excel and Outlook. The Absence Management Team owns this process and it is critical to their operation as it allows them to prioritise live work over work that is paused. Following automation this process is estimated that a saving of 23% of a Clerical Officer role has been made. The process is performed 2 times faster than previously. The process operates with an exception rate of 00.3%; a negligible rate which does not warrant further reduction.

The second process evaluated after automation was in relation to the creation of cases for the Chief Medical Officer. This process involves creating a new case on the internal system for staff who have either been absent for more than 28 days (or in certain circumstances absent for more than 14 days) and therefore should be referred to the Chief Medical Officer. A report is submitted once or twice per week and a Chief Medical Officer case is created on the internal case management system regarding each absence. This Process interacts with the internal Case Management System (Oracle), the Human Resource Management System (Oracle), MS Excel and MS Outlook. The process is also owned by the Absence Team. The CMO team is a sub-team of the Absence Team. Following automation this process is estimated that a saving of 7% of a Higher Executive Officer role has been made. The process is performed between 3 and 3.5 times faster than previously. The process operates with an exception rate of 7.2%. This exception rate is considered high and Peoplepoint is seeking to taper this to around 3% exception.

The third process evaluated following automation was the *Create New Username and Password* process for the Human Resource Information Systems (“HRIS”) team. This Process involves creating a username and password for any new civil servant that comes under PeoplePoint’s remit. A report is run by the HRIS team and submitted to the BPA software. The software checks to see if the new start already has a user profile set up and, if not, it creates one and sends the individual an e-mail informing them of their username and password. This process is essential. Without a username or password, an Officer cannot apply for annual leave, special leave and cannot fill in the correct forms in cases of sick leave. The HRIS team (who own the process) no longer has to involve itself in this process when it is successfully completed by the BPA software. This Process interacts with the internal Case Management System (Oracle), the Human Resource Management System (Oracle), MS Excel and MS Outlook. Following automation this process is estimated that a saving of 7% of a Higher Executive Officer role has been made. The process is performed 3 times faster than previously. The process operates with an exception rate of 6.15%. This exception rate is considered reasonably high and Peoplepoint is seeking to further reduce this exception rate.

PeoplePoint’s BPA Team stated that the automation software is capable of working considerably quicker than a human counterpart. However, it must wait for the other systems to respond. In other words if a person must wait 5 seconds for a page to load, so does the robotic software.

PeoplePoint had another three processes in scoping at the time of conducting their first three evaluations. The organisation estimates that automating these processes would save a further 73% FTE when the combined savings across different grades that are involved in this process are assessed.

In view of the investment outlay in respect of the purchase of servers (which was reported by PeoplePoint to be in the region of €60,000) and the training and implementation costs, PeoplePoint do not expect a year 1 saving. However, on the basis of known costs and expected scaling of BPA, PeoplePoint expect a year 2 saving of circa €100,000 and a year three minimum saving of €200,000 attributable to BPA.

[Synopsis of PeoplePoint Staff Reaction to BPA](#)

PeoplePoint provided a wide range of end user feedback from different stakeholders. The developers were unanimous in their enjoyment of the work. They also communicated a sense of knowing they were doing something both worthwhile and important regarding the changes it can bring to the workplace.

The customer teams all commented on the time savings experienced and also the reduced risk of getting manual tasks wrong, thus improving quality.

"I believe that the BPA system will be of benefit to the Contact Centre. Using the robot to issue alerts has saved us man-power but also allowed us to issue the alerts to all of our customers in a few hours rather than a day or two."

Property Registration Authority of Ireland:

The Property Registration Authority of Ireland ("PRAI") was the first organisation in the Civil Service to trial business process automation and automated the same process using two separate software providers (UiPath and Blue Prism).

The PRAI initially nominated one individual for training in the use of the BPA software (Blue Prism). The nominated official is based within the Information and Communications Technology Division of the organisation. The official had a technical background and qualification in information systems. The PRAI also nominated a second individual for training in the use of the BPA software at a later point.

The PRAI had initially nominated a process which relates to the reconciliation of approved leave with the local flexitime systems. This process is triggered by a daily spreadsheet of data that is downloaded to the organisation from PeoplePoint, the Civil Service's Human Resource Shared Service Centre. This spreadsheet contains details on certain leave types that have been approved using the PeoplePoint online leave approval system. The purpose of the daily reports is to ensure that the information can be inputted into local flexitime systems. The PRAI focussed on automating the annual leave element of the spreadsheet as this is the most time consuming and most straightforward. Following automation, it was estimated that a saving of 27% of a Clerical Officer role had been made. The process is performed 5 times faster than previously. The process operates with an exception rate of approximately 9%, all of which have been anticipated business exceptions built into the automated process for handling.

The PRAI noted that a significant amount of 'development' work was required to implement the process – which is contrary to much of the narrative around BPA. The organisation remarked that the flexiclock application requires only four pieces of information to be entered in order to complete a reconciliation. However, as there are two separate applications involved ('owned' by external third parties) that do not share certain common data, a number of calculations and steps needed to be built into the automated process.

The PRAI also cautioned that if a process is reliant on external data or interacts with external applications, any changes made by those external sources would require the automated process

to be paused until the changes can be assessed, implemented in the BPA software and tested. Organisations therefore may not have a say in what data they receive and its format. Dependency on third parties and awareness of resulting limitations must be acknowledged early on.

Given the task of processing and reconciling holiday leave is replicated in many areas of the Civil and Public Service, there are perhaps further gains to be made by replicating the automated solution to other Departments and Public Service bodies.

The PRAI attempted to identify additional processes to develop using BPA. The organisation did scope a financial process at one stage. However, this process was not considered suitable as there would be a need to align that process with the impending Financial Management Shared Service at some future stage. The PRAI notes that due to the high degree of automation already in place in the organisation and a lesser reliance on non-integrated systems and applications meant that it was not a prime candidate organisation for greater embedding of BPA.

Project cost to the Department of Public Expenditure and Reform:

5 X BPA Licences	€56,095.00
Training, mentoring, coaching and other external supports	€53,919.00
Total	€110,014.00

Conclusions and recommendations:

Conclusions:

- Business Process Automation using robotic software, in general, is effective for certain types of processes
- Processes that are suitable for BPA should be rules based, computer oriented, high-volume, using multiple applications or systems
- Processes that are well embedded in an organisation make better candidates for BPA
- Organisational suitability for Business Process Automation is dependent on a number of factors including the level of automation already in place, degree of reliance on non-integrable systems/applications, dependence on external data inputs and, importantly, the scale of processes available for automation
- A significant amount of time is required in order to properly train individuals to a point of proficiency in using the solution
- Upfront investment by organisations is required in order to succeed in using BPA
- Some processes will need to be re-engineered to ensure that automation using BPA is effective
- Some degree of programming may be required for more complex processes
- Processes must be agreed and 'locked in' by subject matter experts and process owners
- Ongoing management of processes that are automated is minimal
- Successfully automated processes are completed at far greater speeds
- Very small processes are good candidates to allow employees train on BPA software
- BPA generates a number of ancillary benefits including better audit trail, greater data analytics, improving accuracy through standardisation, increased staff motivation and engagement.
- Evaluations require processes to be at the steady state
- Where possible, the sharing of successfully automated processes that are replicated in other areas of the Civil Service should be encouraged
- BPA is complementary to the Business Process Management and IT function and can offer an easier and cheaper to implement solution than a traditional IT solution but which could eventually be replaced by a traditional IT solution
- The early involvement of the IT department is important so that security considerations and clearance regarding the BPA components can be dealt with up front

Recommendations for public organisations considering BPA:

- Identify a sufficient number of processes in your organisation prior to piloting
- Identify champions within the organisation who will take ownership of the initiative to use BPA and who will have the commitment and authority to see the task to fruition
- When conducting the baseline of the process (process design document) ensure that all subject matter experts, process owners and the organisation's IT department are involved; and that the process is fully agreed and approved
- Identify small processes to allow staff to train on before approaching bigger processes
- Lead from the business function but with the full knowledge and assistance of the IT function
- Avoid processes where the external input is unstructured or liable to regular change
- When the process interfaces with different Departments, get agreement that data entry is performed in a standardised format. Otherwise different robots will be needed to interface with different Departments
- Ensure that correct governance arrangements with IT are in place to ensure notification of changes to systems or applications. This allows the robots to be re-engineered as necessary before deployment
- Security and access permissions arrangements need to be approved and implemented (e.g. a secured location for the BPA operation may be required) so that screens cannot be seen by unauthorised people. Also Group Policy Objects that implement the deployment of screen savers after a set period of time need to be disabled for the process automation to work

Appendix A – Project Board

Membership of the Business Process Automation Board:

Dr Lucy Fallon-Byrne (Chairperson), Assistant Secretary, Reform and Delivery Office, D/PER
Laura Broomfield, Office of Government Procurement
Katie Clair, Collector General's Division, Revenue Commissioners
John Cummings, Head of Spot Buying, Office of Government Procurement
Lisa Keyes, Head of Internal Operations, Public Appointments Service
Barry Lowry, Government's Chief Information Officer, D/PER
Philip McGrath, Reform and Delivery Office, D/PER
Paddy Purtill, Collector General's Division, Revenue Commissioners
David Satelle, IT and Reporting Lead, PeoplePoint
Henry Sullivan, Chief Information Officer, Property Registration Authority of Ireland

Meetings of the Business Process Automation Board:

The Project Board met on seven occasions. The dates of the meetings were on:

2nd February 2017

23rd March 2017

22nd June 2017

27th July 2017

4th October 2017

7th November 2017

7th December 2017

Appendix B - Staff perception of BPA from those closely involved in the pilot project.

Testimonials from Revenue Staff

“The BPA software captures and extracts information from application forms, creating a spreadsheet with the relevant data. This has greatly reduced the manual workload in this stage of the competition process, thus improving the efficiencies of the Revenue Recruitment Unit.”

- CSD Management, Corporate Services Division, Office of the Revenue Commissioners

“Creating an effective automation solution for business users has been a very rewarding experience for me as an RPA developer. Learning how to use the software has been challenging at times but it has been relatively easy to pick up. Strong requirements gathering and analysis skills are needed to design and deliver real results.”

- BPA Developer, Management Information Services, Collector-General’s Division, Office of the Revenue Commissioners

“It’s been hugely exciting to have gotten in on the ground-floor of this new endeavour within the Civil Service and within the Office of the Revenue Commissioners. As a developer, it’s often challenging to develop new ways of doing things that are often long-established work practices but the rewards and recognition have made it all worthwhile. The innovations we’ve introduced are just the stepping stones to the positive changes that can be achieved with BPA and I’m proud to be one of the drivers of that change.”

- BPA Developer, Management Information Services, Collector-General’s Division, Office of the Revenue Commissioners

Testimonials from Public Appointment Service Staff

‘A tool like the robot makes you look at all the steps involved in any task and ask the question why is it required? You end up improving the way we work all through the process.’

‘It also makes you think of what is the risk in each task – where can it go wrong and how!’

‘It makes you think what I need to do and what can be done for me!’

‘It needs to be monitored and tested like any other new implementation but that focuses you on the risks involved and how to solve them’

‘It’s exciting to see what it can do! I was immediately interested in learning more about it and I wanted to get involved’

‘It really does look so cool when it is in full flow’

‘I’m delighted that a really mundane task has been taken away from my COs. It has saved a lot of time for my unit!’

Testimonials from PeoplePoint Staff

The CMO Team said *“The quality of the work which we have had processed via the BPA tool has been high. The process itself is very reliable and has cut down on manual work leaving us less open to data risks. It’s very worthwhile and we will be aiming to automate more of our processes as a result”*

The Absence Team stated *“The Robotics process has benefited the Absence Team enormously. We have been able to cease manual completion of a process that was time consuming and repetitive without providing any training benefit to the officers involved.*

The process previously took between an hour and two hours every morning for a member of our team, time which can now be spent more productively.

I would consider it to be worthwhile for the above reasons alone.”

The HRIS Team added *“The RPA process has been a great assistance to the HRIS team in PeoplePoint.*

It has helped ensure that peaks in demand for user login details can be accommodated as part of routine work. In the past the unpredictability of this case load could have a potential negative impact on other aspects of our work due to the drain on limited staff resources.

The process has worked very well and has been consistently reliable. By assigning fluctuating work-loads to the Robotics Automation Process on a routine basis we have been able to better meet other responsibilities and have consistently delivered accurate user login details to our users more quickly than before.”

The Contact Centre noted *“I believe that the BPA system will be of benefit to the Contact Centre. Using the Robot to issue Alerts has saved us man-power but also allowed us to issue the Alerts to all of our customers in a few hours rather than a day or two.”*

We also asked the PeoplePoint RPA Team for their opinion and experiences working with Automation.

The BPA Team Leader stated: *“It is good to be working on innovative program. I believe that it will be able to increase the quality of the work, reduce the cost, and decrease the response times to customers. It is crazy to think that with all the advances in technology in the last 20 years, it can still take 4 or 5 weeks to get responses from Government departments. People no longer accept this and expect an answer in 2 or 3 days. If rolled out and fully implemented, I think people’s expectations can be more closely met.*

Even though our FTE savings are currently small, we have set up and developed a good framework, shown the possibilities to the organisation and set up a governing framework. I anticipate that the rate of savings in 2018 will increase greatly.

The main difference between automation software and full blown back end automation is cost. If you are dealing with processes which never deviate, then backend even though more costly may be the way to go. However as many Departments are open to process changes, new circulars and new guidelines, automation software such as Blue Prism allows processes to be automated in a relatively inexpensive way which is also flexible.

Using developers within the Civil Service allows the developers to help each other and to better achieve results.

A separate developer/analyst added: *"I have very much enjoyed my time on RPA. It feels as if I am part of a positive movement in the Civil Service towards a more efficient, accurate endgame. I believe in the short time that I have been working on the team, our efforts have already positively affected the building and in turn, the service we provide to our customers. We have made good progress in rolling out automated service to the building and are well on our way to convincing more staff of its advantages. The savings in FTE thus far are respectable and looking to the future, I personally look forward to making more significant headway in this regard. The software itself has suited our needs well and has generally been a pleasure to learn and work with. I have high hopes for the project's prospects."*

Another developer/analyst added: *"I really enjoy my current role in RPA. There is a feeling that we are doing something important for the whole Civil Service. Robotics is the future and I have a passion for it. Processes we automated are running well with no errors and it has given me satisfaction.*

I personally think RPA is a future of all back offices; the software we are using is great and only the sky is the limit. Looking forward to automate more.

Appendix C – Status of processes subject to BPA

Process Name:	Organisation	Status
1 ACAT	Office of the Revenue Commissioners	In Production
2 Corporate Services Division Recruitment/Promotion	Office of the Revenue Commissioners	In Production
3 Classified	Office of the Revenue Commissioners	Classified
4 Write-Out Pending Approval	Office of the Revenue Commissioners	In Production
5 VAT Repayments - Work Items	Office of the Revenue Commissioners	In Production
6 VAT Repayments - Online Claims	Office of the Revenue Commissioners	In Production
7 PAYE/PRSI Monthly Increased Collections	Office of the Revenue Commissioners	In Production
8 PAYE/PRSI Monthly Cancelled Payments	Office of the Revenue Commissioners	In Development
9 Post Write Out Work Items	Office of the Revenue Commissioners	In Development
10 Local Property Tax (partial)	Office of the Revenue Commissioners	In Development
11 Update case status (absence)	PeoplePoint	In Production
12 Create a case (CMO)	PeoplePoint	In Production
13 New username and password (HRIS)	PeoplePoint	In Production
14 Travel Pass Photo Resize (Increments and Schemes)	PeoplePoint	In Production
15 E-mail Alerts Process (P&CCM)	PeoplePoint	In Production
16 Union business (leave)	PeoplePoint	Awaiting Deployment (Seasonal Process)
17 Partial PAF population (recoupments)	PeoplePoint	Testing
18 Password Reset (HRIS)	PeoplePoint	Evaluation Stage
19 Update case status (pay)	PeoplePoint	On Hold
20 Flexitime reconciliation of approved leave	Property Registration Authority of Ireland	In Production
21 Panel management	Public Appointments Service	In Production
22 Report for duty	Public Appointments Service	In Production
23 Request for ID	Public Appointments Service	In Production
24 Report for duty carry over	Public Appointments Service	In Production

