

RPA Analyst Course

Written Guide

Contents

Contents	1
Intent	2
Feedback	2
Introduction to RPA	3
Benefits of RPA	4
Overview	4
Direct Benefits	4
Indirect Benefits	4
Strategic Benefits	5
The Vergence of Cognitive AI and Machine Learning	5
Discovering RPA Benefits	6
RPA Delivery Methodology	8
Overview	8
RPA Delivery Methodology	8
The Process Development Life Cycle (PDLC)	9
The Define Phase	10
The Design Phase	10
The Build and Test Phases	10
The UAT Phase	11
The Deploy Phase	11
Definitions	12
Roles of the RPA Analyst	14
Overview	14
Effective Communication	14
Process Management	14
Define Phase	15
UAT Phase	15
Deploy Phase	16
Post Deployment	16
Other Phases	16
Delivery Strategy	16

Intent

This document is designed to augment your online learning experience and provide you with the opportunity to review and revise the content that has been discussed during the individual lessons of the course

Feedback

Please contact your WithYouWithMe RPA instructor if you have feedback on this document or any of your WYWM courseware.

Introduction to RPA

This course sits within the Automation Career Pathway and is one of a suite of Automation Courses offered at WithYouWithMe.

This lesson is an introduction to the RPA Analyst course and a roadmap of what is covered throughout the lessons.

This course will cover the role of the RPA Analyst and the associated responsibilities within the RPA delivery methodology. It will also cover other aspects of an organisation's automation capability, to provide a greater understanding of what needs to be considered from an organisational perspective when implementing automation.

This involves:

- A highly effective and robust Governance, Pipeline and Delivery Methodology
- Understanding the importance of an Initial Feasibility Analysis and Initial Process Analysis
- Determining the organisation and business unit's functional requirements
- Understanding the importance of a Proof of Concept & Pilot program
- Conducting a process discovery and mapping session to assist with defining a manual process
- The end-to-end automation solution design including the building and testing
- The organisational impact and change management requirements associated with RPA implementation

Attached throughout this course are a number of tools for uses in industry as an RPA Analyst.

Benefits of RPA

Overview

When considering the benefits of RPA, they can largely be divided up into 3 categories, direct benefits, indirect benefits and strategic benefits. Here we discuss these benefits, how to find the benefits and the prioritisation of these benefits.

Direct Benefits

Direct benefits of RPA are usually a great place to start because it's generally quite easy to achieve an immediate return on investment (or ROI) following the implementation of RPA.

Direct benefits usually result in an immediate increase in profits for the organisation or an immediate saving in human work hours or what we call Full Time Equivalents (FTEs). Generally, direct benefits are easy to identify and quantify because they're easy to translate in monetary terms, and they're simple to realise. This is because the business process owners and workers can easily see where the addition of a digital worker will help them in their workplace.

Furthermore, the RPA solution deliveries are usually funded by direct benefits because it's easy to demonstrate to an organisation's management that they will achieve an immediate return on investment.

Finally, direct benefits are the best place to gain early support and buy-in from an organisation's executive leadership because it's easy to understand and see the benefits of a digital worker or a digital workforce.

Indirect Benefits

Indirect benefits refer to the second and third order effects of the RPA solution on the organisation. Indirect benefits are usually harder to monetise, but are no less important as part of the overall strategy.

A commonly identified example of an indirect benefit is improved customer satisfaction. A customer may be receiving faster service or a greater length of service as a result of using a digital worker. For example, organisations may be able to offer 24/7 service by using a digital worker as opposed to traditional 9-5 service provision through the use of a human workforce.

Another indirect benefit is improved employee satisfaction. Employees may experience far less stress or work pressure if a digital worker alleviates a lot of the mundane or boring tasks that used to take up a lot of their day in the past. This improved employee satisfaction may also lead to increased staff retention, which can be more difficult to monetise directly, particularly if the HR department is not involved in the assessment.

Another example of an indirect benefit is an increased data analytics and data auditing capability. A digital worker records every task that they conduct, and they therefore leave a clear and auditable trail

for future reference. Furthermore, the data that the digital worker retains could be utilised by the organisation in the future or mined for trend analysis to assist the organisation in improving or refining its business process and strategy.

Indirect benefits of RPA can be difficult to find and even more difficult to quantify as justification to the management of the organisation. If a benefit cannot be compared directly or quantified, it's important to compare it against qualitative markers that the organisation is used to.

Examples of this might be the organisation's key performance indicators, their values or their strategy. As an RPA analyst it's important to remember that you shouldn't be afraid to ask the staff what they perceive the indirect benefits to be and how they would be best articulated to the organisation's management, because generally staff will be very well versed in how to communicate effectively with the management team.

Strategic Benefits

Strategic benefits are often the hardest to identify in the short term, but can lead to the greatest strategic benefit to the organisation in the long term. RPA solutions can be very cost effective when compared to holistic IT transformation programmes. Whilst these transformation programmes may provide a great output, they tend to be an order of magnitude more expensive than RPA solutions.

This can be very attractive to organisations who can achieve their efficiency goals through an RPA solution while allocating considerably less resources for a comparable outcome.

RPA solutions offer reduced risk to an organisation during the implementation phase because they cause less disturbance to extant business practises, and hence less disturbance to the bottom line of normal operations.

In the same vein, because RPA solutions tend to complement existing business processes rather than replace them, they require less change management during the implementation phase and hence less churn in the organisation.

Another strategic benefit of RPA is that it's scalable. RPA digital workers can be selectively inserted into business processes around the organisation in an iterative process to not only help spread the cost of an RPA solution, but they also allow the organisation to watch and see the outcome of including digital workers as part of their team.

The final strategic benefit of an RPA solution is the structuring of data. A digital worker requires digital inputs and produces error free digital outputs.

The Vergence of Cognitive AI and Machine Learning

Artificial intelligence and true machine learning applications are in our very near future, and once they become commonplace, organisations will require clean, structured data in order to apply these systems.

Using an RPA solution allows an organisation to start the process of cleaning its data and making sure it's ready for applying machine learning and artificial intelligence applications in the future.

Discovering RPA Benefits

To effectively discover the benefits of RPA It's important to undertake a very well defined process discovery program that is the responsibility of the Governance Board to implement. This allows the RPA analyst to be in the right frame of mind and identify benefits when they hear or see them.

Secondly, it's important to have a good understanding and a detailed record of the business process' start state before any automation is applied. This allows the RPA analyst to understand the baseline from which to measure benefits and results.

The RPA analyst should also make sure that they understand what the benefits are from the business process owner and process SME's perspective . This could be very useful as business process owners and SMEs are generally very good at identifying direct benefits, and maybe some indirect benefits of an RPA solution.

It's important when finding benefits, to have some perspective and look at the bigger picture. This is especially useful when trying to understand indirect or strategic benefits of an RPA solution.

It's important to look at sister business processes and sections, as well looking into management and into subordinate business processes to see where they may derive benefit from RPA.

Finally the RPA analysts should not be afraid of the paper trail. Often an organisation will provide a lot of very actionable data prior to the business process being automated.

It's important to review everything that's provided to make sure that all the benefits are identified from the outset. Once you've identified all the benefits of an RPA solution, it's important to prioritise them in the right order to achieve the best outcome for the organisation.

A good way to start this is to understand the organisation's intent in seeking to automate. Like mentioned earlier, this is usually aligned with the strategic direction of the organisation.

Question to ask might look like this:

- Is the organisation performing well and looking to RPA for long term strategic benefits to raise its performance to the next level?
- Is the organisation struggling to meet its targets for the year and looking to automation for direct benefits or short term gains to get it over the line in the next financial year?

Similarly, it's important for the RPA analyst to compare the prioritisation order against the organisation's mission, objectives and primary KPIs. Viewing the benefits through the lens of the organisation will help the RPA analyst understand what's important to the business units in the organisation.

Finally, though it's not critical, it can be very beneficial to understand where the funding for the RPA project is coming from within an organisation.

As the RPA capability generally sits within operations and funding will typically be provided from the business unit's annual budget. However in some cases, funding for the RPA capability may come directly from the organisation as either a Capital Expenditure (CAPEX) or via Operational Expenditure (OPEX).

As always, this is dependent on the organisation and may vary from project to project.

As you can see, prioritising the benefits of RPA solutions is both an art and a science, and you'll have to make several judgement calls that unfortunately may need some experience to get good at.

But like all assumptions, you should try and validate them wherever possible to achieve the best outcome for the organisation and you will be able to draw on your experience outside of RPA to make these calls in industry.

RPA Delivery Methodology

Overview

This lesson will discuss the Delivery Methodology of an automation solution and define the process discovery approach that best supports building a credible process automation governance and pipeline framework.

This lesson will cover the RPA Delivery Methodology and where the RPA Analyst sits within this methodology. It will also cover project management methodologies and each phase of the delivery process.

RPA Delivery Methodology

The RPA Delivery Methodology is a proven means of delivering ongoing business benefit through process automation using a controlled and structured lifecycle. The purpose of this slide is to ensure the RPA Analyst understands the project methodology and where they fit into it when delivering automation solutions.

This particular delivery model was developed and matured over time and incorporates both the Waterfall and Agile project delivery methodologies.

Briefly, the Waterfall methodology is quite structured in regards to project planning and delivery. It is well suited to ensuring effective governance of the project and highly reliable in ensuring project deliverables are achieved.

The Waterfall methodology is a linear project management approach, where stakeholder and customer requirements are gathered at the beginning of the project, and a sequential project plan is then created to accommodate those requirements.

As we are essentially building robots or digital workers using software, it's only logical that the Agile methodology would also be incorporated.

At a high level, the Agile methodology is a type of project management process where demands and solutions evolve through the collaborative effort of self-organising and cross-functional teams and their customers.

In regards to delivering an automation capability and in particular, the end-to-end process automation solution, we employ the Waterfall methodology to ensure there is no scope creep, that project governance is met, stakeholder expectations are managed, and project milestones are achieved within the required time and budget.

In regard to building the automated solution, we adopt the Agile methodology. This is focused on short sprints of time to achieve project deliverables for each phase of the end-to-end process automation solution via the adopted delivery methodology.

The Delivery methodology shown in the slides is a mature model that has been adopted throughout the industry. It is broken down into discrete phases that will be discussed in more detail in this lesson and throughout the course.

This Methodology is also referred to as the Process Development Life Cycle (or PDLC).

The Analyst will not be responsible for implementing the Delivery Methodology nor will they be required to deliver the complete end-to-end process automation solution. That responsibility falls on the Head of RPA, Robotic Operating Model (ROM) Architects and Delivery Leads

The RPA Analyst's efforts will be focused in the Process Management, Define and UAT Phases of the PDLC.

Process Management is the framework we use to determine which process we should look to automate. So we use Process Management to work out which process is suitable for automation and should feed into the PDLC. We will cover the Process Management steps in a later lesson.

For the purpose of this PDLC overview, let's assume the process we are considering is suitable and ready for automation.

The Process Development Life Cycle (PDLC)

As an RPA Analyst it is important to understand each phase of the PDLC. Here, we will discuss each phase of the Delivery Methodology life cycle so that you can gain a fundamental understanding of end-to-end process development as an RPA Analyst.

The Delivery Methodology should provide the platform for the creation of re-usable, resilient and scalable automations that reduce delivery effort and maintenance costs.

Best practice is to step through the entire cycle, from define, through to deployment in 12 weeks, however, this varies from process to process and company to company so the timeline can vary anywhere from 6 weeks to 24 weeks, and even more in some cases.

We'll cover the key deliverables for each phase of the Process Development Life Cycle (PDLC) in the next section. For now, we'll focus on what occurs at each stage of the PDLC.

Remember as we said earlier, once a process has been scheduled for automation through the Process management steps, we move into the Define phase of delivery.

The Define Phase

This is the first phase of the delivery methodology and is where the RPA Analysts work directly with the business unit and process SME to define the manual process.

This phase captures the current flow of the business process to be automated at the keystroke level, and forms the requirements for automation solution design. This is also known as process mapping.

It is important to note here that only the manual process should be documented as it is done manually and not with the consideration of automation in mind. It is important for the Analyst to capture all the information about the process for the next phase - Design.

The output of the Define phase is a document called the Process Definition Document (PDD) which defines and maps the process down to the keystroke level as we just mentioned. Finally the PDD gets reviewed and approved by the business unit to ensure accuracy before we move to the next phase.

The Design Phase

In the design phase, the end-to-end automated process solution is designed by either senior developers, delivery leads or solution architects.

In this phase the RPA Analyst provides the link between the business unit, process SME and the developers to ensure the automation design meets the business needs.

This basically means that the RPA Analyst makes sure questions raised by the RPA developers are answered by the right process SMEs. One way to do this is to schedule regular meetings throughout the design phase with the process SME and the solution design team. This will ensure business requirements are communicated and met.

Once the solution design has been completed and approved by the business unit and Solution Architect, we move into the build and test phases.

The Build and Test Phases

The build and test phases are led by the RPA development team, so the Analyst's role here is to ensure the development team has all the information they need from the business unit and business process owner.

These are the phases where the development team uses RPA software to physically build the automations as per the plan that was locked in during the design phase. These phases are shown in a loop, rather than in sequential order, because they employ an Agile methodology to cycle through building and testing until a working automation has been produced.

These phases end when the development team is happy that they have an automation (or bot) that does what it's supposed to do without breaking. In the automation world we would describe this as robust and reliable.

At this point, the only other task the RPA analyst has is to build the user acceptance testing plan, which will be used to confirm the automation fulfills the requirements of the business unit or business process owner.

The UAT Phase

Here, we are now relying on the UAT Document to undertake the User Acceptance Test (UAT).

The RPA Analyst and Process SME are very active in this phase. The RPA Analyst must liaise between the delivery lead and the business unit to schedule a number of meetings for the solution walkthrough and the UAT.

Here, the RPA Analyst, the process SME and the assigned developer will run the automated process through the various scenarios identified by the business unit. These scenarios should make up the go/no-go criteria for acceptance testing.

It's important at this stage of the delivery that there is no change to the scope of design as this will protract the timeline of the project significantly.

The Deploy Phase

Once the process has passed the UAT it moves on to the last phase - The Deploy Phase.

The RPA Analyst does not play a significant role in this phase, rather, they will likely be involved in other Define and Design tasks for other processes that will be scheduled for automation. That said, it's important that the RPA Analyst has a good understanding of what is undertaken during the deployment of the automaton

As you can imagine the deploy phase is the final phase in the delivery. In this phase the process undergoes a staged or supervised release into the live environment or as it is commonly referred to, the Production Environment.

The deploy phase is led by the development team and is where the completed automation solution is introduced into the production environment iteratively over a number of days and weeks, building up to a fully deployed bot that is operational in the production environment. This iterative deployment ensures that any failures are caught when they are easier to rectify and removes the risk of the bot corrupting the live production environment.

If issues arise during the deployment phases, you will need to revert back to the build and test phases and step through the UAT as we've discussed, before recommending the deployment phase.

Even though the delivery methodology formally ends with the automation becoming operational in the live production environment, there is a final step referred to as Operational Support or Maintenance. Bots need constant maintenance to ensure they are functioning correctly. This is because the production environment is constantly evolving (for example, Windows might get upgraded and the process may change), so each time these changes occur, the change must be re-assessed through an abbreviated delivery methodology and re-released. The maintenance phase is ongoing and never stops as long as the bot is in production.

Definitions

Organisation: This refers to the parent company that has adopted an automation capability. You can think of an organisation as a large company. Examples could be a food and beverage company like Coca-Cola or a Bank such as Commonwealth Bank of Australia etc.

Business Unit: A business unit sits within an organisation and has a specific function and responsibilities. Depending on the size and type of an organisation, the number of business units and business functions can vary. An example of a business unit could be Finance, Human Resources or even Sales and Marketing. These all have specific functions and responsibilities within the wider organisation.

Business Function: A business function is specific to a business unit. Most of the time, it is normal for a Business Unit to have numerous business functions that they are accountable for delivering to the organisation. These functions will be achieved by business processes that could be accounts payable processing, customer credit approval, onboarding new staff etc.

Business Unit Manager: The Business Unit Manager leads the Business Unit and is the person responsible for all the business functions within that unit. They are sometimes referred to as the Business Process Owner and they are the ultimate approval authority when finalising the Process Definition Document.

Process SME: This is the person responsible for completing the process we're looking to automate within a Business Unit. They generally have a detailed knowledge of the process and will work directly with the RPA Analyst to assist in defining that process. The Process SME will work with the RPA Team at specific times throughout the delivery methodology and is highly visible in the Define and UAT Phases.

Head of RPA: The person who has been nominated by the organisation to lead the RPA Capability. They work with all leaders in the wider organisation to evangelise and manage the RPA Capability.

ROM Architect: The Robotic Operating Model Architect is responsible for building and delivering the entire RPA Capability and generally reports to the Head of RPA.

RPA Team: When we refer to the RPA team we're talking about the project team delivering the RPA solution.

Digital Worker: When we talk about a 'digital worker' we're referring to the automation or the bot, which is actually carrying out the automated tasks.

The Solution: When we describe the solution, we're talking about the holistic complete solution that includes not only the digital workers, but the change management and the ongoing maintenance of the automation process.

Roles of the RPA Analyst

Overview

This lesson will look further into the role and responsibilities of the RPA Analyst and build on what we have already discussed earlier in this course.

This lesson will focus on the responsibilities of the analyst at the granular level and will align to the PDLC phases that we've covered previously.

Effective Communication

Effective communication is vital in any project, but in an RPA project the RPA analyst is the key communicator and translator between the various stakeholders involved.

The effectiveness of communication between the analyst and other parts of the organisation will impact the quality and accuracy of the RPA solution's delivery.

The RPA Analyst must understand the needs of the business units and ensure they're also aligned to the needs of the organisation. This will assist in determining process and project priorities, and will support the description of the automation's organisational impact once implemented.

The relationship between the RPA Analyst and the Business Unit or Process SME is critical when determining accurate functional requirements and gathering the details that support the development of documentation that annotates the business process and identifies the key impacts on the business unit.

Internal to the team, the relationship between the RPA analyst and the RPA developer is critical when developing the RPA solution, integrating user acceptance testing and when undertaking the general roll out of the final RPA solution.

Stakeholder management is also part of this, but we'll cover that in more detail later in the course.

For now, understand that the organisation, the Process SME and the developer are the primary contacts for the RPA analyst during the automated solution delivery.

Process Management

While not technically part of the Project Delivery Methodology, process management, and in particular the feasibility analysis step of process management is the first evolution where the RPA analyst plays a key role. The feasibility Analysis phase of process management is essentially an analysis and assessment step where the organisation, infrastructure and business processes are reviewed at a holistic level to determine suitability for automation.

During this stage and especially if the organisation is just starting off in their RPA journey, the RPA Analyst will help build a shortlist of processes for automation. This could be done in the form of documents or simple tools to help business users spot suitable processes, or it could involve leading workshops and discussions with key people in the business to get a better understanding of the organisation and the range of processes that they are carried out.

The outcome of these processes and discussions is that the Analyst has a working knowledge of the business, business units and processes, and is able to provide insights as to which processes may be suitable for automation. This assessment is generally summarised in a report that addresses the organisation's suitability for automation at the organisational, business unit and process level. Specific processes that would be suitable for automation are also typically identified at this point and this advice will generally provide a starting point for commencement of the Define phase of the PDLC

Define Phase

One of the most critical aspects of the RPA Analyst's role is in the Define phase. During the define phase the RPA Analyst will define the organisation's functional requirements. The Analyst will do this again by leading workshops, discussions and walkthroughs, and with documents like the functional requirements questionnaire, which we'll discuss in greater detail later in this course.

Before completing the Define Phase, the RPA analyst will need to complete the Process definition document which we'll also discuss in much greater detail later. For now, understand that defining the process we're considering by assessing its functional requirements, and mapping it in detail, is the core role of the RPA analyst, and this is ultimately communicated through the PDD.

UAT Phase

The next key role of the RPA Analyst comes in the Test phase, where the solution design has been locked down, and is where the Analyst supports the generation of a testing and evaluation plan for the automation solution once built.

As we've discussed, we call this the UAT Plan. This plan needs to be developed while considering the functional requirements of the process, which they established earlier. This is why the Analyst is so heavily involved in the testing and evaluation planning process.

To fulfil their role in creating a robust UAT plan, the RPA Analyst needs to develop a range of test scenarios that assess the functionality of the RPA solution in line with what the organisation needs it to do i.e. its functional requirements. The RPA analyst also maintains their role as the key communicator during the testing phase as is the case across all phases of the PDLC.

Prior to the Deploy phase of the automation solution and before the finished product can be used on real data, in a real business process, all stakeholders should be aware of exactly what the impacts of the robot will be on business process operations.

Deploy Phase

Therefore in the Deploy phase, the analyst must determine all the potential operational impacts of the robot on the organisation, and ensure they are documented in the operational impact document (OID). Again, communication is key at this point to make sure that all the stakeholders are on the same page before the digital worker is deployed to a live environment on a real business process.

Post Deployment

Finally, post the Deploy phase, the RPA analyst will be a contributor to an ongoing maintenance plan for the bot that will take effect post deployment and will ensure the automation is reviewed and updated periodically, so it meets the business's needs as they evolve or the process changes. This maintenance plan may be a stand alone document or it may be incorporated into the change management document which we'll discuss toward the end of this course.

Other Phases

We'll pause at this point to look at the phases in the delivery methodology that do not directly relate to the RPA analyst, but where they still have a role to play. These are the RPA solution design and development, as well as the deployment of the solution. These roles are chiefly fulfilled by the RPA developer and delivery leads but the RPA analyst needs to maintain the communication link between these key groups as we've said before. Even though the RPA analyst doesn't typically lead these phases we'll still cover them later in the course so you have a holistic understanding of the automation development process.

Delivery Strategy

The RPA Analyst is also a key contributor to the overall RPA delivery strategy. The development and refinement of a delivery strategy is particularly significant if you're working for a client in a consulting arrangement and we'll cover this in greater detail in later lessons as well. For now though, it's important to understand that while the RPA analyst plays an important role in RPA strategy, they will generally be supporting an RPA consultant, delivery lead or Head of RPA in the development of their overall strategy.

As you can appreciate, the RPA Analyst is a critical cog in the automation process and is involved in some way in every step of the PDLC. You will learn more about each step as we progress through the course.