blueprism®

Robotic Process Automation Software

Blue Prism

PROCESS DELIVERY METHODOLOGY

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1. Introduction

1.1. Blue Prism's Robotic Automation

Robotic Automation refers to process automations where computer software drives existing enterprise application software in the same way that a user does. This means that unlike traditional application software, Robotic Automation is a tool or platform that operates and orchestrates other application software through the existing application's user interface and in this sense is not "integrated".

Blue Prism's Robotic Automation software enables business operations to be agile and cost-effective through rapid automation of manual, rules-based, back office administrative processes, reducing cost and improving accuracy by creating a "virtual workforce".

The virtual workforce is built by the operational teams or accredited Blue Prism partners using our robotic automation technology to rapidly build and deploy automations through leveraging the presentation layer of existing enterprise applications. The automations are configured and managed within an IT-governed framework and operating model which has been iteratively developed through numerous large scale and complex deployments.

2. Blue Prism Process Delivery Methodology

The Blue Prism Process Delivery Methodology is a proven means of delivering ongoing business benefit through process automation using a controlled and structured Automation Framework.

Blue Prism Process Delivery Methodology has been designed to:

- Provide the most appropriate technique for delivering Blue Prism processes.
- Mitigate risk by providing earliest possible visibility to potential issues.
- Allow multiple processes to be delivered in parallel.
- Ensure comprehensive control is maintained throughout the delivery
- Realise the process benefits at the earliest opportunity

This document provides an overview of the recommended methodology through the key phases of the delivery cycle and its content and chronology deliberately mirror the Process Delivery Tracking Sheet.

3. Set Up

Once process delivery has been authorised to commence, the Automation Manager appoints the Delivery Manager, Process Modeller(s) and Test Analyst(s). Business and process contacts are engaged and costs authorised.

The Process Delivery Tracking Sheet is periodically updated by the Delivery Manager. On setup, the following details can be captured in the Summary section:

- Business Contact – This is the process owner. The primary business contact could be a business unit manager, team manager, project manager etc.
- Secondary Business Contact – If required a secondary contact can be listed.
- Process Contact – Names of Subject Matter Experts (SMEs). These will be the first point of call for any process-related queries.
- Cost Centre – Cost centre that the delivery costs are allocated to.
- Cost Centre Authoriser – Name(s) of contacts that will authorise any delivery costs.
- Quality Centre Project Name – Name of Quality Centre project name that all test plans and evidence is captured to.
- Catalogue Request Numbers – List of any catalogue requests made during the delivery.
- Risk Assessment – Risk assessment approval details and dates.
- Delivery Manager – Name of Delivery Manager
- Subject Matter Expert (SME) – Names of SME's
- Process Analyst – Names of Process Analysts
- Process Modeller – Names of Process Modellers
- Test Analyst – Names of Test Analysts

4. Define

The define stage will examine the process prior to a solution design and the commencement of the configuration stage. In addition to allowing all risks to be identified, a thorough analysis will expose the scope of the complete process resulting in a comprehensive design and more economic configuration phase.

4.1. Process Analysis

The Process Analyst, working with the business subject matter expert (SME), will provide a detailed process map and description (Process Definition Document). This will define the entire scope of the process but the granularity will need to be sufficient to provide enough detail for the process to be followed by a user during a PDD Walkthrough. The Process Modeller will confirm the detail and be present during the PDD Walkthrough.

4.2. PDD Walkthrough

There is a risk that a completed Blue Prism process running as per design will result in an unsatisfactory level of business exceptions. This is due to inadequate process definition. To mitigate the risk of this a PDD walkthrough is performed. A business SME will perform the process manually by following the prescribed process in the PDD. The process must be followed exactly and a sufficient number of cases must be processed to provide a rough estimate of what level of exceptions can be expected when the process is automated. It is imperative that cases processed during the PDD walkthrough are a random yet representative sample. The Process Modeller and Delivery Manager will agree the walkthrough volume.

4.3. MI Requirement Analysis

During processing there is an opportunity to harvest data for the purposes of MI. Building this into the initial solution usually requires no additional development effort. An analysis must be made by the Process Analyst to ascertain the MI requirement.

4.4. Functional Requirement Questionnaire

The Functional Requirements Questionnaire (FRQ) captures all the metrics, controls, execution and data management requirements as part of the current operational process today. These are extremely important and useful when designing your automated process, i.e.

- Does your process need to be scheduled at applicable hours when the applications are available?
- Does the process require an “input trigger” to start?
- Is it best to create separate “automated” processes to utilise the robots and share the workload?

The FRQ captures the operational requirements of how the process is manually operated today and will help design how the process can be automated.

5. Design

5.1. Solution Design Document

Following completion of the define phase, the solution can be designed and documented. The Solution Design Document (SDD) will complement the PDD and describe how the Blue Prism process will be designed to successfully automate the process described in the PDD. The SDD is a comprehensive document containing, not only high level details of how the Blue Prism product will deliver the solution, but also includes details of other deliverables that are required for the solution (i.e. web services, database tables, web forms etc.) and on other details such as security, scheduling, alerting, management information, and exception handling.

For full details of the information captured in the SDD, please refer to the Solution Design Document Template.

5.2. Operational Impact Document

This document describes in detail the impact on the Operation from the delivery of the automated solution.

This document is intended for the client's project delivery team to ensure that all components of the required operational architecture are in place. In signing off this document, the business will be acknowledging and agreeing to the retention of some resource to support the solution.

5.3. Process Design Instructions

This document describes in detail a single Blue Prism process, and the components, business objects, work queues and credentials it uses to support the Blue Prism solution.

The document is intended for those developing and supporting the Blue Prism solution. It is a dynamic document that will continually be revised as changes are applied. Its accuracy is essential if different personnel are to successfully develop or support the process.

5.4. Object Design Instructions

This document describes in detail a single Blue Prism Business Object, including all the actions in the object and all the inputs and outputs to those actions.

This document is intended for those developing the Blue Prism solution, instructing them on what needs to be developed, and may be used without knowledge of the wider solution.

5.5. Blue Prism Design Authority

For designs which include any bespoke solution features such as Code Stages or Custom Controls, the SDD must be approved by the Blue Prism Design Authority. A requirement for a Design Authority review is triggered by any information being documented in the Bespoke Solution Features section of the SDD.

5.6. Blue Prism Object Design Library

This library is a mechanism of collating all the processes, objects and actions into an internal library which in turns acts as source for documenting all processes and objects within a client environment. It helps to further support the tracking capability of new actions required to be built, assign objects to delegates across various processes / business areas to build and to ensure reusability of actions that have been built. It allows for quicker analysis of actions required against those that are built for speed to deliver estimates for new processes and a formal method of an impact analysis of amending actions on the processes (Regression Testing). During the ODI phase, this can be seen as a requirement by the Lead Developer that feeds into the Design Authority meetings to progress and update accordingly.

6. Test Planning

The Test Planning stage will outline and communicate the intent of the testing effort for a given process. It is to be performed by the Test Analyst and should be performed in conjunction with the configuration and verification phase.

The three key test phases are:

- Configuration Testing
- Verification testing
- UAT Testing

For more details on the testing within each of these phases please reference the Test overview documents.

6.1. Test Requirement Analysis

Many factors need to be considered when analysing the test requirement. These include:

- Elapsed time to work a case
- Number of target systems
- Test environment availability
- Size of process
- New Blue Prism actions
- New systems
- Number of write stages
- Number of business areas
- SLA's
- Process risk
- Scope of manual processing in the end-to-end process

These factors will determine the expected length of each test phase, test windows, the number of UAT phases and the required volume of test cases.

6.2. Scenario & Case Planning

For each test phase, scenarios and test cases will need to be identified and prepared.

6.2.1.1. Configuration Testing

Tests will be largely functional tests targeted at the Blue Prism component level. Specific cases will be required to prove each test.

6.2.1.2. Verification Testing

Tests will be business or process scenarios and specific cases will be required to prove each scenario. In addition, performance and resilience tests will prepare the process for UAT and ensure that cases and systems can be recovered in the event of process failure, system timeouts etc. Tests will need to be devised that will demonstrate

that when restarted part way through a case the process can identify its previous position and successfully conclude the case.

6.2.1.3. User Acceptance Testing

As the Blue Prism process will have been proved by specific test cases in Verification Testing, the object of UAT is to prove the process against the end-to-end business process by carefully building up the volume of random cases. The test plan should specify how these cases will be supplied to the Blue Prism work queue in a controlled manner.

UAT tests will typically be measured against specific exception rates and case volumes over a period before the volumes can be increased. This is to mitigate the unlikely event of excessive case exceptions resulting from scenarios that are not identified in verification.

6.3. Test Schedule & Resources

A test schedule will need to be defined so that target start dates can be provided and resources secured. Subject Matter Experts will be required during the Verification phase and for spot checking during UAT.

6.4. Acceptance Criteria

The Delivery Manager and Test Analyst must define and document the acceptance criteria for each delivery stage. Qualitative and or quantitative criteria will act as control gates for quality and triggers for stage sign off. The following stages will require clear and unambiguous acceptance criteria:

- Configuration Phase
- Verification Phase
- Test Analyst Verification (Process Studio)
- Test Analyst Verification (Control Room)
- Each Phase within UAT

6.5. Test Plans Creation and Approval

Finally, the test plan is published by the Test Analyst for review and approval. No test phase can begin until its relevant section within the Test Plan has been approved.

7. Configuration

The configuration stage will configure and test all new objects, actions and processes. Because of the extensive reuse of Blue Prism components, regression test harnesses will be configured so that components can be safely amended.

7.1. System Access & Credentials

If the process is required to interface with new systems, access will need to be granted and possible applications installed. Consideration here must be given to all environments where the process will be executed (configuration, UAT and production) and installation SLA's.

User access credentials will need to be secured for each process for each system.

7.2. Configuration Schedule

Where multiple processes are to be delivered concurrently a configuration schedule is produced into which configuration items are assigned to Process Modellers in line with the defined delivery plan.

7.3. Process Configuration

Processes are configured.

7.4. Configuration Testing

In line with the Configuration Test Plan, all configuration acceptance criteria must be satisfied before progression to the Verification Stage. Where a system test environment exists, functional testing of the write stages can be performed here.

Tests can be performed as soon as the relevant components have been developed. Please note that where the process is being configured against production data, not all the configuration will have necessarily been completed at this stage – the remaining configuration will be completed during Verification. For read stages a test harness can be developed to consume large numbers or random cases. The more random cases utilised by a test harness, the more system responses that are uncovered during the configuration phase. Where a system test environment exists test harnesses can be created for both read and write stages.

Tests will be coordinated, documented and executed by the Process Modeller. Sign off will be provided by the Test Analyst.

8. Verification

The Verification Stage will prove the process logic and allow the process to be configured for optimal performance prior to UAT.

8.1. Verification

The Verification Stage requires the Test Analyst to be present to witness and approve each stage of the process as a case is worked.

If a test environment has not been available during configuration, the first step in Verification is to complete and test any new write stages. On successful completion of this, cases are slowly stepped though in Process Studio to test the process flow under the authorisation of the Process Analyst and/or SME.

In order to satisfy the verification test scenarios, cases will be specifically selected and added to the process work queue to test certain routes through the Blue Prism process. Acceptance criteria within the test plan will identify when testing in Process Studio is complete.

When accepted in process studio, the process can be run in the Blue Prism Control Room. Here the process will run at full speed before the Test Analyst analyses and confirms the results.

8.2. Performance and Resilience Testing

Once in Control Room the process will be operating at full speed. Average processing times for cases will enable estimates to be provided for total processing time for peak work load. This will affect resource planning and may impact SLAs. The process may need to be adjusted to improve performance.

A series of resilience tests will test how the process accommodates specific conditions that could cause its failure e.g. system exceptions, timeout or unavailability. In addition to being able to recover the system, the process must demonstrate the ability to recover a case. In the event of a process failure and restart it is essential that the process can recognise its previous point of failure and successfully recommence case processing from that point.

8.3. Verification Sign Off

Acceptance Criteria within the test plan will identify when verification testing is complete and the process can be promoted to UAT. In the event of test scenarios proving difficult to prove because of a scarcity of valid cases, breaks and alerts can be added to the process to provide notification if these scenarios materialise in UAT or alternatively these cases can be set as business referral.

9. User Acceptance Test

UAT will be the process's introduction to the complete end-to-end business process.

9.1. Acceptance Environment Migration

A Blue Prism deployment request is made to export the process and its dependent objects, work queues etc to the Blue Prism UAT environment.

9.2. UAT Phases

In line with the test plan more than one UAT Phase may have been prescribed. The test plan will describe the number of cases to be processed during each phase and what acceptance criteria have to be satisfied before the process can be progressed to the next phase.

In the event of process alerts or breaks identifying dormant scenarios, delivery temporarily returns to the verification stage to test under authorisation of the Test Analyst before restarting the current UAT phase.

The test plan will also specify the rate of case spot checking (if any) by the SME for each phase of the process.

9.3. UAT Sign Off

Acceptance Criteria within the test plan will identify when UAT testing is complete and the process can be promoted to the Blue Prism Production Environment. . The Delivery Manager will complete the Process Sign Off document which will be provided to the requesting business area. The Process Sign Off document will contain the following information.

Business Requirements Summary

A brief summary of the initial business requirements and any requests for change

9.3.1.1. Process Delivery Summary

A brief summary of what has been delivered including any changes in process scope. The latest PDD version must be documented here.

9.3.1.2. BAU – Business Area

As part of the wider end-to-end process this section will confirm the responsibilities of the business. This will include processing business referrals, operational contingency requirements etc

9.3.1.3. BAU – Automation Team

A summary of the Automation Teams responsibilities will include process running times and scheduling, process support hours, operational contingency, Blue Prism process or supporting process failure procedure.

9.3.1.4. Risks and Issues

Any remaining process-related risks and issues must be documented. Particular attention must be paid to unseen test scenarios and business referrals outside of the original PDD

9.3.1.5. Benefits and Savings

Although an estimate of benefits and savings will have been made during the process assessment stage, changes in process scope, performance etc may have changed the actual process benefits.

10. Production Roll-Out

Once the UAT stage has been accepted the process is ready to be roll out in the production environment. From this point the process will work 100% of cases and cannot be amended without a formal request for change.

10.1. Blue Prism Implementation Plan

The Blue Prism Implementation Plan details the plan to be followed during the implementation of the project. It defines the tasks to be covered before, during and after the implementation events, including those tasks performed by the Automation Team, IT and Operational Departments.

The purpose of the document is to:

- Communicate and gain agreement for the detailed implementation approach and schedule.
- Aid planning and resourcing of the implementation events.
- Provide a means of recording and managing implementation dependencies.

It is intended for all members of the project team and stakeholders.

Please refer to the Blue Prism Implementation Plan template for details of the information captured within the plan.

10.2. Production Environment Migration

A request is made to export the process and its dependent objects and work queues to the Blue Prism Production environment. On successful migration a final check is performed to ensure that all required objects, systems, and work queues can be accessed by the process.

10.3. Documentation Update

10.3.1.1. Operational Contingency Document

The Operational Contingency Document is updated with details of what action should be taken and when in the event of the processing being unable to run.

10.3.1.2. Operational Process Control Document

The Operational Process Control Document is updated with details of what actions should be taken by the operations team to successfully complete a case that where a Business Referral or System Exception is generated.

10.3.1.3. Environment Description Document

An update to the Environment Description Document may be required if new systems/resources have been installed or any other change to the configuration was required to facilitate the process.

10.3.1.4. Operational Handbook

The Operational Handbook is updated to describe how a process is to be started or restarted.

10.4. Support Policy

It is essential that a Service Wrapper is implemented for the live Blue Prism processes to ensure smooth day to day running of the automated processes and to prevent the processes from decaying as systems/business processes evolve.

The support policy provides the guidelines on the optimum Service Wrapper for Blue Prism.

11. Document Map

11.1. Stage Documentation

11.1.1.1. Define

Output Documents	Action
Process Definition Document (approved)	Signed Off
Functional Requirement Questionnaire (approved)	Signed Off

11.1.1.2. Design

Input Documents	Action
Process Definition Document (approved)	Used
Functional Requirement Questionnaire (approved)	Signed Off

Output Documents	Action
Solution Design Document	Sign Off
Object Design Instructions	Sign Off
Process Design Instructions	Sign Off
Operational Impact Document	Sign Off
Object Design Library	Updated
Configuration Test Plan	Draft
Verification Test Plan	Draft
User Acceptance Test Plan	Draft

11.1.1.3. Configuration

Input Documents	Action
Process Definition Document (approved)	Used
Object Design Instructions	Used
Process Design Instructions	Used
Solution Design Document (approved)	Used
Configuration Test Plan (approved)	Used

Output Documents	Action
Configuration Test Plan	Sign-Off

11.1.1.4. Verification

Input Documents	Action
Process Definition Document (approved)	Used
Solution Design Document (approved)	Used
Verification Test Plan (approved)	Used

Output Documents	Action
Verification Test Plan	Sign-Off

11.1.1.5. User Acceptance Test

Input Documents	Action
UAT Deployment Request	Created
User Acceptance Test Plan (approved)	Used

Output Documents	Action
User Acceptance Test Plan	Sign-Off
Process Sign Off document	Created

11.1.1.6. Production Roll-Out

Output Documents	Action
Implementation Plan	Signed Off
Production Deployment Request	Approved
Operational Contingency Document	Updated
Operational Process Control Document	Created
Environment Description Document	Updated
Operational Handbook	Created
Support Policy	Created