

blueprism®

ROBOTIC OPERATING MODEL

OVERVIEW AND DELIVERABLES

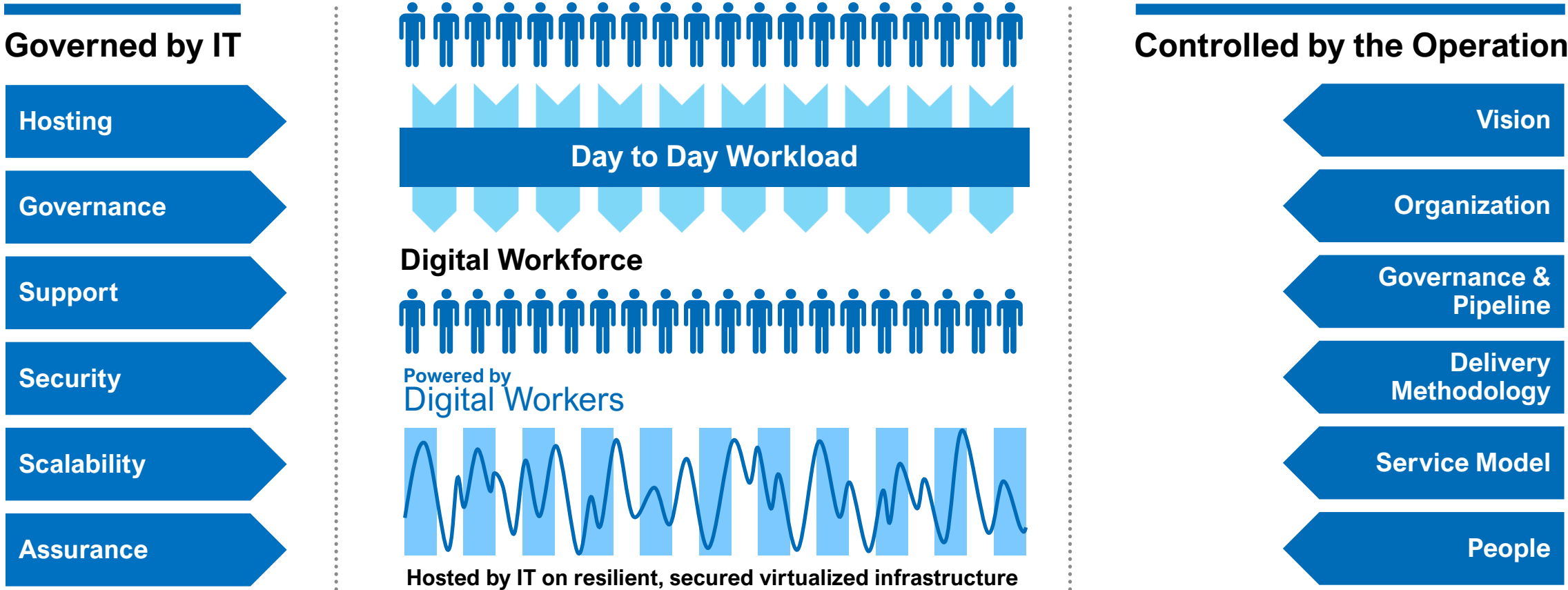


The Robotic Operating Model is Blue Prism's industry leading approach to successfully providing maximum business benefit through the scaled deployment of Robotic Process Automation that rapidly delivers on-going business value through the identification and automation of manual processes within a structured and controlled, IT approved environment.

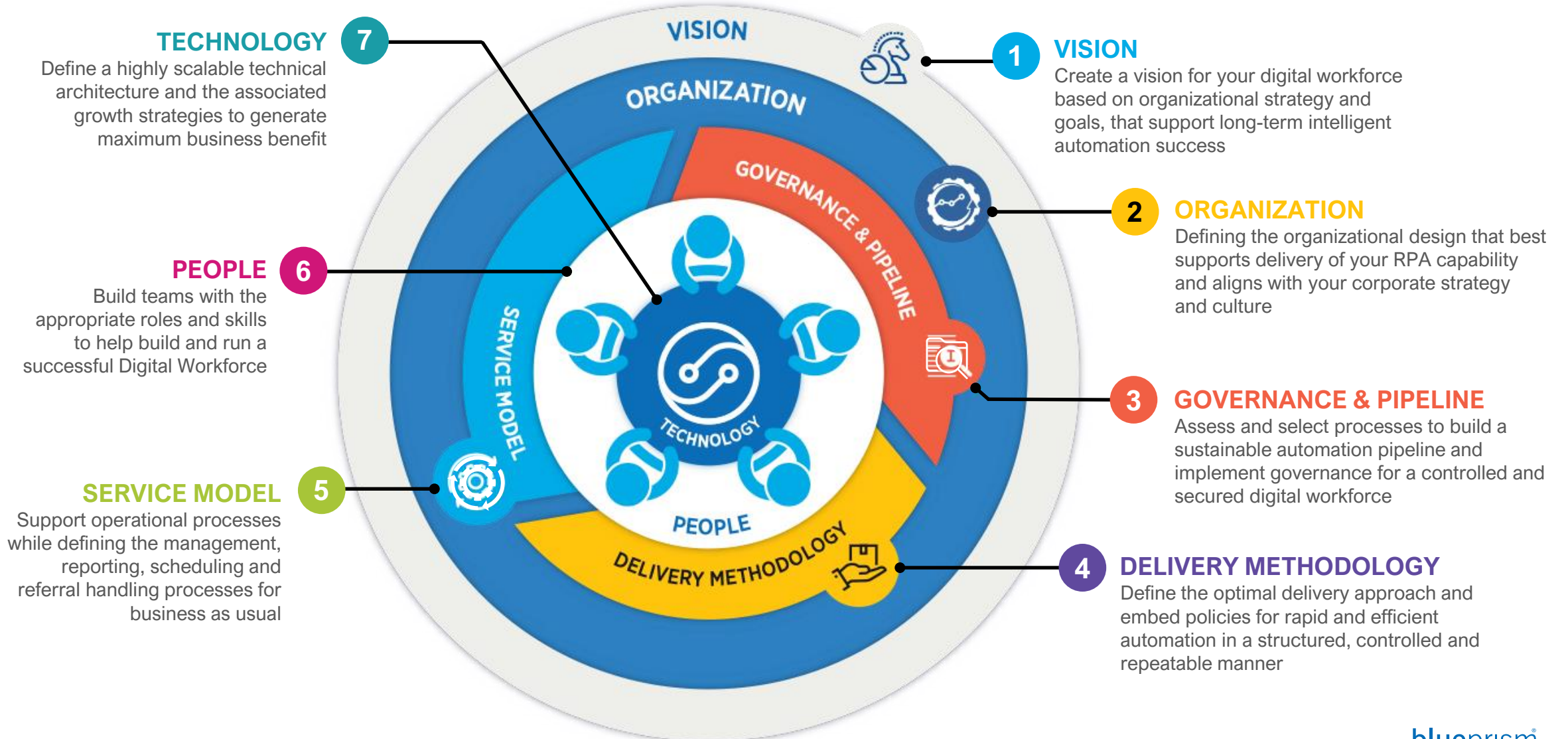
It provides the foundations for evolving the traditional Target Operating Model to embrace the digital workers and establish a seamless bi-directional flow of work between the human and the digital workforce.

The Digital Workforce

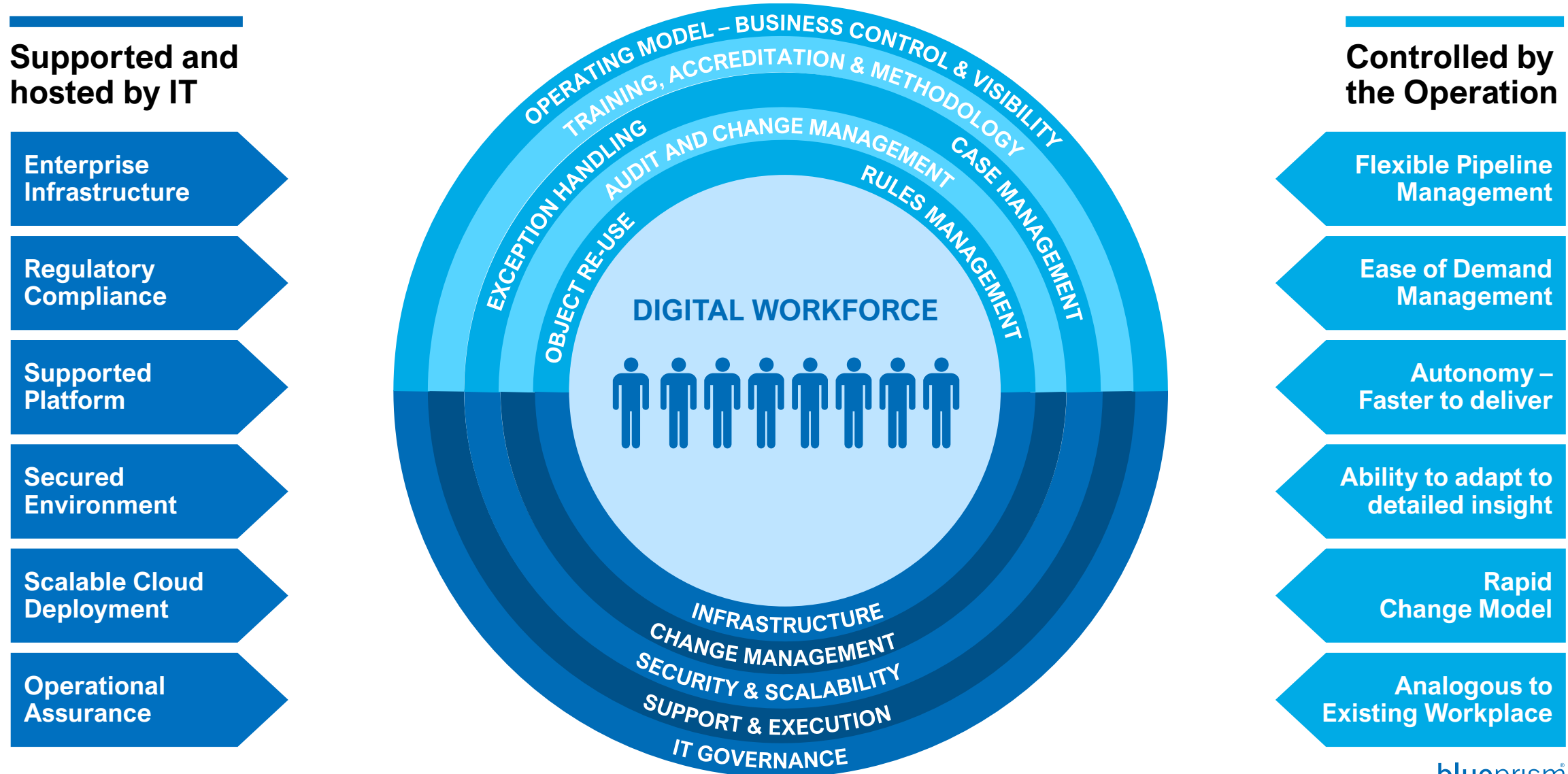
The Blue Prism proposition is a single instance, enterprise class capability designed and proven in regulated industries. The platform allows enterprise operational CoEs to automate with technology endorsed, hosted and supported by IT.



The Seven Foundations of a Robotic Operating Model



Building a Mature Capability



Benefits of an Enterprise Digital Workforce

Technology



ROBOTIC CLOUD

Uses a private 'Robotic Automation Cloud' to enable creation of workers on demand



EXECUTION INTELLIGENCE

Continuously verifies outcomes; applies a digital level of insight to human processing activity



ENTERPRISE STRENGTH

Built on proven scalable and resilient technology and following standard architecture principles

End to end data governance and logical access management



LIGHTS OUT WORKFORCE

Digital Workforce from first principles, designed to work intelligently and autonomously

Operations



INCREASED EFFICIENCY

Reduces operational costs and re-work, increases customer satisfaction



COMPLETE COMPLIANCE

Digital employees follow documented processes to the letter, without error, omission or deviation



ON-DEMAND MANAGEMENT

Digital employees are multi-skilled across all automated processes



ROBOTIC ANALYTICS

Draws insight from the wealth of data captured by the Digital Workforce



CENTRALISED KNOWLEDGE

Processing expertise is combined into a centralised repository and provides ease of maintenance through standardisation

Removes overhead and risk associated with localised initiatives

The Governance Board Overview

The Governance Board will set the strategy for RPA and deliver against that strategy. The Board will be comprised of the Head of RPA and representatives from IT and the Business. The Board will prioritize the demand for processes being selected for automation ensuring the associated business benefit is recorded.

Head of RPA

- Chairs the Governance Board
- Accountable to executive management for business performance of the RPA capability
- Ensure a Governance Board is in place consisting of proven decision-making members
- Ensures the Governance Board meet regularly and predictably to discuss new candidates
- Ensure responsibility for reviewing and approving changes as well as new automation requests

IT Representatives

- Responsible for managing inward and outward dependencies with IT
- Gatekeeper for demand on RPA capability from IT
- Establishing the digital workers have the applicable applications / systems required
- Flagging any potential obstacles to automating proposed processes such as scheduled application changes
- Responsible for ensuring proposed process automations meet all necessary requirements from an environment perspective

Business Representatives

- Consumer of services provided by RPA capability - responsible for managing alignment with business strategy
- Accountable for the benefits realization of processes
- Responsible for the prioritization of processes based on business requirements
- Ensure there are no business obstacles which may impact proposed automations
- Ensuring a good mix of people from across the business units are represented
- Act as RPA Evangelists to ensure RPA capabilities are demonstrated to the organization

The Governance Board Responsibilities

Demand Management

- Gate-keeper for all demand generated via the pipeline
- Responsible for defining & prioritizing RPA schedule
- Ensure consistency and visibility of demand management decisions
- Define the demand qualification, assessment, prioritization and benefits realization criteria

Demand Generation

- Promote the benefits of RPA throughout the organization
- Identify and qualify RPA opportunities

Benefits Realization

- Accountability for defining success criteria and benefits realization tracking for RPA initiatives
- Responsible for communicating RPA success across the organization

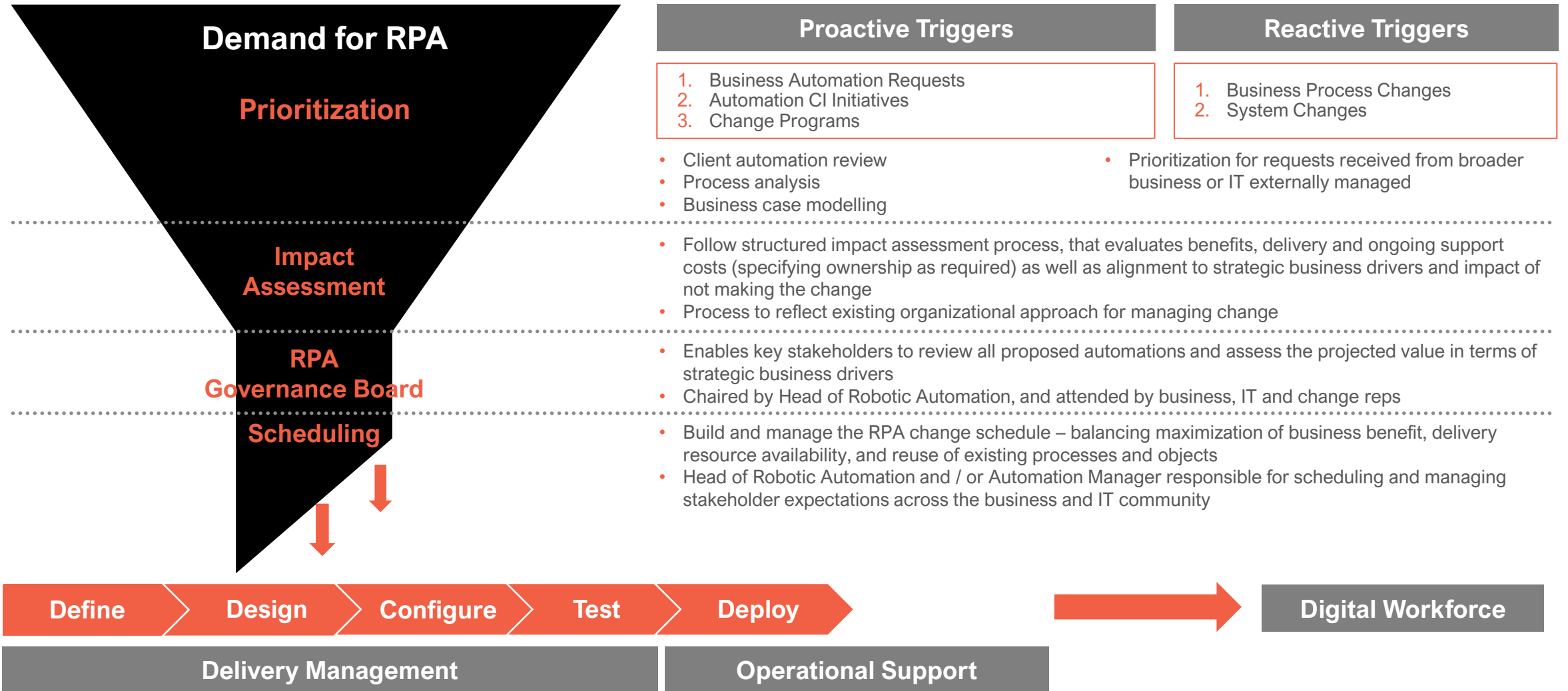
Program Steering

- Decision-making forum for all strategic business and technical design challenges occurring during the delivery
- Providing an escalation point for critical delivery issues and risks

Continuous Improvement

- Providing sponsorship for Continual Improvement initiatives
- Identifying opportunities to drive greater value from RPA

Managing the Demand Pipeline



1. Business Automation Requests
2. Automation CI Initiatives
3. Change Programs

1. Business Process Changes
2. System Changes

- Client automation review
- Process analysis
- Business case modelling
- Prioritization for requests received from broader business or IT externally managed
- Follow structured impact assessment process, that evaluates benefits, delivery and ongoing support costs (specifying ownership as required) as well as alignment to strategic business drivers and impact of not making the change
- Process to reflect existing organizational approach for managing change
- Enables key stakeholders to review all proposed automations and assess the projected value in terms of strategic business drivers
- Chaired by Head of Robotic Automation, and attended by business, IT and change reps
- Build and manage the RPA change schedule – balancing maximization of business benefit, delivery resource availability, and reuse of existing processes and objects
- Head of Robotic Automation and / or Automation Manager responsible for scheduling and managing stakeholder expectations across the business and IT community



Opportunity Assessment Approach

1

PROCESS DISCOVERY

Highlight areas of work best suited for Blue Prism digital workforce

Identify operational areas in need of improvement

Identify areas with appetite for virtual worker skills

Establish process taxonomy

Catalogue processes to include in scope of the assessment

Assess impact on current change pipeline

Identify impact on planned initiatives and assess risks

2

OPPORTUNITY ASSESSMENT

Estimate automation potential and effort required to setup a business process within Blue Prism

Obtain Process Information

Collect process information and evaluate any business process.

Size process automation potential

Apply Blue Prism' automation criteria to establish initial automation potential

Estimate Financial Impact

Assess a combined business case and benefits

3

PROCESS REVIEW

Validate identify business processes and assumptions

Perform process review

Observe process and validate assumptions

Scope implementation effort

Define scope and level of effort

Update demand pipeline

Add process to automation queue

4

OPTIMIZATION

Extend automate scope of the existing process pipeline

Optimize Design

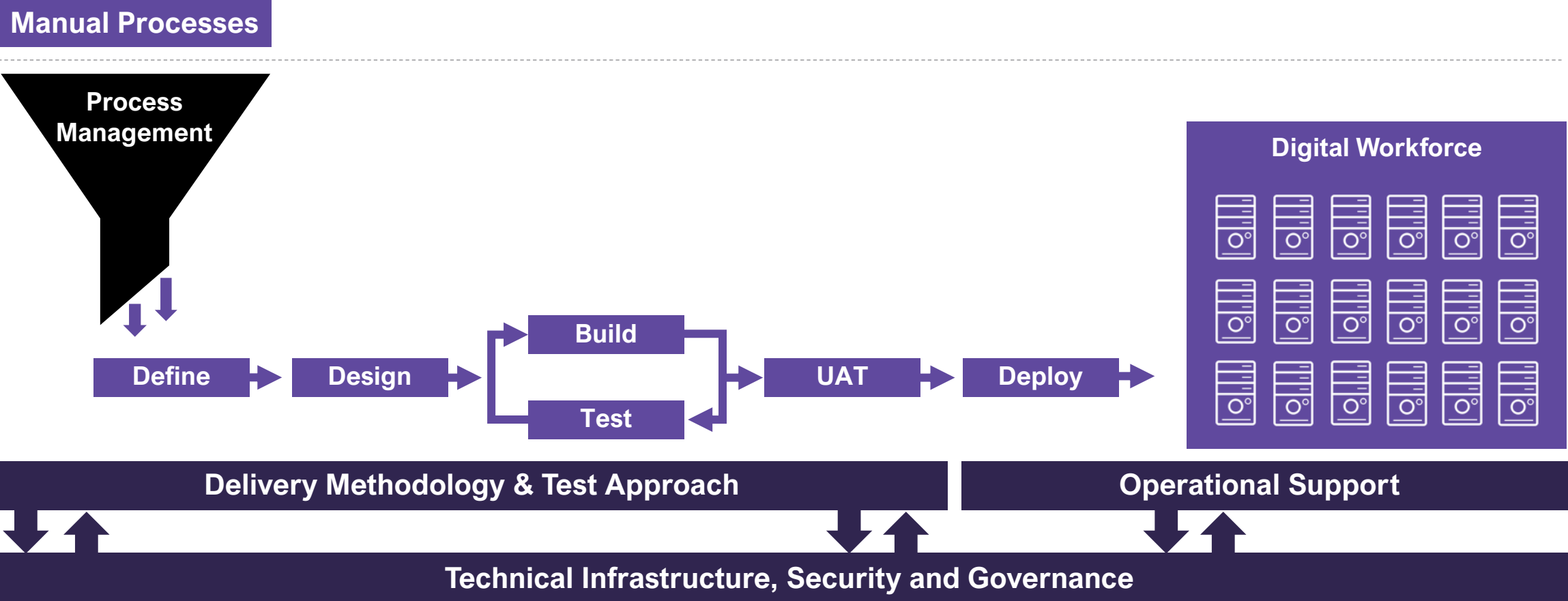
Extend automation potential through component re-use and design improvements

Extend Functionality

Leverage Blue Prism's Technology Partnerships to increase automation potential

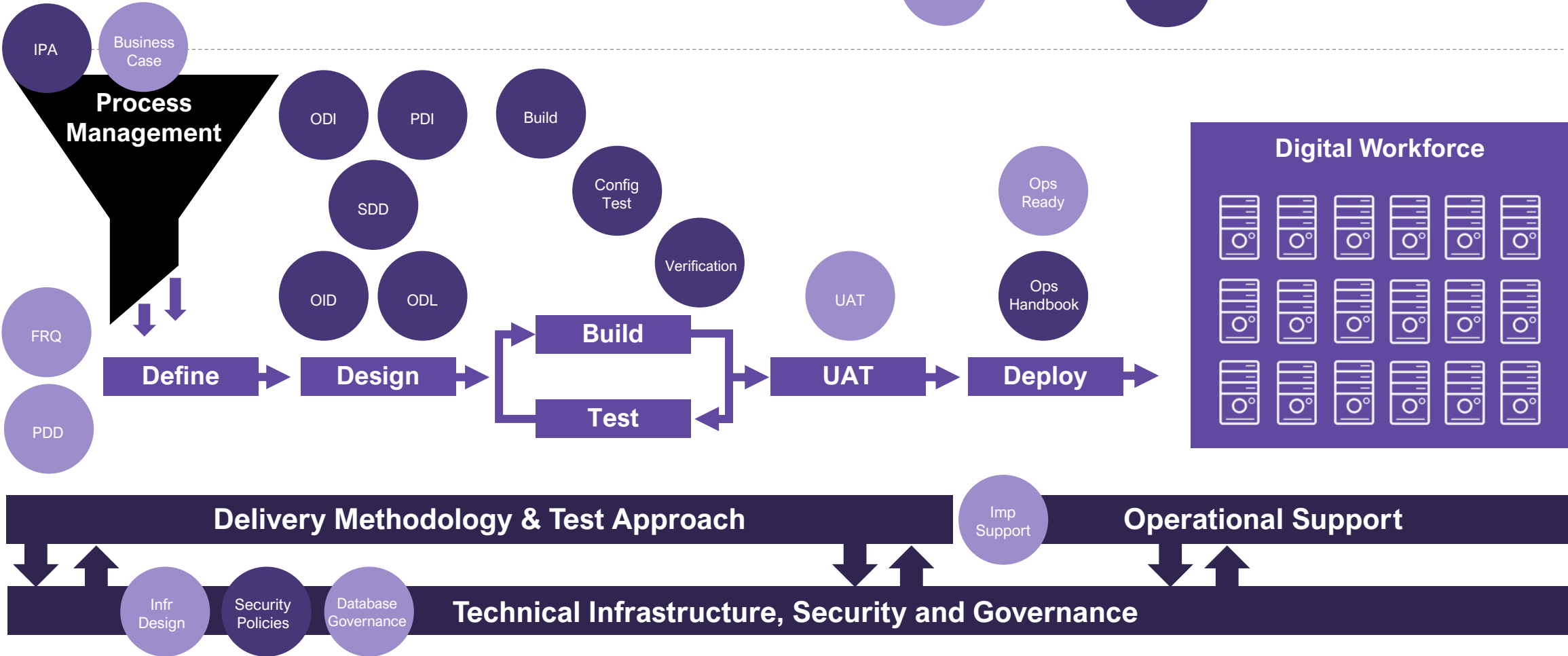
Delivery Methodology Lifecycle

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



Delivery Methodology Key Deliverables

Manual Processes



Key Deliverables

RPA METHODOLOGY DELIVERABLES

RPA DEMAND GENERATION

		DELIVERABLE	PURPOSE / DESCRIPTION:
Process Management		Initial Process Analysis (IPA)	Define, by process, the feasibility, scope, complexity, effort, and projected benefits
		Application Assessment	Provides the RPA team with an opportunity to assess the client's host systems and gained knowledge will assist in determining the delivery and support costs
		Business Case	Translates the aggregated results of Process Assessments into a financial case and provides the inputs for project planning (i.e. effort and cost breakdown)
Delivery Management	Define	Process Definition Document (PDD)	Captures the current flow of a business process at a keystroke level to be automated and forms the requirements for design
		Functional Requirement Questionnaire (FRQ)	Documents the functionality to enable the process solution to run unattended whilst meeting the demands of the business
	Design	Object Design Instruction (ODI)	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
		Process Design Instruction (PDI)	Describes in detail the Blue Prism processes, components, business objects, work queues and credentials used to support the Blue Prism solution
		Solution Design Document (SDD)	Comprehensive document containing, not only high level details of how the Blue Prism product will deliver the solution, but includes details of other deliverables required for the solution
		Operational Impact Document (OID)	Describes in detail the impact on the Operation from the delivery of the automated solution
		Design Authority (DA)	Responsible for maintaining the development integrity and its constituent processes and object as well as updating a centralised view or library to reflect the available objects and processes
	Build	Peer Review Board	Operates as both advisor and gatekeeper to the Blue Prism development team, supporting and validating all build elements during the deployment and testing phases
		Build Review Checklist	Provides feedback on areas to concentrate on to improve the robustness, resilience, scalability and controllability of the process
		Development Best Practice	Guide describes the basic best practice that should be adopted during process and object development
		Development Test Plans	Used during the testing phase that covers a testing plan, scenario coverage and tests, but also reflects the scenario ratio coverage to cases worked in testing

Key Deliverables

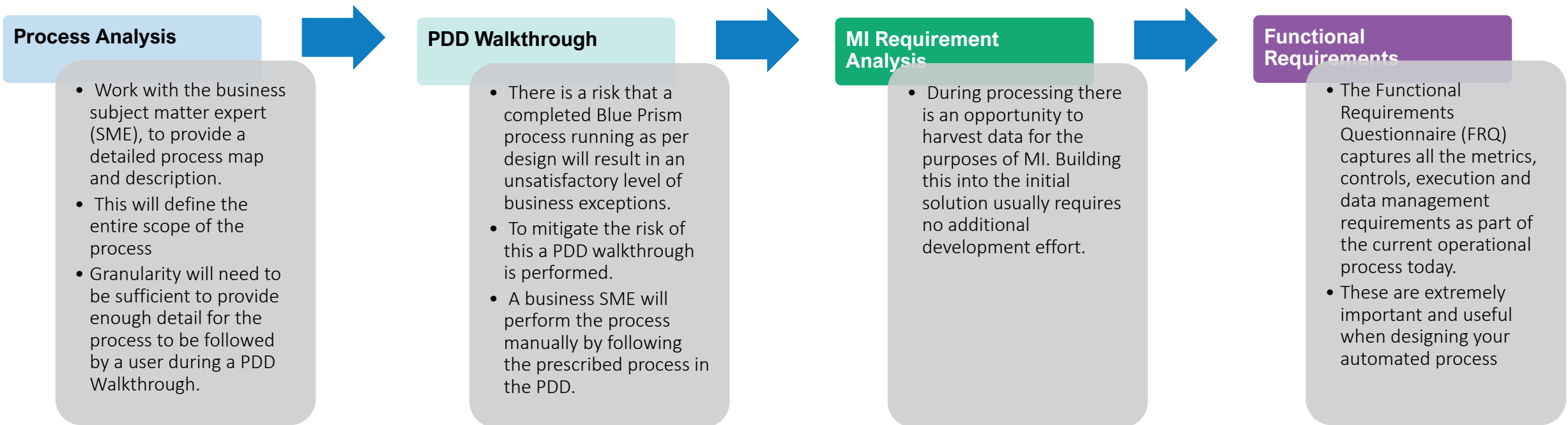
RPA METHODOLOGY DELIVERABLES

RPA DEMAND GENERATION		DELIVERABLE	PURPOSE / DESCRIPTION:
Operations Support	Test	Verification Test Plan	Generate & document test conditions to ensure all relevant scenarios are captured to step through cases in a controlled manner in the presence of Operational SME's
		UAT Plan	Controlled testing, gradually ramping up the volume based on successful completion, and starting with the processing of a single case
	Deploy	Release Note	Delivers the Blue Prism Release Package into test (i.e. the output of process development)
		Operational Handbook	Provides instruction, information and advice on the running of the specified automated process in a normal daily operational environment for those who will run the process
		Process Release Acceptance	Enables the release that has been created to be checked and accepted when migrated and deployed across environments.
		Process Implementation Plan	Details the implementation plan to be followed by the project that defines the tasks to be covered before, during and after the implementation events
	Technical Infrastructure, Security, Governance	Archive and Backup Policy	Gives guidance to archiving process logs and backing up production processes and business objects
Logging Configuration Policy		Gives guidance to logging settings on stages in processes and objects for each deployment environment	
Security Policy and Procedures		Outlines the security policy and procedures that supports the platform which is robust, highly scalable, powerful and flexible, designed from first principles to support a Digital Workforce	

Defining a Process

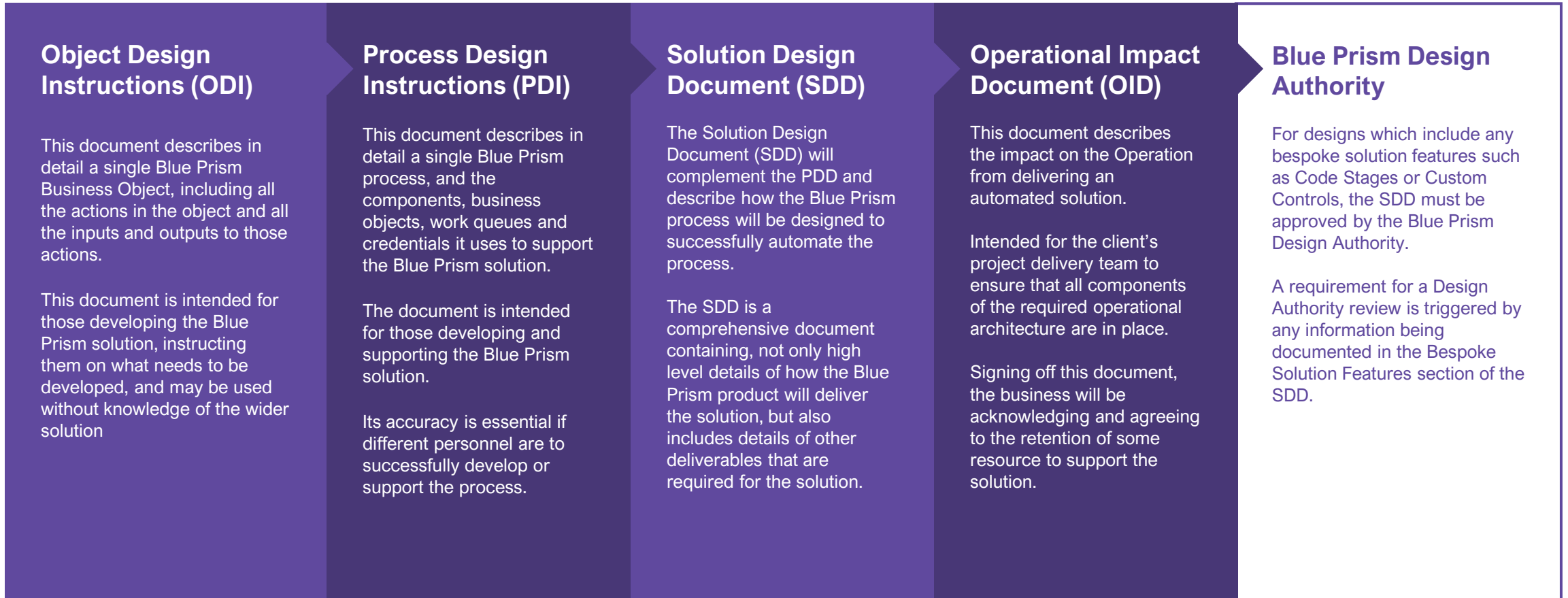
The define stage will examine the process prior to a solution design and the commencement of the configuration stage.

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.



Methodology Design

Blue Prisms Methodology comprises of five different stages in order to orchestrate a good design and to help build a robust, resilient and maintainable solution.



Solution Design Considerations

Scalability

Does it need to scale? Can it scale?
Can we share a process?

Recoverability

Can the process recover itself after a restart and pick up where it left from?

Resilience

The process must be able to accommodate unforeseen system responses

Data management

Data security, work queue keys, work queue data

Data integrity

Eliminating the risk of orphans and duplicate cases

Performance

Processing the fastest way (not necessarily the way the user does it) and use the fastest interfaces

Efficiency

Minimise further work downstream when exceptions occur. Harvest as much data as feasibly possible and make it available with the exception case.

Solution Design Considerations

License Optimisation

Batch process or continual processing? Design to make best use of the licenses.

24 hour processing

The process should be started at least once per day, will minimize the size of the session log and also keep the running process visible to the controller

If you need to a process continually, have the scheduler start the process at the same time each day and have the process consume a finish time 10-15mins prior to the start time.

Security

Security access models will need to be adhered to. For example some target systems may be accessed via SSO and the defined security model requires the process to log into windows as a specific user.

Testing

The test approach could affect the design & build. Can anything be built into the solution to aid testing e.g. case control or report outputs?

Latency

Minimise calls to high latency interfaces

Reporting, MI, logging

Are reports to be generated, data pushed into data stores or external logging repositories.

Throttling

Do we need to build in the ability to slow down processing? Put a wait stage at the start of each action that consumes a wait defined in an environment variable.

Design Solution Elements

Work Queues

Lock current case to prevent duplication
Cases can be deferred / be retried
Process can be taken down in a controlled manner by pausing the queue

Environment Variables

Local storage of variables outside of the process.
Used to parameterise environments, file locations, URLs etc

Session Variables

Allow for data item values to be changed from Control Room during processing

Environment Locks

Used to control access to shared resources
Can be used to control process flow during concurrency.

Credentials store

Process and windows credentials can be stored securely in the DB

Login Agent

Ability to login automatically to windows
Can unlock a locked screen

Exposing process & objects as web services

Process and objects can be exposed as web services.
Preferably use objects and keep call short and synchronous i.e. adding a case to a work queue

COM objects and Blue Prism API

You can list external references in objects and call exposed functions.
Blue Prism has it's own API if you want to wrap existing code and have public functions appear as Blue Prism actions

Code stages

Full access to the .net Framework to enable access to faster interfaces where required.

VBO

Library of ready made utility objects for reuse

Scheduler

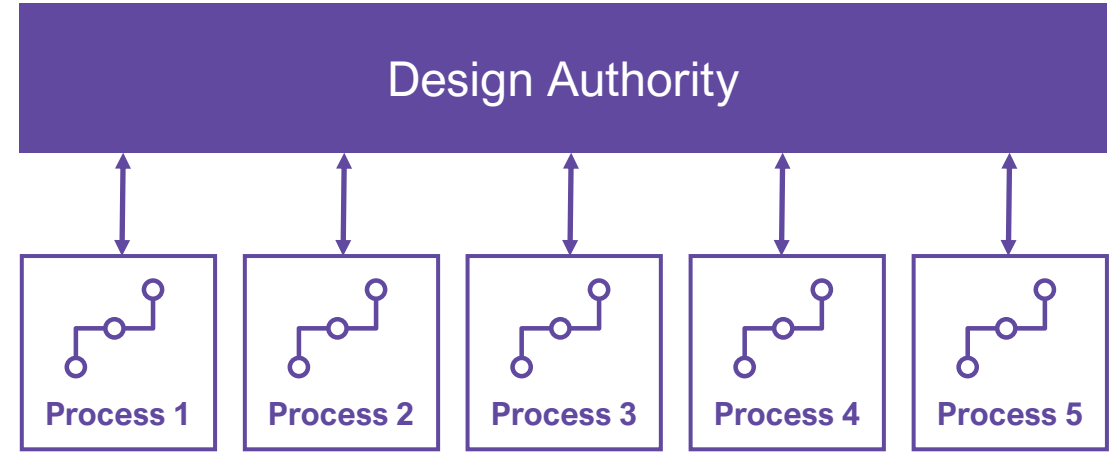
Can schedule a task to start periodically. Tasks within the schedule can be configured to call further tasks on successful completion or exception.

Calendar

Create your own calendars for use in schedulers if required

Blue Prism Design Authority

- Provide Practical Solution Reviews
- Team Knowledge Share – Proposition and Standards
- Team Training and Mentoring Gaps
- Delivering Consistent Quality of Automations



Terms of reference

Design Authority

Meets every week (i.e. Thursday) to review completed designs

Lead Developer/Designer must present their submission at the DA meeting

All Design documentation e.g. Process Overview, ODI & SDD must be submitted by COB Wednesday

DA Approves or declines the Design (on approval the process can progress to the build phase)

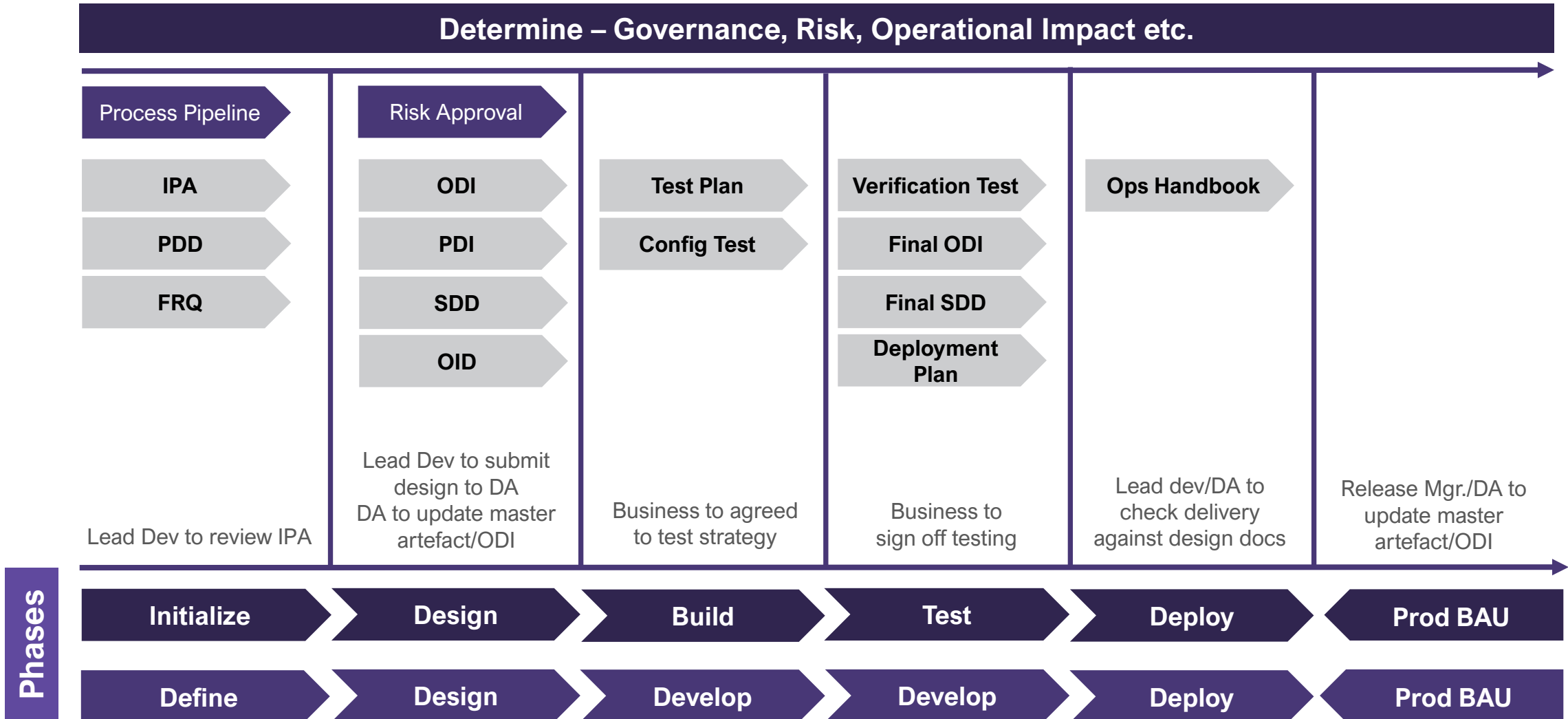
Emergency DA meetings can be arranged in exceptional circumstance

DA feedback observations, gaps & recommendations

DA members review designs ahead of the meeting and score the submission based on the agreed checklist (Design Control Checklist)

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Blue Prism Process Release Timeline



Blue Prism Testing Phase Overview

Test Phases

Standard test phases during a Blue Prism project

To ensure that automated solutions are delivered into live with the optimum possible level of testing

Throughout development to ensure that processes are delivered that meet business requirements

Contain the minimum possible levels of system exceptions.

Test Phases Document

As outlined in this document, testing is carried out through each stage of the Blue Prism methodology

Through the creation of objects, components, processes, verification, and user acceptance testing.

Experience has found that commencing robust testing as early as possible in the creation of a solution assists in finding and incorporating process scenarios and system behaviour that may otherwise have been missed during design and configuration

Testing Approach Summary Overview

	DEVELOPMENT PHASE		TEST PHASE			PILOT
	Build & Unit Testing	Configuration Testing	Validation Testing	Verification Testing	UAT Testing	Pilot Mode
BP Environment	Development	Development	Development	Development	Test	Production
Attended Automation	Yes	Yes	Yes	Yes	No	No
Target System	Test	Test	Test	Production	Production	Production
<i>Resources</i>						
Developer	●	●	●	●		
Tester			●	●	●	
SME				●	●	
Controller						●
Summary	Testing of individual objects and processes	Integration and non-functional testing	Testing against process definition using model scenarios	Testing performed against live scenarios in presence of SME. Fix on fail.	Unattended end to end testing of the solution by Tester with SME providing QA.	Process in Production

Testing Approach Live Data Only

	DEVELOPMENT PHASE			TEST PHASE		PILOT
	Object Build	Process Build	Assisted Development	Verification Testing	UAT Testing	Pilot Mode
BP Environment	Development	Development	Development	Development	Test	Production
Attended Automation	Yes	Yes	Yes	Yes	No	No
Target System	Production	N/A	Production	Production	Production	Production
<i>Resources</i>						
Developer	●	●	●	●		
Tester				●	●	
SME			●	●	●	
Controller						●
Summary	Read stages completed. Write stages partially developed	Process developed using partially completed object layer	Write stages and process completed in presence of SME whilst stepping through live cases.	Testing performed against live scenarios in presence of SME. Fix on fail.	End to End testing of the solution by Tester with SME providing QA.	Process in Production

Methodology Configuration Testing

Object Testing

As applications are modelled and actions are created in object studio they should always be tested as they are being developed

Component Testing & Test Rigs

A component contains multiple completed object studio actions linked together. Components should include exception handling to retry if there is an unexpected system exception

Process Integration Testing

It is recommended that processes are tested end-to-end as early as possible, even as it is being built and before all the business logic has been added

Configuration Testing

The developer should ensure that all the specified functionality is built into the process and it works as expected, and the process is ready for verification.

Methodology Verification Testing

Process Driven

The verification phase involves stepping through the completed Blue Prism process with TA's/SMEs.

Approach

Cases are stepped through in Process Studio with a TA/SME. Where possible TAs/SMEs should be experienced users that know the process well.

Scenario coverage

As many different cases are used as possible to identify and test different scenarios As many different scenarios as possible should be tested.

Test Plan

A Verification Test Plan or a Scenario Tracker can be used to ensure as many scenarios as possible are known.

Not Covered Scenarios

If any scenarios are not seen during verification testing (because a relevant case is not found) should be noted.

Forcing

The developer should force the process down routes in the process for which test cases have not travelled

Subject Matter Experts

Different SMEs should be used during the verification phase as different users will have different process knowledge.

Re-Iterative

The verification phase should be re-iterative. Required changes identified with the help of the TA/SME should be developed, and the process re-verified.

Note: If test systems are not available and access to the live systems are not made available for verification, additional time will need to be factored in to UAT and live roll out of the solution

Methodology Verification Testing

Performance and Resilience Testing

Performance 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.



Resilience Testing

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

Blue Prism User Acceptance Testing (UAT)

UAT is a customer driven testing phase, giving the business the opportunity to ensure that the Blue Prism solution that is being delivered fully meets their requirements.

The process should be tested against UAT test plans that should have been created by the business based upon the Process Documentation

The process should be tested in an environment that mirrors the live environment (i.e. ran on a Virtual Machine (VM), using BP Server and credentials, test mode turned off, scheduling used).

Testing should be done in control room. The Operation Handbook should be used to ensure it adequately enables users to run processes.

One of the aims of UAT is to ensure that the automated Blue Prism solution will work in the live environment. If possible, UAT tests should be done on live systems using live accounts.

It is recommended that UAT testing is performed on a limited number of cases for each scenario, and each case worked by Blue Prism is audited by the tester to ensure it has been worked correctly.

'Stress tests' should be included. For example, system not available or invalid file format type errors.

The UAT testers should ensure that exception reporting, performance reporting, and management information reporting all meet requirements

Note: If test systems are not available and access to the live systems are not made available for UAT, the initial system exception rate during live roll-out may be high, and additional time will need to be factored in to cater for post-live support and changes

UAT Phases

NB: Cases per session and acceptance criteria are indicative and will be dependant on the size and complexity of the solution

	Cases Processed	Cases Processed	Quality Assurance	Acceptance Criteria
Phase 1	5 cases per test session	All cases not processed by DW & Exception cases	100%	5 successful sessions without defect
Phase 2	10 cases per test session	All cases not processed by DW & Exception cases	100%	3 successful sessions without defect
Phase 3	20 cases per test session	All cases not processed by DW & Exception cases	50% spot checking	2 successful sessions without defect

Blue Prism Testing Live Proving

If Blue Prism processes are to be ran in a new or changed environment, testing must be done to ensure the environment is set up correctly. For example, if a new process is moved from a test environment to a live environment.

The following steps should be taken during Environment testing:

The environment should be checked to ensure it has been set up in accordance with the Solution Design and Environment Definition Documents.

All Blue Prism requirements for the process should be checked prior to use (i.e. Work Queues correctly created, Credentials set up, environment variable configuration done, such as setting network paths and test mode etc.)

All desktop or VM settings required are set. For example, access is given to required systems and network paths. Screen lock turned off if required etc...

In a new environment the Blue Prism process should be rolled out gradually. Starting with just running one case at a time and only increasing the number of cases worked per session if the process completes successfully.

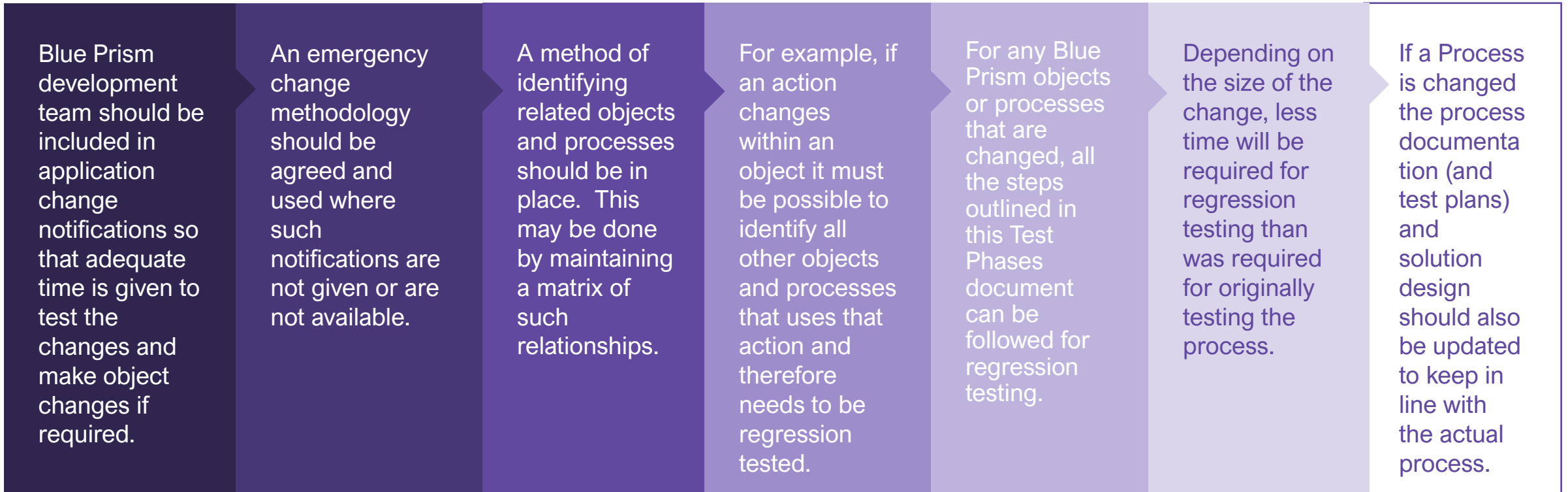
Different environments may run at different speeds. Case times should be evaluated in the new environment to ensure that allocated resources will meet SLAs in the new environment.

Blue Prism Testing

Regression Testing

Any application, process or environment changes should be fully regression tested. Regression testing should not only ensure that the change made to a process or object works, but also that any unchanged but related objects or processes still work as expected.

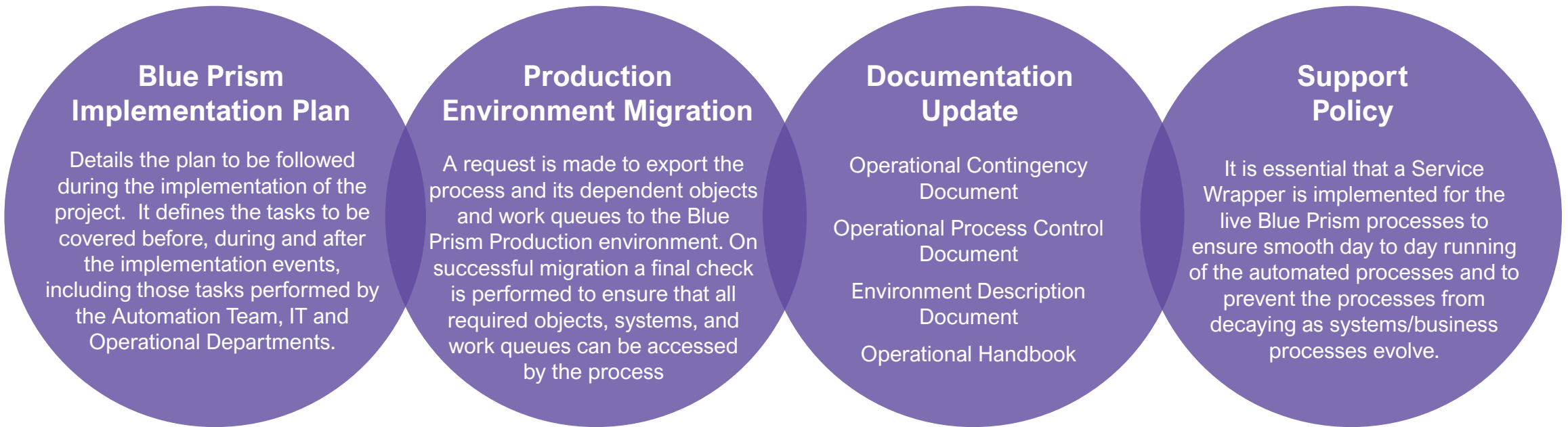
The following steps should be taken during Regression Testing:



Blue Prism Deployment

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



Production Rollout Readiness

Implementation Plan

Document

This document details the implementation plan to be followed by the project.

It defines the tasks to be covered before, during and after the implementation events, including those tasks performed by the Agility Team, IT and Operational Departments.

Purpose

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.

Audience

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

Recommendations

The creation of this document is started as part of the design phase with consideration given to scope, approach, content, cut-over considerations, back out and contingency plans during this phase.

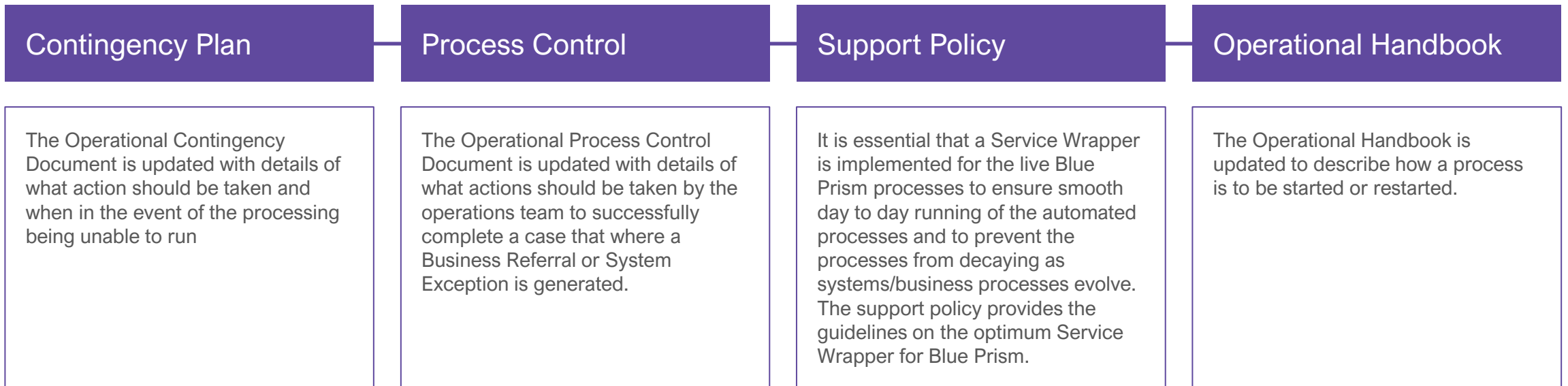
The document should then be updated throughout the project lifecycle and completed following the end of the SIT phase.

Deployment Operational Handover

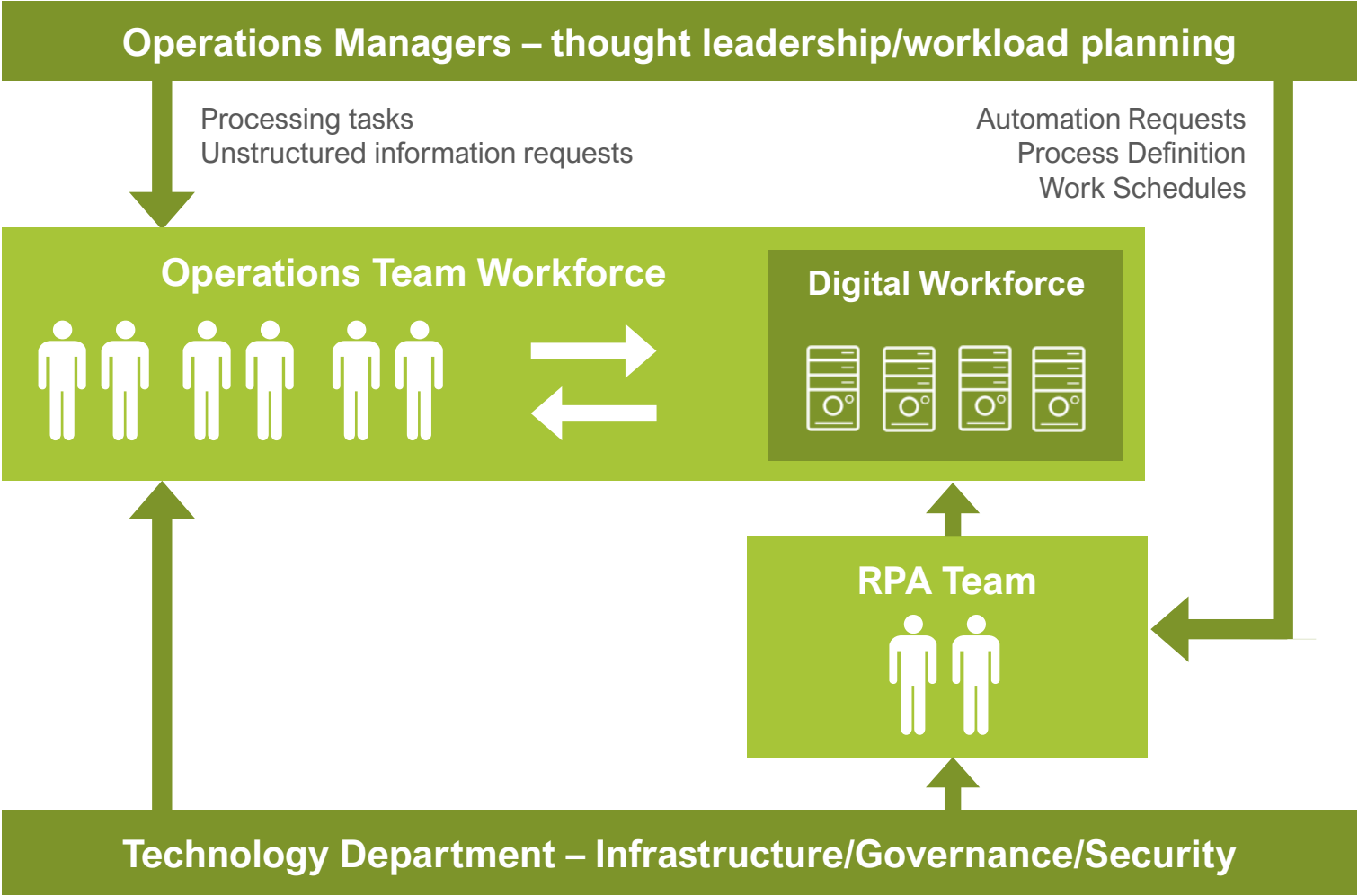
Handing over Effectively

Once the UAT stage has been accepted the process is ready to be rolled out into the production environment.

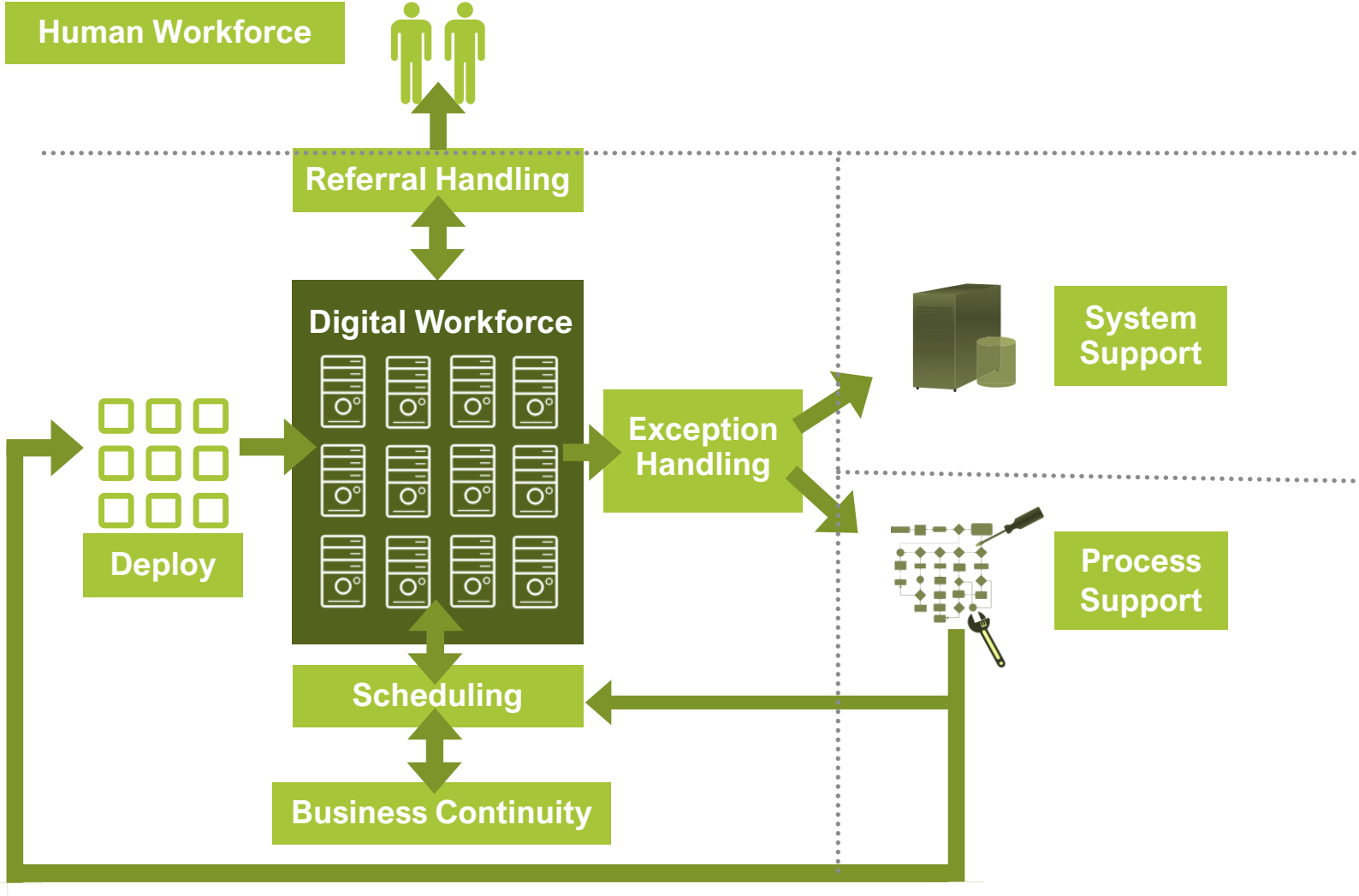
A request is made to export the process and its dependent objects and work queues to the Blue Prism Production environment. On successful migration a final check is performed to ensure that all required objects, systems, and work queues can be accessed by the process.



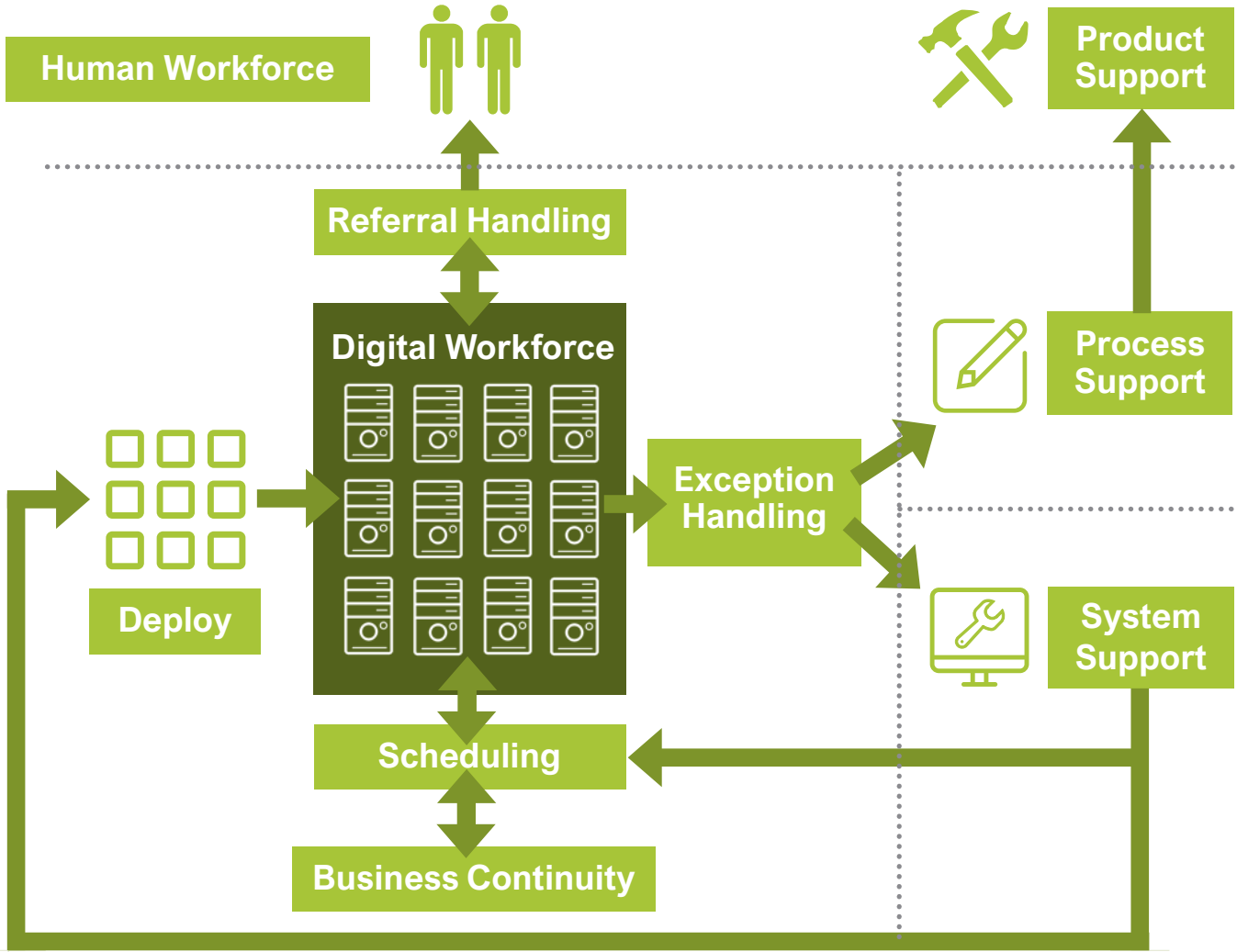
Robotic Automation Overview



Blue Prism Operational Support



Operational Support Overview



Support Activities

Activity	Roles and Responsibilities
Referral Handling	Operational (BAU) resources handle process scenarios out of scope
Exception Handling	Developers handle unexpected scenarios where Blue Prism doesn't perform as designed
Scheduling	BP Controllers manage the workload and demand for the Digital Workforce
Business Continuity	Failover, resilience and disaster recovery is provided via infrastructure teams
Deploy	RPA team is responsible for testing and promoting new automations into production
System Support	All underlying application issues are managed and resolved by IT
Process Support	Process automation issues are handled and resolved by the RPA team
Product Support	Blue Prism technical product issues raised to and addressed by Blue Prism Customer Support

Blue Prism University



Blue Prism University

Blue Prism University provides a range of educational products and services to support the key roles in an RPA program. It enables Developers to quickly acquire the necessary skills and experience to deliver professional Blue Prism solutions. Complemented by additional materials and learning pathways for technical architects, solution designers and ROM architects.

eLearning



Blue Prism Resource Certification

Resources only become certified once they have completed the 1 hour online Certification Exam – this can only be taken after all the mandatory training modules have been completed and the individual has then had a minimum of approximately 3 months' experience of configuring processes in a client or partner environment. Resources that have taken the training but not the exam should be capable of delivering high quality processes under supervision of Certified resources.

Certification



Mentoring

To begin your journey Blue Prism's experienced consultants can be utilized to help create and embed a training model into the bedrocks and fabrications of your RPA capability foundations, whilst mentoring your current individuals in the roles they have been assigned. Blue Prism consultants provide support and guidance where the customer resources require training on the product, infrastructure and implementation methodology best practice.

Mentoring by experienced consultants

Blue Prism Portal

Starting point for access to structured training, tutorials, guides, templates, software downloads, FAQs, support, etc.

Register for BP Portal access at <https://portal.blueprism.com/>

Online Help

Server-based HTML5 Version of Product Help



BP Learning Community

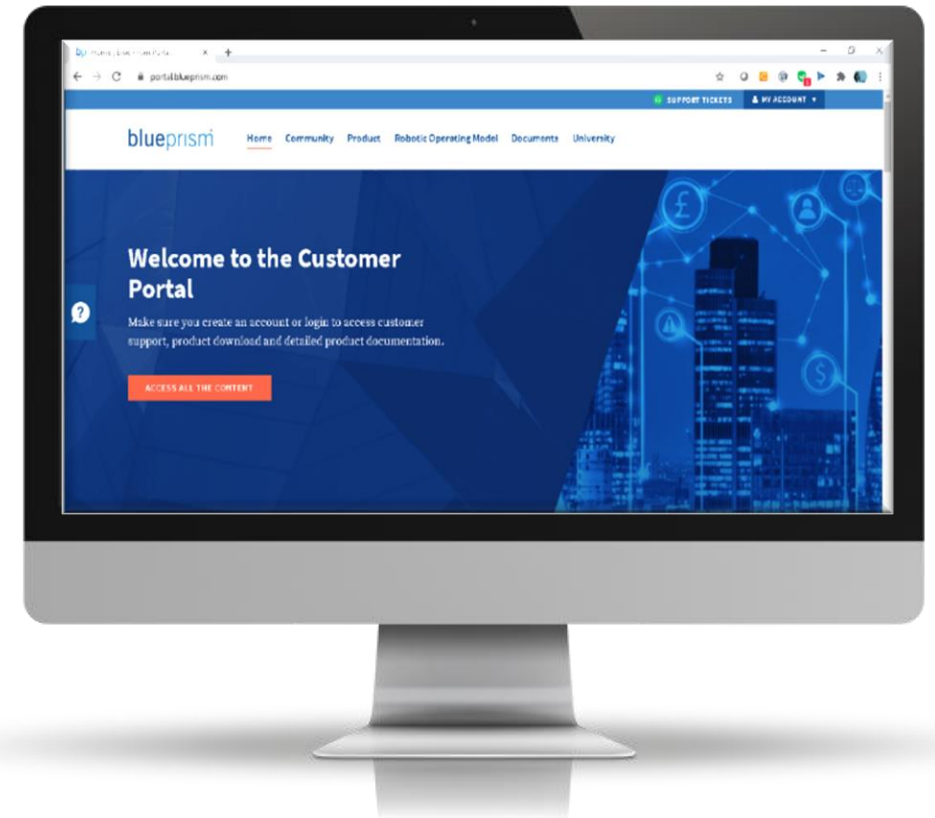
Forum users, partners, professors, students and more to access communal knowledge



<https://community.blueprism.com/home>

Blue Prism University

On-demand RPA learning program, free to use for anyone with a Blue Prism Portal login



blueprism®