



Robotics Process Automation

High performance. Delivered.

Mai 2017

Strategy | Consulting | Digital | Technology | Operations

Agenda de la formation RPA – Session 1

Introduction

1

Sensibilisation à Robotics Process Automation

Introduction des Assistants Virtuels et première phase d'un projet de cadrage RPA

2

Présentation des outils RPA – Focus sur BluePrism

BluePrism, Automation Anywhere, UiPath

3

Méthodologie de Delivery

Définition des principes clés du modèle Agile vs Cycle en V

4

Illustration de cas concrets et retour d'expérience

Exemples, problèmes rencontrés, bonnes pratiques et livrables

Robotics is the use of software to ‘mimic’ the actions a human user would perform on a PC at scale and

Organisations can run their automated Business Processes with current tasks as if a real person was doing them across applications and systems



Emulates human execution of repetitive processes with existing applications



Robots are a virtual workforce controlled by the business operations teams from functional standpoint



Robots can be trained by business users via configuration



Sits alongside existing infrastructure



Robots work with existing IT architecture – no complex system integration

... generates proven quantitative benefits

Robotics drives efficiency benefits, along with improvements in quality, scalability and resiliency in a cost effective way*

Higher Quality



Human **errors** eliminated
Improved **compliance/auditability**
(all details of the process are captured and stored)



Capacity increased by
Robotics virtual workforce and
refocus of staff on value and
customer service => higher
staff satisfaction

Productivity Boost



Average Handling
Times reduced

24/7

A robot works 24/7 without
pausing at machine speed; 1
Bot equates to ~3 FTE

Implementation speed



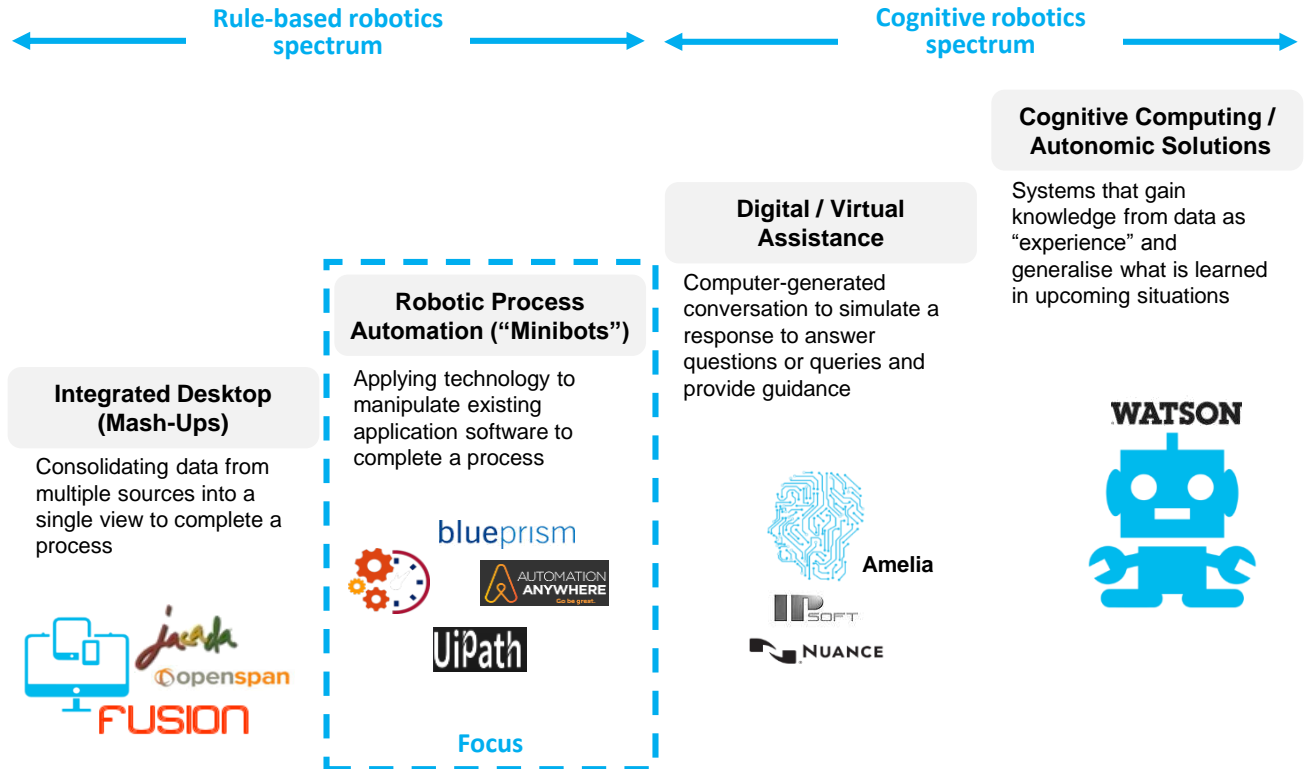
Robotic software can **rapidly**
model and deploy the
automation.



Re-usable Process
Elements

Process automation is at the «simple» end of the Robotics spectrum

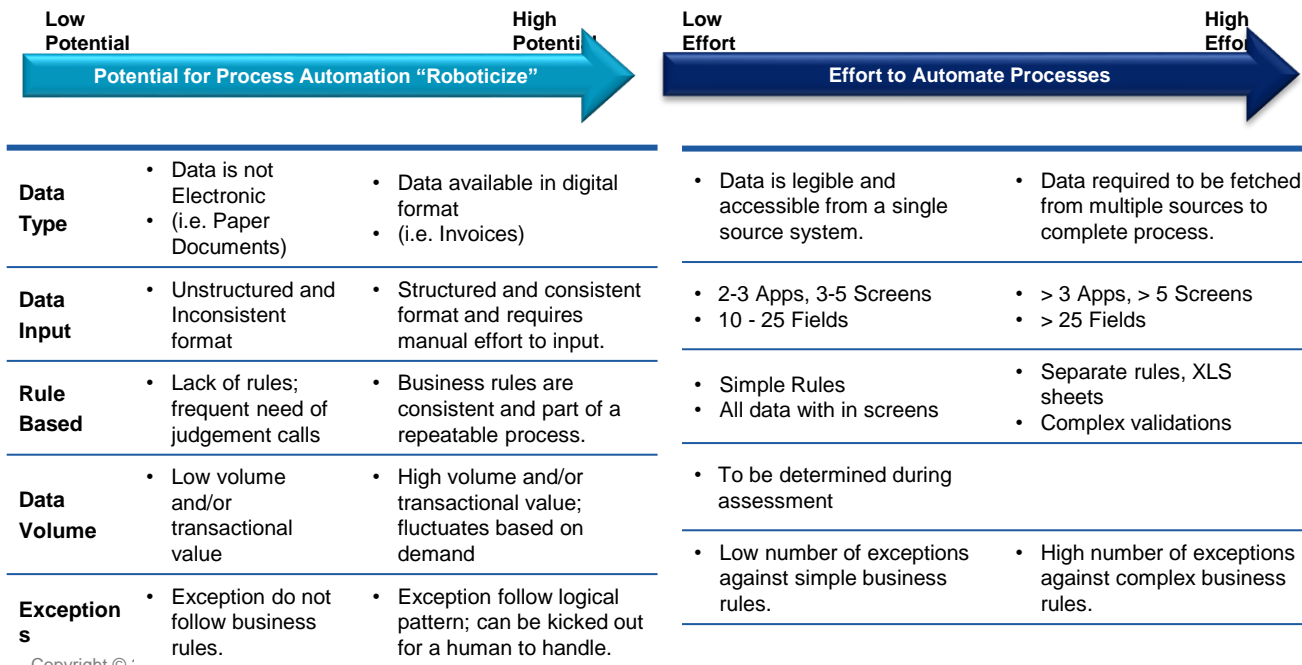
Robotic Process Automation Spectrum



Evaluating Processes for Automation Opportunities

Applying the right selection criteria and determining potential is key to selecting the right processes and tool for automation

Accenture can help clients with performing analysis to identify and validate business processes that are ripe for automation and can deliver maximum ROI to the business.



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Les assistants virtuels : définition et principales fonctionnalités



Logiciels qui permettent de **modéliser** et d'**automatiser** des **processus opérationnels**, en **interagissant**, comme un utilisateur, avec différents types d'**applications** (Pack Office, mails, interfaces web, applicatifs maison, etc.)

Un **Assistant Virtuel** est capable d'opérer l'ensemble des fonctionnalités suivantes:

1



Recherche et consolide

- Copie de données
- Consolidation d'information
- Création de dashboard

3



Tâches et Processus répétitifs

- Intègre les données dans les systèmes
- Télécharge des fichiers / données d'une application

2



Prise de décision objective

- Routage d'information basée sur une décision logique
- Compare l'information provenant de deux bases de données

4



Convertit en digital

- Lit l'information d'une image et l'intègre dans les systèmes

Les types d'assistants virtuels

Les assistants virtuels peuvent être **déployés selon deux modes**, pour des **usages distincts** :



Assistant virtuel interactif (AVI)

Définition:

L'AVI fonctionne **en interaction** avec un collaborateur pour **l'accompagner** dans l'exécution de ses activités.



Principes Clefs

- Maximise les possibilités d'automatisation des **processus avec des ruptures de chaîne**, en créant des **interactions entre le collaborateur et l'AVI**.
- Fonctionne en **tâche de fond sur le poste du collaborateur**.



Assistant virtuel autonome (AVA)

Définition:

L'AVA exécute des processus de bout en bout de **façon autonome** (sans intervention du collaborateur).



Principes Clefs

- Permet d'**automatiser des tâches répétitives et manuelles**.
- Adapté aux **processus limités en matière de réflexion et impliquant des données structurées**.
- Fonctionne de manière autonome.

La méthodologie Phase d'Analyse

Accenture propose une **méthodologie d'analyse en 4 étapes** : **priorisation** des activités, **identification** des opportunités et **qualification**, Business Case et Feuille de route



La méthodologie Phase d'analyse

Etape 1 – Sélection des activités éligibles

Objectif de l'étape 1 : Préciser le périmètre de l'analyse et les équipes à rencontrer

Méthode

Eligibilité et Priorisation

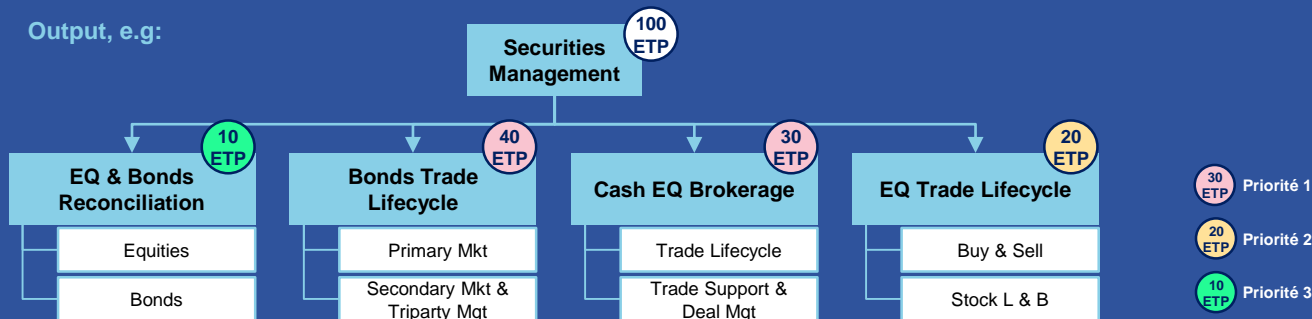
Sur base de l'organisation client, définition des **équipes éligibles et prioritaires** (P1, P2 et P3) en fonction des critères suivants :

- **Le nombre d'ETP** : sont privilégiées les équipes de tailles conséquentes
- **La charge de travail** : l'automatisation des processus requière une charge de travail minimum de 0,5 ETP afin rentabiliser l'implémentation
- **L'activité des équipes** : les activités doivent correspondre aux fonctionnalités des AV.

Accélérateurs

Afin de collecter les informations nécessaires, un **Guide d'entretien niveau 1** peut être utilisé

Output, e.g:



La méthodologie Phase d'analyse

Etape 2 – Identification des opportunités

Objectif de l'étape 2 : Préciser la liste des opportunités d'automatisation à approfondir

Méthode



Identification des Opportunités

Première identification des opportunités à travers des **ateliers avec les managers opérationnels et parfois avec les équipes opérationnelles**.



Validation des Opportunités

Afin de **valider** les opportunités et/ou identifier de nouvelles, des immersions/démonstrations métiers sont conseillées



Estimation

Pour chaque opportunité remontée par le métier, une **charge de travail doit être estimée**:

- A dire d'expert ou avec le plan de charges fourni par le manager opérationnel
- A l'aide des volumes et temps de traitement



Accélérateurs

Le Guide d'Entretien Niveau 2 ainsi que les critères de sélection sont des outils à l'identification des opportunités d'automatisation

Output, e.g:

Equipe	Opportunité	Description de l'opportunité	Commentaires	Charge	Bénéfices	Complexité (% Auto)
CSI - 13 ETP + 3 Managers	1 Création des dossiers (SARI)	Mise en place d'un formulaire de saisie dans lesquelles les informations requérant de l'analyse seront manuellement saisies. Le dossier sera ensuite automatiquement créé (informations TOGE et TETHYS)	Démonstration % auto : moyenne simple 1200 dossiers créés/mois, TU 5mn (5 min analyse et 5 mn pour remplir le reste du formulaire NPEC) Formulaire de saisie Equipe SWIFT et HORS SWIFT	0,9 ETP	ETP : 0,8 Sécurisation Confort opé.	Faible (92%)
	2 Elaboration des pièces jointes	Création des pièces jointes attachées sur chaque dossier ouvert dans SARI	Démonstration 700 dossiers ouvert par mois, TU 3mn (Hors SWIFT) 500 dossiers ouvert par mois, TU 8mn (SWIFT) Facteur complexité : 3270 et règles métiers Equipe SWIFT et HORS SWIFT	0,3 ETP (HS) 0,6 ETP (S) 0,9 ETP	ETP : 0,9 Sécurisation Confort opé.	Moyenne (100%)

La méthodologie Phase d'analyse

Etape 3 – Qualification des opportunités

Objectif de l'étape 3 : Qualifier les opportunités automatisables et estimer les gains potentiels associés

Méthode

Automatisation & Complexité

- Chaque étape du processus / de l'opportunité est identifiée comme :
 - automatisable** : input standard, règle prédéfinie
 - non automatisable** : input non standard, règle non prédéfinie, gestion d'exceptions
- Le **taux d'automatisation** de chaque étape est déterminé par la charge automatisable dans la charge globale de l'étape.
 - Pour chaque tâche automatisable correspondant à l'une des fonctionnalités de l'AV, un taux d'automatisation usuel est appliqué.
- Le **niveau de complexité d'un processus** se détermine selon les caractéristiques de l'activité et sa technicité (cf. page suivante)

Accélérateurs

Les **hypothèses de charges** peuvent être étudiées à l'aide des critères de complexité définis

Output, e.g:

Description du processus	Système(s)
• Description de l'opportunité	Nom des systèmes

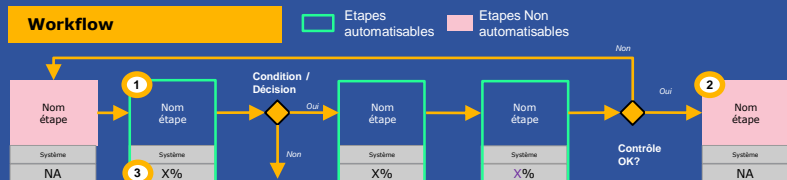
ETP	X ETP
Bénéfices	X

4 % Automatisation	X%
5 Niveau Complexité	X

Qualification des Bénéfices / Commentaires

Hypothèses	Bénéfices	Commentaires
<ul style="list-style-type: none"> Volume actuel : X Charge de travail: X Fréquence : X 	<ul style="list-style-type: none"> Bénéfices ETP: X 	<ul style="list-style-type: none"> Pistes AV: <ul style="list-style-type: none"> A compléter

Workflow



La méthodologie Phase d'analyse

Etape 3 – Qualification des opportunités – Complexité

Aperçu de l'activité

Aperçu technique

Complexité très faible

- Processus comportant peu d'étapes, très simples (exemple : ouverture d'applications)

- Pas d'exceptions à gérer

Complexité faible

- Processus répétitif comprenant des **règles simples** sans plus d'un processus alternatif
- Exemples d'activités :
 - Copier-Coller de données, saisies multiples dans plusieurs appli.
 - Conso/Retraitement des données
 - Téléchargement de données

- Gestion de **peu exceptions** (< de 5 exceptions)
- **Nombre** de systèmes source (< de 3 systèmes)
- **Type** d'application (*web, entreprise*)
- **Pas de transformation digitale requise** (.doc, .xls, .csv, .txt)

Complexité moyenne

- Processus basés sur des **règles simples**, mais pouvant avoir jusqu'à 5 processus alternatifs

- Gestion **d'exceptions** (entre 5 et 15 exceptions)
- **Nombre** de systèmes source (< de 10 solutions dynamique)
- **Type** d'application (*Mainframe*)
- **Pas de transformation digitale requise** (.pdf)

Complexité forte

- Processus basés sur des **règles complexes** pouvant avoir plus de 5 processus alternatifs

- Gestion **d'exceptions** (15 ou plus d'exceptions)
- **Nombre** de systèmes source (10 ou plus de solutions dynamiques)
- **Transformation Digitale requise** (scan / OCR)
- Utilisation de **CITRIX**

La méthodologie Phase d'analyse

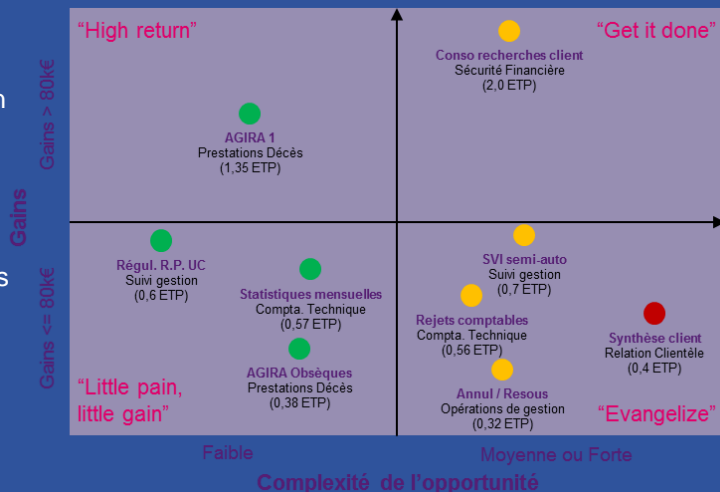
Etape 4 – Business Case et Feuille de Route

Objectifs de l'étape 4 :

- ❖ Valider les opportunités retenues avec le top management
- ❖ Alimenter le Business Case afin d'obtenir une vision consolidée de l'analyse
- ❖ Prioriser les opportunités en fonction de plusieurs critères : gains, complexité d'implémentation et besoins métiers
- ❖ Construire la feuille de route métier en prenant en compte la priorisation, les contraintes et des charges projet de chaque opportunité.

Méthode

- Les critères de classification des opportunités sont les gains (valeur générée) et la complexité (effort de mise en œuvre)
- Ces critères théoriques peuvent être challengés par les directions métiers, en fonction:
 - ✓ de la disponibilité des ressources métiers et/ou IT
 - ✓ des prérequis au déploiement (*IT, organisation, ...*)
 - ✓ des impacts RH (*départs en retraite, recrutements en cours ...*)



Livrables - Phase d'analyse



Support d'analyse

- Ce support est élaboré lors des étapes 2 et 3 (identification et qualification) et est présenté aux managers opérationnels pour validation



Validation des opportunités

- Ce support est présenté lors de la validation finale auprès du top management



Matrice de priorisation

- La Matrice de Priorisation des Opportunités permet de comparer les opportunités en terme d'effort estimé nécessaire à la mise en œuvre et en terme de valeur générée estimée.

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Process Automation Tools

					Accenture Cognitive Robotics
	Pre-dominant tools used in the financial services industry			Specialised in ERP finance automation	Opportunity for a low-cost pilot
Target Area	Enterprise automation tool	Desktop automation; enterprise capabilities	Desktop automation; enterprise capabilities	Enterprise automation tool	Accenture's Enterprise automation tool
Process Area	Suitable from minor tasks to complex automations.	Suitable for minor tasks, low complex automations.	Suitable for minor tasks, low complex automations.	Suitable for complex tasks cross systems	Suitable for minor to complex processes with multiple steps and systems.
Key Features	<p>Time or event triggered automation capabilities.</p> <p>Workflows configured to communicate with underlying applications on continuous basis.</p> <p>Object orientated user interface, with no .NET or Java code required.</p> <p>In-built OCR & API integration capabilities.</p> <p>Reporting and analytics.</p> <p>High system recognition accuracy.</p> <p>High scalability.</p> <p>Process re-use library.</p>	<p>Time or event triggered automation capabilities.</p> <p>Workflows configured to communicate with underlying applications on continuous basis.</p> <p>Object orientated user interface coding required for complex tasks.</p> <p>'Record and click' functionality.</p> <p>Can integrate data from multiple applications into one single view.</p> <p>Development client and runtime client</p>	<p>Time or event triggered automation capabilities.</p> <p>Workflows configured to communicate with underlying applications on continuous basis.</p> <p>Object orientated user interface; Windows, Mainframe, Silverlight, Adobe, Java, etc.</p> <p>Coding for complex tasks.</p> <p>OCR integration capabilities.</p> <p>High system recognition accuracy & screen rec.</p> <p>Process re-use library.</p>	<p>Focus on financial processes automation with RoboClose solution</p> <p>Integration with SAP and Oracle/Peoplesoft</p> <p>Pre configured packages for SAP and Oracle/Peoplesoft</p> <p>Workflows and mail notification</p> <p>Measures and validation rules</p> <p>Visibility and control of the end to end Close via a cockpit</p>	<p>Uses computer vision instead of APIs, so supports a wider range of software.</p> <p>Can record processes and automatically generate documentation.</p> <p>Can read scanned documents.</p> <p>Can detect illegal behavior for compliance reporting.</p> <p>Simple UI includes the ability to edit processes.</p> <p>Supports complicated, multi-step, multi-app processes.</p>
Management Console	Out of the box management console (Control Room).	Web based management console.	Web based management console.	Management console available	Web based management console.

Blue Prism Technology Overview

Interfacing Methods

- Windows Applications
- Java Applications
- Mainframe Applications
- HTML Applications
- Remote applications eg Citrix
- Accessible applications
- SAP applications
- Web Services
- APIs and COM Components – via .NET Extensions
- Direct Data Transfer
- File Manipulation via .NET Extensions



Infrastructure: Blue Prism Components



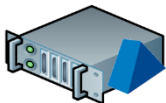
Blue Prism Interactive Client *(1 per developer / controller)*

- Standard user desktop image with business applications and Blue Prism installed
- Used by Blue Prism developers to build and test processes
- Used by Process Controllers to monitor runtime resources in live
- Can be a thick client or hosted on a virtual infrastructure



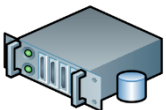
Blue Prism Runtime Resource PC *(1 - 10 robots per pc)*

- Standard user desktop image with business applications and Blue Prism installed
- Runs automated Blue Prism processes, usually “headless”
- Can be a thick client or hosted on a virtual infrastructure



Blue Prism Application Server (service) *(1 per 100 robots)*

- Windows Server or Windows Client operating system
- Used to schedule processes, authenticate users and encrypt data
- Marshalls database connections



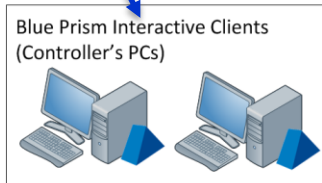
Blue Prism Database *(1 per environment)*

- SQL Server Database, centralised repository that holds process definitions and audit information

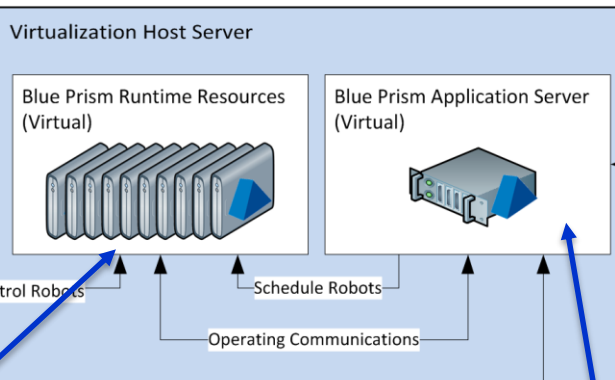
Architecture and Components

- Standard user desktop image with Blue Prism installed
- Used by Blue Prism developers to build and test processes (requires business applications to be installed)
- Used by Process Controllers to control and monitor runtime resources
- Can be a local installed client or hosted on virtual infrastructure*

1 per controller / developer



Configure & Control Robots



Operating Communications

Schedule Robots

Operating Communications

**Virtualized instances must be persistent*

- SQL Server Database, centralised repository that holds process definitions and audit information

1 per environment

Database Communication



1 per 100 Runtime Resources

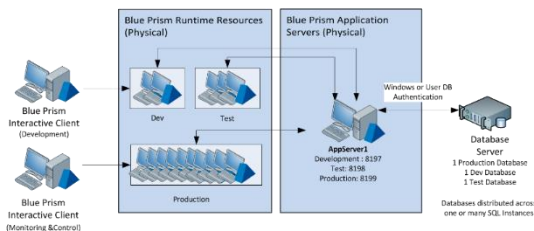
- Standard user desktop image with business applications and Blue Prism installed
- Runs automated Blue Prism processes, usually "headless"
- Can be a physical machine or provisioned as a virtual device*

- Windows Server or Windows Desktop operating system
- Used to schedule processes, authenticate users and encrypt data
- Marshalls database connections

Infrastructure: Architecture Options

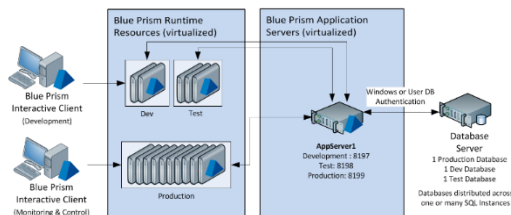
Option 1: Desktop-Based, IT Secured

- Robots and application server are desktop deployed
- Database implemented and managed in the data-centre
- Separate development, test and production environments
- Suitable for small tactical implementations**



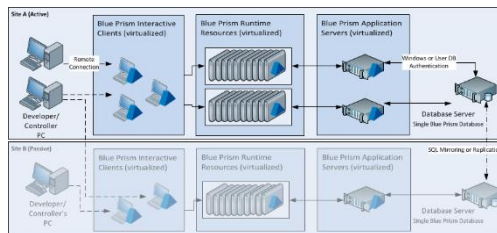
Option 2: Data-Centre Secured

- Apart from Interactive Clients, all components are virtualised and / or located in the data-centre
- Separate development, test and production environments
- Suitable for larger scalable non-business critical implementations**



Option 3: Data-Centre Resilient

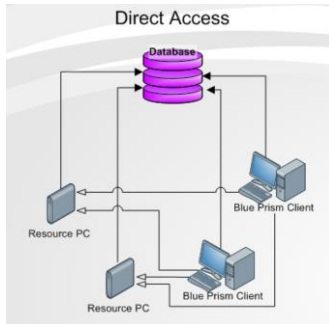
- All components are virtualised and / or located in the data-centre
- Separate development, test and production environments
- Failover and disaster recovery capabilities
- Suitable for fully scalable business critical deployments**



Speed to Implement

Security, Scalability and Resilience

Option 1 - Desktop-based, IT Secured Architecture



Advantages

- Fast to implement / provision
- Possibility to re-use of existing desktops

Constraints

- SW and HW requirements must be met
- Everything running on one computer, no backup
- Physical security of components must be considered
- Higher level IT support needed (treated like a workstation vs server)
- Database backup – but no contingency against operational outages

Blue Prism Client

Typically, a Blue Prism client is used to configure and maintain processes and to monitor the runtime engines executing on the Virtual Machines.

For deployments where the solution is being installed on user desktops (for pilot processes or small projects up to 5 robots), the entire solution can be configured to run on a desktop model.

Each desktop requires that the Blue Prism runtime is installed, which has a 14mb footprint on local disk and 20mb in memory. Processes and objects are stored in the database server (or in a local copy of SQL Express), along with any selected runtime logging and user auditing.

A direct database connection using Windows or User Authentication is used to connect the clients to the Blue Prism database. On execution, the runtime component retrieves the process and any associated object and runs them locally.

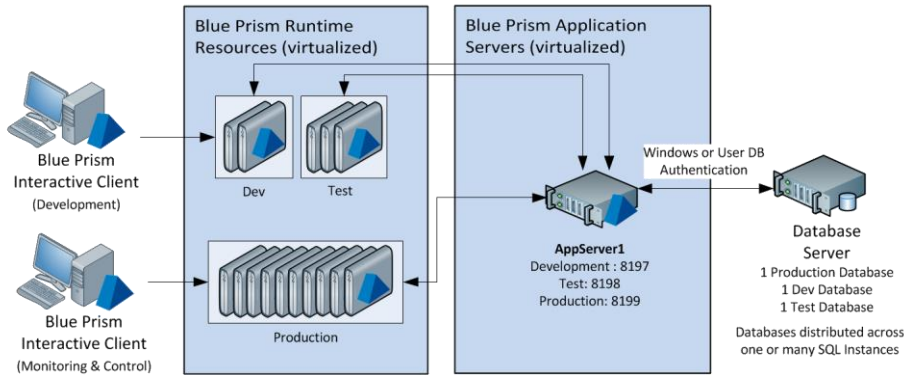
Distribution of runtime components to desktops is therefore usually limited to the Blue Prism runtime engine. To monitor each connected client, the Control Room module communicates with each resource PC using the TCP protocol in order to ascertain its' status.

Minimum Requirements (based on 1 production robot)

Runtime Resources (Robots)

- Pentium IV 450MHz
- 512MB RAM
- 50MB Disk Space
- Windows 2000 or above, 32 / 64-bit
- Windows Installer v3.1
- .NET Framework 2.0

Option 2 - Data-Centre Secured Architecture



Advantages

- Quick to scale – as already virtualised
- Database performance and capacity easily scaled
- Components are secured and managed by IT
- Process development and test can be delivered without constraining production (separate development and test environments and dedicated runtime resources)
- Virtualisation aids commonality across components

Constraints

- There may not be an IT support model in place for virtualised desktop PCs
- Speed to implement / provision
- Database backup – but no contingency against operational outages

Minimum Requirements (based on 25 production robots)

Interactive Clients (User Desktops)

- Intel Xeon Processor
- 2GB RAM & 10GB free disk space¹
- Windows XP / 7 (32 or 64-bit)
- Windows Installer v3.1
- .NET Framework
- Access to all in-scope applications

Runtime Resources (Robots)

- Intel Xeon Processor
- 2GB RAM & 10GB free disk space¹
- Windows XP / 7 (32 or 64-bit)
- Windows Installer v3.1
- .NET Framework
- Access to all in-scope applications

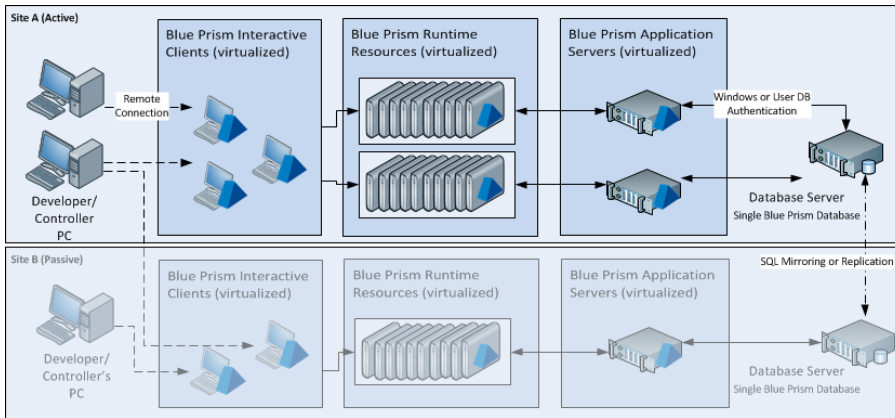
Application Server

- Dual Intel Processor
- 4GB RAM & 10GB free disk space¹
- Windows Installer v3.1
- .NET Framework
- Windows XP / 7 or Windows Server 2003 or above (32 or 64-bit)

Database Server

- Quad Intel Processor
- 8GB RAM
- Windows Server 2003 or above
- SQL Server 2005 and above (x86/x64)
- Prod Data file: 250GB, Log file: 125GB
- Dev Data file: 50GB, Log file: 25GB
- Test Data file: 50GB, Log file: 25GB

Option 3 - Data-Centre Secured with DR



Note - Development and test environments can be accommodated in the same way as production environments displayed.

Advantages

- Fully scalable across all components
- Highly resilient – full capability on standby suitable for business critical processing
- Components are secured and managed by IT
- No geographic constraints across development, test or production
- Consistency across developers and environments that reduces support overhead

Constraints

- There may not be an IT support model in place for virtualised desktop PCs
- Speed to implement / provision

Minimum Requirements (based on 25 licensed production robots¹)

Interactive Clients

- Intel Xeon Processor
- 2GB RAM & 10GB free disk space²
- Windows XP / 7 (32 or 64-bit)
- Windows Installer v3.1
- .NET Framework
- Access to all in-scope applications

Runtime Resources (Robots)

- Intel Xeon Processor
- 2GB RAM & 10GB free disk space²
- Windows XP / 7 (32 or 64-bit)
- Windows Installer v3.1
- .NET Framework
- Access to all in-scope applications

Application Server

- Dual Intel Processor
- 4GB RAM & 10GB free disk space²
- Windows Installer v3.1
- .NET Framework
- Windows XP / 7 or Windows Server 2003 or above (32 or 64-bit)

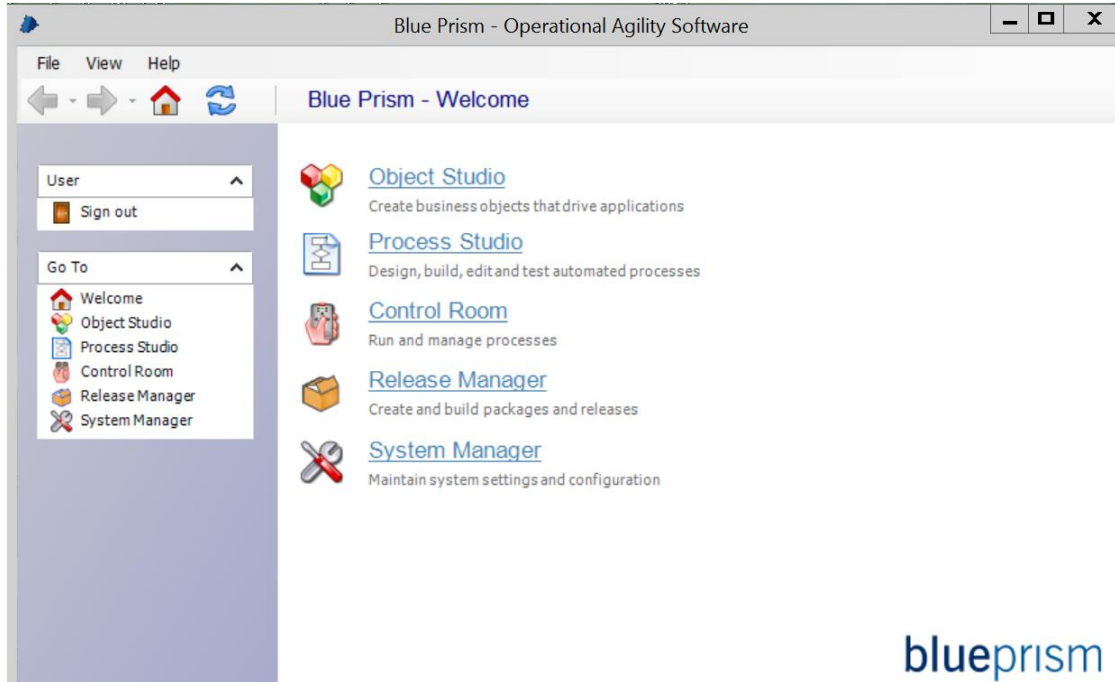
Security & Compliance

Designed with enterprise organisations in mind, Blue Prism is proven to support compliant processes.

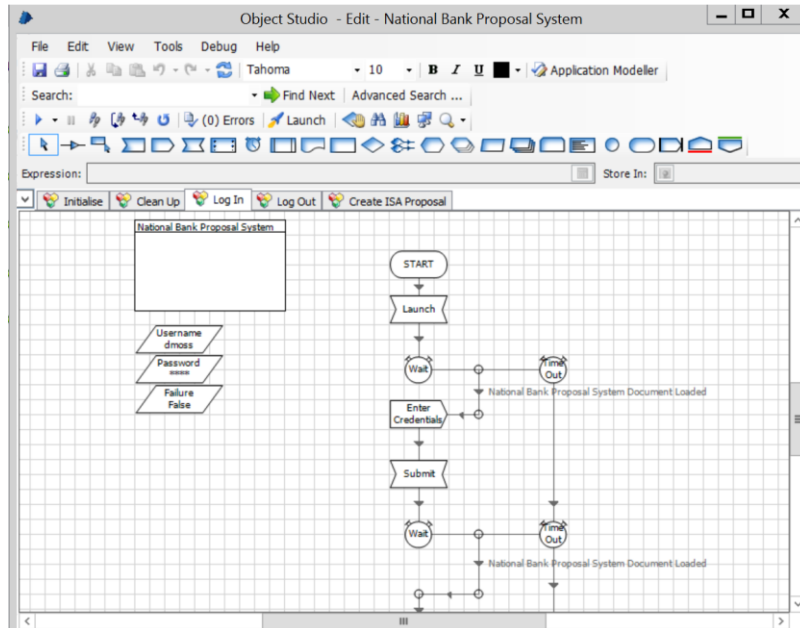
A large number of controls are in place to provide the necessary security and governance, including:

- Segregated user roles (developers, release managers, controllers).
- Automated credential management for robot access to the network and specific applications.
- Options for native or Active Directory authentication
- As the business function is leveraging the underlying application logic already available, access authorization concepts are immediately inherited.
- Audit history for: system access; configuration changes; and process execution.

Blue Prism – Initial screen



Blue Prism Modules – Object Studio



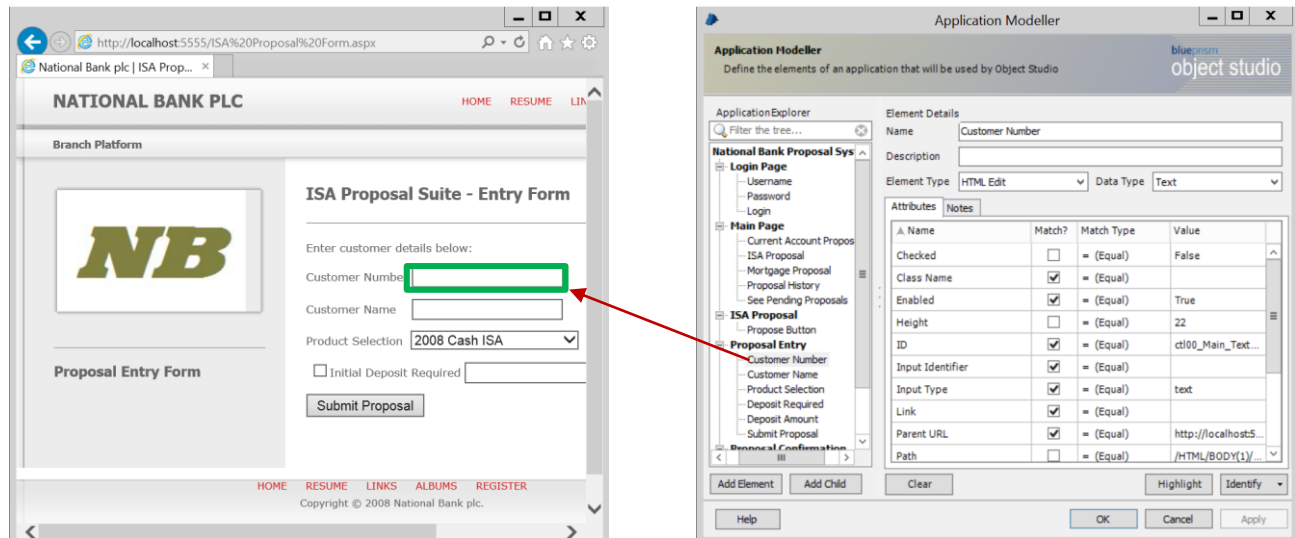
Object Studio is a module that ensures the robot is trained effectively to mimic the actions a user will take when performing their tasks within the specified applications

Typical actions are write, read and navigate within the application

Objects when built become **reusable** and can be used within a number of different processes

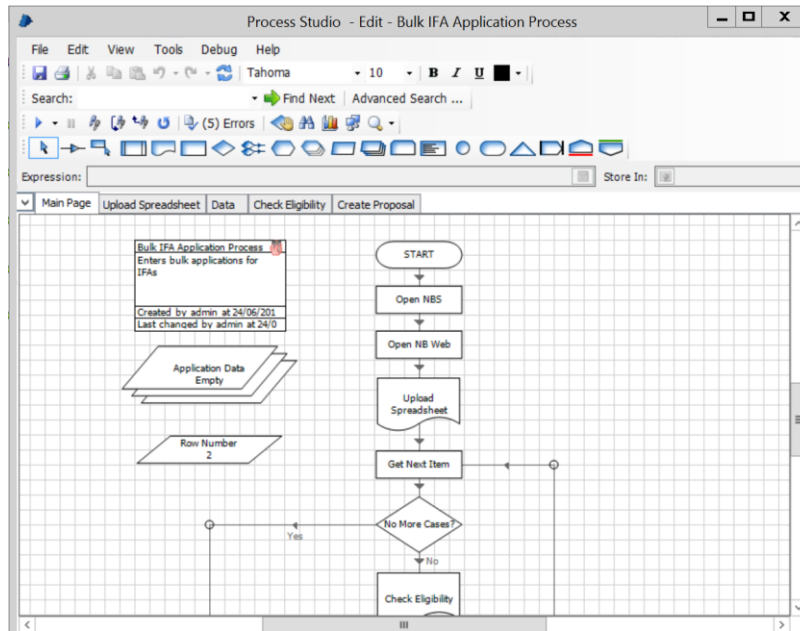
Blue Prism is also supplied with a number of **built in business objects**, providing off the shelf functionality for functions such as Microsoft Office automation (Excel and Word objects), e-mail automation, file management, encryption and credential management

Blue Prism Modules – Application Modeller



Object Studio has a feature called **Application Modeller** that enables us to create a logical representation of an application. Simply add new elements (field, button, menu item, windows etc.) to Application Modeller and highlight the particular element in an application. **System automatically pre-fills the element's attributes** which uniquely identify the elements when process runs. Attributes do not come from Blue Prism; the application provides this data to Application Modeller and Object Studio uses the elements to manipulate the application

Blue Prism Modules – Process Studio



A Blue Prism Process is created as a diagram that looks much like a common business flow diagram.

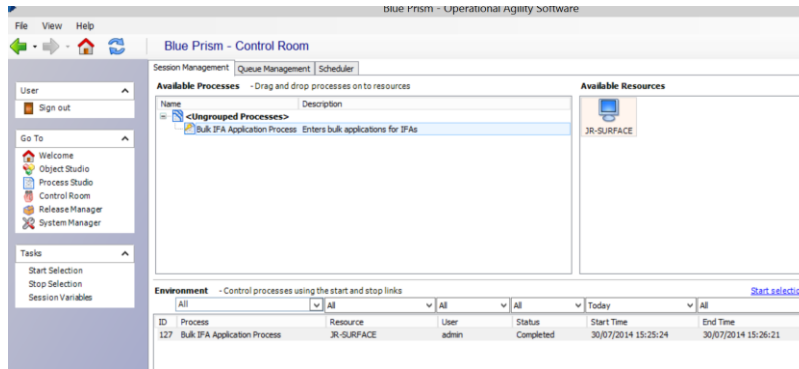
It includes process steps, decision points, calculation steps, process rules etc.

Steps are usually connected to business objects which manipulates the applications (log in, log out, navigate, write, read)

Difference between Process and Object studio is that process studio includes key process components and logic whereas Object studio interacts directly with applications.

Having these 2 layers enables various processes to use already created Business objects which save a time when automating new processes.

Blue Prism Modules – Control Room

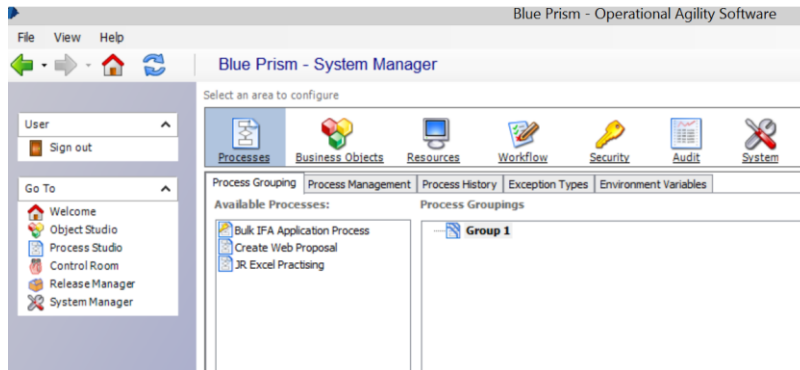


Control Room provides operations users with a day to day operational environment that is used to control, monitor and schedule the runtime resources (robots).

Processes can be started either manually or in schedules

Results of the processes being run will be recorded effectively within the Control Room, but also Session Logs and exceptions reports are captured so it allows testing and effective problem solving of processes if they have not ran as expected

Blue Prism Modules – System Manager



System Manager is where Blue Prism's own settings are kept. Key features here are:

The credentials Management - functionality provides a secure repository for login details used to access target applications.

Users roles and permissions management - designed to simplify the administrator's task of setting the permissions of the system's users (e.g. Process developer, Process controller etc)

Reporting, Analytics and Audit Trail

blueprism

Work Queue Report

Queue Name	IFA Applications					
Start Date	18 October 2010					
End Date	22 October 2010					
Items Pending	0					
Items Loaded	500					
Worked Items	500					
Completed Items	382	76%				
Exception Items	118	24%				
Business Exceptions	108					
System Exceptions	10					
Median Work Time	1:21					
Median Completed Time	1:21					
Median Exception Time	0:40					
	Mon 18	Tue 19	Wed 20	Thu 21	Fri 22	Total
Items Loaded	100	100	100	100	100	500
Worked Items	100	100	100	100	100	500
Completed Items	82	77	76	76	71	382
Exception Items	18	23	24	24	29	118
Exception Rate	18%	23%	24%	24%	29%	24%
	Mon 18	Tue 19	Wed 20	Thu 21	Fri 22	
Median Work Time	1:21	1:21	1:21	1:21	1:22	
Median Completed Time	1:21	1:21	1:21	1:21	1:22	
Median Exception Time	0:40	0:40	0:40	0:40	0:41	
Exception Types	Mon 18	Tue 19	Wed 20	Thu 21	Fri 22	Total
Business Exception	18	20	22	20	28	108
System Exception	0	3	2	4	1	10
Business Exceptions	Mon 18	Tue 19	Wed 20	Thu 21	Fri 22	Total
Application Rejected - Customer is bank staff	1	1	1	1	0	4
Application Rejected - Customer is not a UK resident	9	10	8	8	12	47
Application Rejected - Customer is under 18	8	9	12	10	12	51
Application Rejected - ISA Already Held for current tax year	0	0	1	1	4	6
System Exceptions	Mon 18	Tue 19	Wed 20	Thu 21	Fri 22	Total
Failed waiting for NB Web	0	2	2	4	0	8
Failed waiting for NBS System	0	1	0	0	1	2

Blue Prism has the ability to **output the results** in a different format via XML and write the outcomes / results to e.g. an EXCEL spreadsheet and place this file in a directory or location the robot has access to for a human to pick up and review if required.

Reporting, Analytics and Audit Trail

blueprism

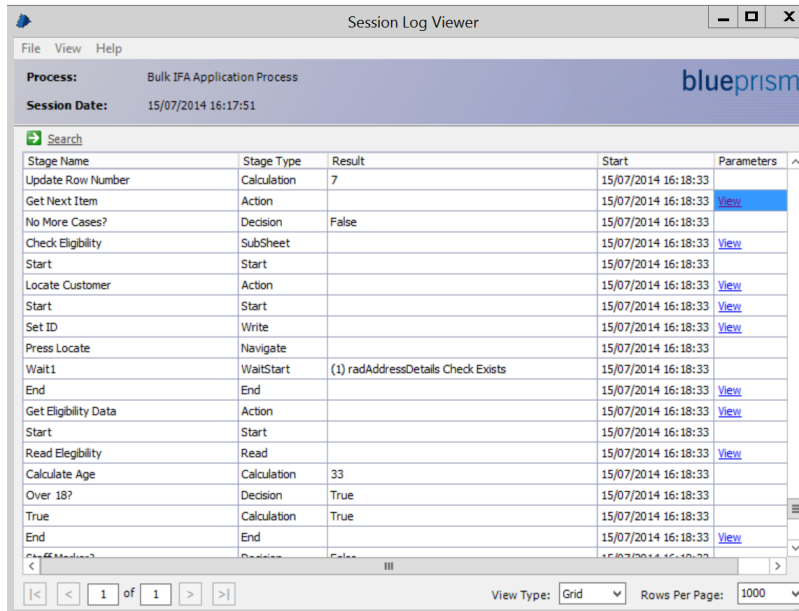
Exception Report

Process	Bulk IFA Applications Process
Work Queue	IFA Applications
Start Date	Mon 18 Oct 00:00
End Date	Fri 22 Oct 23:59

Customer Number	Loaded	Excepted	Exception Type	Exception
123456789009986	Thu 21 Oct 17:41	Thu 21 Oct 17:41	Business	Application Rejected - Customer is under 18
123456789000956	Thu 21 Oct 17:41	Thu 21 Oct 17:41	Business	Application Rejected - Customer is under 18
123456789002164	Mon 18 Oct 17:41	Mon 18 Oct 17:41	Business	Application Rejected - Customer is not a UK resident
123456789002886	Wed 20 Oct 17:41	Wed 20 Oct 17:41	Business	Application Rejected - Customer is under 18
123456789006322	Thu 21 Oct 17:41	Thu 21 Oct 17:41	System	Failed waiting for NB Web
123456789009234	Fri 22 Oct 17:41	Fri 22 Oct 17:41	Business	Application Rejected - Customer is not a UK resident
123456789009536	Tue 19 Oct 17:41	Tue 19 Oct 17:41	Business	Application Rejected - Customer is under 18
123456789008706	Mon 18 Oct 17:41	Mon 18 Oct 17:41	Business	Application Rejected - Customer is under 18
123456789006824	Thu 21 Oct 17:41	Thu 21 Oct 17:41	Business	Application Rejected - Customer is not a UK resident
123456789001994	Fri 22 Oct 17:41	Fri 22 Oct 17:41	Business	Application Rejected - Customer is not a UK resident
123456789004426	Fri 22 Oct 17:41	Fri 22 Oct 17:41	Business	Application Rejected - Customer is under 18

Any **exceptions** during the robot run (either business or system exception) are recorded and handed over for follow up by Business or IT.

Reporting, Analytics and Audit Trail



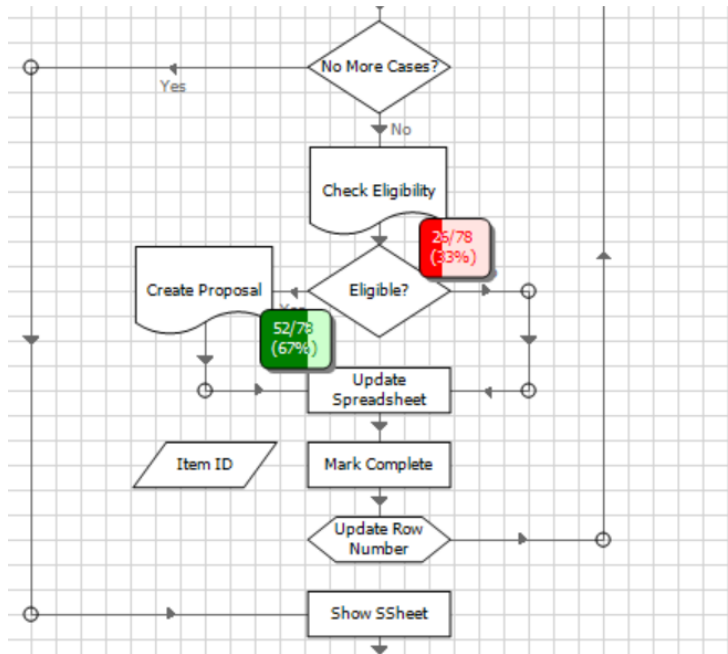
The screenshot shows the 'Session Log Viewer' window for a process named 'Bulk IFA Application Process'. It displays a table of actions performed by a robot, including stage names, types, results, and timestamps. Each row has a 'View' link for more details. The interface includes a search bar, a table with columns for Stage Name, Stage Type, Result, Start, and Parameters, and a footer with navigation controls and a 'View Type' dropdown set to 'Grid'.

Stage Name	Stage Type	Result	Start	Parameters
Update Row Number	Calculation	7	15/07/2014 16:18:33	
Get Next Item	Action		15/07/2014 16:18:33	View
No More Cases?	Decision	False	15/07/2014 16:18:33	
Check Eligibility	SubSheet		15/07/2014 16:18:33	View
Start	Start		15/07/2014 16:18:33	
Locate Customer	Action		15/07/2014 16:18:33	View
Start	Start		15/07/2014 16:18:33	View
Set ID	Write		15/07/2014 16:18:33	View
Press Locate	Navigate		15/07/2014 16:18:33	
Wait1	WaitStart	(1) radAddressDetails Check Exists	15/07/2014 16:18:33	
End	End		15/07/2014 16:18:33	View
Get Eligibility Data	Action		15/07/2014 16:18:33	View
Start	Start		15/07/2014 16:18:33	
Read Eligibility	Read		15/07/2014 16:18:33	View
Calculate Age	Calculation	33	15/07/2014 16:18:33	
Over 18?	Decision	True	15/07/2014 16:18:33	
True	Calculation	True	15/07/2014 16:18:33	
End	End		15/07/2014 16:18:33	View

Every action performed by Robot is recorded and tracked - related data can be used for further process optimization

Detailed tracking of robot actions eases auditing and reporting for security and compliance purposes

Reporting, Analytics and Audit Trail



Blue Prism provides high quality data that can be used to drive meaningful **BI and MI reporting** and identifies both inline process statistics and real-time operational analytics by recording each and every:

- System login.
- Change management action.
- Decision and action taken by each robot.

RPA tools

BluePrism Overview

High level demo of the tool - Video

Agenda de la formation RPA – Session 1

Introduction

1

Sensibilisation à Robotics Process Automation

Introduction des Assistants Virtuels et première phase d'un projet de cadrage RPA

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Présentation des outils RPA – Focus on BluePrism Technology Overview

BluePrism, Automation Anywhere, UiPath

3

Méthodologie de Delivery

Définition des principes clés du modèle Agile vs Cycle en V

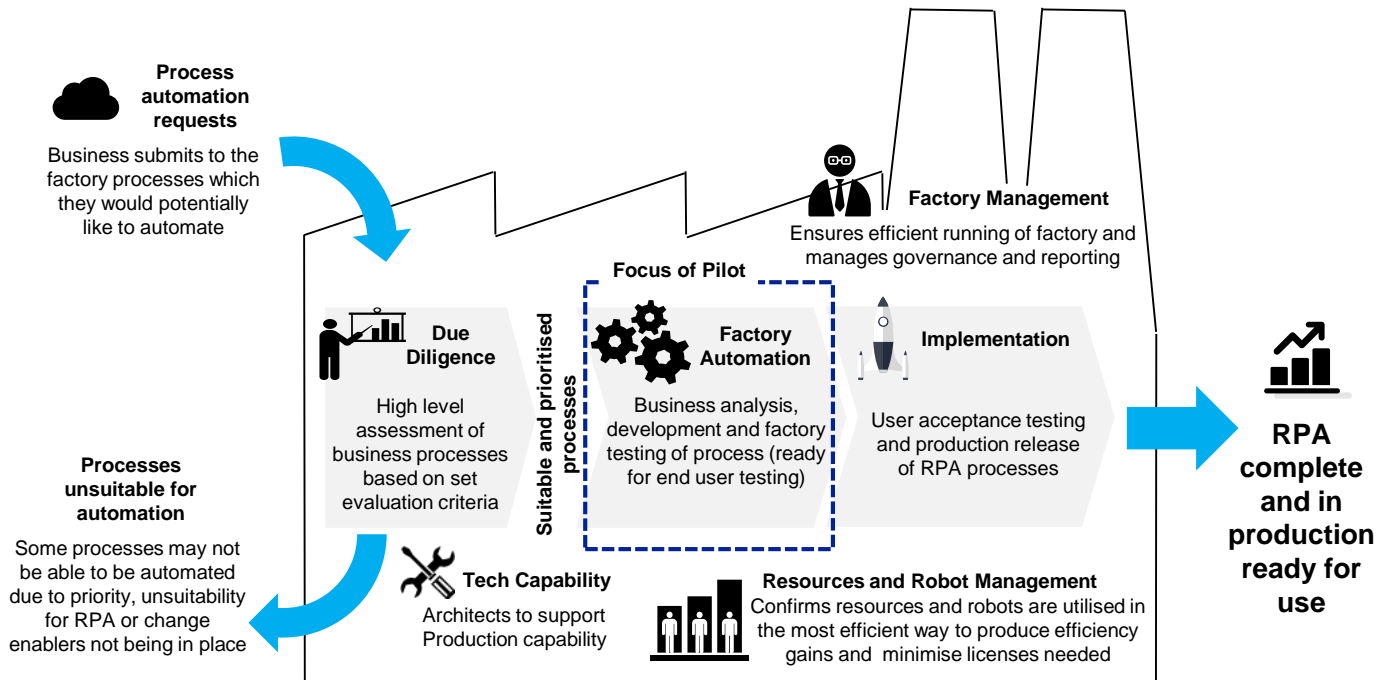
4

Illustration de cas concrets et retour d'expérience

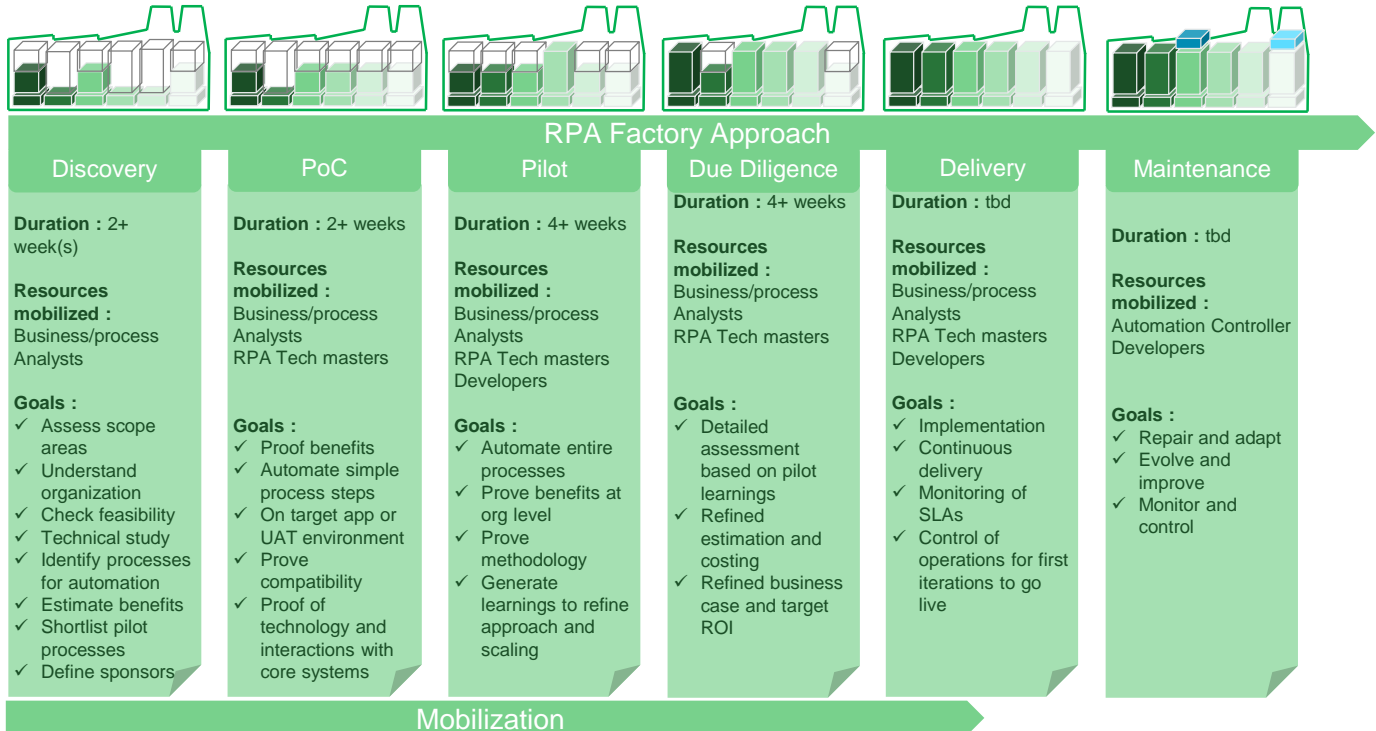
Exemples, problèmes rencontrés, bonnes pratiques et livrables

RPA Factory Overview

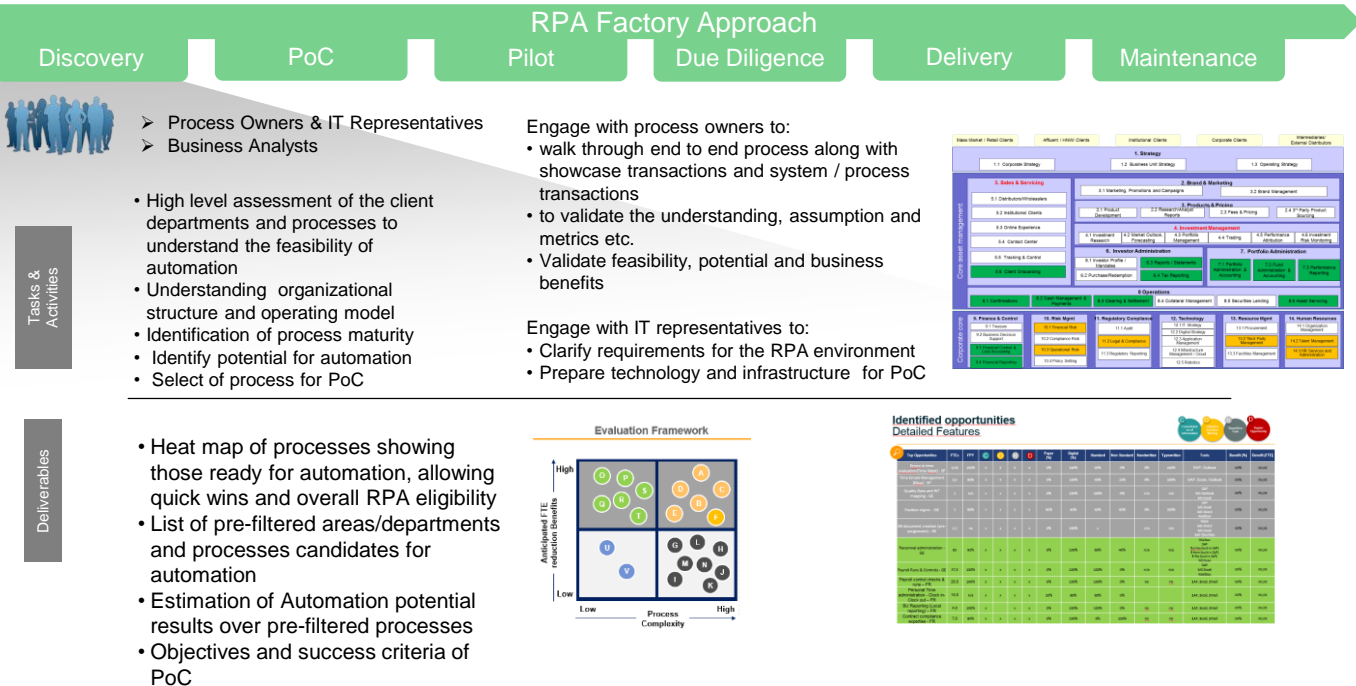
The RPA Factory achieves efficiencies of scale based on a consistent methodology to evaluate and automate processes



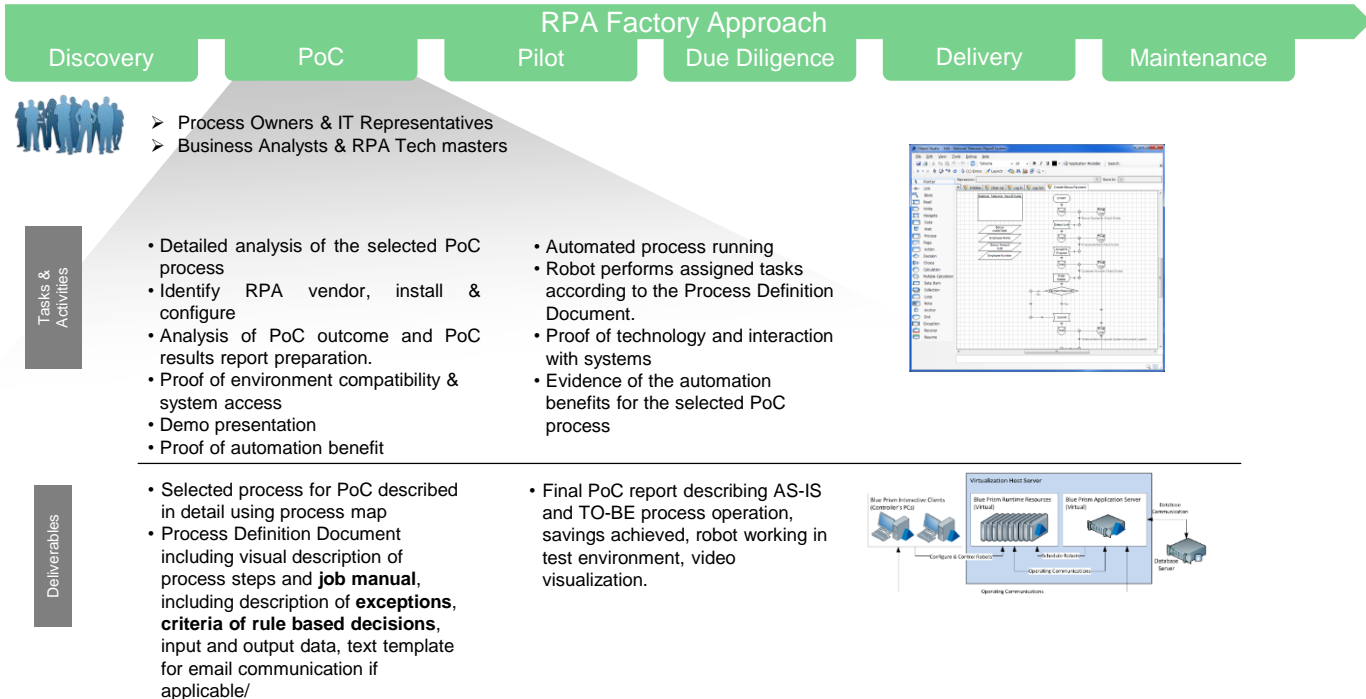
Robotics Factory set up approach from Discovery to Delivery



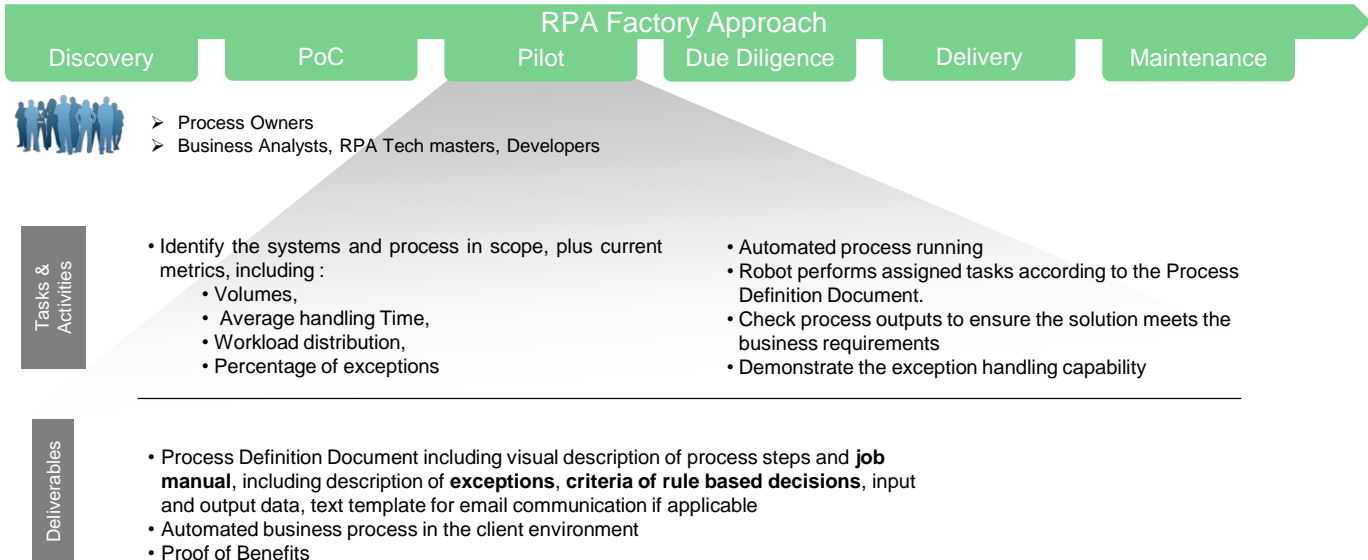
Robotics Factory set up approach – Discovery phase



Robotics Factory set up approach – Proof of Concept



Robotics Factory set up approach – Pilot



Robotics Factory set up approach – Due Diligence



- Process Owners & Business sponsor
- Business Analysts & RPA Tech masters

Tasks & Activities

- Very detailed assessment based on pilot learnings.
- In-depth analysis of processes with FTEs, AHT, possible efficiency/ cost gains
- Helps create more precise baselines, cost/ efficiency calculations, pricing, proposal(s), commercial models and long-term partnership arrangements
- Helps to create, discuss and finalize contracts

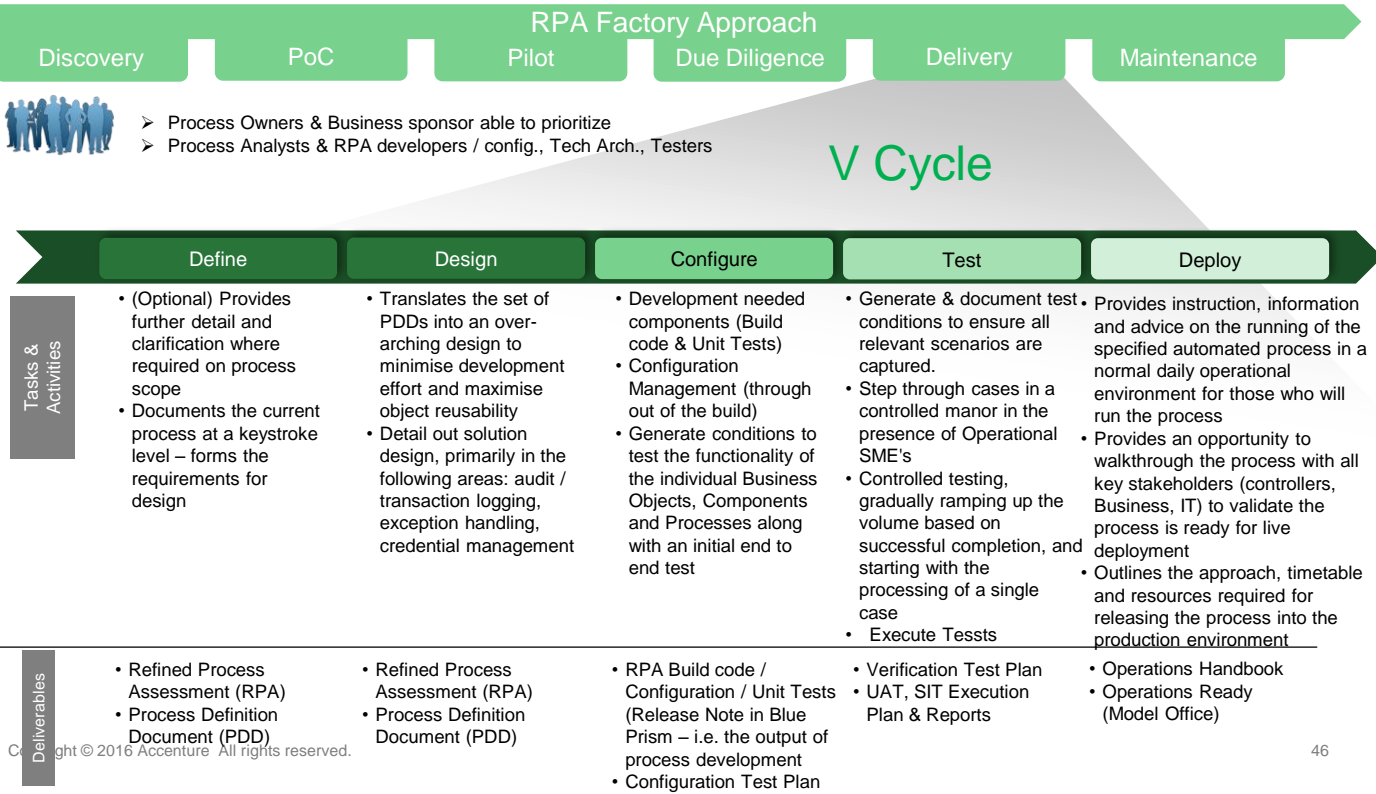
Deliverables

- Detailed assessment
- Refined Costing and estimate
- Refined Business case and target ROI

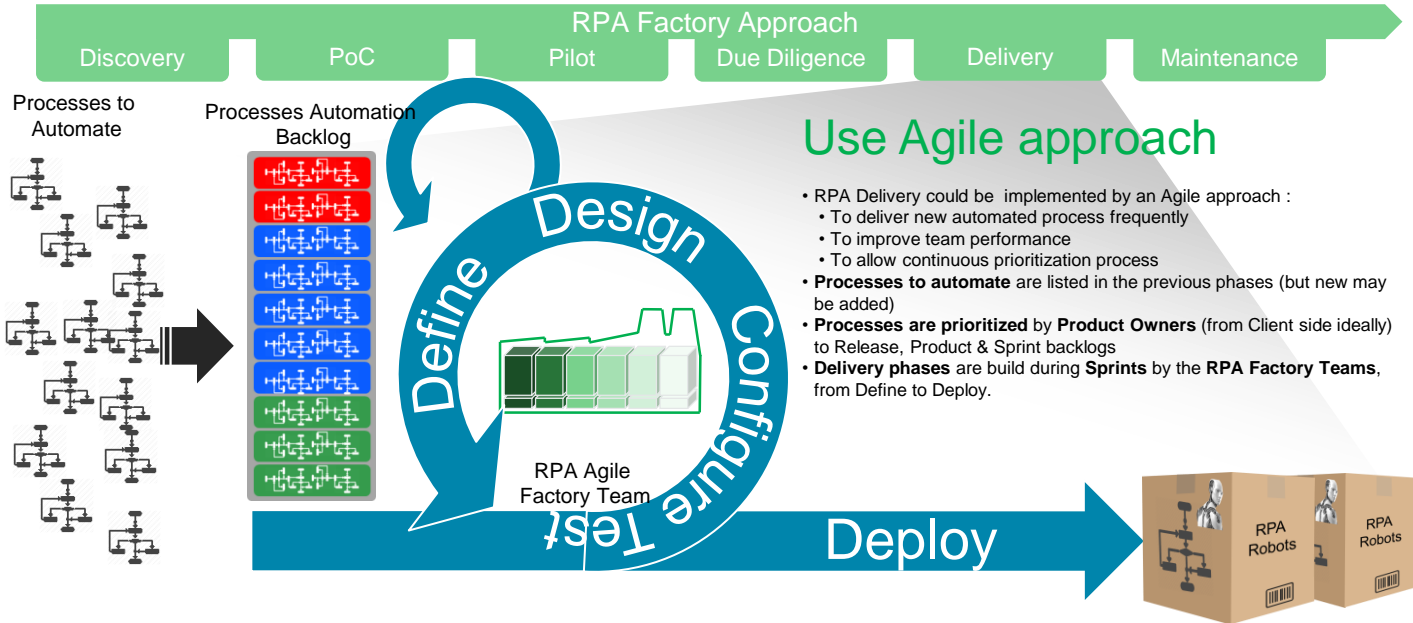
	1 month	2 months	3 months
Low	Process analysis & solution design	Development & testing of simple applications	Deployment & testing of simple applications
Medium	Process analysis & solution design	Development & testing of simple applications	Deployment & testing of simple applications
High	Process analysis & solution design	Development & testing of simple applications	Deployment & testing of simple applications

High	Moderate	Low
<ul style="list-style-type: none"> • Enabler (web form) required • Greater than 2 target applications • Complex calculations • New target applications • Letter output • Multiple screen interaction • Complex rules • Immature process (may require re-engineering) 	<ul style="list-style-type: none"> • Less than 2 target applications • Multiple screen interaction • Mature process • Immature process but simple rules • Existing Target Applications already built in Blue Prism 	<ul style="list-style-type: none"> • 1 Target System already built in Blue Prism • Mature Process • Blue Prism – reusable objects available • Single step task or g. adding a column

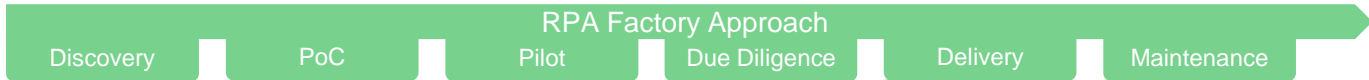
Robotics Factory set up approach – Delivery / V Cycle



Robotics Factory set up approach – Delivery / Agile Approach



Robotics Factory set up approach – Delivery / Agile Factory Approach



Use Agile Factory Model

To Deliver RPA projects, the Agile Factory Model is a model which enables to maintain the Agility promise and guarantee quality through different phases.

In an Agile Factory Model, the various disciplines relating to design, build and test are separated out into individual teams.

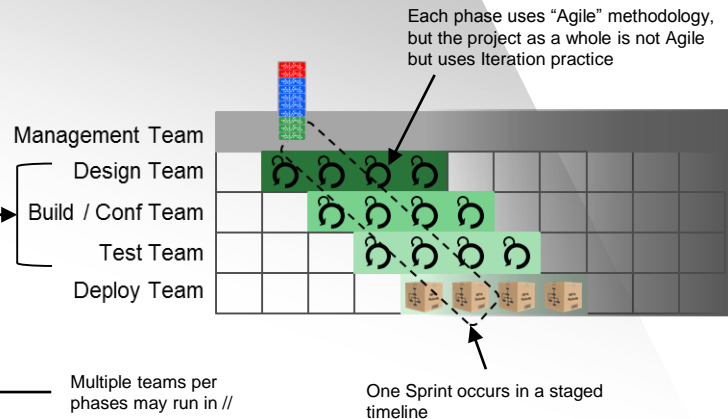
The usage of this model allow people to be more focused on the separated activities :

- Provides high **agility**
- The design team is available for **change requests** and more focused to work on prioritization
- Separate teams ensures that **testing is objective**
- Reduces technical integration risk

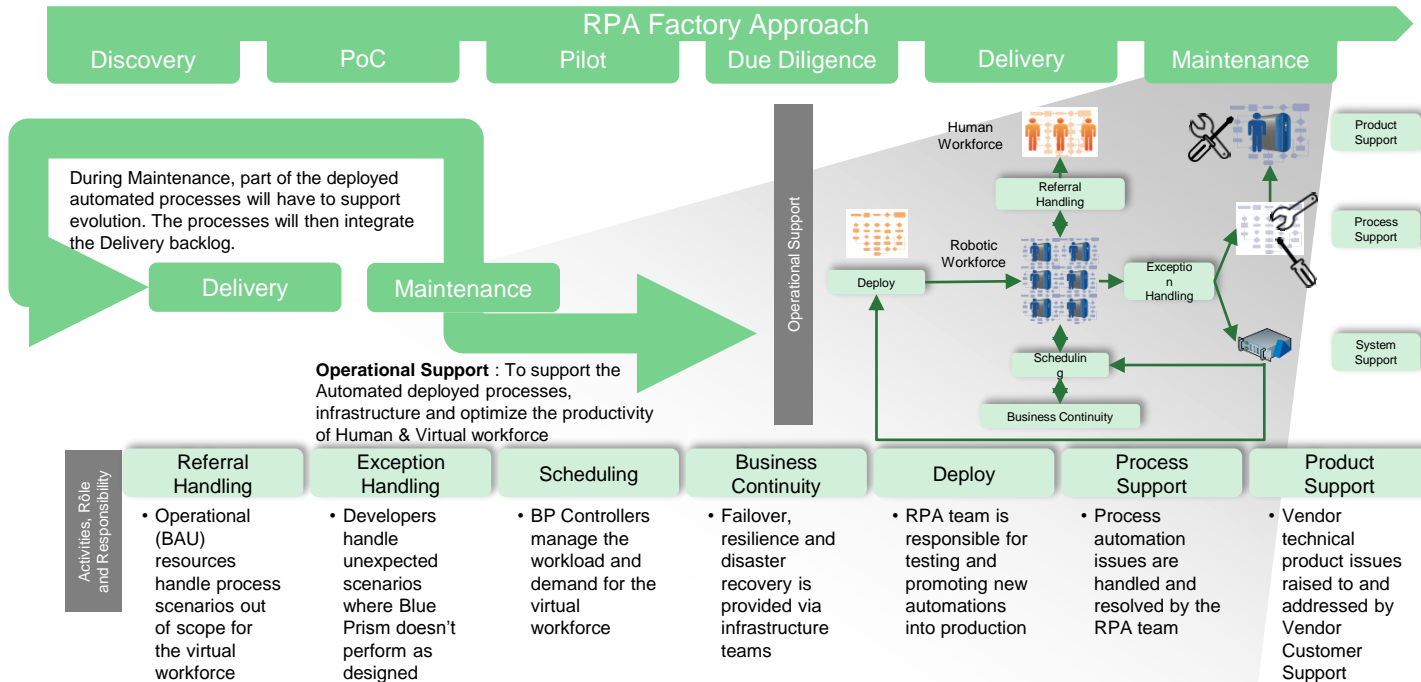
The teams may be operating under Scrum, Kanban, or some combination of the two – the challenge being to keep the pipeline of work flowing without any team getting too far ahead or too far behind the others.

The time of each team need to be adapted to the effort needed by phases.

The Sprint length is then adapted to be as short as possible to allow a time to deploy as short as the Agility promise.



Robotics Factory set up approach – Maintenance



Robotics Factory set up approach

Mobilization & Change management



- Sponsor, Process Owners
- Program Manager, Mobilization experts

Tasks & Activities

- Prepare and provide all necessary inputs for the different efforts across automation phases
- Obtaining and securing the right resources, access to client systems, vendor licenses, etc.
- Secure handover of internal support steps & tasks
- Ensure implementation of solid methodology for the entire RPA

Key Challenges :

- Availability of suitable resources
- Availability of client IT
- Internal organizational issues within client organization
- Understanding of RPA amongst key client people
- Culture and organizational changes in management

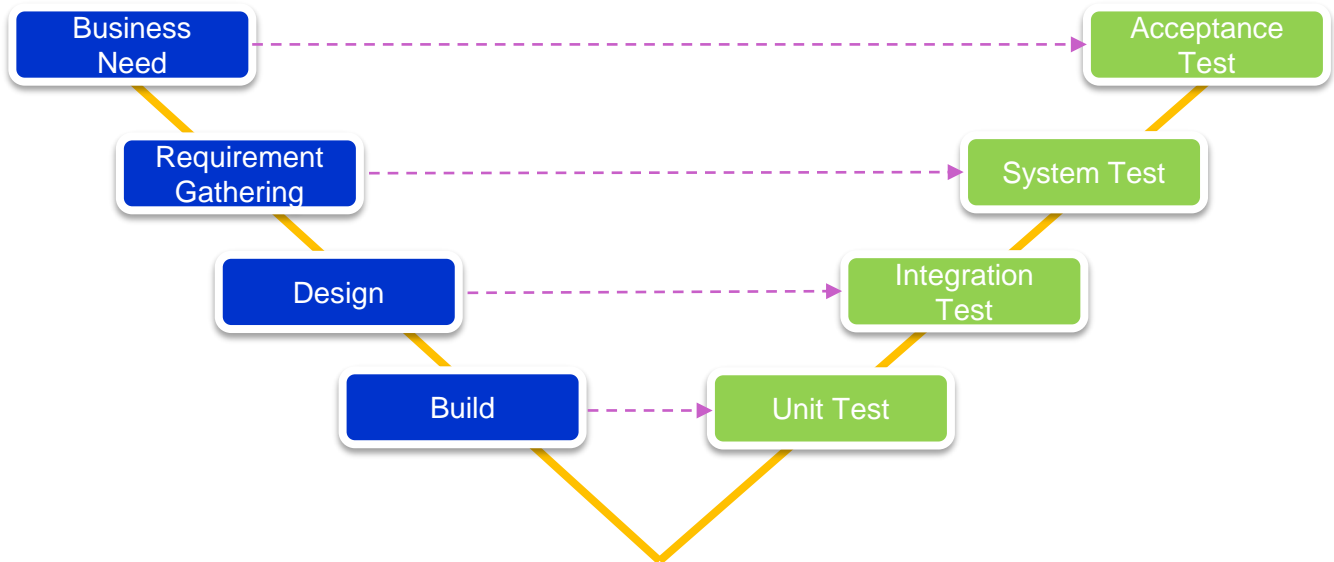
Deliverables

- Inventory of necessary and available resources
- Skills matrix
- Mobilization-specific KPIs
- Ramp-up plan

Mobilization

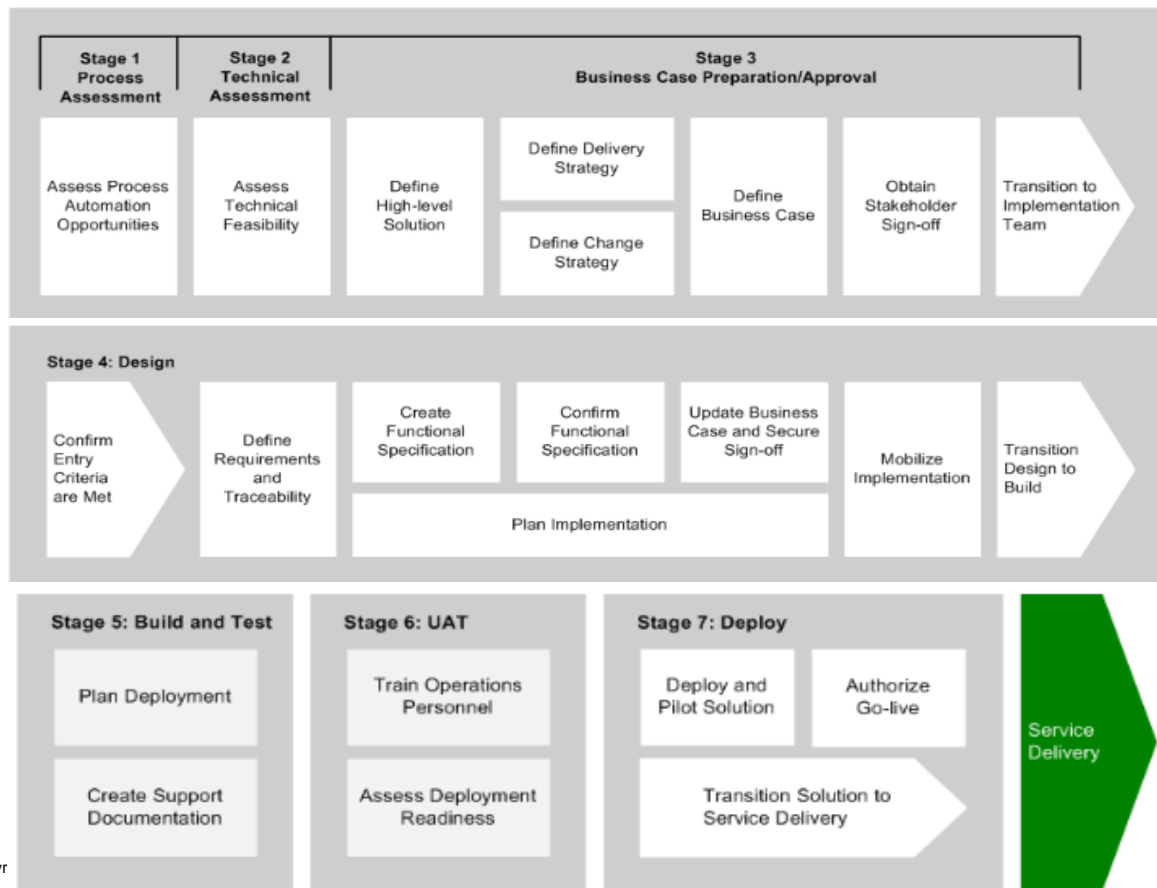
Project delivery methodology – V Cycle

Introduction



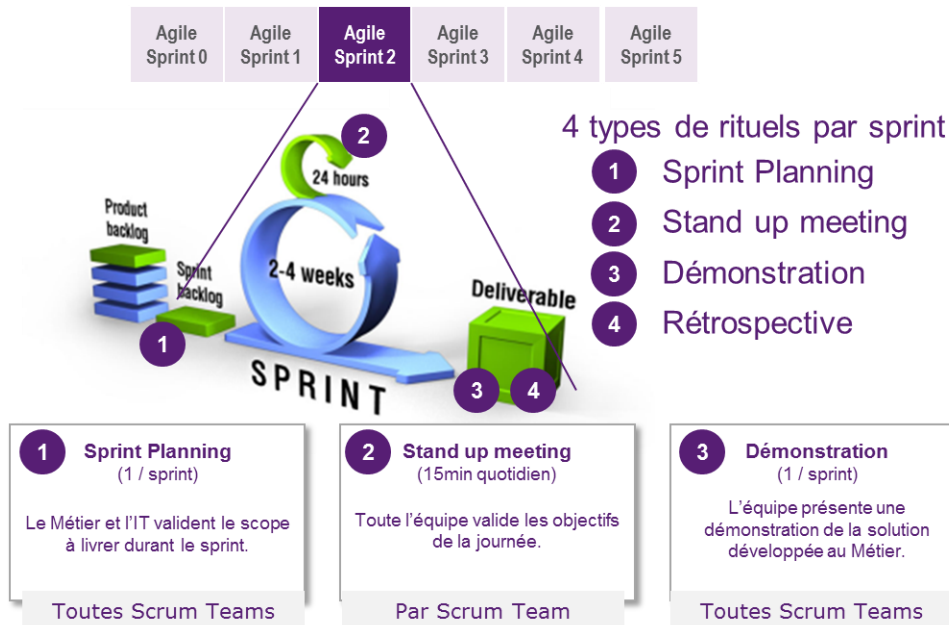
Project delivery methodology – V Cycle

RPA End to End cycle Delivery



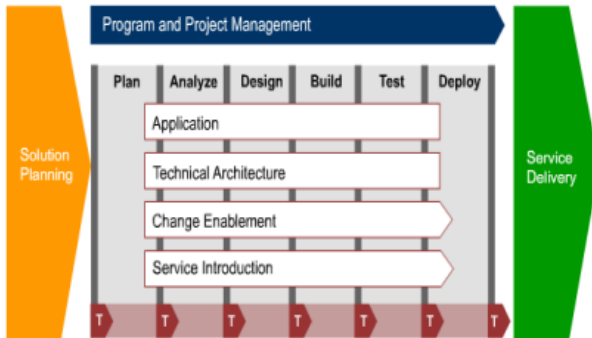
Project delivery methodology - Agile

Governance and Organization



V cycle vs Agile

Classic “waterfall” methodology



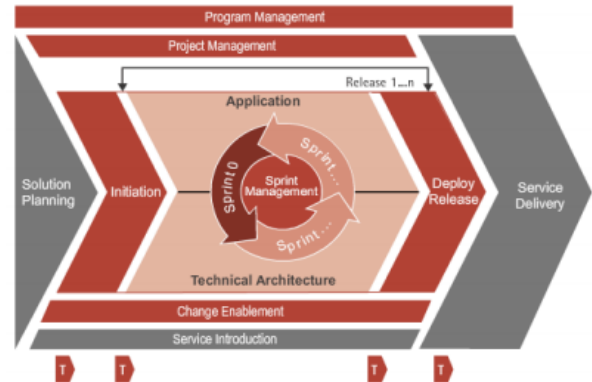
Works well in an environment with

Fixed scope

Defined set of requirements

Defined set of technology

“Agile” methodology



Works in an environment with

Uncertain level of requirements

An aligned goal

High level of agreed user involvement

Le modèle opérationnel

INFORMATIONS

PREREQUIS & STRATEGIE

- Croissance volume
- Réduction de coûts (Business Case)
- Risques opérationnels
- Qualité de service
- Flexibilité gestion
- Agenda IT
- Réglementation
- Contraintes techniques

MODELE OPERATIONNEL CIBLE



MODELE ORGANISATIONNEL

- Rôles & RACI
- Gouvernance
- Organisation et taille
- Cadre de contrôle



MODELE DE SERVICE

- Services offerts
- Méthode de livraison
- Processus
- SLAs & KPIs



PEOPLE

- Compétence et profils
- Formation



TECHNOLOGIE

- Outils
- Infrastructures
- Habilitation et Admini.

Le modèle opérationnel

Approche

Evaluation des opportunités

Analyse

Evaluation

Modèle Opérationnel

Implémentation

Bilan

- Comprendre les processus
- Etablir une base / critère de référence afin de mesurer les processus
- Collecter les données afin de mesurer et d'analyser les processus

- Calculer le potentiel d'automatisation et élaboration Business Case
- Evaluer l'impact des inputs sur les outputs

Activités clés

- Etablir la liste des processus et créer une « heat map » des processus avec le potentiel d'automatisation
- Mener les ateliers afin de déterminer les gains et la faisabilité.
- Etablir une short liste des opportunités
- Créer le catalogue de processus RPA

- Coordonner les bénéfices et les efforts estimés
- Identifier les opportunités d'automatisation clés et quick wins
- Etablir une première pipeline contenant les opportunités prioritaires
- Mettre en avant les écarts, préoccupation et possibles problèmes
- Confirmer l'obtention des licences et des infrastructures requises

Prochaines Etapes

- Compréhension de la capacité des processus existants à travers une documentation détaillée
- Identification de possible quick wins

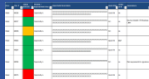
- Business Case (Delivery Model)
- Développer le plan d'implémentation
- Valider et initier les quick wins

A CAPACITÉ INTERNE (COE)
Ou
OPS vs IT

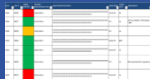
B JOINT SERVICE MODEL

C OUTSOURCING

Livrables clés



Liste des processus



Catalogue de processus



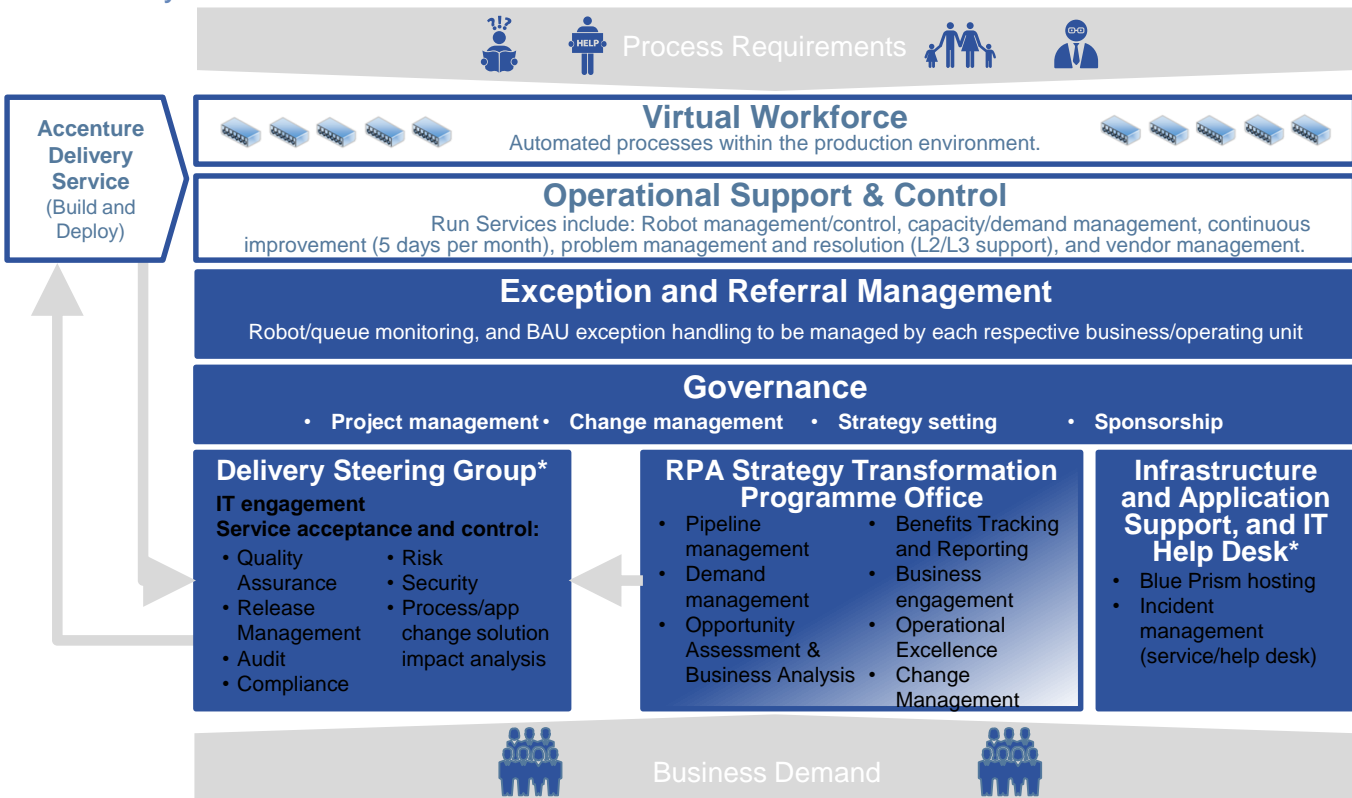
Business Case



Plan d'implémentation

Target Operating Model – Run Example

The Target Operating Model is designed to maximise efficiencies in delivery whilst ensuring governance and are able to continually QA the initiative.



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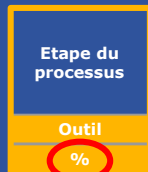
Exemples, problèmes rencontrés, bonnes pratiques et livrables

Estimation du pourcentage d'automatisation

Niveau étape & processus

Le pourcentage d'automatisation peut être **estimé** après l'analyse des processus et l'identification des différentes étapes automatisables. Pour chaque étape identifiée, un pourcentage d'automatisation, est indiqué. Il est **estimé** en fonction de différents critères :

Etape



100%	Pas d'exceptions à gérer (Exemples : connexion à une application, sauvegarde d'un fichier, extractions de données brutes, application d'un filtre ...)
80% - 100%	Exceptions possibles mais identifiables en totalité (Exemples : retraitement de données, identification d'un message/d'une ligne selon quelques critères prédéfinis ...)
50% - 80%	Règles de gestion complexes et des exceptions (Exemples : utilisation de calculs complexes pour un tableau d'amortissement, règles de gestion comptables lourdes ...)
< 50%	Règles de gestion complexes, non formalisées et difficilement identifiables
0%	Etape non automatisable (Exemples : analyse et expériences requises, formats papier et différents, écritures manuscrites)

Une fois que le pourcentage d'automatisation a été **estimé** pour chaque étape, un pourcentage d'automatisation global est lui aussi **estimé**.

Processus

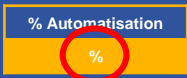


Moyenne	Calcul du pourcentage d'automatisation à l'aide d'une moyenne simple lorsqu'il n'y a pas de pondération sur chaque étape, et après validation avec le management
----------------	--

Estimation de la charge ETP

Exemple à valider par le management Projet

Une charge de travail ETP doit être estimée pour chaque processus identifié. Il existe deux types d'estimation de charge ETP :



A dire d'expert

La charge de travail peut être **communiquée par le management**, et sera donc « à dire d'expert »

Sur base du volume et temps unitaire

Si le management n'a pas de charge ETP à communiquer, celle-ci sera calculée sur base des volumes et temps unitaires

Définir les hypothèses avec le management (exemples) :

- Une journée = 8 heures par jour
- Taux opérationnel retenu : 80%, soit 6,4h/j
- Jours travaillés par an : 209 j, soit par mois 17,4 j

Calcul de la charge :

Charge jour =

- $[(\text{Volume année}) / 12\text{mois}] / 17,4\text{j} = \text{Volume/j}$
- $\text{Volume/j} * \text{Temps unitaire (h)} = \text{Temps unitaire de traitement par jour}$
- $\text{Temps unitaire de traitement/j (h)} / 6,4\text{h} = \text{Charge ETP}$

Retour d'expérience

Phase d'analyse



Facteurs clés de la réussite de la phase d'analyse

1. **Démonstration efficace de la technologie au métier** : il est important que le métier ait une vision des capacités des AV afin de collaborer à l'identification des opportunités. L'expérience a montré que l'utilisation de vidéos était efficace.
2. **Collaboration et disponibilité du métier** :
 - Une forte disponibilité et implication des équipes métiers (niveaux managers opérationnels et opérationnels métiers)
 - Communication des informations quantitatives nécessaires (volumes, temps de traitement, charge de travail, nombre d'ETP ...)
 - Mise en place de démonstrations et/ou d'immersions métiers afin d'affiner l'analyse



Principaux problèmes rencontrés lors de la phase d'analyse

- I. **Incompréhension du projet et/ou de la technologie par le métier**
 - Difficulté d'appropriation des concepts d'automatisation par le métier
- II. **Projet IT ou de réorganisation impactant les processus**
 - Il est important d'identifier les changements à venir sur les processus lors de la phase d'analyse

Retour d'expérience

Project delivery methodology

Robots are highly dependent on the GUI of Legacy application, agility is required to realize savings

- During Delivery Project phase:
 - Stability of legacy application is a key success factor
 - All robots will use the GUI of the different legacy application.
 - Modifications of the screens will directly impact the robot
 - Release Plan of Legacy application is key to schedule robot development.
 - Development and Test environments need to be iso-production
 - Development could be done on the Production code line of the legacy application

Key points:

- One Business Process is not equal to one Robot
- IT robots are required to support Business robot and ensure scalability (for instance change password management every month, log management, application connection management...)
- IT Team from client are to be involved at the early start of the project as they will be in charge of the production support after delivery. Their requirements are to be collected during analysis phase
- A robot is not working faster than a human – execution time still remain the same as the robot is interacting with the GUI of the legacy application. Number of machines and licenses are directly impacted.