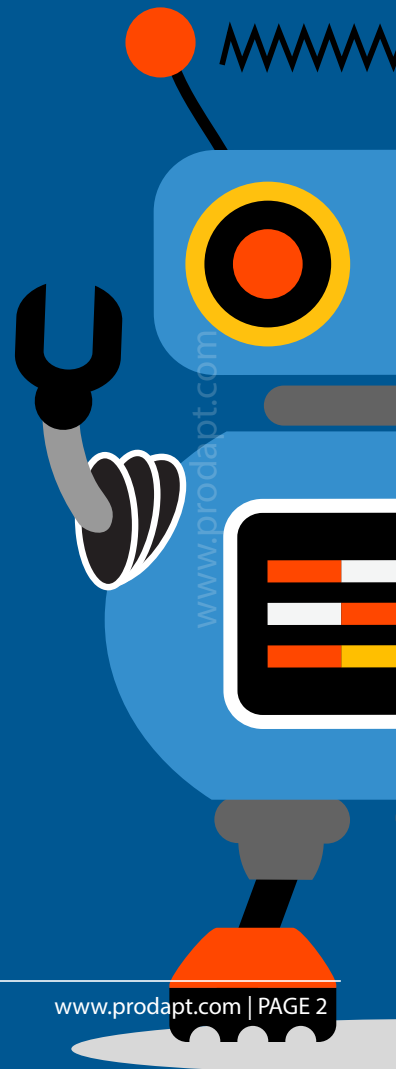

Prodapt
powering
global telecom
blueprism®
Robotic Process Automation Software
TRANSFORMING TELECOM BUSINESS PROCESSES USING
ROBOTIC PROCESS AUTOMATION (RPA)
www.prodapt.com

Table of contents

	Executive summary	3
1.	What is RPA?	3
2.	Why RPA adoption is increasing?	4
2.1.	Reasons for increased adoption in the telecom industry	4
2.2.	The bigger picture	5
3.	Preview of telecom processes that can be automated	5
4.	The RPA journey - what it takes to implement RPA in an organisation?	6
5.	Common challenges & solutions while implementing RPA	7
6.	Choosing the right combination of solution provider and RPA tool	8
6.1.	Considerations for choosing the right RPA technology provider - 5 pillars of the “Most Successful Digital Workforce”	8
6.2.	Choosing RPA solution provider/integrator	8
7.	Prodapt - Blue Prism partnership: Delivering enterprise RPA solutions for CSPs/DSPs	10
7.1	A success story	11



Executive summary

Robotic Process Automation (RPA),

the latest trend in automation, has been proving its worth in a lot of industries such as banking, logistics, financial services, etc. This paper discusses how RPA can be beneficial in the telecom domain and how it can be implemented. RPA is applied on processes that are highly rule-based, repetitive, and voluminous. Since telecom has a high number of such processes, RPA can prove to be extremely helpful.

RPA is an unassisted automation technology. Apart from the regular benefits, RPA improves compliance and governance and allows shifting employees from mundane tasks to customer-facing roles.

RPA can automate a lot of processes in the telecom industry ranging from order entry in fulfilment to network management. For example, managed services, Business-Process-as-a-Service (BPaaS), order-to-activation processes, such as order validation, directory listing, service activation, etc., can be made more efficient with RPA.

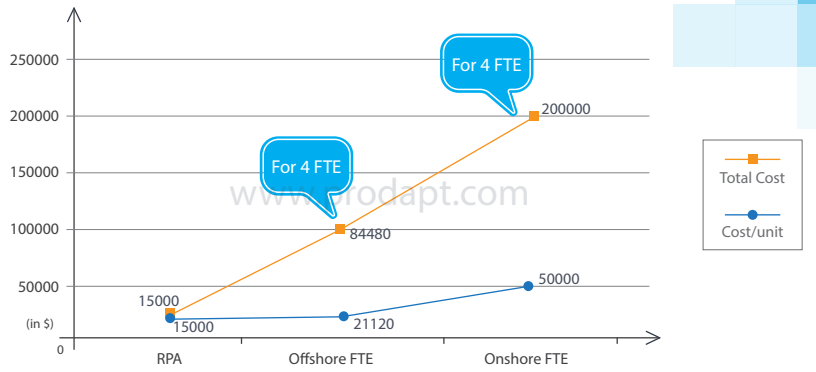
For the success of RPA in an organization, it is imperative to draft a foolproof roadmap of implementation. The roadmap includes the following steps:

- Identification of the right processes
- Streamlining the process flows by eliminating irrelevant steps
- Identification of the best vendor
- Assessing the pilot
- Rollout

Also, the organization should identify what may be the potential challenges in implementation and strategies to handle them.

1. What is RPA?

Robotic process automation (RPA) is an instrument of business process transformation and innovation. It allows the people to focus on the work that is strategically aligned to the company's business goals by moving the repetitive & rule-based part of their work to robot-led automation. Notwithstanding the obvious cost benefits, RPA also helps in making people more valuable by increasing their quality of work, minimizing errors and allowing organisations to scale rapidly.



Cost Comparison of RPA vs FTE – the graph compares total cost incurred on offshore FTE and onshore FTE for the same amount of work which one bot can do, considering one bot can do the job of 4 FTE

There are several predictions around the growth of RPA. Here are a few from Gartner:

- By 2025, 3 out of 10 jobs will be done by software, robots, or smart machines allowing replaced employees to do more crucial jobs.

- By 2018, digital businesses will require 50% fewer business process workers.

- By 2018, the total cost of ownership of business operations will be reduced by 30% through smart machines and industrialized services.

RPA can automate business processes quickly and cost-effectively without the need to invest in expensive platforms. Any repetitive, rule-based, and frequent business processes can be automated with RPA. RPA implementation can benefit the most when:

Repetitive: When most of the employees' time is spent on repetitive tasks such as data entry, order entry, billing verification, etc.

Rule-based: When a majority of the workforce is deployed in highly rule-based processes such as prebilling verification, address validation, facility assignment, etc.

Need for cost optimization: When the organization is spending a lot on offshore partners. E.g., the offshore FTE headcount can be brought down by more than 50% by automating processes like SIM swap and application of pre-calculated credit to customer account.

High volume: When the monthly transactions are running into several hundred thousand. E.g., processes such as order entry and invoice generation whose monthly count usually runs into 500,000 to 700,000.

2. Why RPA adoption is increasing?

Telecom operators are moving towards RPA to reduce costs, improve data quality, boost customer service, and to drive improvements in operational efficiency.

- Robotic process automation can save cost by 25-50%
- Increases scalability and flexibility in business processes
- RPA allows data and processes to be retained onsite
- RPA offers an improved service delivery model by increasing production and accuracy, reducing cycle times and decreasing the need for ongoing training
- Automation phases out human intervention, thus reducing possibility of humans errors
- RPA tools can work 24/7. Typically, one robot can do the work of 3-5 FTEs

2.1. Reasons for increased adoption in the telecom industry

RPA implementation has increased in telecom in the recent past. Based on few such implementations, we have identified some reasons behind it with results achieved as examples to support it.

Improved service delivery: As per the reports by Ipsos, 38% of the consumers feel there is a large gap between customer service delivered by CSPs and consumer experience. The following examples give a glimpse of how effective RPA can be in such a scenario:

- The process of SIM swap SLA can be reduced from 24 hours to 1 hour.
- More than 500,000 transactions can be automated, bringing down the chase-up calls by 80%.

Cost savings: Few of the components, which adds to high costs in telecom industry, but can be worked upon by RPA includes maintaining data integrity and security, software and hardware costs, high employee attrition in mundane tasks etc.

- ROI of 650% - 800% can be achieved over a period of 3 years.
- Reduction of more than 45 FTEs just in customer care brought savings of more than £500,000 per annum.

Decreased human intervention: RPA can automate mundane processes which are tiring and boring for a human to do all day long - the kind of fatigue that result in mistakes and expensive turnover.

- Saved and shifted more than 45 FTEs from mundane task to high quality roles since there was huge reduction in “chase-up” calls from customers.
- By the entire process rationalization initiative i.e., process elimination, simplification and optimization, headcount can be decreased by 10%.

Increased scalability: During the peak times, which can be because of various reasons, the number of transactions can increase by 50-60%, sometimes going even beyond 100%. This requires additional resources if done manually, but RPA bots, in most cases can handle the upsurge without the need of additional bots. They can be up-scaled without pre-planning period and without any training. The number of bots can be increased by several times while extending RPA to other processes or even in same process in no time.

- Ability to manage with the same workforce even when number of transactions increase by 50-60% during peak times
- Number of robots deployed in new processes, after successful implementation in pilot phase, expanded from 20 to more than 160 over a period of 12 - 15 months.

Allows data to be onsite: RPA bots are mostly installed in the operator’s premise itself and not at that of offshore partner. This takes care of the security concerns as the data need not be shared with offshore partner. Secondly, this also saves the data transfer cost.

- Automated 15 core processes like SIM swaps, credit checks, customer reassignment, porting, ID generation, etc., representing 35% of all back-office transactions.

2.2. The bigger picture

Other than the above mentioned operational benefits, RPA brings some high-level strategic benefits also:

Security and reliance: Just like humans, access controls and security policies can be applied on robots. But unlike humans, they never deviate from the policies, lack curiosity, and cannot be tricked into divulging information.

Returning hours back to business: RPA reduces time spent by FTEs in mundane tasks. The same workforce can be deployed back in more meaningful tasks involving human interactions, especially customer facing roles returning hours of workforce back to business.

Governance: Since bots track and document all tasks that they automate as well as never deviate from the tasks, compliance reporting can be much improved.

Unassisted automation: RPA, being an unassisted automation technique, offers high value creation opportunities like cost-savings, better service delivery, quicker time to value, etc., at relatively lower risk.

Revenue and profits: With inexpensive robots doing the grunt work, employees are freed to focus on tasks that have more revenue and profit potential. When live agents aren't constantly overloaded with inquiries that could be handled by RPA-enabled self-service, they're better able to make upsell pitches to the customers they do interact with.

3. Preview of telecom processes that can be automated

The telecom business process framework, covering service fulfilment, service assurance, billing, revenue management and network management, has many such repetitive, rule-based functions. The applicability of RPA in telecom domain spans across the processes defined by TM Forum's eTOM framework.

Fulfillment	Assurance
- Order entry & validation - Feasibility checks - Resource allocation logical/physical - Service activation - Service testing - Handling fallouts & exceptions - Customer communication - Workforce management - Directory assistance - Supplier/partner management - Sales & marketing support	- Problem management - Incident management - Trouble ticket creation - Fault diagnosis - Track & manage ticket up to closure - Quality of service management - Service-level agreement monitoring - Customer win-back - Equipment management & L1/L2 support
Network management	**Billing**
- Network planning - Network performance management - Alarm & fault monitoring - Network design - Network inventory creation & reconciliation - Network digitization	- Pre/post bill checks - Revenue assurance - Bill generation - Bill invoicing - Interconnect billing - Bill inquires - Manual bill consolidation - Bill rating & CDR correction - Receivables management - Collections & posting

Nevertheless, to maximize the impact of robot-led automation, business leaders need to look at RPA as an enterprise-wide initiative and implement a clearly defined strategy for automating their enterprises. This document attempts to help communications service providers and telecom enterprises on the "what," "why," and "how" of implementing RPA.

RPA adoption - some facts

US$ 125-175 million BPM spend on business processes where RPA has been applied (currently <1% of the addressable market)

69% of RPA adopters are large enterprises

60.5%+ CAGR is expected in RPA, worldwide, through **2020**

66% of RPA solutions are hosted by service providers

54% in North America and **34%** in EMEA RPA adopters' headquarters locations

Below are some of the sub-processes from the order-to-activate cycle that telecom operators can consider to automate using software robots, in the first phase.

Typical processes in O2A cycle that can be automated

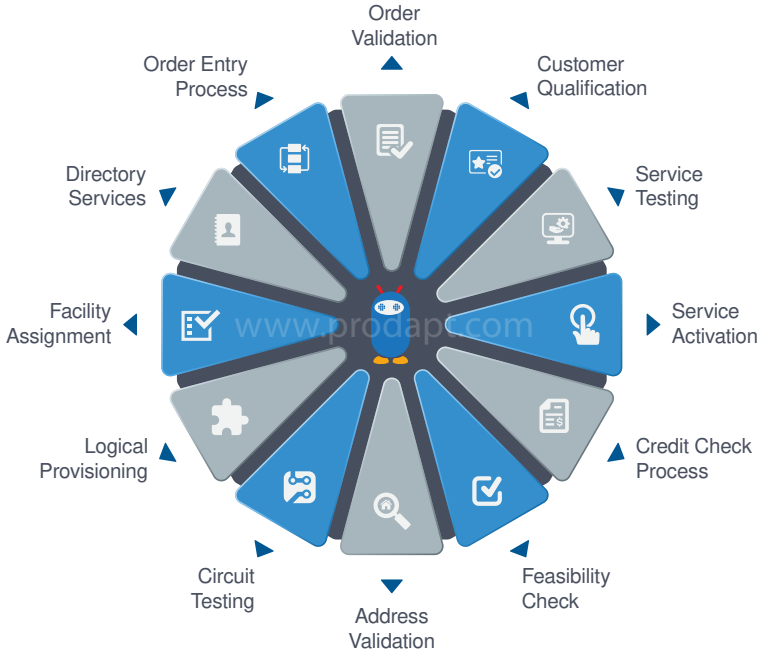


Figure - 2 Order-to-Activate processes for RPA

4. The RPA journey - what it takes to implement RPA in an organisation?

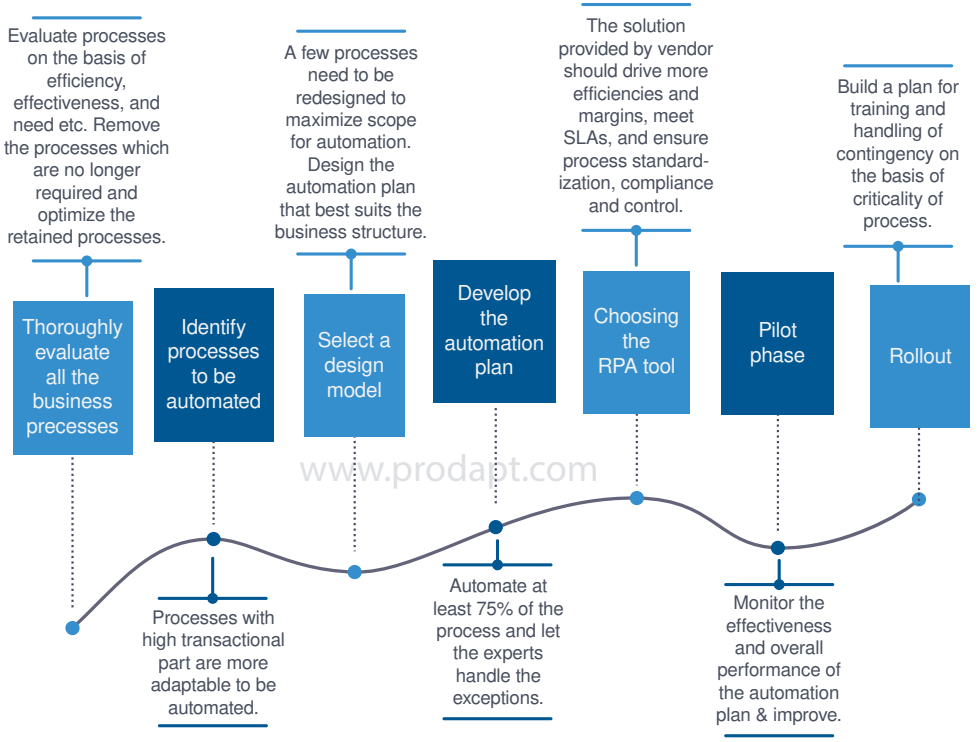


Figure - 3 The RPA journey

The following are the steps of RPA implementation in an organization.

Thoroughly evaluate all the business processes: To increase the overall productivity, all processes don't need to be automated. Evaluate processes on the basis of efficiency, effectiveness, the need, etc. Remove the processes which are no longer required and redesign the processes to increase the productivity. For example, for many old CSPs, the process of verification of order shipment might be redundant now, but it might still be in place because of lack of evaluation.

Identify processes to be automated: Usually the processes comprise transactional and decision parts. Processes with high transactional part are more adaptable for automation. For example, the process of last-mile configuration has less scope of automation than a process such as logical provisioning.

Select a design model: A few processes may need to be redesigned to maximize their scope for automation. Design the automation plan that best suits the business structure. Customize the automation model to suit the process needs. For example, when a process such as bar removal (call barring/service barring) is automated, bar removal verification process is rendered futile and can be removed from the entire flow.

Develop the automation plan: Deep-dive into the processes and identify all exceptional scenarios. In some cases, most time consuming part of the process can be automated and remaining part can be automated in incremental phases. It is recommended to automate over 75% of the process and let the experts handle the exceptions. For example, facility assignment service can be automated up to 70-75%, but the process of eCommerce (where orders are created) can be automated more than 90%.

Choosing the RPA Solution Provider: The solution provided by every vendor is different. It is best to judge the solution provided by them on the basis of following factors:

- It should drive more efficiencies and margins
- Improve end-to-end process visibility and meet SLAs
- Ensure process standardization, compliance and control

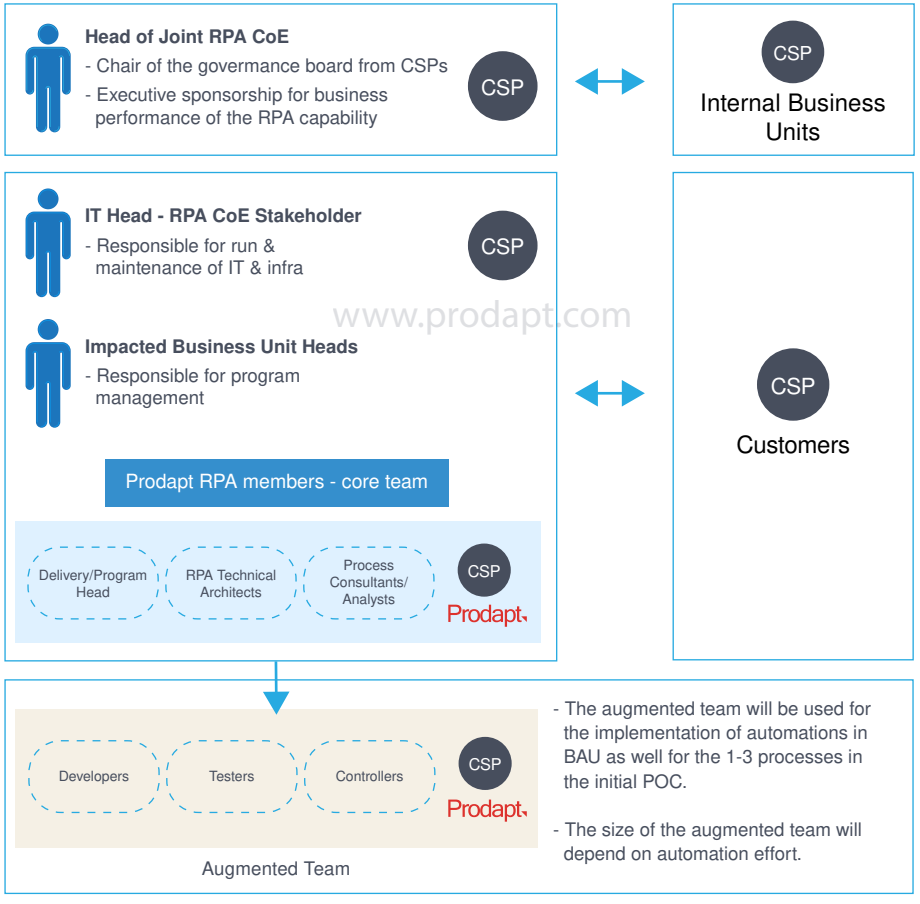
It is in in the best interests of a CSP to select RPA solution provider with prior RPA implementation experience in the Telecom domain. For example, a solution provider like Prodapt with expertise in Telecom coming together with best-in-class bot provider like Blue Prism.

Pilot phase: This allows observing the effectiveness and overall performance of the automation plan. Improvement in the automation plan and design can be made on the basis of the results of the pilot project. For example, it is wise to have a pilot phase for a high-volume and low-complexity process such as SIM swap.

Rollout: Apart from development of automation, it is important to build a plan for training and handling of contingency on the basis of criticality of processes.

5. Common challenges & solutions while implementing RPA

Challenge	Description	Solution	Primary Stakeholder
Involvement of multiple stakeholders	IT teams usually have apprehension around data security, changes in the IT architecture as well as the integrity of systems. Secondly, they also have concerns about the intrusion of RPA in their area of expertise.	The IT team needs to be apprised of the safeguards put in place and be made part of the governance team.	Vice President - Information Technology, Director - IT Shared Services.
Visibility issues	Multiple robots run multiple applications in the background. This makes it difficult to pinpoint which robot is doing what and create issues of monitoring and control.	Set up a control tower for monitoring and managing the robots. This is essential to get the most out of RPA.	Vice President/ Director - Service Delivery.
Governance	There will be integration of robotic software and workflow design with upstream and downstream customer business processes. Any unanticipated change in business processes will have the potential for bringing the entire automation workflow model to a halt.	Design the governance structure in a way so that it reflects all the changes happening on the customer side. Also, keep experienced resources who can predict outcomes of the changes accurately and modify the configuration.	Director - Operations Sr. Manager - Operations.



Prodapt's recommended Governance Model to aid successful RPA implementation

6. Choosing the right combination of solution provider and RPA tool

RPA as a service can only be provided as a combination of solution provider/integrator with domain expertise and the right RPA tool.

Domain expertise of solution provider/integrator plays an important role in optimizing/ standardizing the process while moving to RPA. Such a solution provider can analyse telecom processes holistically to identify reusability of bots that brings down development time & cost and provides continuous improvement post implementation. Therefore, it is recommended to consult one on getting an unbiased opinion on right RPA tool.

6.1. Considerations for choosing the right RPA technology provider - 5 pillars of the "Most successful digital workforce"

Blue Prism has devised a set of guidelines which helps any organization in choosing the correct RPA tool. While moving forward in the journey of creating a digital workforce, look for a RPA tool/technology provider who can provide the following 5 features:

Operational performance and productivity: This ensures the underlying architecture is optimized for performance and the specific needs of an enterprise enabling intelligent execution and driving productivity gains.

Ease of development and maintenance: The vendor should consider organization's speed of development and ease of maintenance, not only in the initial phases but also as the solution is implemented at scale.

Methodology and implementation: Should help to develop a repeatable and industrialized quality standard for implementing and using RPA.

Scalability & resilience: Should help organizations define the way work is allocated and managed including communication between digital workers. This is required to successfully respond to ever-changing business demands, priorities and work allocation to achieve process goals.

Security, governance risk and control: Automation must provide optimum controls for 100% policy-compliance through impenetrable data and access security. It should provide the ability to operate in a lights-out environment with minimal dependency on human support and intervention.

6.2. Considerations for Choosing RPA Solution Provider/Integrator

Few things to look for in a RPA solution provider:

Successful implementation: The solution provider should have experience of delivering large RPA engagements across multiple clients.

Profound expertise in telecom: Should have deep understanding of CSP's requirements & operational challenges and have competencies in business process consulting, outsourcing and optimization services to fulfill all kinds of customer needs.

Value framework: Should have a framework to provide process consulting, assessment and deployment methodology with a capable team to deliver as per global standards.

Tool-agnostic: Should be able to bring the most appropriate tool for client's applications/ technology and telecom specific process stacks.

Meticulous change management: Should be able to provide on-going back-office support and training to better manage fallout or manual operations post RPA implementation.

Prodapt's elaborate and extensive Security Framework safeguards against any kind of threat:

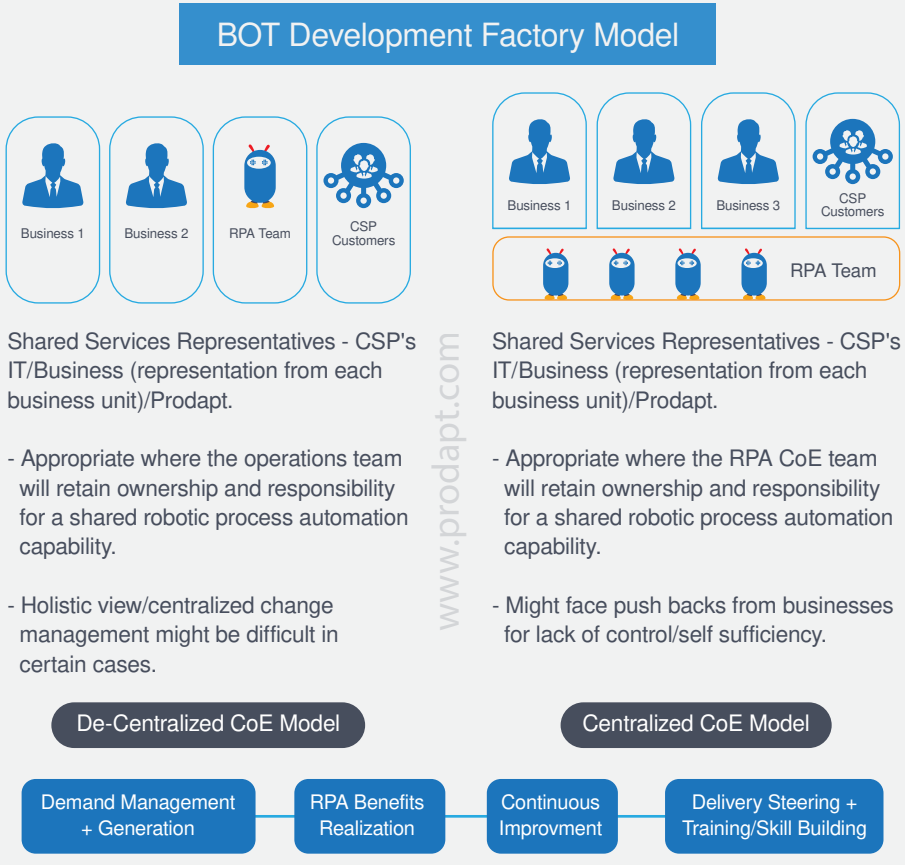
Information Security Full data governance over the whole data life cycle, and support for data governance standards such as PCI DSS.	**Infrastructure Security** Architected to maximise security - operates in a data centre full oversight and centralised control over users, activity and data.	**User Access Control** Role-based access control that integrates with your Enterprise Identity & Access Management (IAM) systems.
Secure Communications All network traffic protected in transit	**Audit** Full audit and oversight over users, robots and platform configuration	**Process Audit & Version Control** A full history of all changes made to processes, supporting peer review, deployment control, rollback and forensic audit
Release Management Enterprise features for release management and controlled promotion to Production environments	**Methodology & Framework** Rigorous procedures and delivery methodology support the proper governance and usage of the platform	

Prodapt's Security Framework

Prodapt's BPaaS and Bot Development Factory Model takes care of any CSP's end-to-end RPA implementation in lieu with above mentioned guidelines.

BPaaS Execution Framework

Prodapt's BPaaS Model



Prodapt's Bot Development Factory Model

7. Prodapt - Blue Prism partnership: Delivering enterprise RPA solutions for CSPs/DSPs

About Prodapt/Telebots™: Prodapt is a global technology and operations innovator with a singular focus on the communications service provider ecosystem and has presence in four continents. Prodapt was among the first services companies to launch a specialized RPA framework called Telebots™ specifically designed for the communication industry with predefined process stacks and accelerators. Telebots™ offers a blend of automation and process improvement and works with leading RPA tools like Blue Prism.

About Blue Prism: Blue Prism provides the most successful digital workforce made up of software robots. These robots learn specific "processes" that is defined in an intuitive, user-friendly studio that resembles a Visio diagram with simple building blocks and commands.

- To strengthen the partnership, Prodapt has established a dedicated RPA Center of Excellence (CoE) to provide expert consulting, process automation, and transformation services targeting wireline, wireless, and cable MSOs.

- The partnership is focused to address the challenges faced by CSPs/DSPs and help them in prioritizing "right" processes for RPA and achieve faster and more efficient automation through "utility bots" concept (building robots that do common tasks across core processes).

- It is packaged with process leaning assessment and improvement services that has delivered 10% to 20% of improvements through process optimizations alone, during and after the implementation of RPA.

- The Blue Prism robots can execute any repetitive operational task and involves "objective decision making" - and they execute the tasks free of errors and faster than human workforce.

- The robots, which are centrally controlled, can be instantly scaled or repurposed as required. They can traverse most architectures including, mainframe, Windows, Linux, and web UIs. Since they are replicating human work, they can work with any appliction including home-grown ones.

- Inherent reporting in the centralized Blue Prism solution ensures compliance as every step of every process is meticulously recorded and logged. The data can be exported into various databases including Excel, SQL and Oracle.

- Blue Prism software robots, which cost a fraction of the human-resource and never take a break, work so similarly to humans that the enterprise customers actually name the robots and delegate work to the robots accordingly in management planning discussions.

7.1 Success story

Prodapt - Blue Prism Partnership has delivered automation successes for several CSPs/DSPs globally. One such success story is given below:

About the client: The customer is a provider of voice and data network communications, and managed services to businesses in the United States. It is the ninth largest residential telephone provider in the country with service covering more than 8.1 million people in 21 states. Its services are designed for businesses ranging from home/small offices of up to 50 employees, including internet solutions, phone services, and 24/7 technical support.

The business challenge: The objective is to automate the process steps that are rule-based in directory listing process (with and without LSR) received from MSS applications.

- Identification of scope for automation
- Reduction in average handling times
- Process standardization
- Better queuing management

Delivery: The Prodapt - Blue Prism team followed the proven 3-stage RPA implementation strategy for this deployment. It included Business case/ROI analysis (covering automation potential review and in-depth process assessment), Automation delivery and Post RPA operations & continuous improvement. The applications in scope were Citrix XenApp, Oracle MetaSolv solution, Directory Data Finder, Record Finder, Web-Based Link for government and high-profile customer search, YPH code, DLQuery search, and USPS website.

Benefits: This partnership has successfully helped the client in

- Automating 95% of scenarios as against 83% planned
- Implementing 5 bots delivering 220-250 tasks per day in 9 hours
- Reducing 56% in AHT
- Expected average ROI over 3 years crosses 46%

Contact details

USA
Prodapt North America

New York: 1 Bridge Street, Irvingston
Ph: +1 646 403 8158

Oregon: 7565 SW Mohawk St., Tualatin
Ph: +1 503 636 3737
Fax: +1 503 885 0850

Texas: 222 W. Las Colinas Blvd., Irving
Ph: +1 972 201 9009
Fax: +1 972 501 9019

UK
Prodapt (UK) Ltd.

Berkshire: Davidson House, Reading RG1 3EU
Ph: +44 (0) 1189 001 068
Fax: +44 (0) 1189 001 069

THE NETHERLANDS
Prodapt Solutions Europe

Amsterdam: Zekeringstraat 17A, 1014 BM
Ph: +31 (0) 20 4895711

Prodapt Consulting BV

Rijswijk: De Bruyn Kopsstraat 14
Ph: +31 (0) 70 4140722
Fax: +31 (0) 70 3030047

SOUTH AFRICA
Prodapt SA (Pty) Ltd.

Johannesburg: No. 3, 3rd Avenue, Rivonia
Ph: +27 (0) 11 259 4000
Fax: +27 (0) 11 259 4111

INDIA
Prodapt Solutions Pvt. Ltd.

Chennai:
1. Prince Infocity II, OMR
   Ph: +91 44 4903 3000
   Fax: +91 44 4903 3010

2. “Chennai One” SEZ, Thoraipakkam
   Ph: +91 44 4230 2300
   Fax: +91 44 4903 3010

Bangalore: “CareerNet Campus”
No. 53, Devarabisana Halli,
Outer Ring Road

To know more or connect with the subject matter experts, send an email to: **insights@prodapt.com**

Prodapt powering global telecom