

# Mastercard GBSC Automation Program

## Driving Operational Efficiency with Robotics Process Automation

### EXECUTIVE SUMMARY

Mastercard is a technology company in the global payments industry, enabling the use of electronic forms of payment instead of cash and checks.

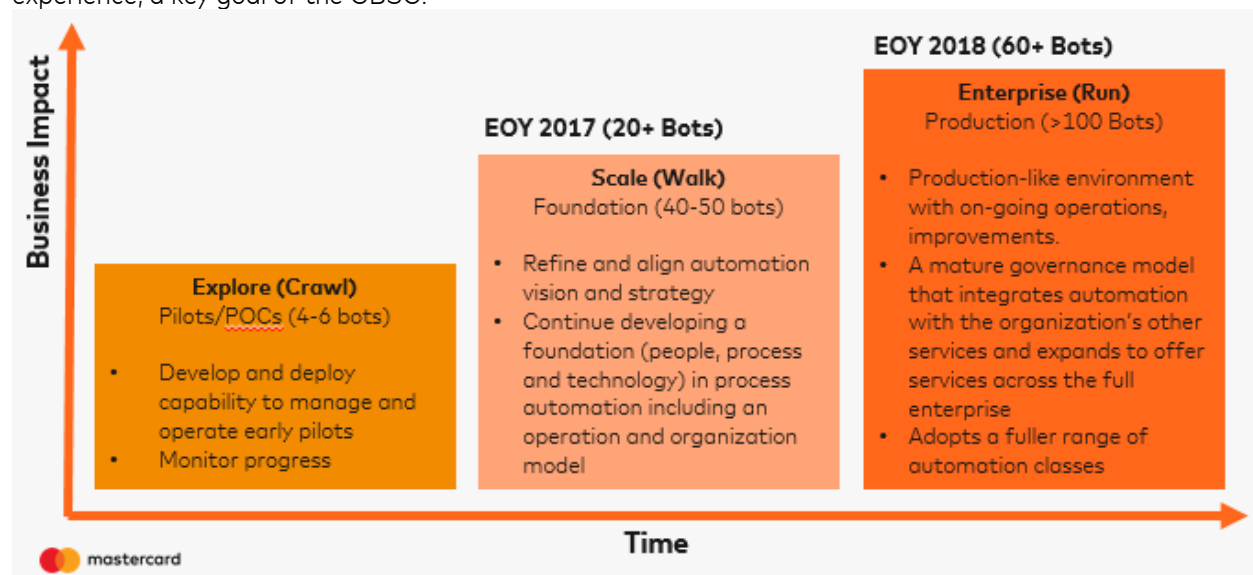
The Global Business Services Center (GBSC), launched in October 2012, is the Shared Services Organization (SSO) for Mastercard providing centralized global delivery of finance, transaction, accounting, billing, human resources operations, legal and franchise integrity services.

GBSC has created a powerful end-to-end automation solution leveraging Robotic Process Automation (RPA) and Cognitive AI. These innovative solutions greatly helped to automate manual and repetitive activities to promote quality, efficiency and productivity for enhanced business outcomes:

- Created 10 FTE of capacity using robotics to perform repetitive tasks, freeing up resources to focus on higher value work
- Delivered 60 Bots in less than two years of starting the Automation program
- Reduced loss and upheld compliance through cognitive forecasting and card validation solutions

### STRATEGY AND INNOVATION

Our automation **journey** started when the GBSC was launched in 2012 by leveraging automation capabilities within Mastercard's systems. This was followed by a focus on ad-hoc scripts. However, this didn't satisfy our expectations of what automation could deliver, nor did it produce a better user experience, a key goal of the GBSC.



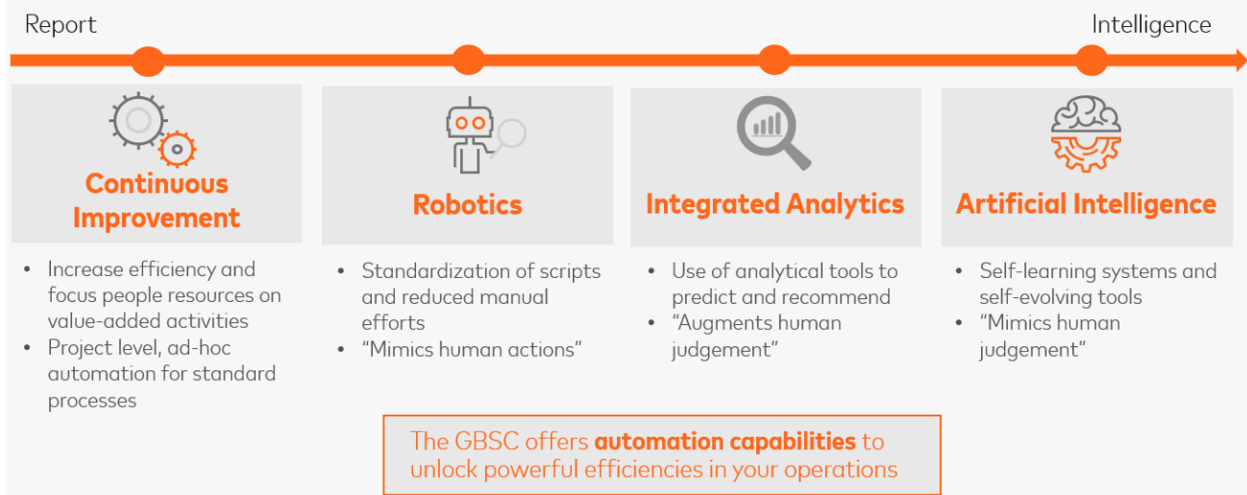
- In **2015**, automation was introduced by homegrown capabilities including VB macros and cognitive capabilities using Python. These opened the possibilities for unattended automation.
- In **2016**, GBSC evaluated RPA software and established an Automation program to deploy RPA using Automation Anywhere. GBSC create an innovative team, and invested in infrastructure.
- In **2017**, we trained business process experts in RPA to drive automation of manual processes and align vision and strategy with management, deploying 25 Bots.
- In **2018**, we increased staff and funding, through operational savings. The reinvestment enabled 100 percent internal funding and cost avoidance of approximately USD \$500,000 annually.

## APPROACH AND SOLUTION

RPA offered an opportunity to evaluate our operations and to automate repeatable, manual tasks. GBSC has created automation solutions leveraging RPA and Artificial Intelligence.

### Intelligent Automation

The four building blocks of intelligent automation

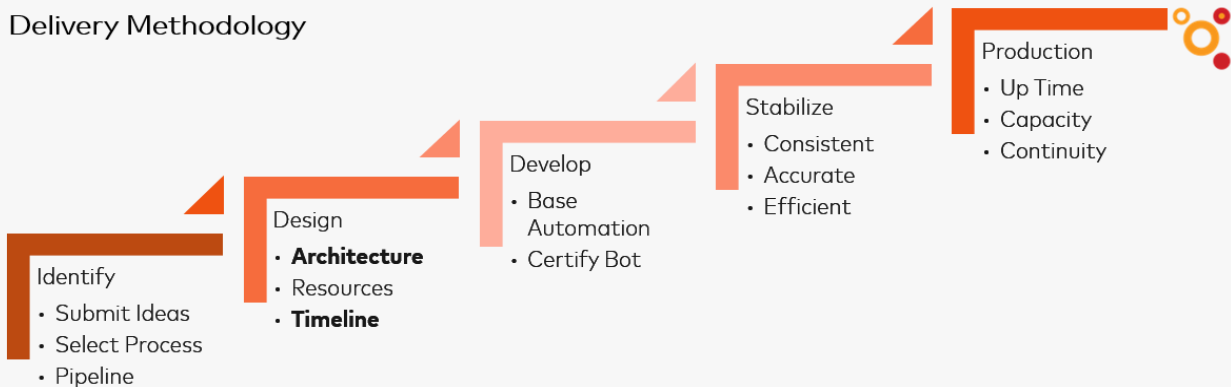


To ensure adoption and success, we followed this **approach**:

- **Submit Idea:** Encouraged GBSC teams to submit automation ideas no matter how small using standard templates. Raised awareness through knowledge sharing and training program.
- **Validate Idea:** Ideas are validated by "automation artisans" for value and complexity. They are rated with focus on automating high-volume tasks that are high value and low complexity.
- **Implement Automation:** Used standards and best practices, and agile methodology for implementation.
- **Celebrate Success:** Communicated the benefits from the automation. Reward the submitter of the automation idea. Raised awareness by displaying the savings on office TV screens.
- **Monitor Automation:** Continuously monitor for timeliness, efficiency and performance.

Our **delivery approach** is segmented into five phases, as described below. Our delivery timeframe depends on the system and process complexity, and varies between four and 12 weeks.

#### Delivery Methodology



## BENEFITS

Having deployed RPA throughout the GBSC, we have seen improvements in many aspects of our operations. Some select processes include:

- Cash and Trades Reconciliation, Ticket Monitoring and Classification, Expense Reports
- Report Generation and Distribution, Resolve Tickets and Remediate Issues
- Data Scrubbing and Processing, Email Monitoring and Handling, HR Surveys
- Quality Control, System Integration, Risk Escalation and Support, User Provisioning
- Payment Preparation and Processing, Downloads Invoices and Statements, Auditing and Tax

Some of our key innovations include:

**Nostradamus** provides Daily Net Position Forecasting for Traders for 50 currencies. Traders were manually forecasting by relying on complex Excel templates and there exists a huge variation across traders hedging the currencies. The daily data from settlement system is ingested into Nostradamus, cleansed and is passed to a model that forecasts the net position for every currency. The model takes into account different data volatilities across different countries. Nostradamus is reducing the risk of loss due to currency fluctuations during hedging and has consistently proven to be better than manual predictions.

**Card Design Processor** is an image processing system that provides the ability to verify card designs submitted by Mastercard issuers. Card designs are complex, varying by colors, logos, patterns and other factors. Card design has strict rules to follow to be compliant. This cognitive program uses vision algorithms and machine learning to determine if the graphics on the submitted card designs are in compliance with Mastercard standards. This processor was able to process 4000+ requests every month that were previously manually verified. With only a two-day window to review card submissions from issuers, this process accelerator has improved customer service while meeting compliance standards.

**CorpTax Bot** provides efficient automation by seamlessly integrating the interactive but complex corporate tax application with an automated RPA solution. CorpTax Bot is triggered by a schedule that runs and extracts reports using a wide variety of parameters. All the reports are consolidated into groups

and sent to respective teams in multiple countries. The Bot is monitored using Splunk and Tableau. CorpTax runs on a highly available server environment that allows for up-time and scalability. CorpTax has provided increase in productivity, and cost savings by redirecting the team to higher value added activities.

## CHALLENGES

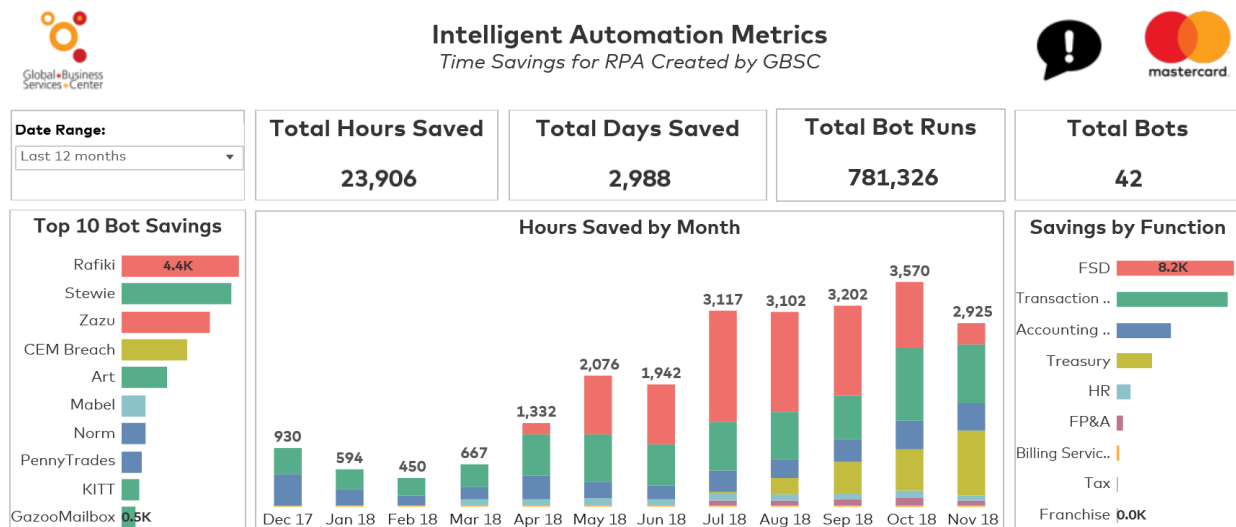
One of our biggest challenges was building the infrastructure that complies with existing Mastercard policies. As automation was new to Mastercard, it took 12 weeks to finalize the architecture and nine months to build a 35+ servers environment.

Our toughest challenge was to increase our commitment to automation while our SSO was still maturing. Evangelizing on how automation will be beneficial rather than a job replacer was also a challenge, yet ultimately successful by directly engaging teams with the benefits of automation for their operations.

## RESULTS

By the end of **2017**, just a year after the start of the program, **25** bots had been implemented. In **2018**, **60** bots will be implemented to improve efficiency and accuracy in previously manual tasks.

RPA had freed up **10+ FTE capacity** time in the **last 12 months** for teams to engage in more challenging and value-added work, while increasing overall customer satisfaction and turnaround time.



Note: graphic above shows 42 Bots as it does not include Bots in-progress or in testing.

## SUMMARY

With the expertise, technology and process developed by the GBSC, tremendous opportunity exists to implement RPA in new areas of Mastercard and achieve business results. Data Science and cognitive field has already started providing value in forecasting, producing much better results than manually administered processes. GBSC has embraced both the innovation and challenges in this new age of technology disruption.