ROBOTIC PROCESS AUTOMATION (RPA) AT EXPORT DEVELOPMENT CANADA (EDC)

Free the Humans

19 October 2018

Canada

EDC

Export Development Canada is Canada's export credit agency.

OUR MISSION: HELP COMPANIES TO GO, GROW AND SUCCEED IN MARKETS ACROSS THE WORLD

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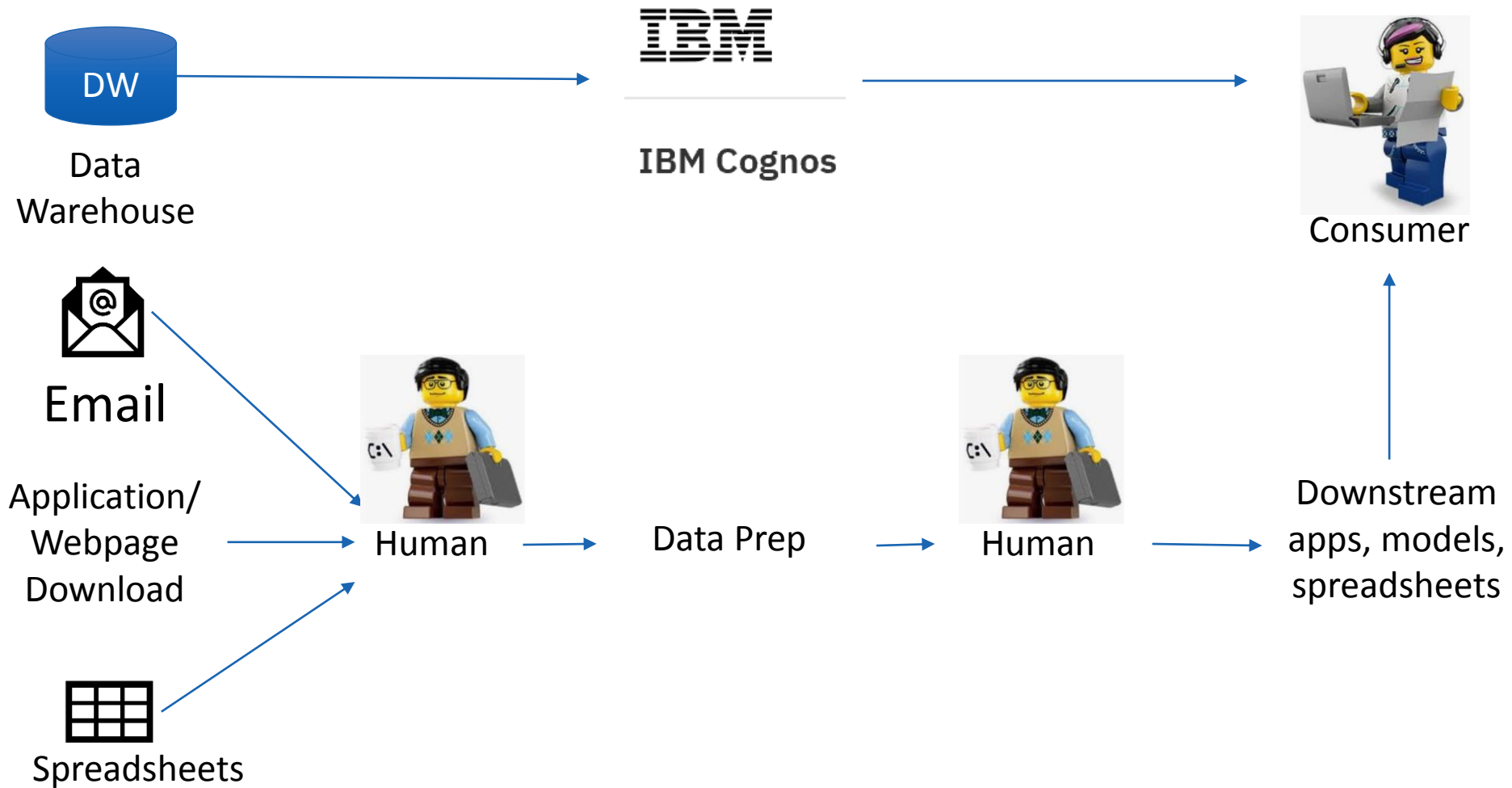Automation Analyst

Business Intelligence Centre (BIC)

Export Development Canada

(EDC)

WHAT DO WE DO ?

- Business Intelligence Centre (BIC)
  - Reporting for EDC lines of business
  - Not in IT
  - Products/services: anything related to business data such as data prep, reports, dashboards, data quality, data sets, visualization, Excel-based tools, automation
- What do we report on?
  - Products: Credit Insurance, Political Risk Insurance, Contract Insurance and Bonding, Loans, Investments and Guarantees
  - Types of Data:
    › Customers / policyholders : Number of customers, customers acquired, policies sold …
    › Foreign buyer information: Exposure, geographic…
    › Volumes: Sales volumes, number of loans, health of loan or insurance portfolio….
    › Efficiency: Capacity management, amount of human involvement in processes…

- Who are you? Who here is in the business ? In IT ?
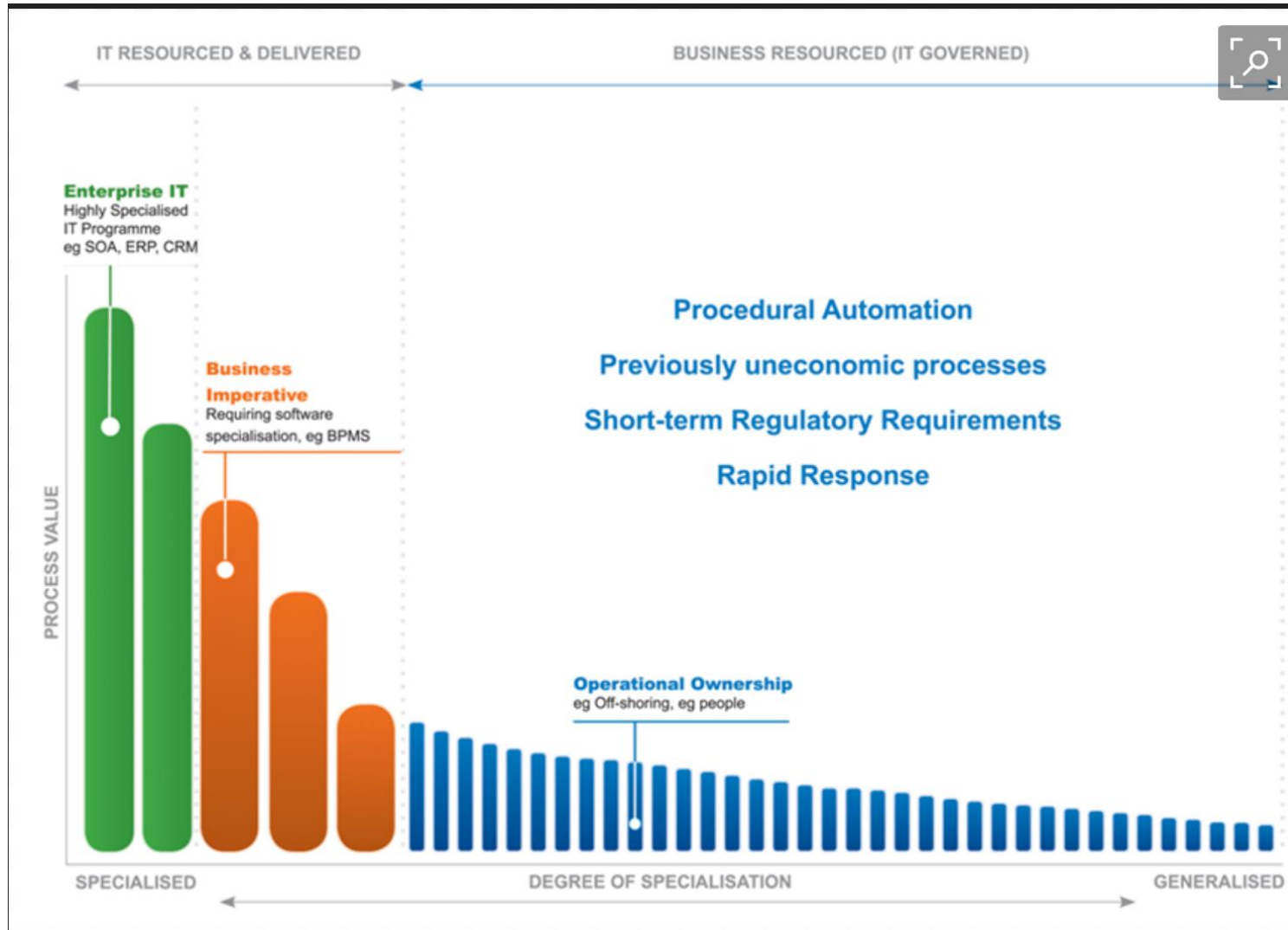
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CURRENT BI ENVIRONMENT AT EDC

DW

Data Warehouse

IBM Cognos

Consumer

Email

Application/ Webpage Download

Human → Data Prep → Human → Downstream apps, models, spreadsheets

Spreadsheets

PROBLEM FACING REPORTING TEAM

- Many reports use data from the data warehouse (DW) and are fully automated with no human intervention

- Some reports use data not found in the DW and require manual data retrieval for data that:

  - comes as a file attachment in an email from a vendor

  - is downloaded from a business application

  - is downloaded from a non-public website that requires interaction with the website before data can be downloaded

- Data preparation tools such as DataWatch could do some of the work but there are still manual steps

- Result: Some reports need manual steps and are delivered via spreadsheet every week, month, quarter. Unsustainable for existing capacity. Demand outstrips capacity

- Goal: Automate all recurring reports, dashboards, scorecards, etc.

- IT Dept has insufficient capacity to help automate or build data integrations

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RPA VERSUS IT-SPONSORED INTEGRATIONS

ENTER THE ROBOTS

- Consultants in 2016/17 advised EDC how to mature into a digital business

- Recommendation

  - Deploy Robotic Process Automation (**RPA**)

  - Eliminate repetitive non-value added work

  - Free up headcount for value-added work

  - Improve job satisfaction of EDC employees

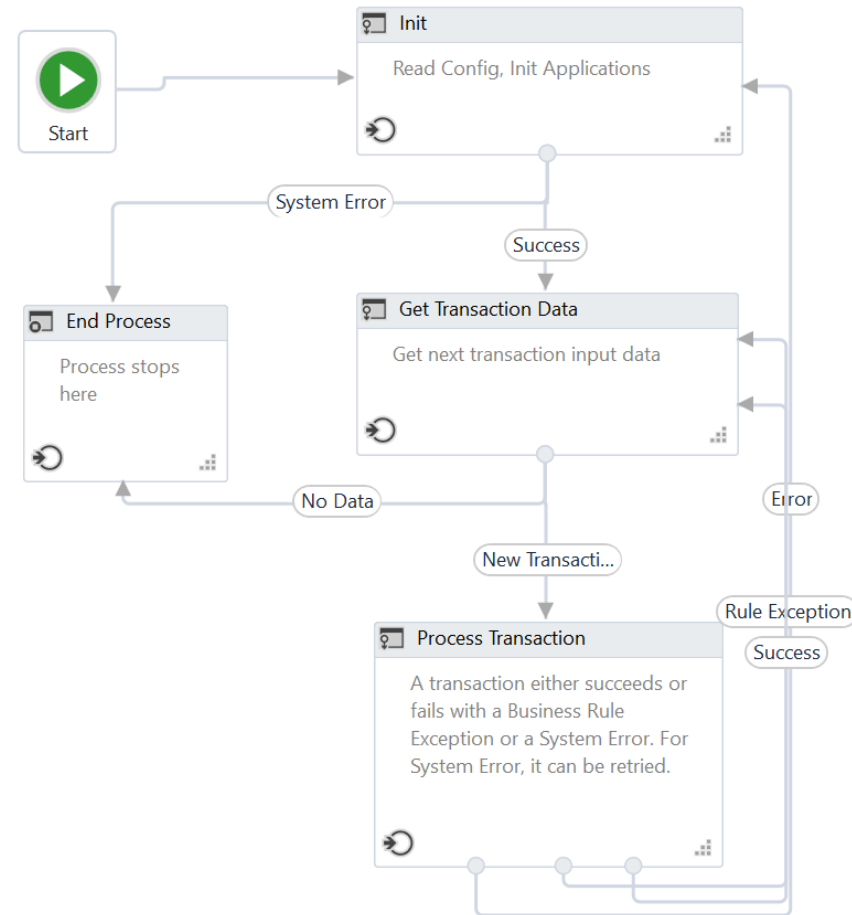- **UiPath** was selected as EDC's first RPA tool

WHAT IS RPA?

- Similar to Excel Macros but can work in and between any program

- Numerous RPA Vendors

- Robots operate in two different modes:

  - **Attended**: Human-initiated process

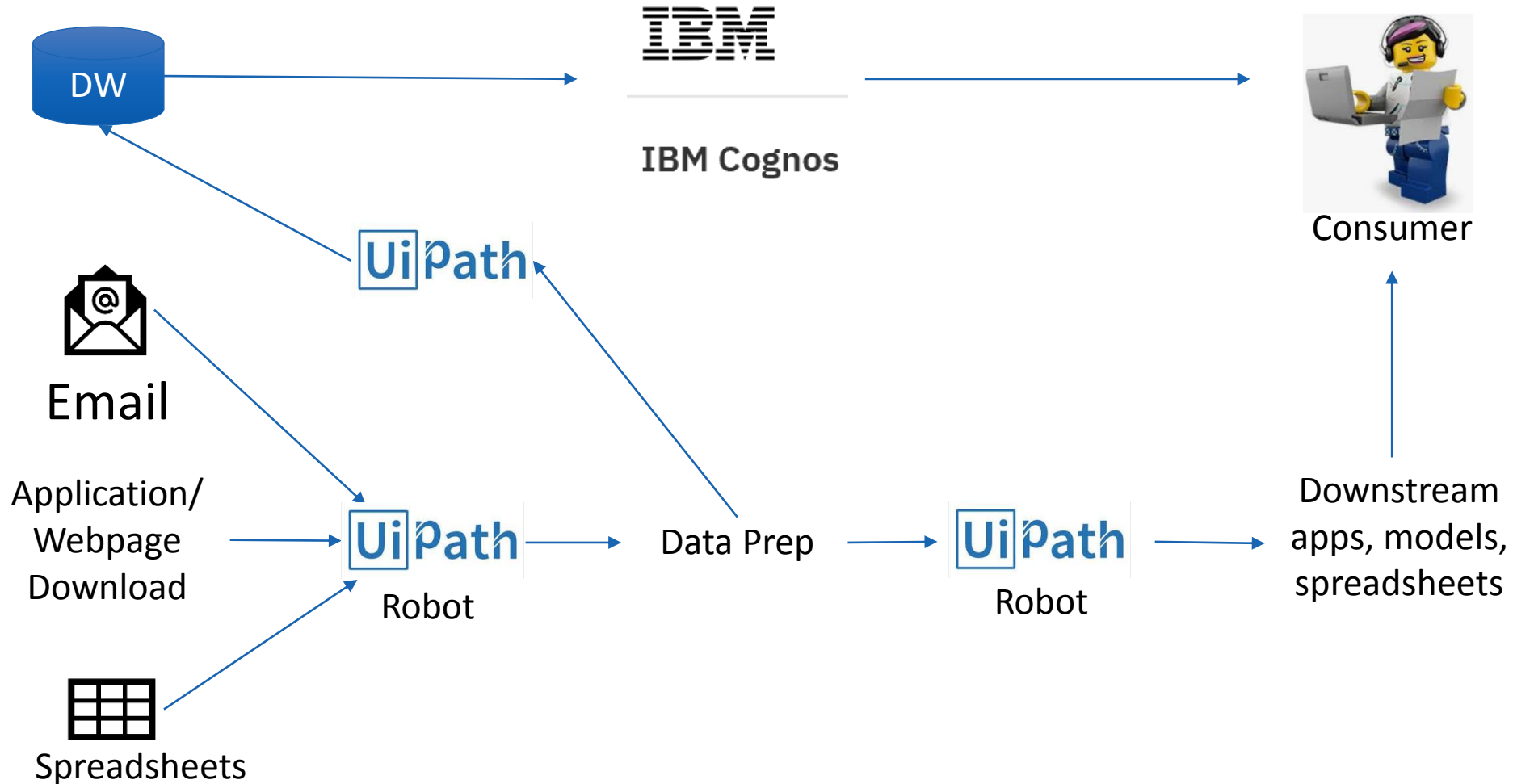 - **Unattended**: Scheduled (24/7) process with no human interaction

WHAT CAN RPA DO?

- Numerous Functions:
  - Can navigate within and/or between applications
  - Open emails, copy data from subject, or body to target locations
  - Can open software applications and interact with them, including selecting option to download information
  - Has built in tools similar to those in a data prep tool but it can fully automate these tasks with other tasks as well as navigate in a system or website to get the target data:
    - › Scraper : Pull information from webpages or applications and copy that data into a target file / system
    - › OCR (Optical Character Recognition) : engines to read paper documents
- Future/advanced functions:
  - Apply machine learning to RPA to provide **intelligent automation**

FUTURE : RPA IN BI ENVIRONMENT AT EDC

RPA ADVANTAGES AND DISADVANTAGES

- Disadvantages:
  - Processes run by robots are brittle. They can break easily whenever changes are made to the sources of their data
  - Rogue implementations of RPA software and processes are possible if not governed properly
- Advantages:
  - Can implement relatively quickly
  - Can automate the smallest to the largest processes
  - Frees up capacity
  - Improves accuracy and data quality (e.g. removes many data input errors)
  - Can be fixed quickly
  - Can include error control

HUMAN SIDE OF RPA

- **From Lean Principles - 8 Types of Waste**
  - **W**aiting
  - **O**ver Production
  - **R**ework (defects)
  - **M**otion
  - over**P**rocessing (over or excess)
  - **I**nventory
  - <mark>Intelligence</mark>
  - **T**ransportation (conveyance)

- **What happens when we free up time?**
  - Reduce time spent on monotonous work – Happier workers?
  - Capacity is freed up to deal with the excess demand in the same role/team
  - Upskill staff to tackle more value-added work – Workers paid more?
  - Happier clients because processes are faster

DEMO *

Demo showing early implementations of UiPath at EDC

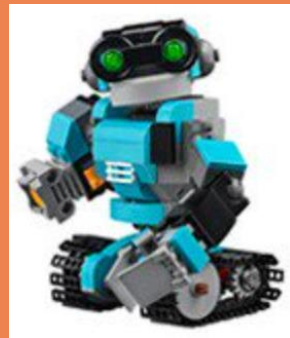* DEMO = Don't Expect Miracles, Okay?

TAKE ON THE WORLD

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Q & A

EXTRA SLIDES

RPA GOVERNANCE

- Bots only use the access rights of the human that they are assisting

- We use "service accounts" (ie. not tied to a human individual) that has the same profile as a human who does the same task

- Processes are locked in the Orchestrator module so that users can't modify the processes

PRIORITIZATION OF RPA AT EDC

Prioritization Considerations:

- Digital Input and Rules Based
- Repeatable
- Stable process
- Few/No Exceptions
- Process Documented
- Can revert back to Manual in Emergency
- Stable system / application
- Modifies Operational System
- Complexity (H/M/L)
- Strategy 2020 Impact (30k customers or 1.5b Revenue)

- Citrix Compatibility Required
- Client Meets Criteria
  - Willing to test and learn
  - Willing to make mistakes w RPA team [for when the bots won't come to work one morning]
  - Responsive
  - Willing to dedicate resources
  - Executive support in client area
- Overall turnaround time (impact)
- Efficiency or error reduction
- **Risk**
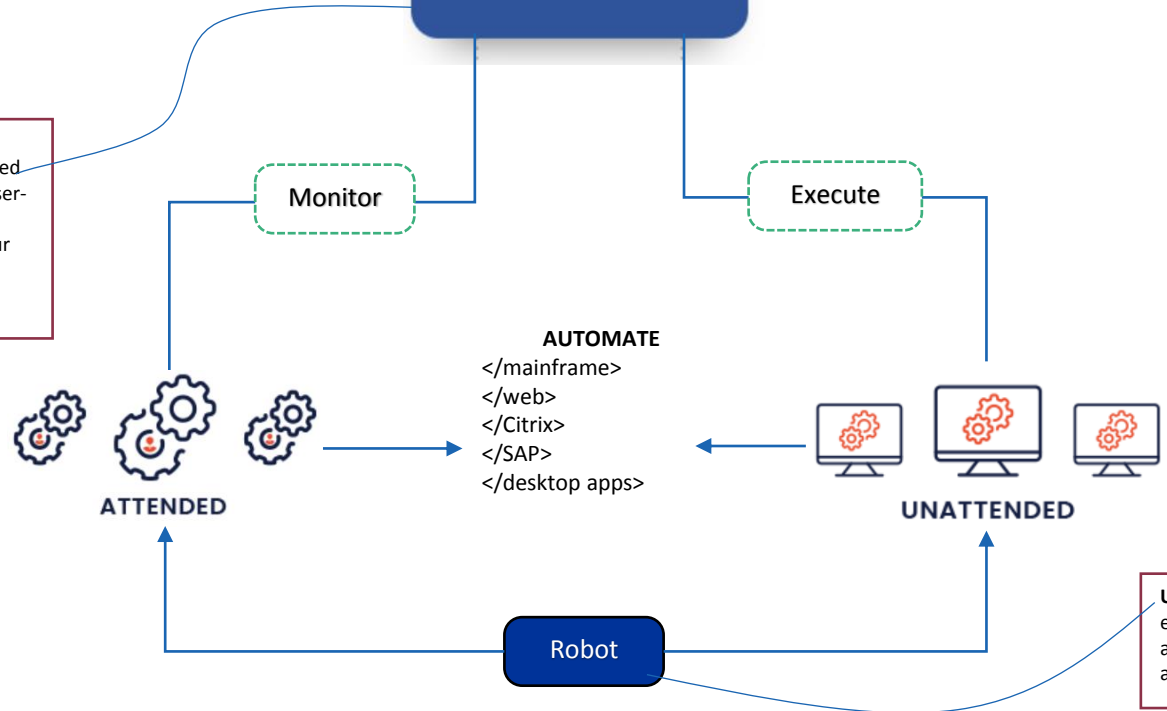- **Expected Benefit (hrs per year)**

UIPATH PLATFORM

Design automation visually in **UiPath Studio**. Use recorders, drag & drop widgets and best practice templates to model robotic processes.

UIPATH STUDIO

Deploy

UiPath

ORCHESTRATOR

API

3RD PARTY APP

All UiPath product's components can run on both **physical** or **virtual machines**

Your entire robotic workforce is managed, controlled, and monitored by **UiPath Orchestrator**, the browser-based server application that centralizes in one secure place your entire enterprise operation
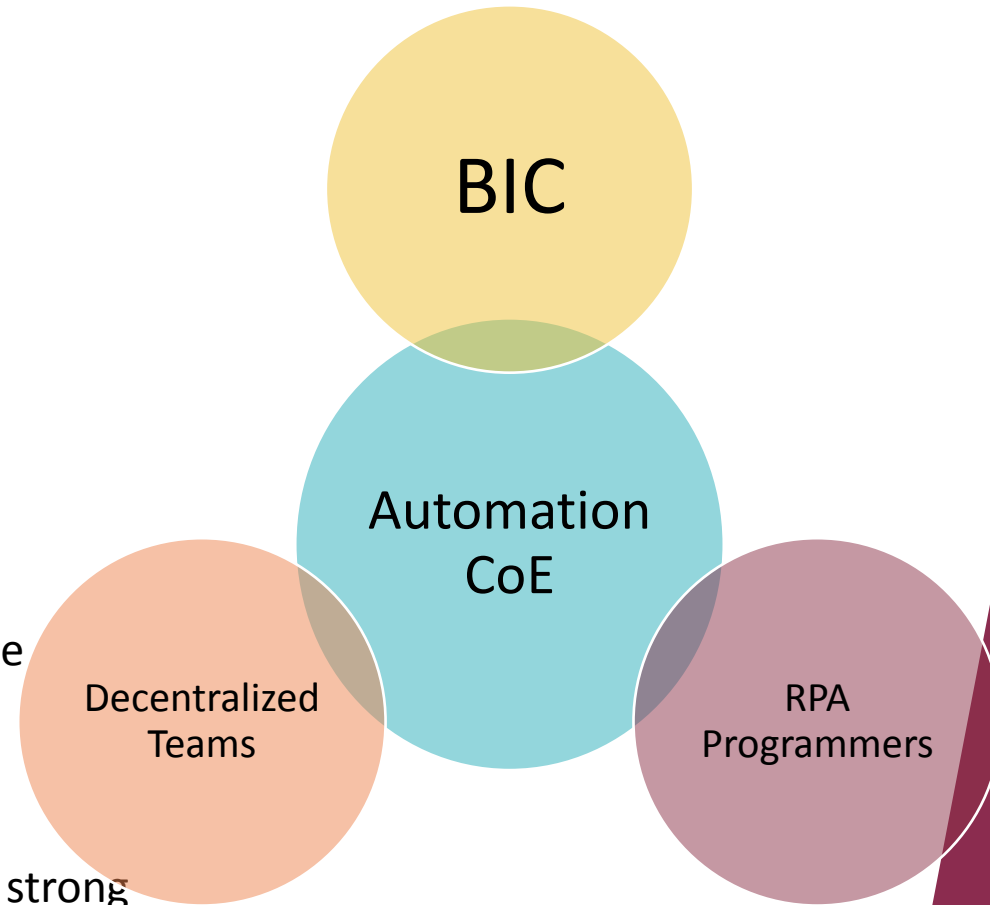
Monitor

Execute

AUTOMATE
</mainframe>
</web>
</Citrix>
</SAP>
</desktop apps>

ATTENDED

UNATTENDED

Robot

UIPath Robot will take over and execute all processes automatically with perfect accuracy

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RPA ROLL OUT AT EDC

- Two-pronged approach
  - Centralized in CoE
    - › The Automation CoE is currently located in BIC
    - › Currently have one RPA programmer to automate processes
  - Decentralized
    - › For teams that have someone who is technically strong enough, CoE will consider training staff in teams to automate their own processes with CoE oversight.
    - › Informal name of "Citizen Programmer"

EDC OVERVIEW

- Export Development Canada is Canada's export credit agency
- OUR MISSION:
  - HELP COMPANIES TO GO, GROW, AND SUCCEED IN MARKETS ACROSS THE WORLD
- We help Canadian companies of all sizes, industries, and sectors:
  - from traditional exports, like lumber, natural gas, and fish to digital services, pharmaceuticals, and family sedans
  - regardless of their knowledge and experience with international trade
  - that want to grow and make their mark in global markets