Robotic Process Automation in Healthcare

Nardo Manaloto

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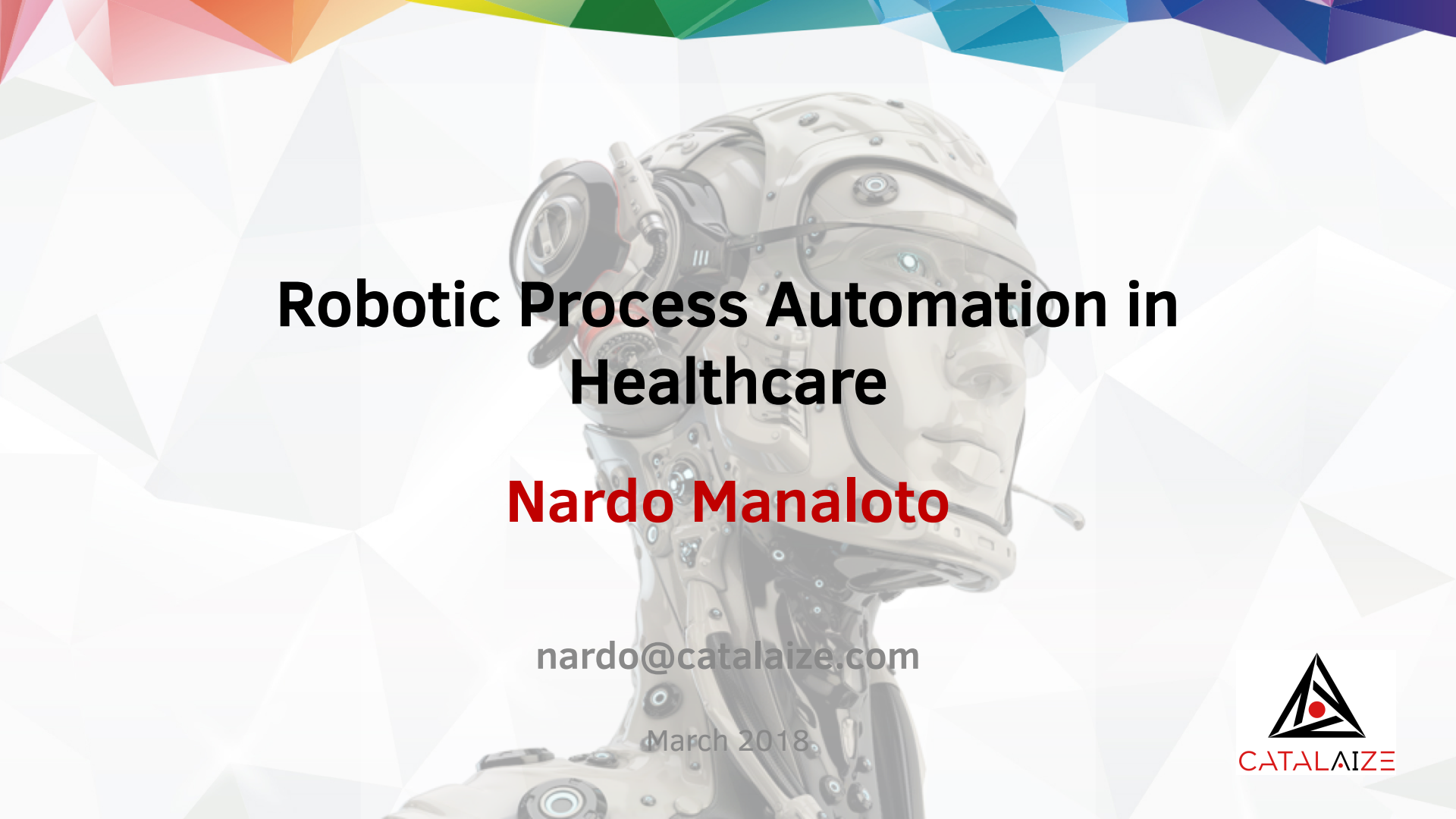
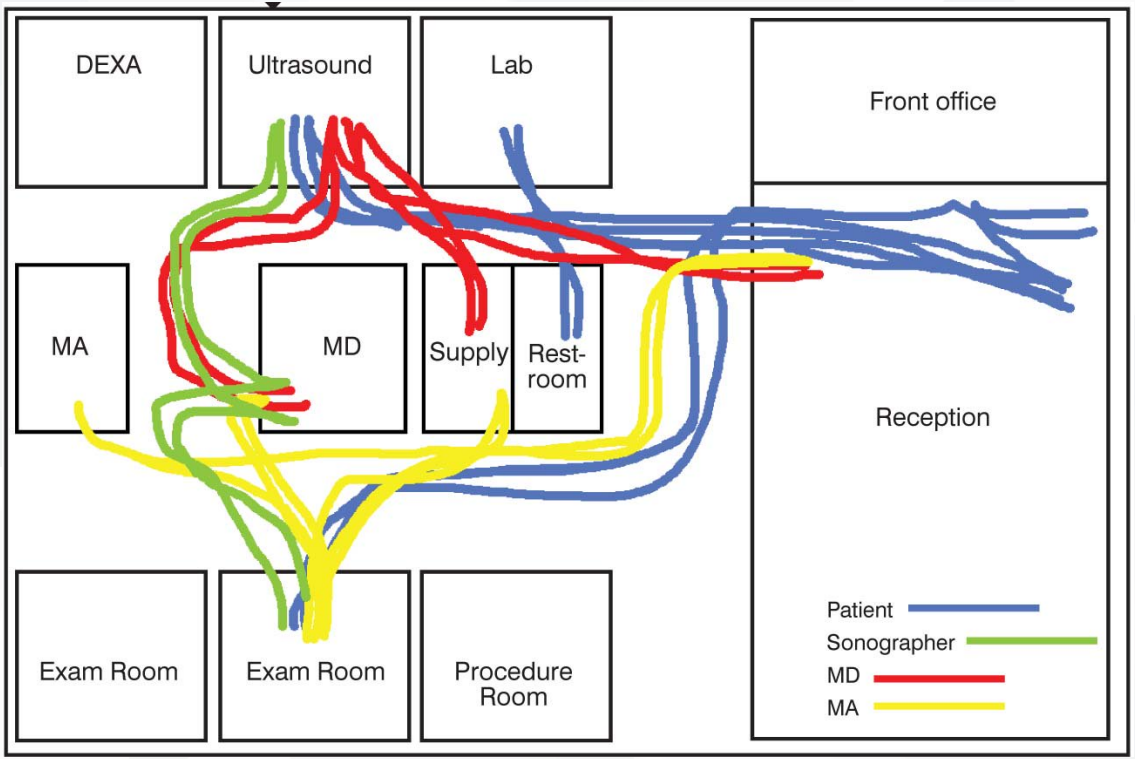
March 2018



Healthcare Loves Spaghetti!



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Problem Statement

- Healthcare is
  - Workflow intensive
  - So manual
  - Requires a lot of human intervention
  - Scarce resources (physician & nursing shortages)
  - Hard to scale
  - Hard to change
  - Involves many different internal and external systems
  - Not automated

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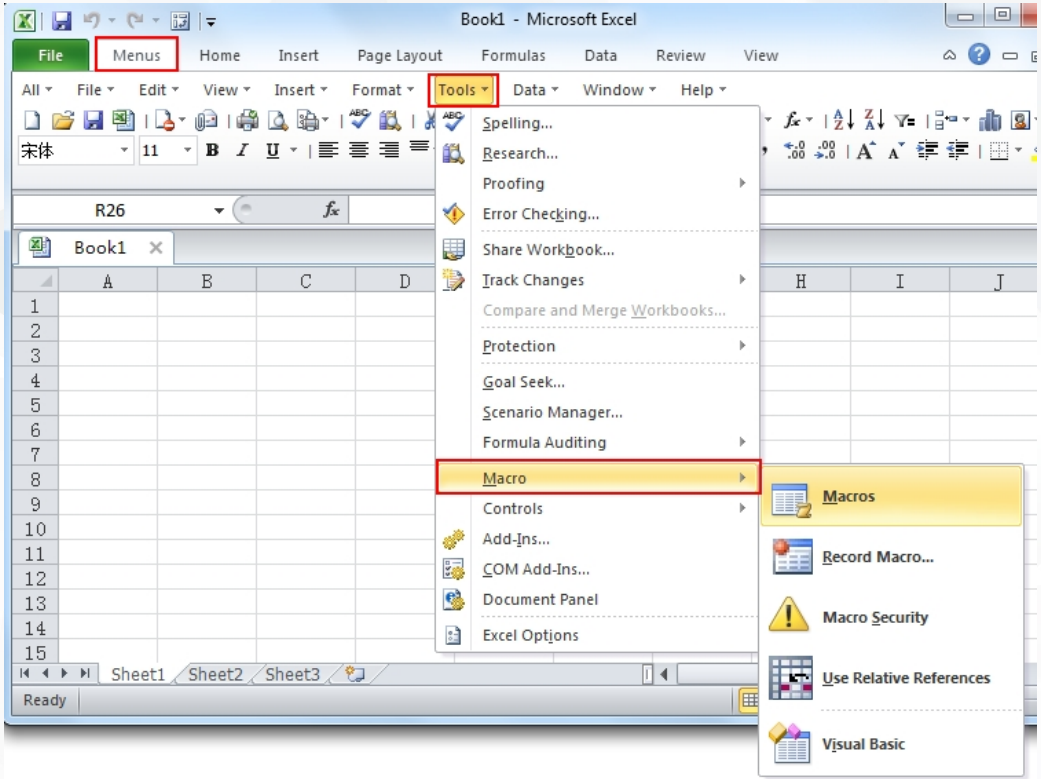
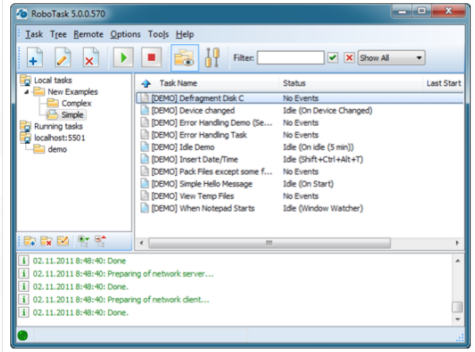
Do You Remember This?



Excel macros save you time and headaches by automating common, repetitive tasks. And you don't have to be a programmer to write one. With Excel 2013, it's as simple as recording your keystrokes.



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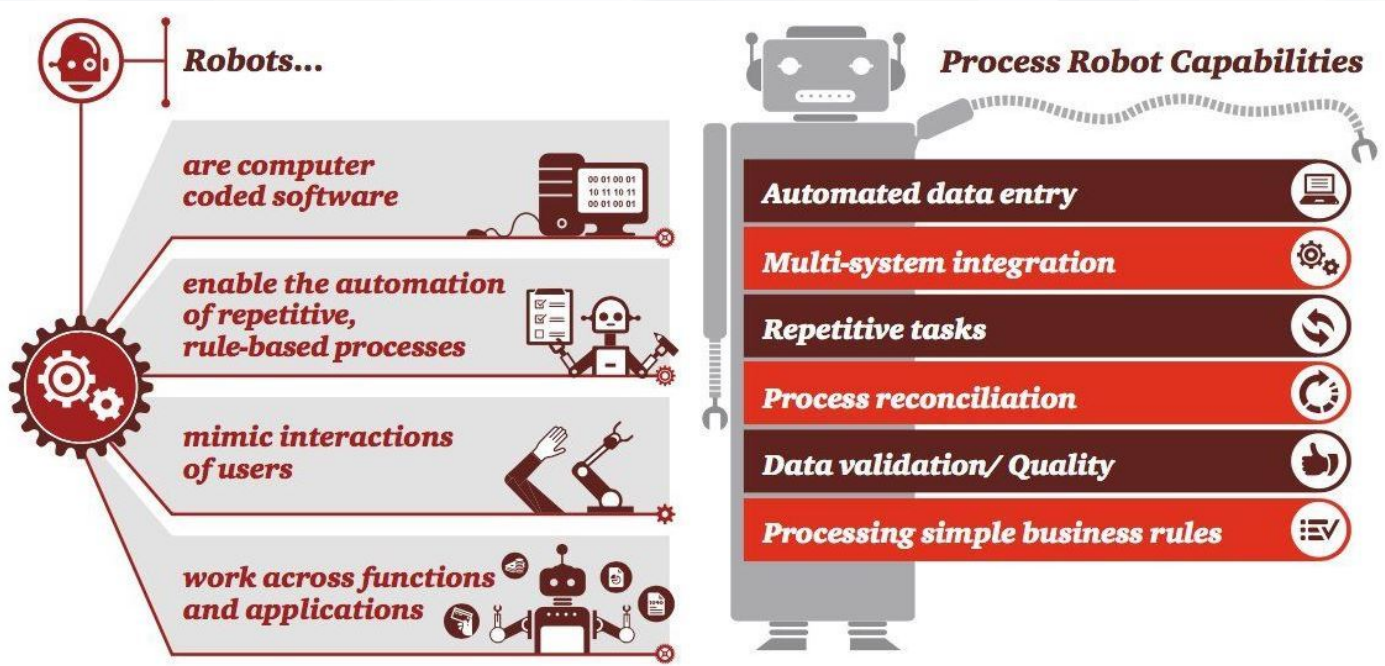
RPA in a Glance



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Source: PWC RPA Report

History of RPA

Screen Scraping

Workflow Automation & Macro Generation

Business Process Integration & Management

Artificial Intelligence

Robotic Process Automation

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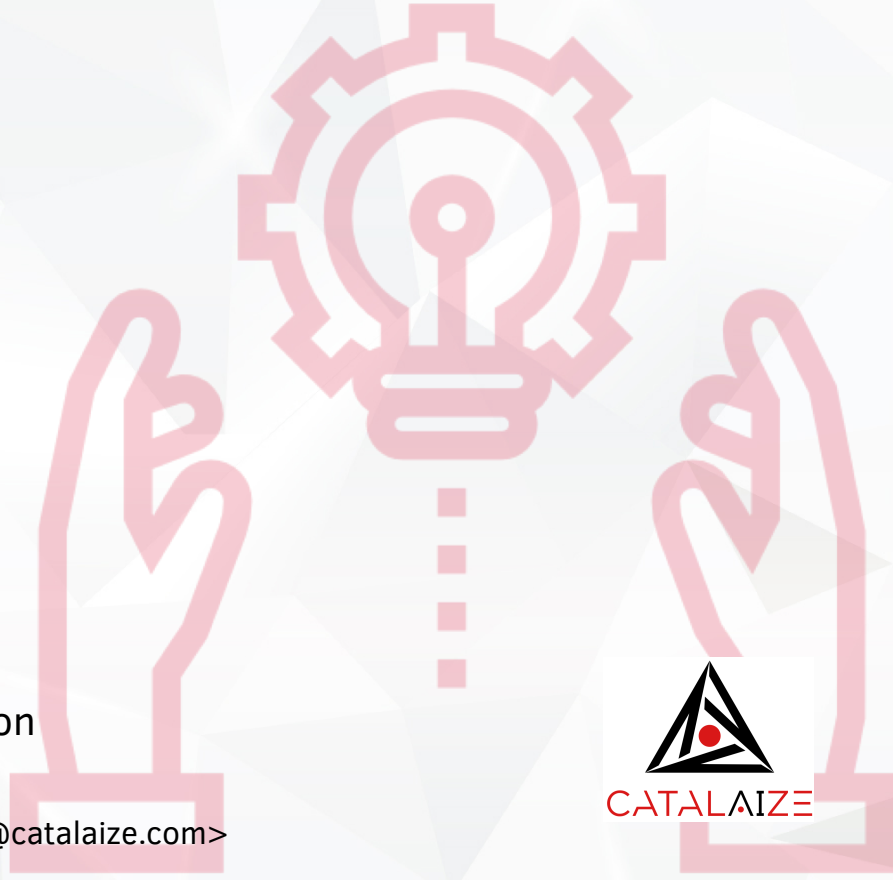
Example Healthcare Use Cases

- Customer / Member Services
- Insurance Eligibility Checks
- Prior Authorization
- Appointment Scheduling
- Form Filling
- Responding to Emails, SMS, etc.
- Letter / Correspondence Generation
- Order Management
- DME Inventory Management
- Post-Visit Follow Ups
- Health Risk Assessment Initiation & Follow Up
- Patient Satisfaction Surveys
- Billing, Claims Processing, Payments
- Patient Engagement
- Reminders, Notification, Alerts & Communication
- ***And Many More...***



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RPA Benefits

- Data Entry and Workflow Automation
- Improve Data Capture, Routing and Migration
- No Integration Needed
- Interoperable
- Achieve Full Automation
- Available 24 X 7 X 365
- User Role Appropriate
- Human Like Interactions
- Can Be Monitored

- All Transactions Are Logged
- Increased Productivity
- Increased Compliance
- Reduce Cost
- Improve Patient Experience
- Improve Efficiency
- Error Elimination
- Process Standardization
- Reduce Variations

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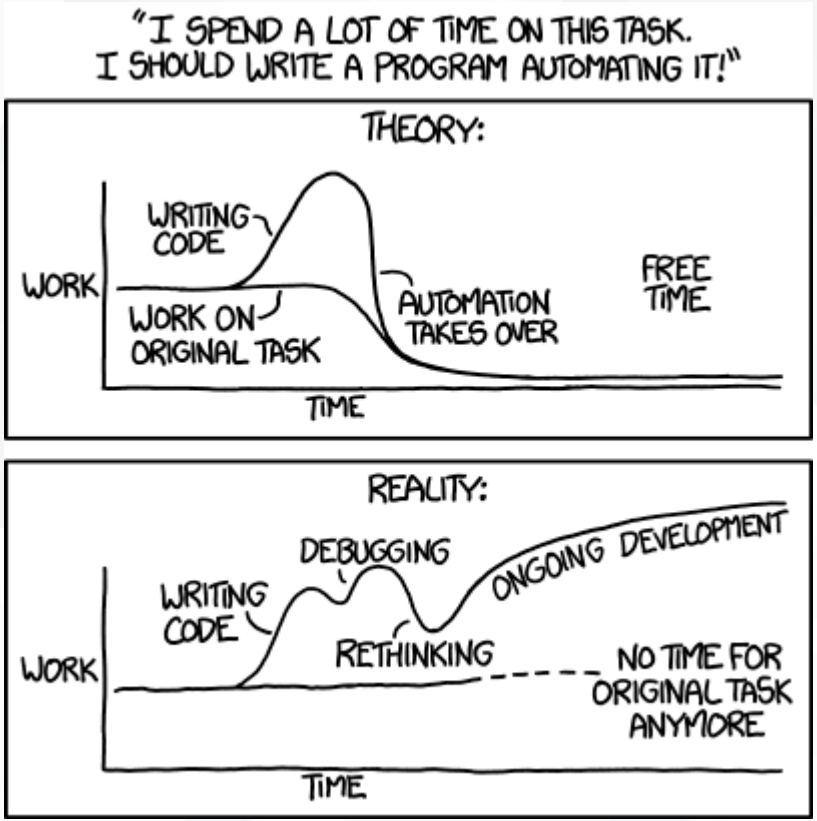

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Automation Challenges

- Clean, complete and trusted data
- Identifying the right process to automate. Automating the wrong processes can lead and magnify wrong results and/or unintended outcomes.
- Governance structure (monitoring, version control, rollback, testing, etc.)
- Knowledge and process documentation and audit trails (transition from human knowledge to robot knowledge)
- Robotic process management and control (work queues, schedules, execution rules, add bots, kill bots)
- Automation of self learning capabilities can lead to autonomous decision making
- Potential patient safety issues
- Labor union issues
- One tool is unlikely to solve every unautomated activity in your organization
- Multiple RPA robots can get into automation and/or decision conflicts
- How to unlearn what has been learn by self learning automation
- Automation handshake, protocols, standards, etc.
- RPA robot to RPA robot cooperation and orchestration

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RPA Solution Components

Central Governance Dashboard	Robot User Management	Process Definition Studio	Process Orchestrator	Process Management
Process Analytics	Process Monitoring	Process Pattern Machine Learning	Knowledge Base Management	Knowledge Documentation
API Management	GUI Interaction	Computer Vision	Image Recognition	Rules Management

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The Road to RPA

- Enterprise Automation Strategy
- Data Life Cycle Management
- Enterprise Knowledge Management
- Governance Structure
- Change Management
- Executives, IT an Business Buy In
- Skilled Resources
- Availability of External RPA Experts
- RPA Implementation at Scale Examples
- Need for Legacy Systems and Technology Infrastructure Upgrades
- Security Policies & Procedures

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RPA Technology Companies

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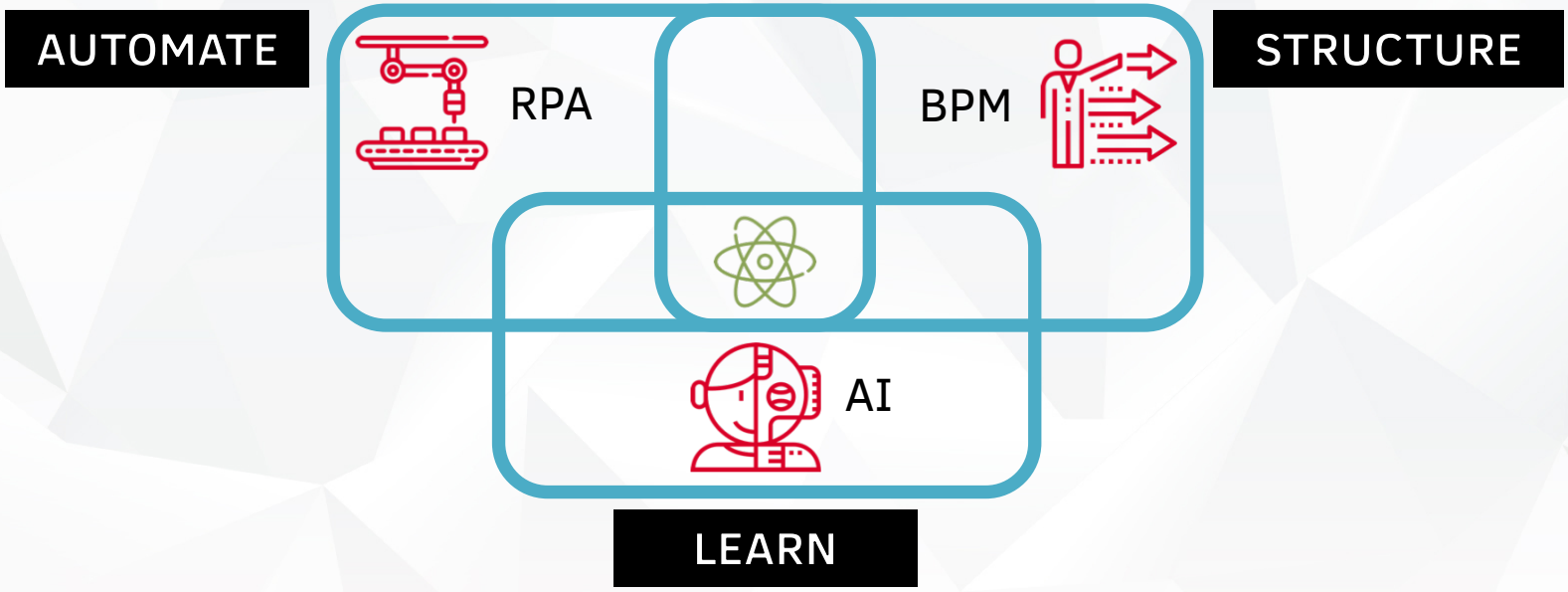
Future of RPA



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RPA Possibilities

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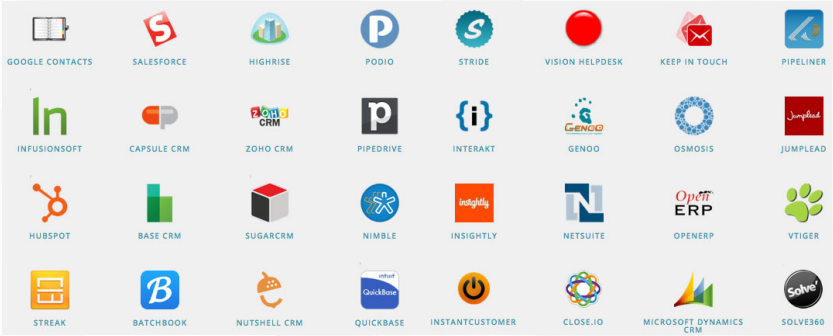

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