Robotic Process Automation

The future is now

Mirko Einert and Peter Gomes

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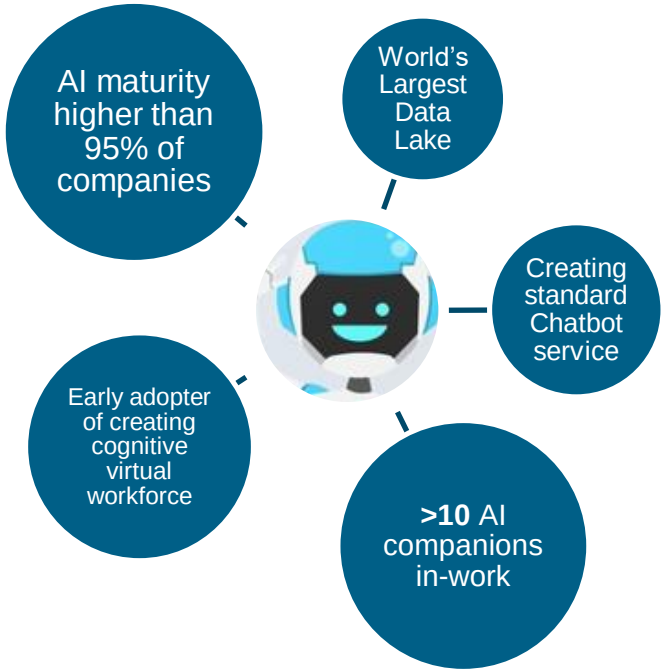
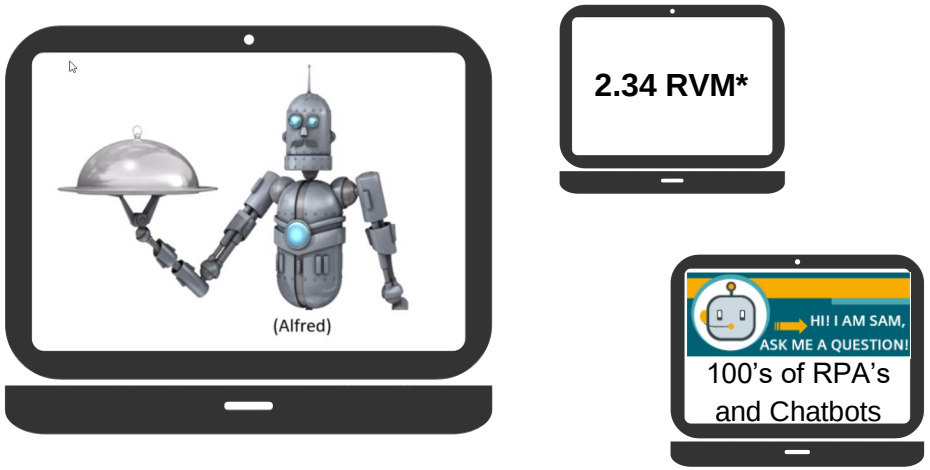
Siemens as a digitalization leader

How does Siemens compare to other companies in AI maturity?



Robotic Process Automation (RPA)



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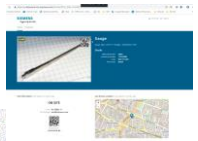
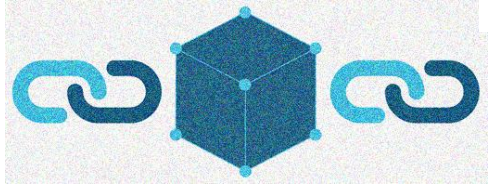
Patent for Universal Asset Passport concept developed by Siemens





IBM HYPERLEDGER

Strategic partnership with IBM

Blockchain early adopters

Pega

Smart Workflows part of digi strategy → Major projects like GMDM already using → Supplier onboarding

Smart Workflow

*RVM = RPA Value Multiplier, UAP = Universal Asset Passport

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Agenda

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1 **Robotic Process/Desktop Automation**

2 **Key Success Factors to Automation**

3 **Examples of Automation**

4 **What Next**

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Robotic Process/Desktop Automation (RPA and RDA)

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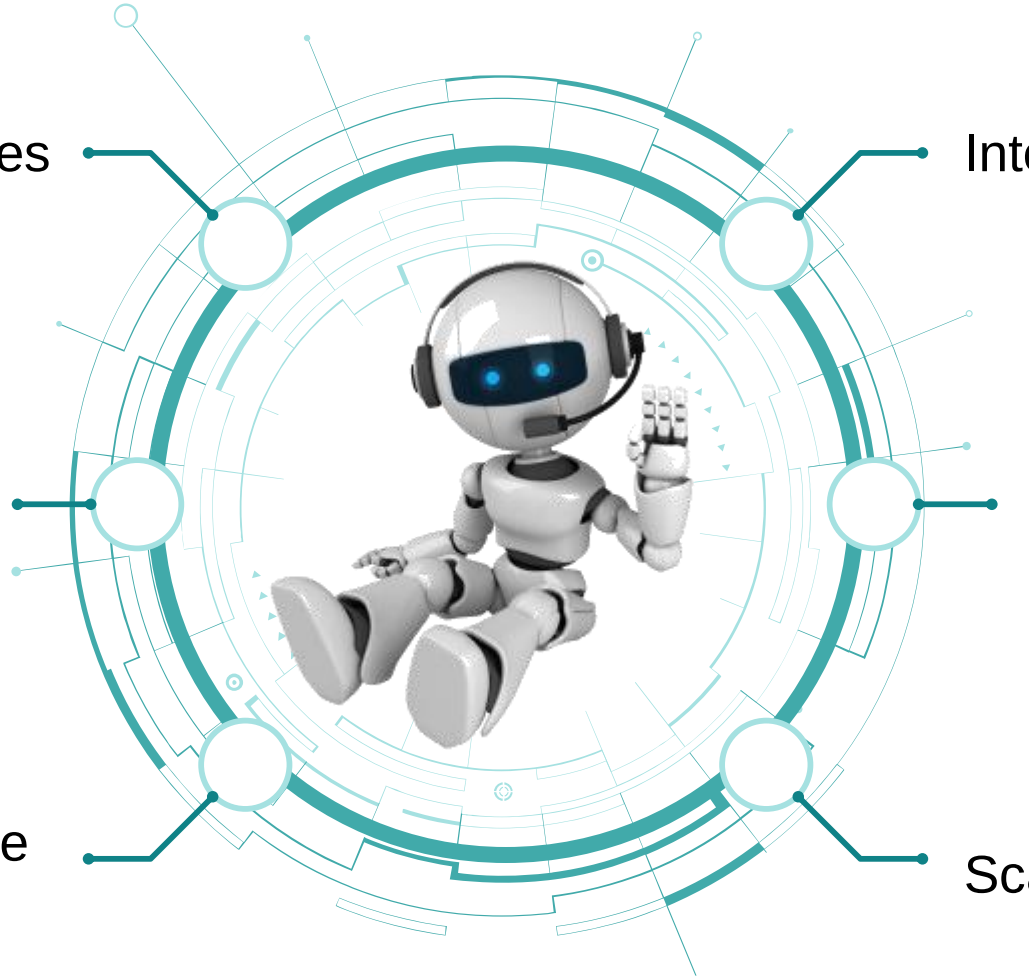
Rule based virtual employees

Execute daily tasks

Fast agile solution to reduce manual efforts



Integrate business applications

Require digital information

Scalable across entire company

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The Robotics Automation Continuum

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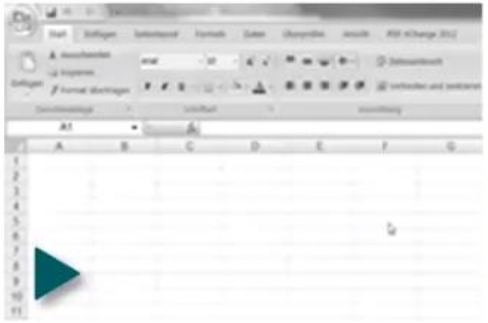
	Macro	Robotics Desktop Automation (RDA)	Robotics Process Automation (RPA)	Cognitive Automation
Data	simple, transactional		more complex, structured, digital	unstructured, volatile
Process	repeatable steps		rule based, routine, predictable	judgment or pattern based
	Automation of simplest, repetitive tasks	Substitution of manual / repetitive processes, either on local computer (RDA) or on central server (RPA)		Simulation of human thought processes in intelligent set of automation processes
		1 User initiates process 2 Super user initiates user's process	Robot handles user's processes exception handling automated	
	Execution via button within document, i.e. Excel	Execute button on local computer, exceptions handled by user	Execution via central server; exceptions routed to service team	Execute on central server; autonomous decision making / process orchestration

GP: +Virtualized Desktop Processes

Process selection criteria for RPA/RDA

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KO-criteria:

Strategic fit

1. Process is executed frequently and in **large volumes**
2. Process requires access to **multiple systems**
3. Process can be broken down into **unambiguous rules**
4. **Structured and digital data** available
5. Process is prone to **human error**
6. Process requires **limited exception handling**
7. Process, once started, needs **limited human intervention**
8. Complexity in stakeholders / **process ecosystem**

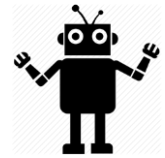
What Robots can do….

Read / Handle Structured data

- E-mail
- Work Flow
- Excel
- PDF
- Database
- ERP/CRM

Interaction via User interface

- Click
- Run program
- Extract
- Compare
- Copy
- Report



Decisions based on Business rules

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Benefits of Automation

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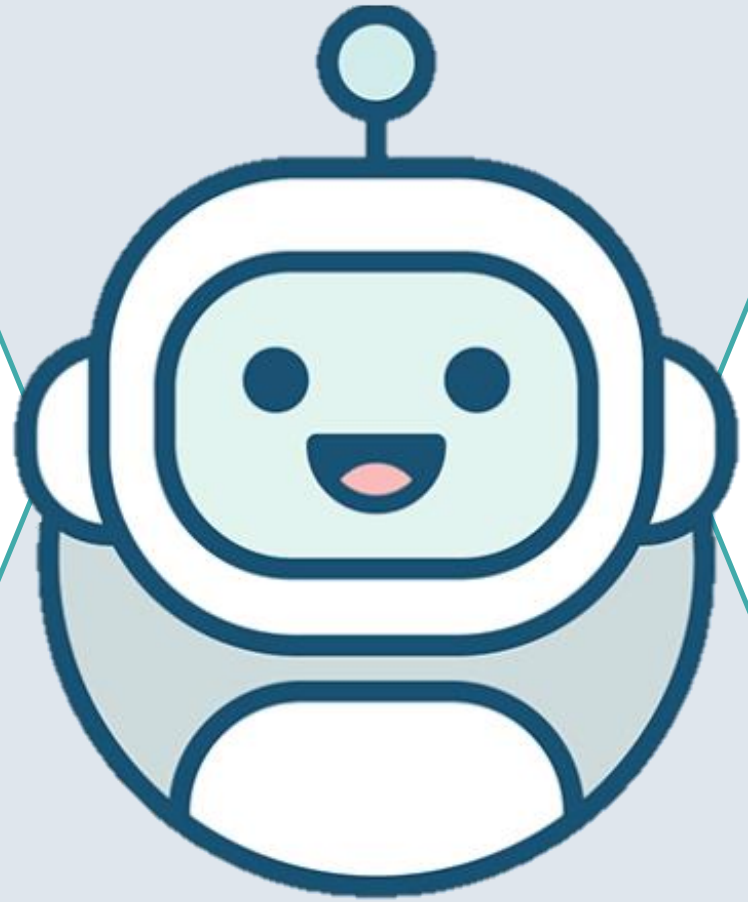
Operational

- Increased data accuracy
- Consistent process execution
- Process compliance
- Free-up capacity
- Support process improvement



Social

- Improved Morale
- Allow for more human interaction
- Opportunity for change
- Decreased frustrations

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Getting Started
Discovery to Delivery

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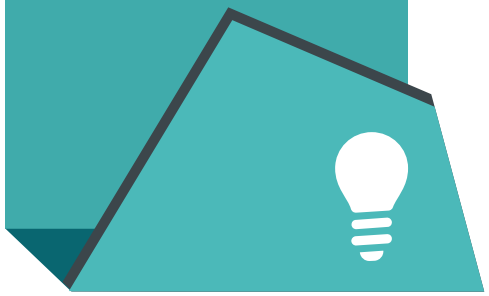
- **Discovery**
  - Form hypothesis
  - Confirm hypothesis
  - Evaluate benefits

- **Pilot**
  - Start small
  - Think big
  - Inital challenges
  - Evolve



- **Scale**
  - Rollout to similar locations
  - Increase value, decrease cost
  - Look up and down stream

- **Delivery**
  - Share knowledge
  - Establish highly engaged teams
  - Fill backlog
  - Focus on high value
  - Celebrate wins!

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Getting Started
Prototyping Process

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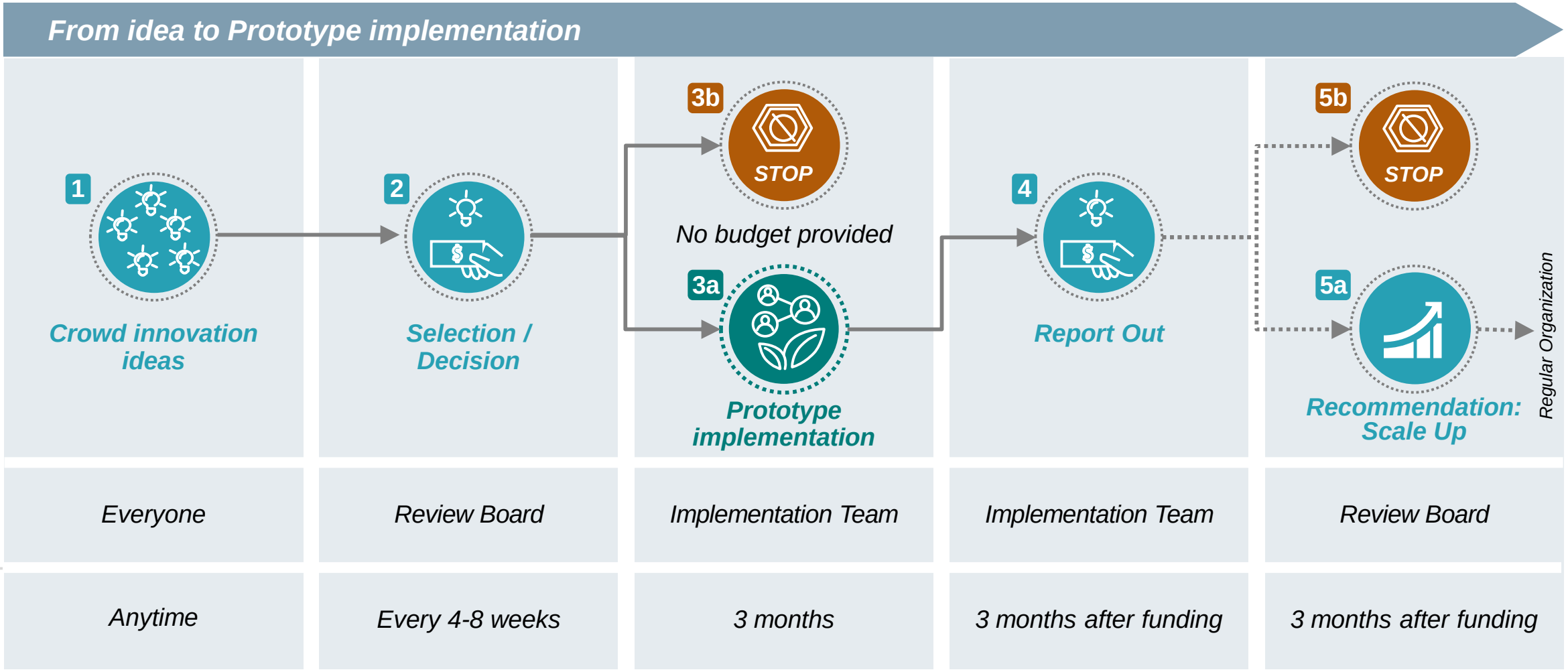

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Key Success Factors to Automation

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Process Assessment

Pilots

Scaling by Design

Close Collaboration

Bridge Gaps

Agile Working

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Deliveries running late?
Meet SCCoTy!

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Functional building blocks

SCM Control Tower User Interface
Portal/ Dashboard

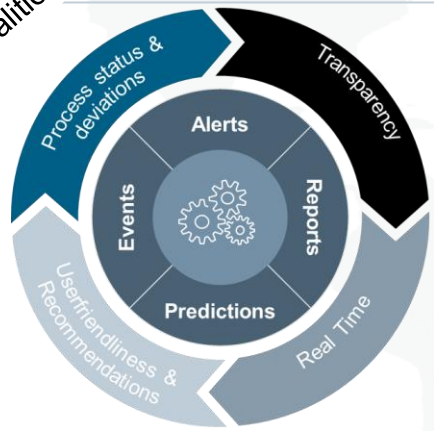
SCM Control Tower Business Logic
(Events, Alerts, Predictions, Reports)

Data Lake

ERP | PM Systems | TMS | EDI / WEB | SAP ERP

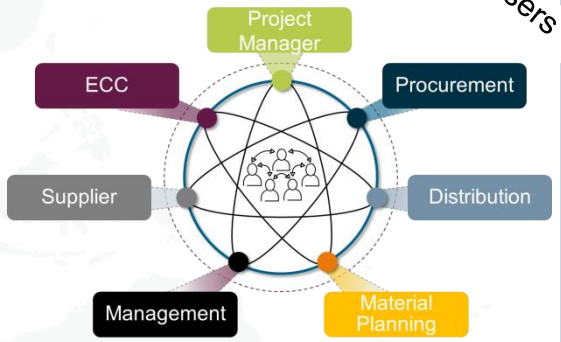
Visualization

Functionalities



SCM Control Tower

Users



End-to-End Processes

Source | Make | Deliver

Supplier | Goods Receipt | Production | Customs | Customer

Alerts: Supplier delay | Traffic Jam | Delay GR | Production late | Delay Customs | Storm

Reports: Deviations in lead time | Benchmarking Report | Performance Report | Process Compliance Report

Transparency

Real time action enablement

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Meet The Family

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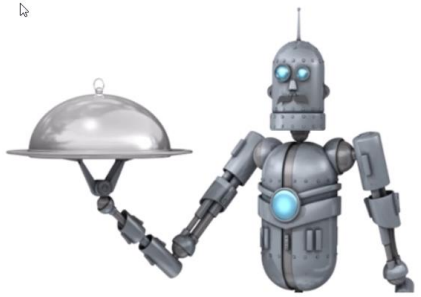

(Alfred)

Alfred

- Supports ECC reporting
- Alerts business about missing information

Johnny 5

- Ensures master data compliance
- Keeps PDT aligned in system

Milly Migrator

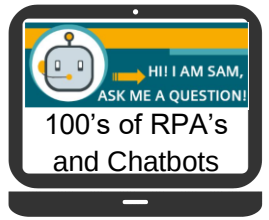
- Supports Supplier EDI activations
- Supports EDI platform migrations

Strategic Procurement Support

- Transfers cost break down information between systems

RaFiQ

- Supports gathering of material and pricing information for RfQ process



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What Next?
Focus on Scalability and E2E Orchestration

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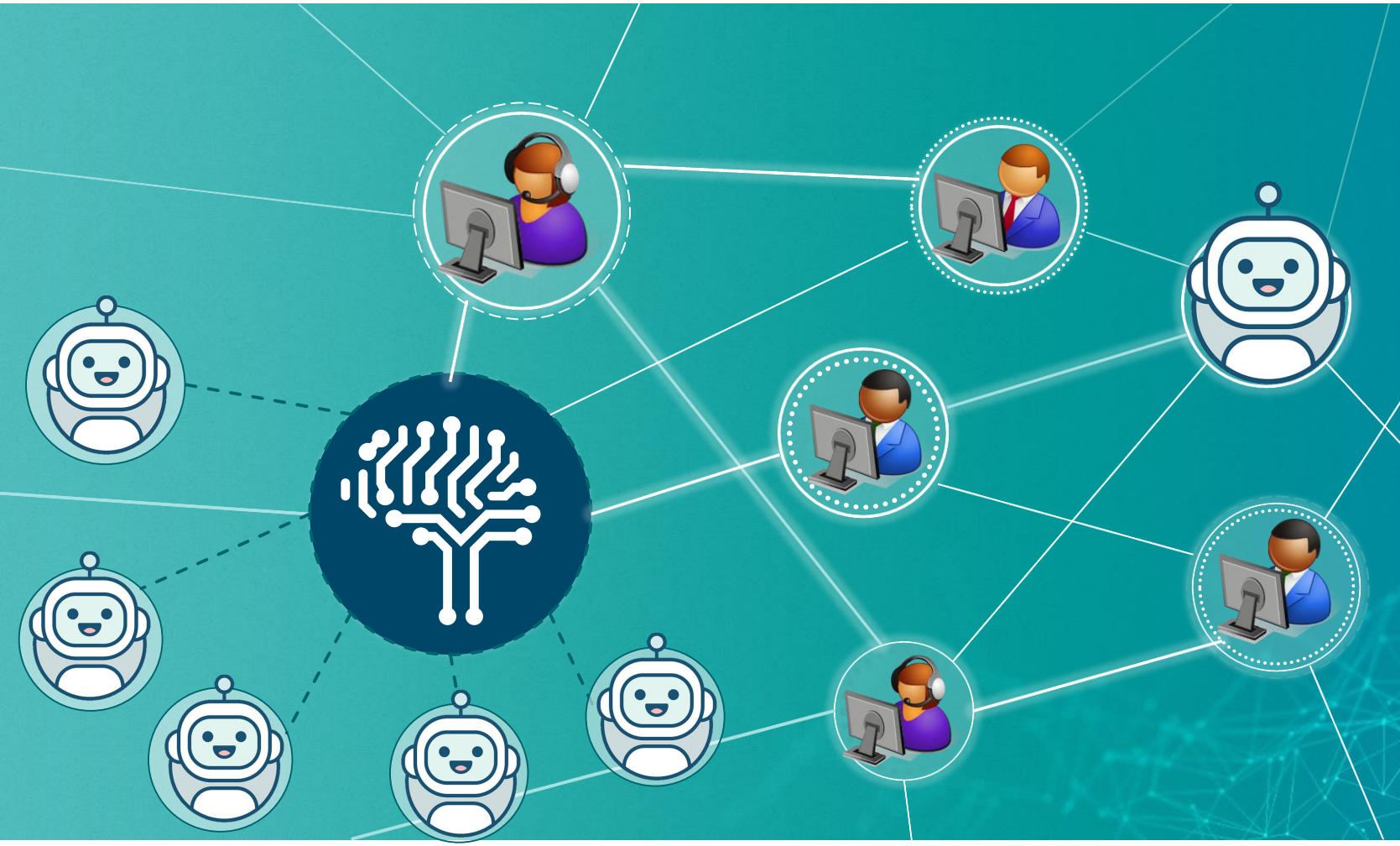

- Humans will focus on value adding tasks
- Leave machine work for machines
- Design for scaling
- Leverage existing solutions for E2E coverage through orchestration layer
- Enhance user experience through cognitive assistants

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How can we ensure that we are prepared?

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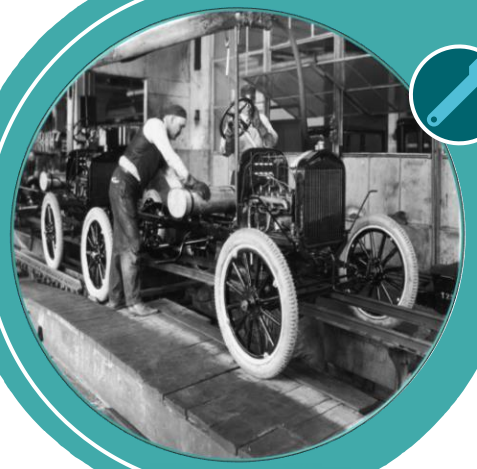
Creating a vision of the jobs of the future. What will it mean to be a procurement professional?



Creating job profiles of the future and plans to help people transistion into the roles that fit them best.

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Thank you