RPA als strategische Gestaltungsoption des Enterprise Architecture Managements

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Leiter IT Management Consulting
Stuttgart, den 30.09.2020

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Agenda

RPA as a Strategic Design Option for EAM

1. CTI Consulting, who we are
2. RPA, next challenge of Shadow IT?
3. RPA defined as part of your Roadmap for Digitization
4. RPA as integration technology
5. How to keep RPA at bay?
6. How to get involved?
7. Which kind of use cases to be supported?
8. Lessons Learned from a Use Case
9. Outlook on RPA supported by AI
10. Conclusion

Über CTI CONSULTING

Gegründet 1991
mit den Kernkompetenzen SAP Enterprise-Information-Management und IT-Management-Consulting.

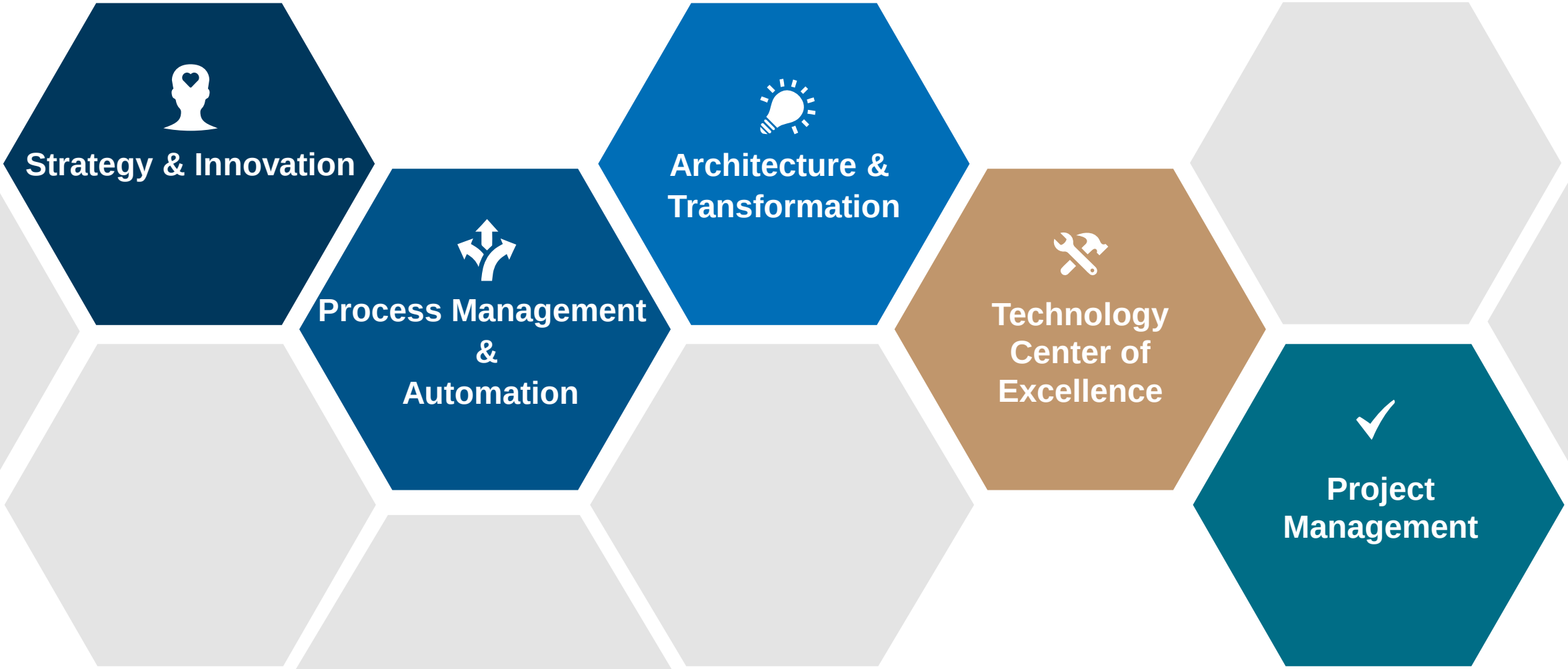
Branchenübergreifende Beratung
von DAX-Unternehmen, Kozernen, großen Mittelständlern auf nationaler und internationaler Ebene.

SAP-Expertise
30 Jahre Erfahrung im Bereich SAP Enterprise Information Management, Business Integration und Workflow Management (seit 1997).

IT-Management-Expertise
10 Jahre Erfahrung in der Entwicklung und Umsetzung unternehmensspezifischer digitaler IT-Strategien sowie IT-Architekturen.

Was wir tun…

Services im Bereich IT Management Consulting



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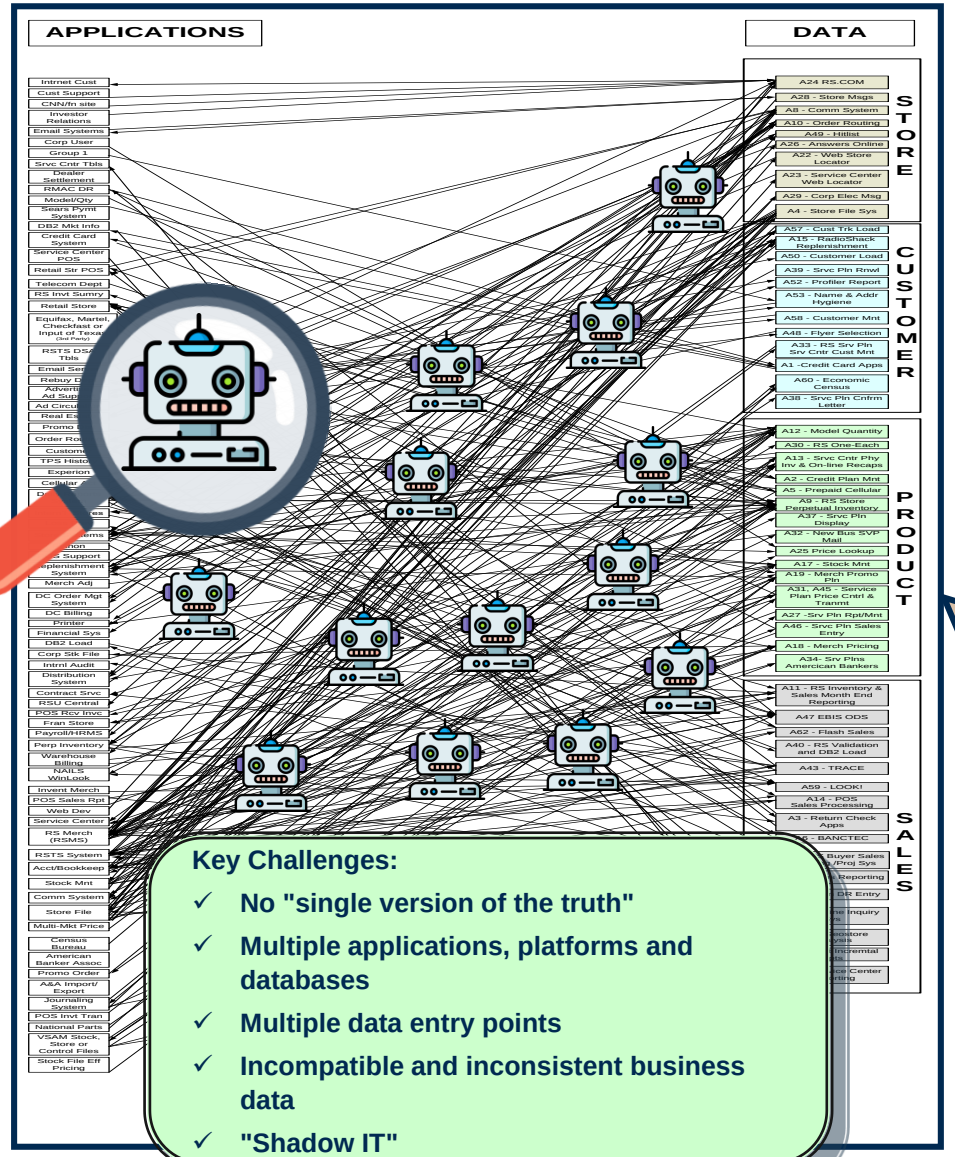
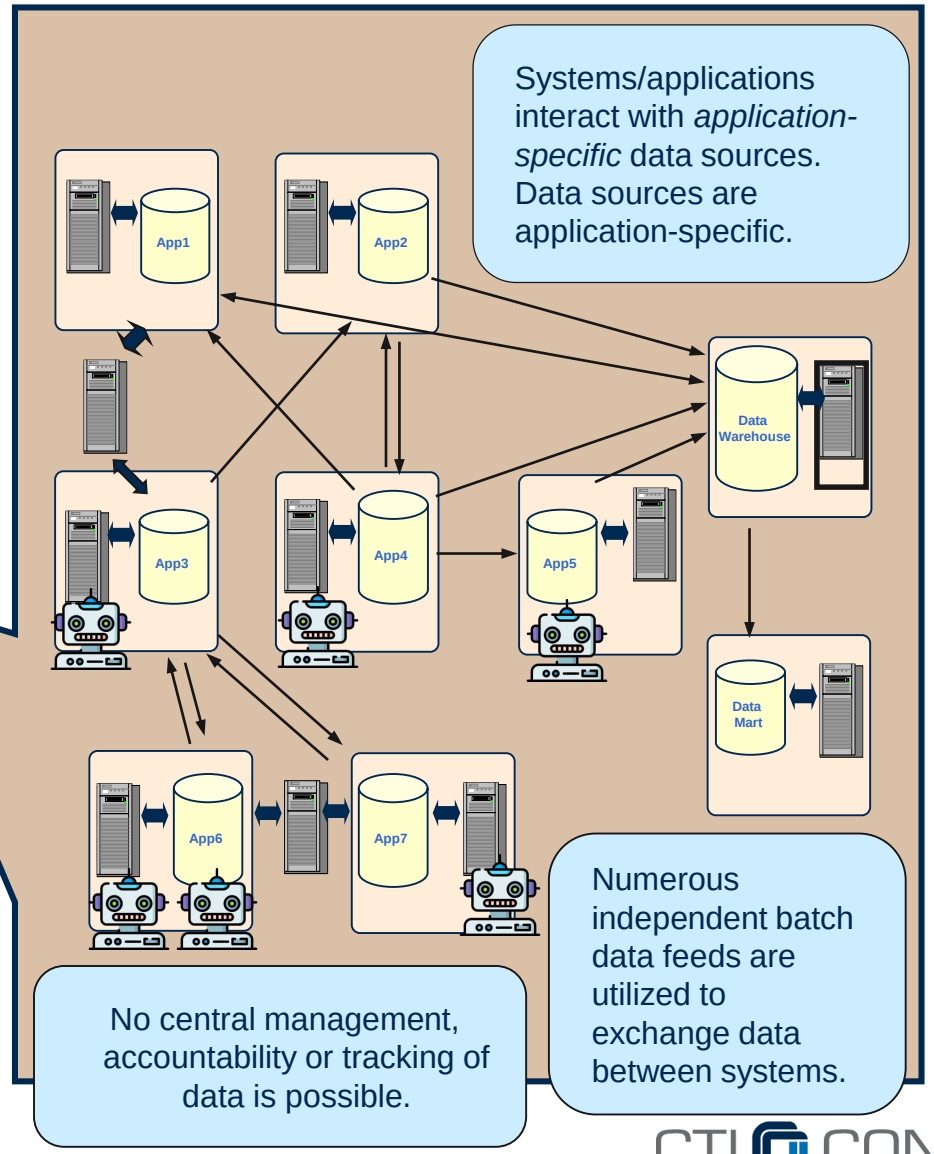
Don´t let RPA become part of your Shadow-IT



Key Challenges:

- ✓ **No "single version of the truth"**
- ✓ **Multiple applications, platforms and databases**
- ✓ **Multiple data entry points**
- ✓ **Incompatible and inconsistent business data**
- ✓ **"Shadow IT"**



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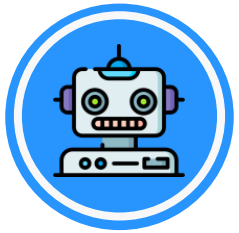
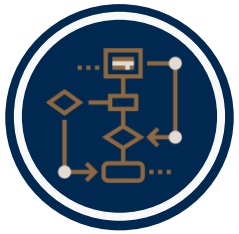
What is Robotic Process Automation (RPA)?



Robotic

Imitates human interaction with software



Process

Sequential processing steps

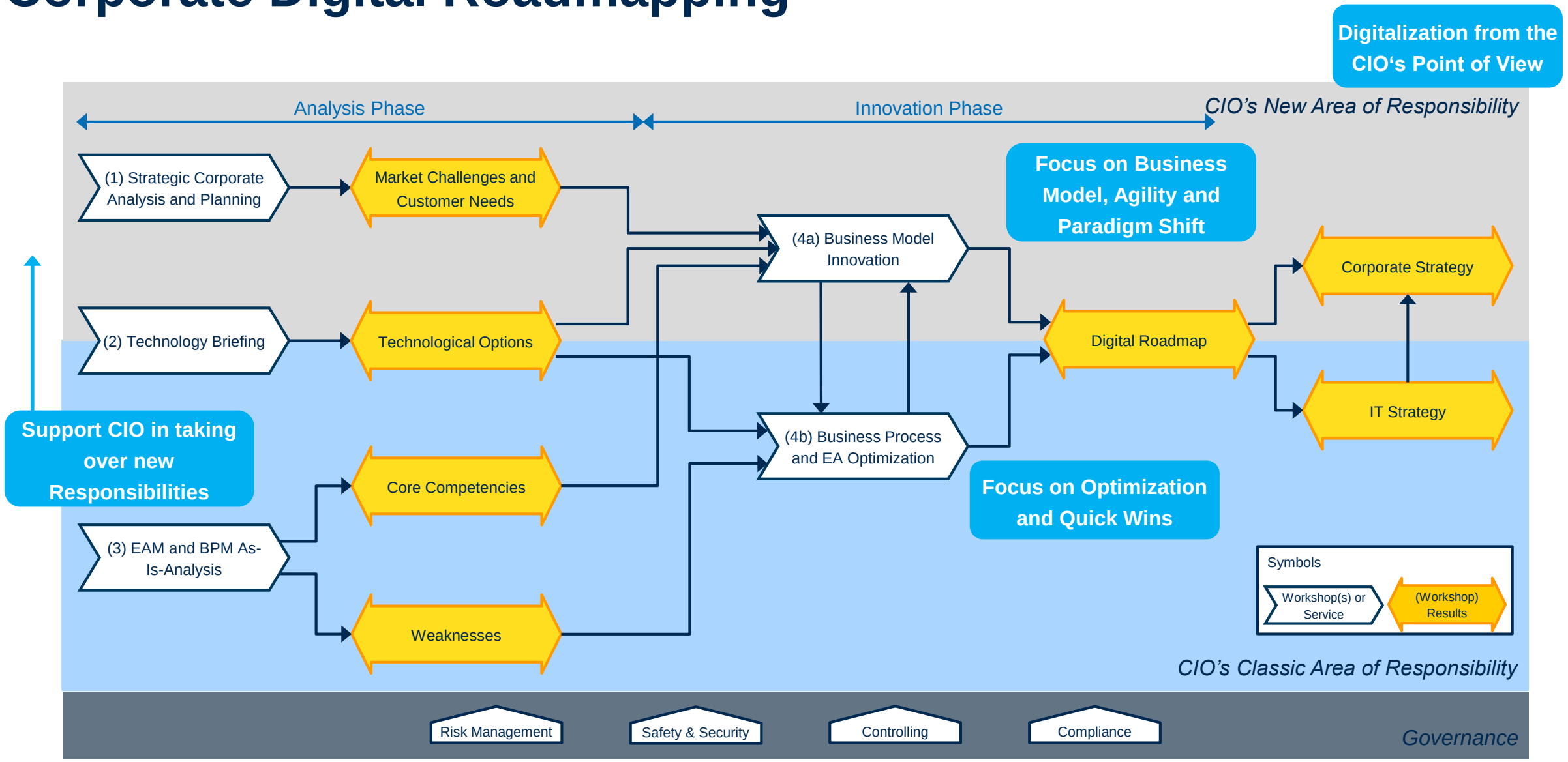
RPA enables you to develop software („bots“) that can automate standardized tasks by interacting with the UI of applications directly.

Automation

Without or with less human interaction

Bots can be helpful to support corporate business processes.
As such, they should be depicted as part of the application architecture.

Corporate Digital Roadmapping



(numbering does not necessarily imply logical succession, workshops/services might overlap or be combined)

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Benefits and Risks of RPA

Benefits

- Reduced costs
- Faster processes
- Scalability
- Employee satisfaction

Strategy risks

- No long-term strategic orientation*
- Covers shortcomings of the current IT landscape*

Operation risks

- Enabling Architecture*
- High maintenance costs*

Sourcing risks

- No sufficient know-how
- Wrong tools*
- Licensing issues*

Project risks

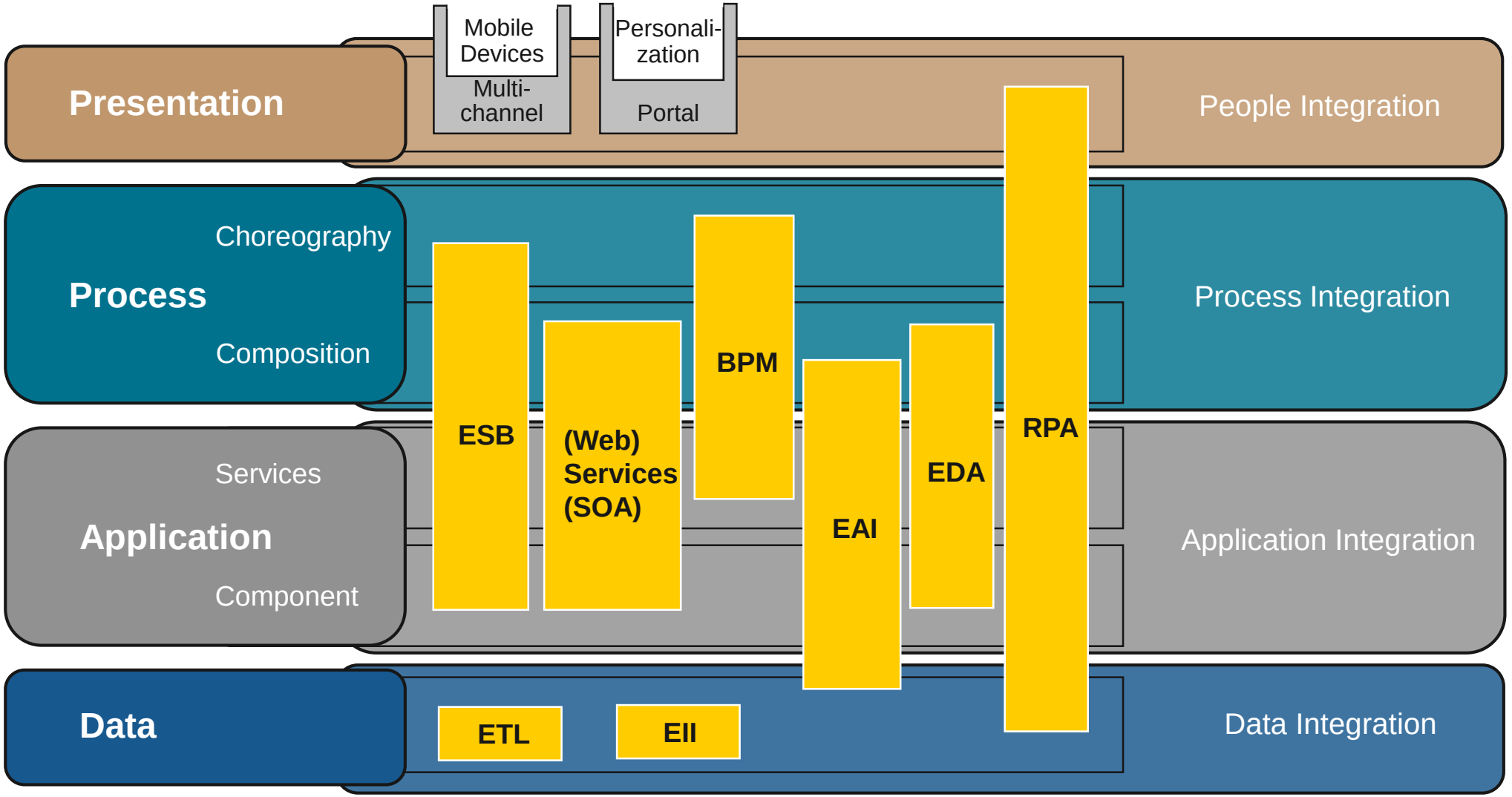
- Wrong processes*
- Unclear responsibilities*
- Unrealistic expectations
- Insufficient quality standards*

Stakeholder risks

- Lack of support by management*
- Lack of inclusion of employees
- Implementation without IT department support*

*Contribution in avoiding this risk by the Enterprise Architect

RPA as an Integration Technology



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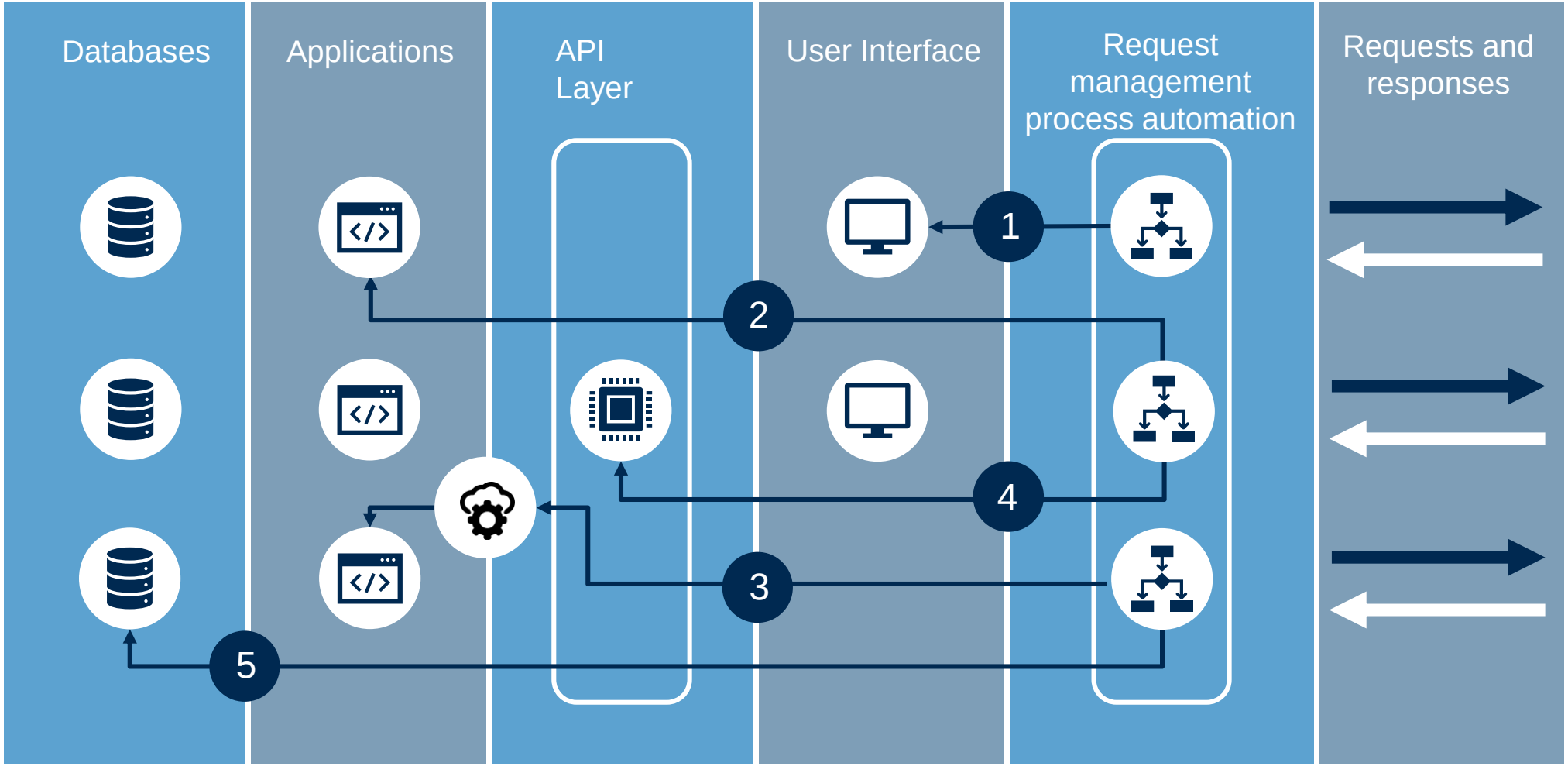
Robotic Process Automation – Integration Options



1 **Access via UI**

2 **Access to Application**

3 **Access by Webservice**

4 **Access via API**

5 **Access via database**

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RPA Governance Perspective

Imperatives to handle RPA from an EA Perspective

RPA Center of Excellence (CoE)

1. **Funding a Center of Excellence supported by EA**

- Assigning Key Roles (Enterprise Architects, BAs, Solution Architects, Trainers etc.)
- Gathering Knowledge (e. g. Lessons Learned, Technology Radar Screen)
- Driving decisions for RPA Use Cases
- Accompanying Initiatives (Review, Lessons Learned)

RPA Policy

2. **Defining Governance Rules for RPA**

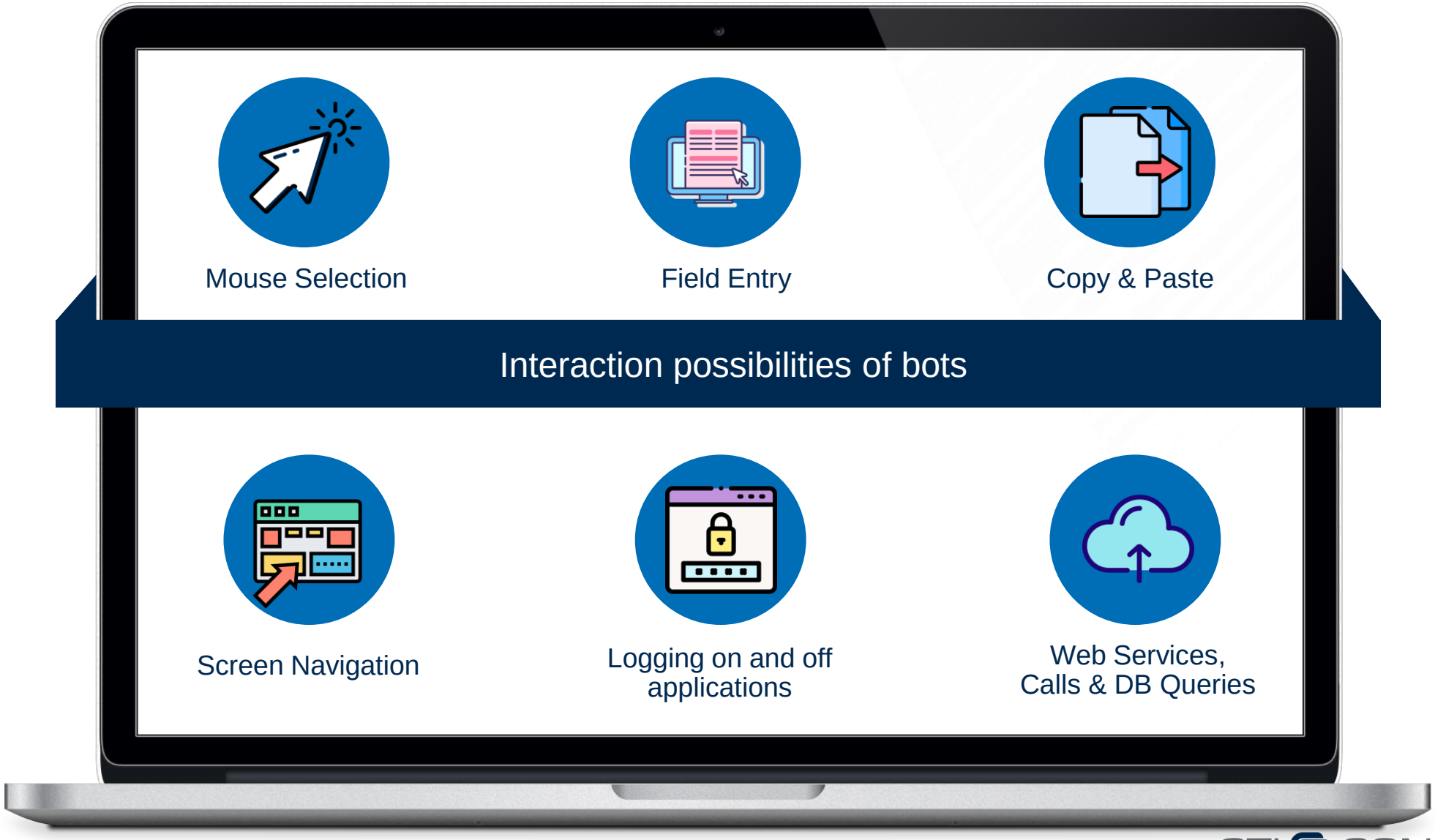
- Tools Usage
- Standardized Bot Framework (e. g. central repository for business rules)
- Software Development Guidelines (Code Conventions, Rules of Integration)
- Define rules for application of RPA technology

Integrate with Governance Bodies, ITIL- and IT Management Processes

3. **Define Framework for collaboration and interaction with already existing internal institutions**

- Integrate with EA Community and -Board
- Integrate with Business Process Management (RPA is not only a technology)
- Integration with Demand and Change Management Process and other ITIL-Processes

Interaction Possibilities of Bots



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RPA-TYPICAL BUSINESS PROCESSES

Across systems

The process requires access to **multiple systems**

Repetitive

The process is performed **regularly** and in **large quantities**

Short Running

No "E2E" claim to the process, **within a user session**

Standardized

Process based on **clear rules**, manageable number of exceptional situations

Data-oriented

Electronic trigger, data available, **defined data set**

Error-prone

The process is prone to **human error**

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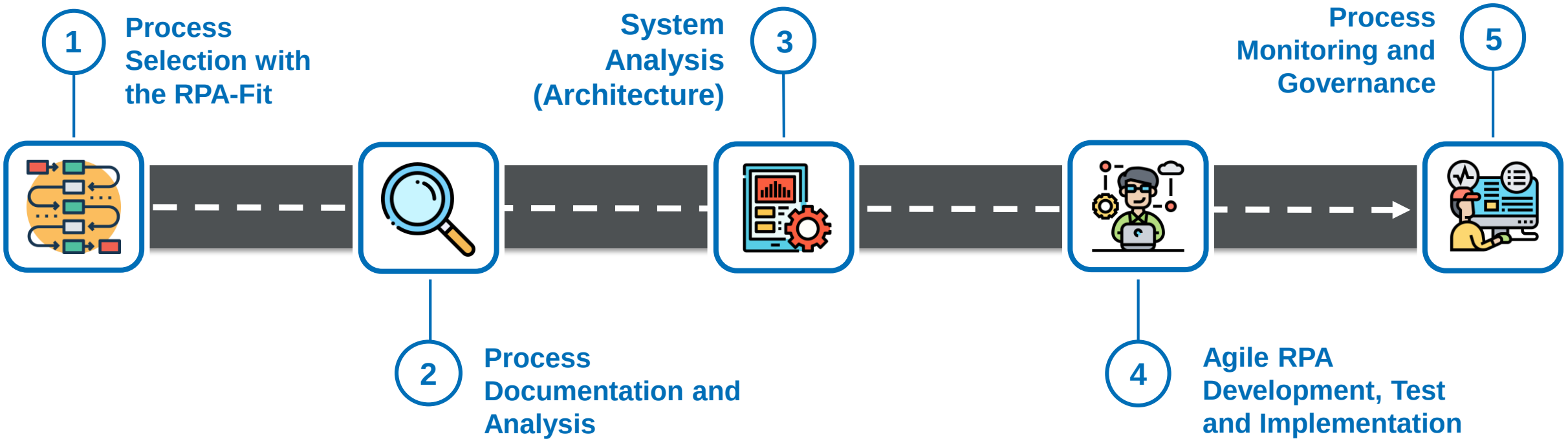
RPA in Practice – Procedure Model



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RPA Selection Criteria for Process Candidates

Potential for Automation

Manual Tasks
Bots take over manual tasks. Employees become free for other tasks.

Frequency of Execution
The use of bots is profitable with a high number of executions.

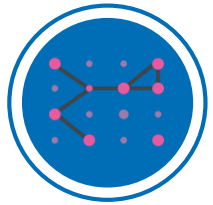
Customer Orientation
The improvement of the process is associated with a direct benefit for the customer.

Possible Savings
The savings potential results from the criteria "manual task" and "frequency of execution".

Necessary Requirements

Standardization
The better the process is defined, the faster the RPA implementation can take place.

Stability
If changes are more frequent, the RPA bot must also be adjusted, which reduces the savings potential.



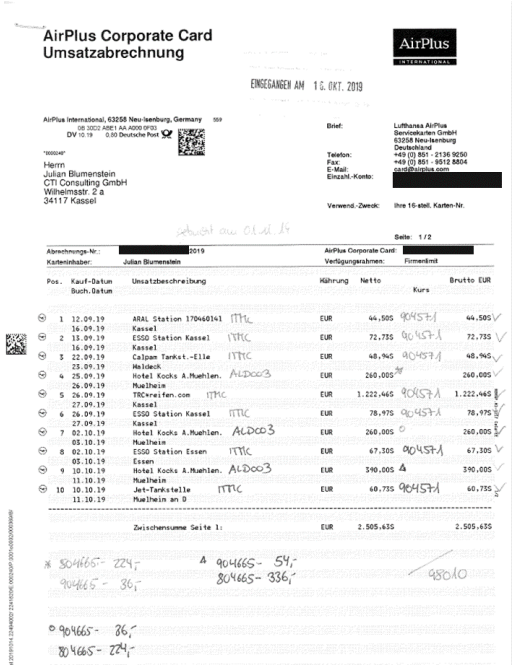
Complexity
Automation may take much longer and may not meet expectations if the process is too complex.

RPA-Fit Evaluation

	Standard-ization	Stability (Changes per year / intensity)		Complex-ity	Execution frequency per month	Manual Task	Savings potential per month	Customer orientation
Process 1	Yes	1	little	little	120 x	10 minutes	1200 minutes	Yes
Process 2	No	3	medium	much	30 x	15 minutes	450 minutes	No
Process 3	Yes	0	little	medium	79 x	5 minutes	395 minutes	Yes
Process 4	No	50	much	little	60 x	120 minutes	7200 minutes	No
Process 5	No	9	much	medium	32 x	35 minutes	1120 minutes	Yes
Process 6	Yes	0	little	medium	500 x	7 minutes	3500 minutes	Yes

Practical Use Case – Travel Expense Report

1. Bot downloads data
2. Bot transforms data
3. Employee checks data
4. Bot books data



AirPlus Corporate Card
Umsatzabrechnung

AirPlus INTERNATIONAL

EINGEGANGEN AM 16. OKT. 2019

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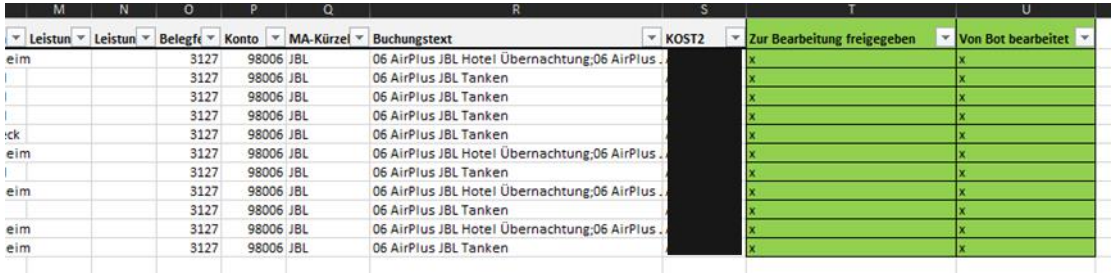
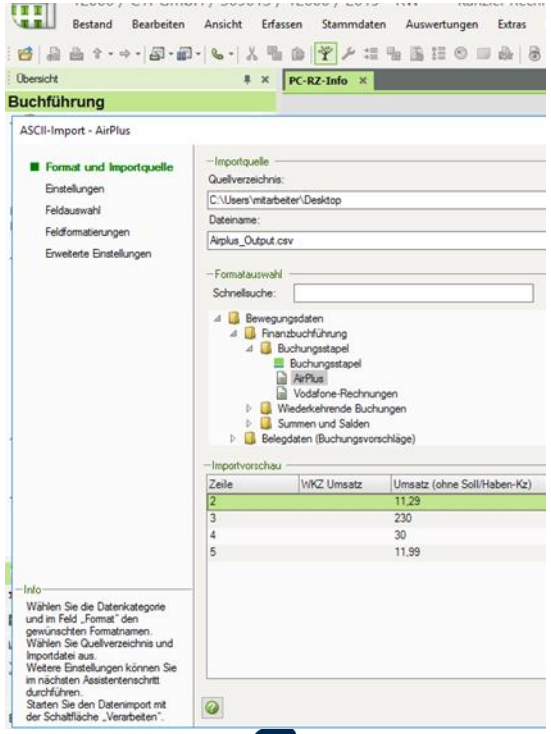
Seite: 1 / 2

Abrechnungs-Nr.: 2019
Karteninhaber: Julian Blumenstein
AirPlus Corporate Card:
Verfügungsrahmen: Firmenlimit

Pos.	Kauf-Datum / Buch.Datum	Umsatzbeschreibung	Währung	Netto	Kurs	Brutto EUR
1	12.09.19 / 16.09.19	ARAL Station 17046014l Kassel	EUR	44,50S		44,50S
2	13.09.19 / 16.09.19	ESSO Station Kassel Kassel	EUR	72,73S		72,73S
3	22.09.19 / 25.09.19	Calpan Tankst.-Ella Haldeck	EUR	48,94S		48,94S
4	25.09.19 / 26.09.19	Hotel Kocks A.Muehlen. Muelheim	EUR	260,00S		260,00S
5	26.09.19 / 27.09.19	TRC+reifen.com Kassel	EUR	1.222,44S		1.222,44S
6	26.09.19 / 27.09.19	ESSO Station Kassel Kassel	EUR	78,97S		78,97S
7	02.10.19 / 03.10.19	Hotel Kocks A.Muehlen. Muelheim	EUR	260,00S		260,00S
8	02.10.19 / 03.10.19	ESSO Station Essen Essen	EUR	67,30S		67,30S
9	10.10.19 / 11.10.19	Hotel Kocks A.Muehlen. Muelheim	EUR	390,00S		390,00S
10	10.10.19 / 11.10.19	Jet-Tankstelle Muelheim an D	EUR	60,73S		60,73S
		Zwischensumme Seite 1:	EUR	2.505,63S		2.505,63S



Leistun	Leistun	Belegfe	Konto	MA-Kürzel	Buchungstext	KOST2	Zur Bearbeitung freigegeben	Von Bot bearbeitet
eim		3127	98006	JBL	06 AirPlus JBL Hotel Übernachtung;06 AirPlus .		x	x
		3127	98006	JBL	06 AirPlus JBL Tanken		x	x
		3127	98006	JBL	06 AirPlus JBL Tanken		x	x
		3127	98006	JBL	06 AirPlus JBL Tanken		x	x
ck		3127	98006	JBL	06 AirPlus JBL Tanken		x	x
eim		3127	98006	JBL	06 AirPlus JBL Hotel Übernachtung;06 AirPlus .		x	x
		3127	98006	JBL	06 AirPlus JBL Tanken		x	x
eim		3127	98006	JBL	06 AirPlus JBL Hotel Übernachtung;06 AirPlus .		x	x
		3127	98006	JBL	06 AirPlus JBL Tanken		x	x
eim		3127	98006	JBL	06 AirPlus JBL Hotel Übernachtung;06 AirPlus .		x	x
eim		3127	98006	JBL	06 AirPlus JBL Tanken		x	x



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Practical Use Case (1-2)

Background	Conclusion
▪ Accountant receives **all credit card statements** of the **entire company** once a month as an Excel-file ▪ Starting from this file, the accountant prepares the necessary information for each payroll such as project code, employee code, contra account, etc. ▪ The required information is entered individually into an accounting software by the accountant (**takes a few days for all employees**)	

Solution	Result
The developed bot **activates itself** at a **certain point**, extracts the monthly CSV accounting file from the corresponding mail folder and converts it into an editable Excel-file, in which a large part of the fields are pre-filled, based on rules. After some adjustments by the employee, the bot uploads the required information into the accounting software.	

Practical Use Case (3-4)

Background	Conclusion
	▪ Always the same → **standardized** process ▪ Changes are extremely rare → **stable** process ▪ Relatively simple → **not complex** ▪ Standardized and recurring, high volume task → **high potential** ▪ Therefore this is a **suitable automation process** according to the RPA fit criteria

	Result
	▪ Average **processing time** has **decreased by 70%**. ▪ **Return on investment** in **5 months** with 500 bookings per month ▪ The employee now has **more time** for **more complex tasks**

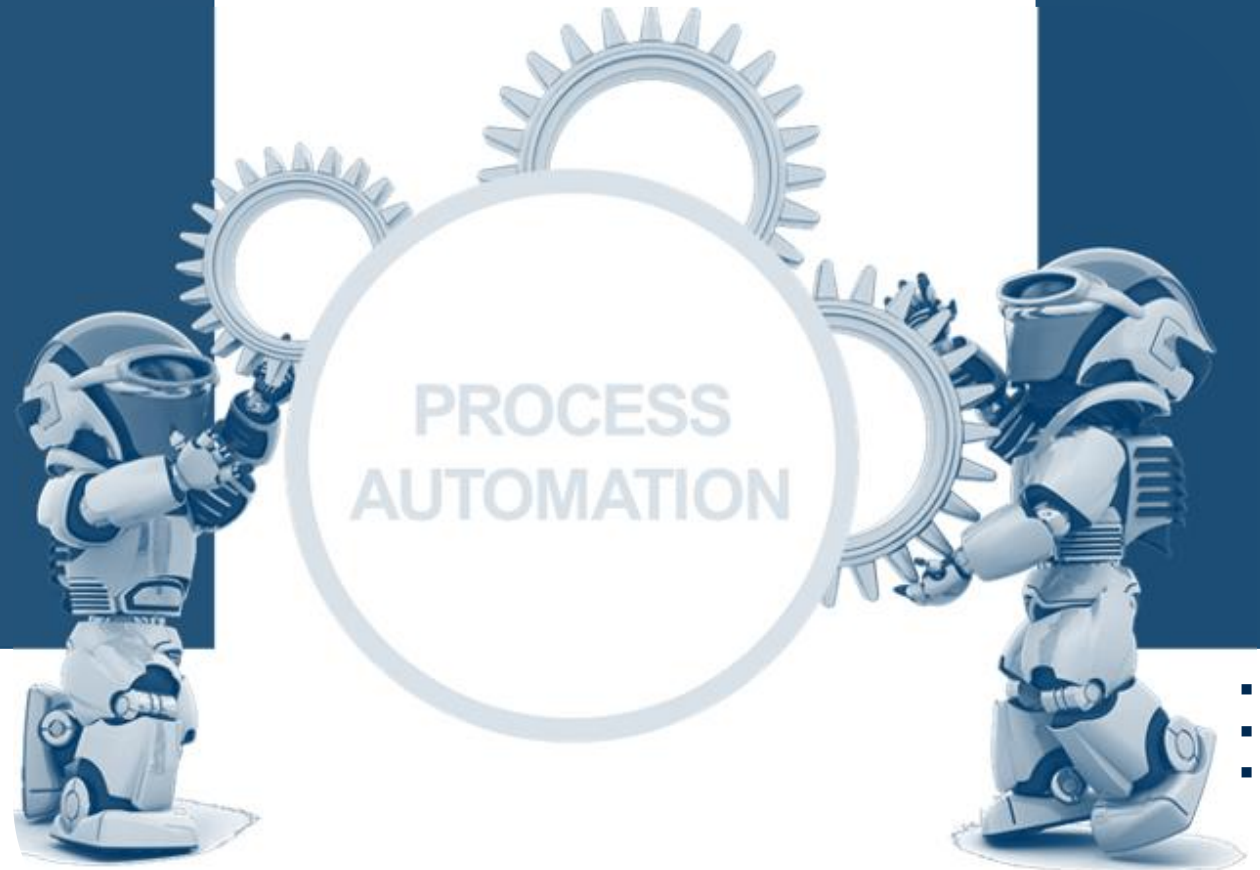
Artificial Intelligence + RPA = Intelligent RPA

RPA

Systems based on rules

Automates simple tasks and transfers them to the AI

- Access to legacy systems
- Filling out web forms
- Copy data from one system to another



AI

Systems that learn

AI learns to imitate and improve processes based on the data provided by RPA

- Learns from human decisions
- Makes quick decisions
- Interacts with people

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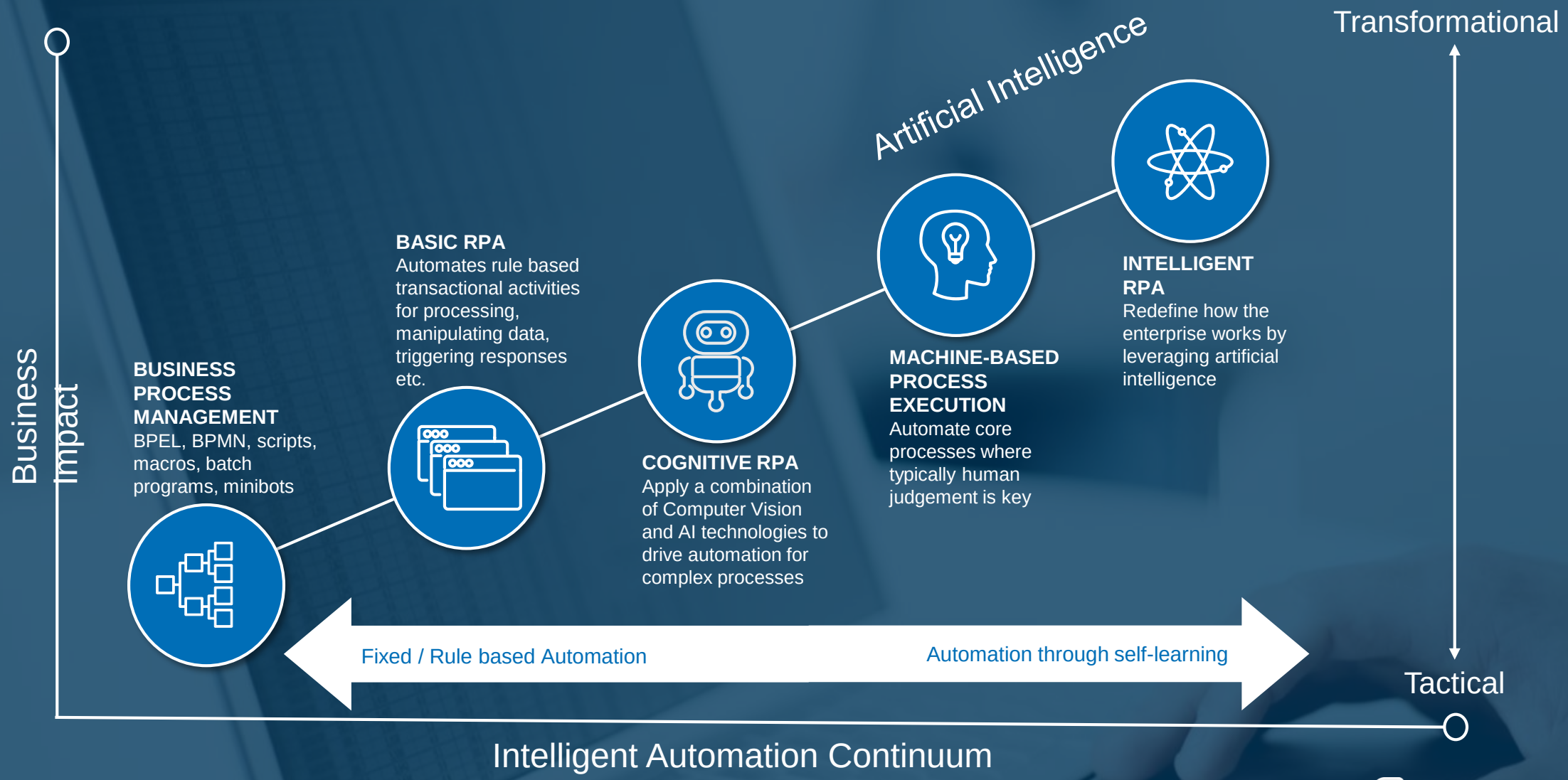
The Intelligent Automation Spectrum



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Conclusion

1. „Initiis resistere“: Don‘t let RPA become part of your Shadow IT
2. RPA is a mighty integration technology on Enterprise Architect‘s agenda don‘t underestimate it
3. Define proper processes and governance bodies: RPA policy, RPA CoE
4. Take accountability for RPA initiatives
5. Select the right business processes for RPA enablement (RPA-fit)
6. Accompany RPA intitiatives, make conclusions, do reviews
7. RPA is getting even mightier by AI, Compliance and Governance will be key

VIELEN DANK,
Q & A

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