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SPECIALIST TOPIC

TMG IMPULSE

Robotic Process Automation

Process automation of repetitive activities

TMG Understanding of Robotic Process Automation

Robotic Process Automation (RPA) ...

…is the **automated processing** of structured business processes by digital software robots.

... involves performing manual, **highly repetitive tasks** using a **“virtual”** workforce.

... is software that **performs tasks independently** and interacts with other **software systems in this context**.

... is **implemented by an automated robot** that executes a software application in the **same way as an employee** would.

RPA is not…

- Physically existing machine from the manufacturing industry
- Artificial intelligence or “machine learning”
- Replacement of employees with human intelligence

RPA is the automated execution of repetitive tasks using software programs.

A Variety of Advantages of Process Optimization...

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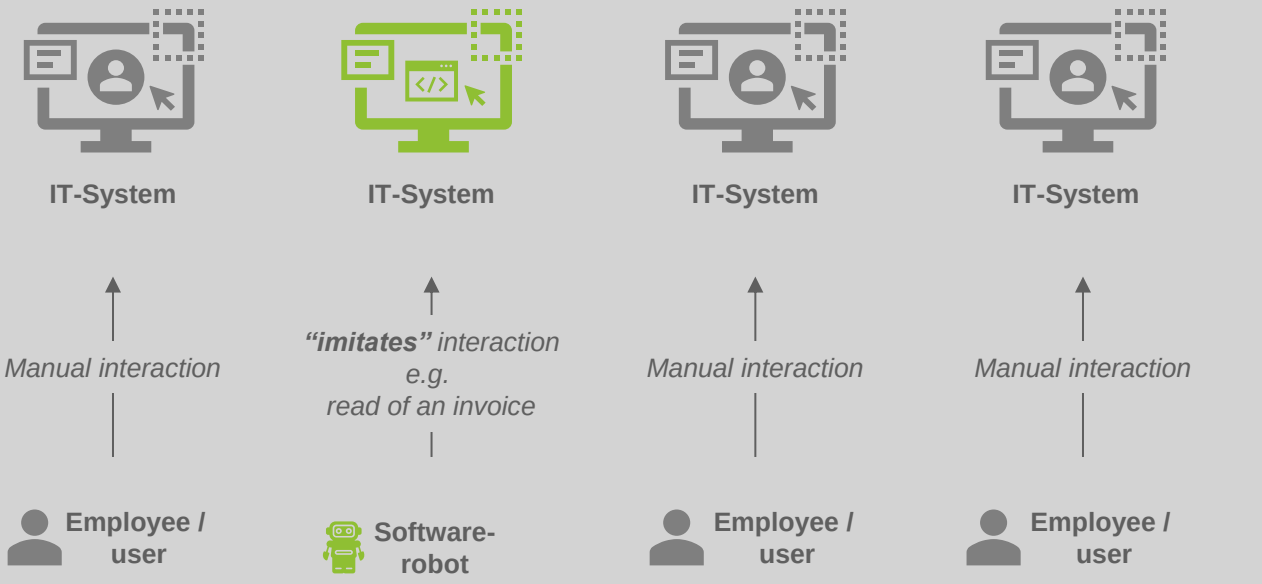
How RPA works



Benefits

- Reduction of lead times
- Increase of process quality
- Cost savings
- Strengthening of employee satisfaction
- Improving data quality
- Increased flexibility - available 24/7

... using RPA lead to a rapid realization of the ROI.

From Manual to Automated Process

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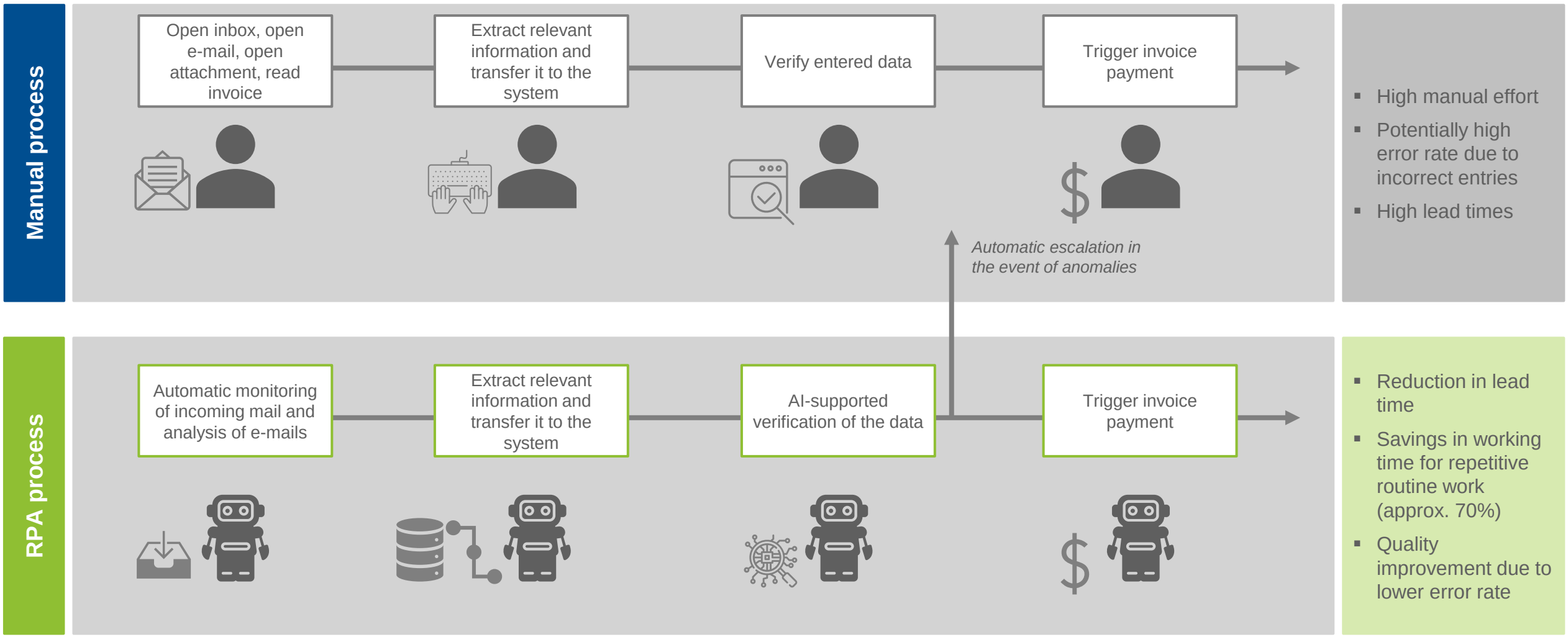

- High manual effort
- Potentially high error rate due to incorrect entries
- High lead times

- Reduction in lead time
- Savings in working time for repetitive routine work (approx. 70%)
- Quality improvement due to lower error rate

Manual activity is only necessary in borderline cases; the focus is on value-adding activities.

Optimization Using RPA

Which processes are best suited?

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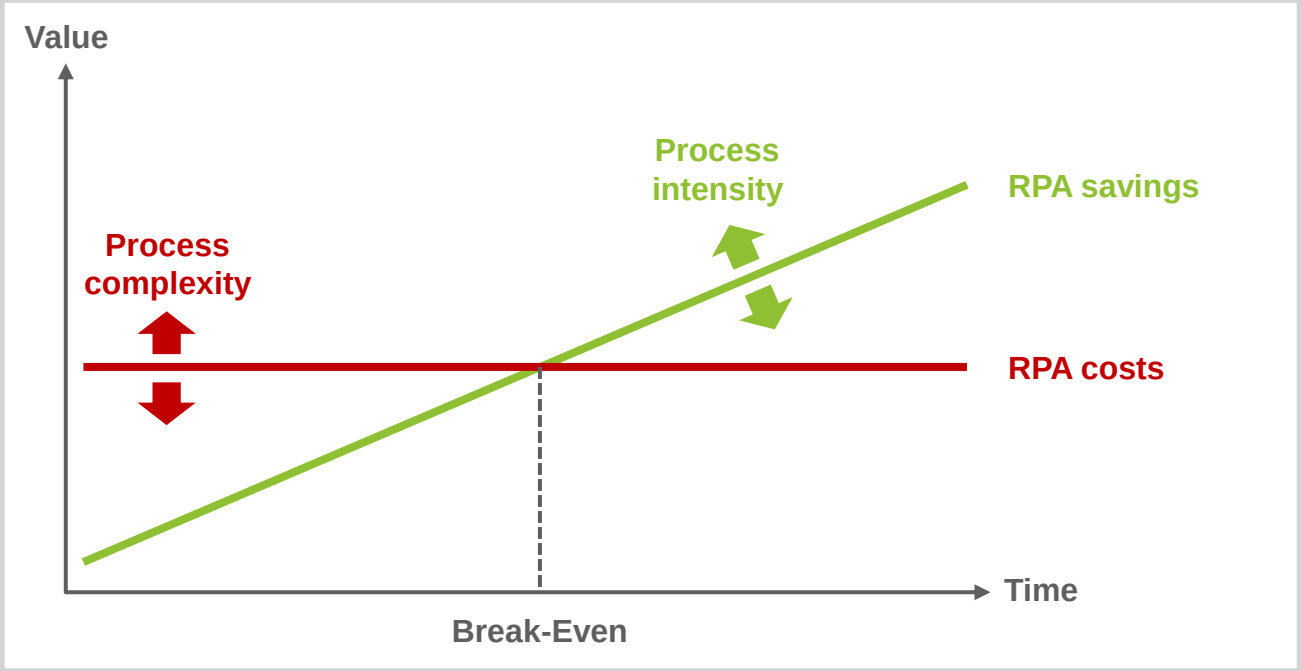
	⊕	⊖	
RPA suitability	Rule-based process decisions	Decision based on judgment	The use of RPA is more complex for experience-based discretionary decisions; can still be implemented with the help of AI models and sufficient training data
	Structured data	Unstructured inputs	The processing of structured data is generally less error-prone and can therefore also be carried out with a higher degree of automation
Imple-mentation costs	Standardized procedure	High number of exceptions	A high number of exceptions increases implementation complexity and reduces efficiency gains
	Process continuity	High rate of change	A frequent occurrence of change requests reduces the profitability of RPA use due to the implementation costs incurred
Return on Investment	High error rate	Low error rate	The use of RPAs offers great benefits, especially when manual processes (e.g. data entry) are prone to errors
	Centralized	Decentralized	Digital interfaces are always a prerequisite for the use of RPAs across different systems; a new implementation of these is associated with costs
	Continuous input	Cyclical activity	The implementation of RPA technologies is particularly worthwhile for continuous iterative processes and amortizes the implementation costs.

The Use of RPA Must Be Economical

Economic efficiency of RPA

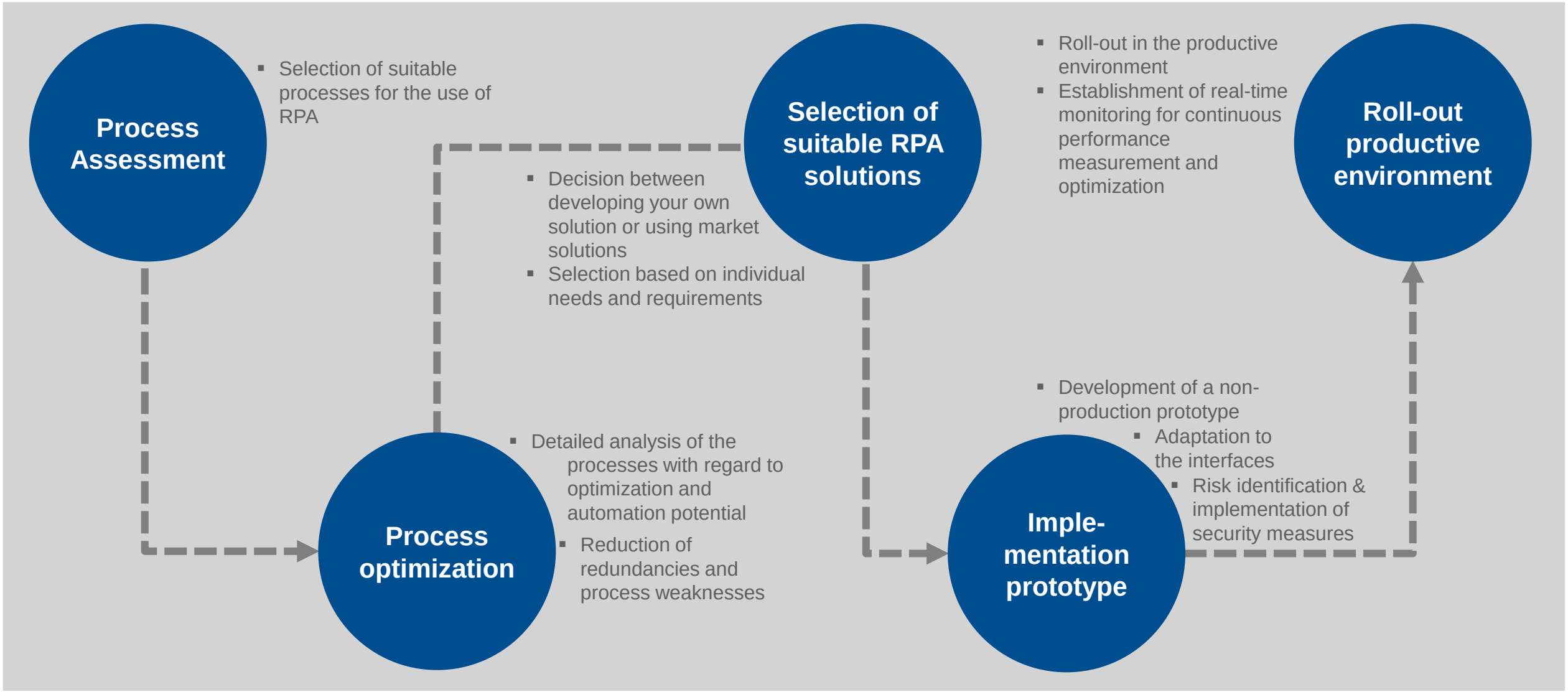


RPA savings: quantity of automated process executions x manual process costs
RPA costs: implementation costs + ongoing operating costs (licenses, maintenance, servicing)
Break-even: Amortization point (target: ≤ 2 years)

Area	Activities that can be automated with RPA activities (examples)
Procurement	▪ Reading and checking supplier invoices ▪ Reading, comparing and evaluating contract documents ▪ Creating material and supplier master data
Sales	▪ Checking customer data (liquidity, solvency, etc.) ▪ Creating and maintaining customer master data ▪ Creating/entering customer orders in the ERP system
Controlling	▪ Reading, checking, registering and posting invoices ▪ Creating and maintaining accounts payable/receivable master data ▪ Carrying out liquidity checks
F&E	▪ Transferring CAD/design data to ERP systems ▪ Creating and maintaining parts lists ▪ Creating design change notifications
HR	▪ Recording and processing certificates of incapacity for work ▪ Evaluating payroll data and preparing payroll statements
IT	▪ Creating and managing IT authorizations ▪ Assigning, prioritizing and responding to service tickets ▪ Creating evaluations and reports from databases

The economic use of RPA must be determined depending on the manual effort, the number of process runs and the process complexity.

Process Steps for the Introduction of RPA



TMG Proof-of-concept Approach in RPA projects

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Scope

- Initial assessment of the process environment
- Investigation and evaluation of processes suitable for RPA
- Process selection and definition of PoC scope

Scan

- Detailed analysis of the selected process
- Process optimization
- Selection of suitable RPA solutions
- Preparation of the implementation

Prototype

- Structure of the (dummy) interfaces
- Implementation of the RPA in a non-production environment

Optimize

- Testing and optimization of the RPA
- Monitoring and validation of execution quality
- Development of roll-out scenarios

Roll-out

- Implementation in the production environment
- Comprehensive roll-out of further RPAs
- Continuous optimization and redesign

TMG – Proof of Concept (PoC)

Customer – Set-up

Customer – Results

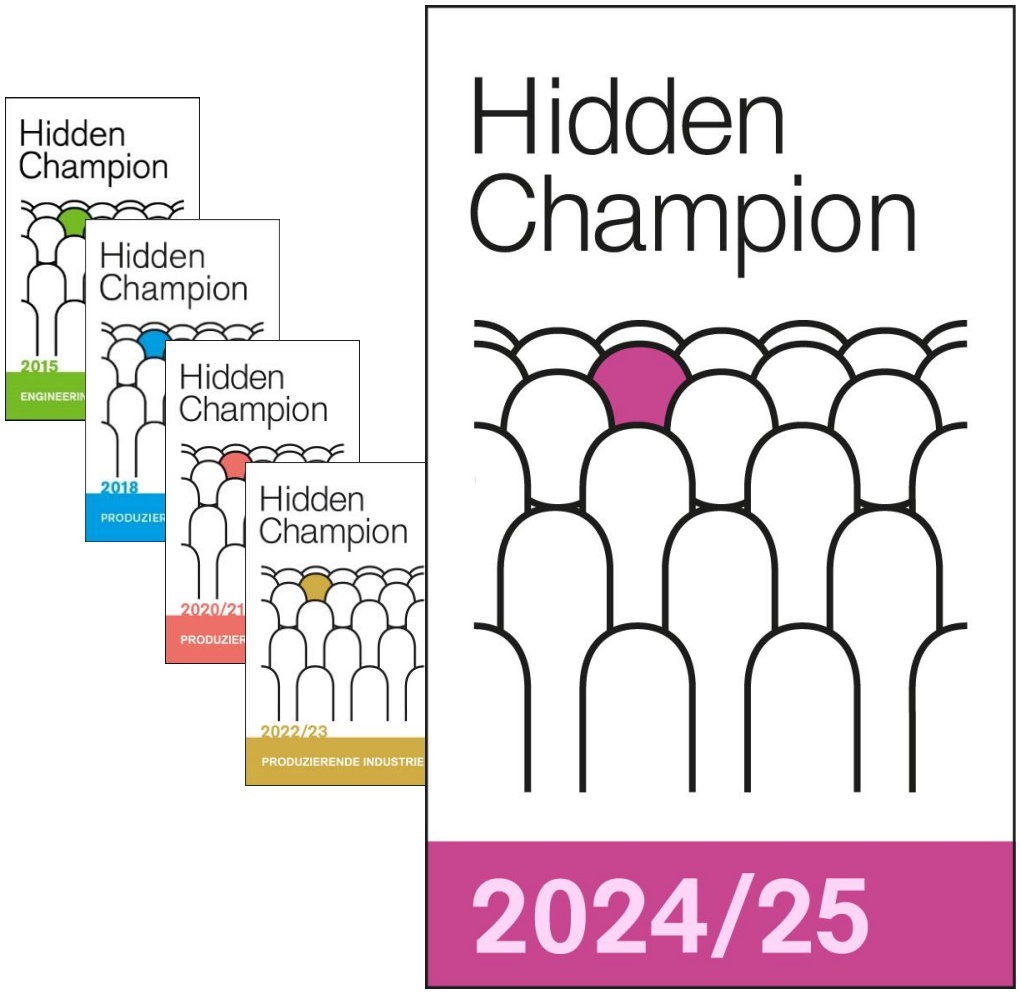
RPA – Development

1 - 2 Weeks

Provision of (Dummy) interfaces

4-8 Weeks

Why TMG Consultants



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- Speaking our customer's language – across all levels
- High level of technical expertise and methodological competence
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