

Go ahead, I'm listening...

MHP WHITE PAPER

INTELLIGENT AUTOMATION -THE ENABLER OF YOUR DIGITAL STRATEGY

A holistic approach to intelligent automation of business processes

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LIST OF ABBREVIATIONS

A

BI

CN

ER

IA

IP.

KI

R

ΛT .	Automation Assessmen
1	Application Programm
	Business Intelligence
1S	Content Management
Р	Enterprise Resource Pla
	Intelligent Automation
4	Intelligent Process Auto
I	Key Performance Indica
)I	Return on Investment
A	Robotic Process Autom
11	Voice User Interface

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System anning

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ation

Intelligent Automation

A fast, seamless business process flow is the foundation of any successful company, and the only way to harness maximum potential during process execution. Unfortunately, business processes do not always run as effectively as they could. Due to changes in process requirements over time, new technological advances and ever-increasing competition, it is necessary to regularly adjust processes to reflect new conditions and find ways to optimize these processes.

Digital transformation can play an especially decisive role in this regard. To be successful, this transformation must be supported by a suitable strategy and steered in the right direction. Once transformationrelated goals have been aligned with a company's corporate strategy, automation technologies can play a major role in implementing a digital transformation in line with the company's overarching strategy. When based on an appropriate process design, automation solutions offer a fast and effective way of optimizing processes and taking the execution of business

processes to a new level. Companies ask themselves the same question time and again: Which automation solution is the most suitable and best solution to help us achieve our goals? To find the answer, companies need to choose a holistic approach that will support them in their digital strategy and subsequent digital transformation. Only a holistic view of the relevant opportunities and technologies will reveal the full potential of a digital strategy. The processes identified can be optimized and automated with tailor-made solutions. With this in mind, the methodology described in this white paper is used to illustrate the potential of automation through several examples.

(5)TRANSFORMATION

AUTOMATION TECHNOLOGIES **IN ACHIEVING THE**

Intelligent Automation Methodology



Several sub-steps are required to tackle **digital process transformation** holistically from the strategy stage to implementation. A holistic approach aims to tailor automation efforts and make them measurable. The focus is not the individual technology used to automate the process – instead, the process is the baseline. Combined with our value-based approach, our methodology enables quantitative and qualitative optimization in three key areas: organization, technology, and employees. These areas must always be considered together as part of an integrated approach.

The starting point for process automation is a detailed process analysis to identify efficiency potential and to initiate tailored automation projects. Our Automation Assessment Tool (AAT) has been designed for this purpose. The tool provides a fully digital process assessment and enables rapid identification of the greatest potential on a process map. This assessment. based on process costs and automation potential per sub-process, forms the basis for pinpointing the most promising measures. An industry comparison and benchmarking in terms of the degree of digitalization within comparable processes and organizations ensure that the analysis remains objective. In addition to the assessment using the AAT, expert knowledge from numerous projects and use cases is incorporated into the analysis to provide an outside-in perspective that can help companies to identify opportunities and best practices per topic area. Depending on the current situation at your company, we can work with you to narrow down the relevant solutions and develop the most suitable implementation scenarios. The purpose of the assessment with the AAT is not limited to illustrating where digitalization initiatives could be launched. We go one step further: We use an algorithm to pinpoint a suitable technology that you can use for process optimization. Once the processes with the best potential for automation have been identified via the process assessment, we perform a deep dive that focuses on the technical implementation and business case.

As part of these deep dives, we use our Solution Toolbox to develop a **tailor-made customer solution** for the each process-related weakness. Our Solution Toolbox comprises system-integrated ERP solutions, such as automation solutions that still exist in an SAP context, ERP-external technologies such as Robotic Process Automation (RPA), Intelligent Process Automation (IPA), machine learning, and process mining. The basic idea that "technology follows business process" always applies: Rather than finding a use case to justify implementation of a specific technology, we focus on solving a process weakness individually for the customer while always taking into account the costbenefit factor. In addition to pinpointing a technological solution, the deep dive focuses on the business case for the selected technology. It ac-counts for qualitative aspects, such as increasing process quality and compliance by reducing manual errors, as well as quantitative aspects with a focus on return on in-vestment (ROI). The end result of the deep dive is a strategy paper that contains a detailed, customized solution for automating process-related weaknesses and the associated business case. Implementation planning can therefore start immediately, and digitalization initiatives can be set up appropriately based on the principles of change management.

Once this implementation plan has been defined and agreed with all stakeholders, the **process automation** concept is implemented in five steps via a predominantly agile approach. The starting point is the conception phase, followed by implementation through to testing. Following a successful go-live, we also provide extensive support as part of a hypercare phase to ensure the seamless introduction of a new process/ technology. A pilot phase based on one process can often be useful at this point as a means of effectively coordinating the above project phases with the customer and checking the suitability of the concepts that have been developed. This ensures that each concept can be improved or refined at an early stage as necessary. The concepts can then be scaled systematically from the analysis stage to implementation using the holistic project approach. A willingness to change processes and embrace innovative approaches is another essential prerequisite for cross-site scaling. In summary, the end-to-end "from strategy to implementation" consulting approach presented here focuses on the needs of the customer as far as possible, compares current market trends with standard process automation solutions, and results in an implementation roadmap that suits a company's overall corporate strategy.

TECHNOLOGY FOLLOWS BUSINESS PROCESS

Complaint Management



Everyone shares the same frustrations when faced with a complaint: the search for a lost package, incorrect debiting of an invoice or your computer being on strike on a Monday morning. There are several reasons why a customer may need to contact a company's complaints management team.

Complaint management is usually the **first point of contact for customers** who have a company-specific problem, whether that it is product related, service related, or a general complaint. Companies face many challenges when handling complaints but being in a position to resolve complaints can represent a key advantage over competitors. For this reason, ensuring that customers identify with a company and good customer satisfaction are essential factors for business success.

Extraction and Distribution of Complaints

In addition to the various communication channels used by customers in this age of digitalization and social media, one major challenge is often the process of classifying complaints into a specific subject area and therefore distributing them to the right contact within the organization. This is where valuable time is often lost when solving problems, and customer satisfaction decreases as a result. The focus when processing complaints is not only finding the problem. The company image, how it perceives customer needs, prioritizes them and deals with problems also play an important role. For this reason, the key challenges of complaint management are the continuous availability of a complaint management team, multi-channel communication with the customer, correct classification and distribution of customer inquiries, and rapid problem solving at the lowest possible cost.

Added Value

One solution for overcoming the challenges of complaint management combines the individual disciplines of artificial intelligence and conventional process automation using software robots (see Figure 1: Intelligent Complaint Management).

Artificial intelligence is used to analyze and process customer inquiries from a wide variety of communication channels, such as social media posts, calls to a call center or a shared mailbox for emails. Using natural language processing and sentiment analysis, artificial intelligence identifies and extracts key terms from the complaint and classifies the request. In addition to using the extracted information, an assessment of the customer's mood can be used to prioritize the request. Once classified, the request is distributed to the conventional RPA technology or the responsible specialist department so that the complaint can be processed. At this point, the assigned clerk checks whether all Figure 1: Intelligent Complaint Management

- the necessary information for automated processing is available. If essential information for automation is missing, the assigned clerk can either supply the information to the software robot (cf. human-in-the-loop models) or manually process the precategorized complaint.
- When used for complaint management, intelligent process automation combines the advantages offered by the individual disciplines of artificial intelligence and conventional RPA. This combination ensures that the interaction with the customer takes place significantly faster, more cost-effectively and potentially in a more targeted way than with conventional methods.

Reporting

Internal reporting is one of the most widely used methods of internal communication for any company. Given the increasing interdependencies within the business world and the complexity of entrepreneurial activities, developing an efficient and intelligent design for reporting structures and information flows is essential for any company. Considering the variety of information sources available from Finance and Controlling departments, usually only a small subset of all potential aspects is relevant for making an entrepreneurial decision. This subset is the result of a data consolidation process, which includes the steps of data acquisition, documentation, preparation, and presentation. In addition, different data pools, systems, and applications from a heterogeneous IT system landscape are often used, leading to inefficiencies in the process of collection, movement, and retrieval of decision-critical data.

Automated KPI Reporting

The Implementation of increasingly innovative techniques offers several different opportunities for customizing and automating reporting structures. Intelligent automation initiatives allow relevant key figures to be automatically calculated, visualized, and dispatched in the appropriate format.

For this purpose, the underlying databases and source applications are first accessed in an encrypted form. The relevant information is extracted from the data pools, and the corresponding system components and tables are transferred to the target application for further processing. Aggregation of the source data based on the necessary organizational units and thus hierarchy levels plays an essential role here. The subsequent visualization via a BI tool selected for this purpose uses live data aggregations from the target database. In this case, KPIs are merely calculated and included as part of the visualization. The underlying hierarchy levels can be included as filters for different report recipients. Based on the recipient group of the report, the automation software selects the relevant report view and exports it to a predefined email structure before sending it to the recipient group. If an error occurs within the process, an error message is sent to the application management team to enable timely troubleshooting.

Added Value

The development and **implementation of an intelligent automation** solution for reporting positively impacts costs and the time-consuming process of information collection, aggregation, and preparation in the form of reports. The intelligent automation solution can analyze the information collected to identify specific patterns and correlations within the data structures and then use these patterns to customize subsequent reports. The report automation solution also enables precise identification of exactly how an insight was generated. Report automation can help businesses to find answers to their day-to-day questions and analyze data, allowing them to scale knowledge and improve decision-making by leveraging those insights.

An initiative of this nature cuts the time it takes to understand a dashboard, in turn increasing overall engagement with and adoption of business intelligence investments by stakeholders. Reports can be adapted to a specific stakeholder group and trusted as consistent and logical across the organization. When implemented in an upstream information acquisition process, intelligent report automation is therefore an ideal initiative for supporting relevant managers in gaining high-quality insights into past business transactions and reporting these to the corresponding recipients of the report.

Ultimately, an intelligent automation solution can not only increase the relevance of reports, but also offer the potential to reduce the time required for creating reports, while also increasing their quality.



Intelligent Automation | December 2021



of businesses say that voice assistants are revolutionary.

63% believe that voice assistants will play as big of a role in their life as smartphone and 58% would rather talk to a device than type it in.

(State of the Connected Customer; Salesforce Report, 2019)



The number of digital voice assistants in use worldwide is about to double between 2020 and 2024.

Forecasts suggest that by 2024, the number of digital voice assistants will reach 8.4 billion units.

(Voicebot.ai, Business Wire, 2020)

Q

HI! HOW CAN I HELP YOU?



Digital Assistants

Even though the very first chatbot was developed in the late 1960s, conversational assistants only became popular among a wide range of users around 50 years later. In addition to becoming more widely used, this solution has evolved considerably in terms of its functionality and conversational capability since it now benefits from the technical advances made over several years, particularly in the fields of artificial intelligence and natural language processing. Since chatbots have evolved from being a bot that can conduct a polite chat and answer simple questions to being a solution that is able to support users with various kinds of tasks in their everyday lives, we refer to this solution as "digital assistants" rather than "chatbots."

Whether they are used to address a need for information on a product or service, or to manage financial transactions, digital assistants are versatile and relevant to several industries as well as multiple phases of the customer journey. Digital assistants can be developed to handle multiple tasks and operate in a human-like form with advanced conversational skills and personality traits, making the technical solution more approachable and likable for users. And since the demand from today's customers for immediate information is independent from time or location, it is not surprising that the popularity of digital assistants is still increasing. 24/7 availability is one of its biggest benefits thanks to the ability to integrate digital assistants into several types of media and devices.

To provide customers with immediate responses to their questions, a voice assistant can be a smart solution since it enables multi-tasking and assists customers by providing information or performing simple tasks. For example, customers can ask questions while on the move or driving a car. The technology uses voice recognition and natural language processing to listen and respond to spoken commands, enabling customers to converse in a natural way.

In-Car Voice Assistants via Mobile Apps



The automotive industry in Germany has been unable to escape the digital assistants trend: Companies have been harnessing the potential of this technology for years. Since cars are increasingly becoming digital products, customers now expect a digital experience while using the car. This expectation is particularly evident in the rising popularity of mobile apps featuring a voice/text assistant that can be used in the car while driving or before/after the journey. These apps assist customers by providing information whenever and wherever they need it. The solution can be modeled into a new or existing mobile IOS or Android app, where customers are able to choose whether they type their question or just speak to the app. The goal is to provide a solution that is easy, intuitive, and based on natural communication.

Before the journey, customers can speak or type to interact with the app. The mobile app itself can be integrated into the infotainment system of the car, as can the customer's smartphone. When handling information requests, the digital assistant can also be configured to respond by providing multimedia content such as an instruction video or a route suggestion that the customer can open in their navigation app, allowing them to plan routes on their phone before even getting into the car. Since the digital assistant is part of the mobile app, further content can also be modeled, such as a completely digitalized vehicle manual. Alternatively, the app can be used as an opportunity to emphasize information about electric mobility to help customers familiarize with their (first) electric car and assist them with finding favorable charging rates or charging stations near their current location.

During the journey, the ability to speak to the app that is integrated into the infotainment system enables a safe, hands-free experience. It is also very convenient for users since the digital assistant can immediately provide the required information that users would otherwise only find by manually operating the infotainment system in the car or looking up the information in the vehicle manual.

A Voice User Interface (VUI) is an indispensable aspect of developing a voice and chat-enabling digital assistant. The VUI allows customers to interact with the assistant via technologies such as speech recognition, natural language processing and text-tospeech for understanding spoken language as well as for responding in speech. A VUI can be added to several different devices, such as smartphones, cars, and home appliances. To model the conversations, a content management system (CMS) can be used to store various conversation items and topics. The items can also be extended by accessing several APIs in order to provide more queries and functions.

Added Value



Implementing a digital assistant can offer multiple benefits for companies. Given that most call centers receive repetitive questions and therefore must spend time answering those same questions repeatedly, digital assistants can be a solution for decreasing the number of simple and frequent inquiries by modeling the questions and corresponding answers into an app. In addition to reducing the number of calls and other forms of contact with the call center, this solution can also help call center agents to focus on complex inquiries that require more support, therefore enabling the call center to operate more efficiently. From a customer's perspective, the time-saving aspect of reaching out directly to the digital assistant rather than having to wait in line until a call center agent is available to discuss their question can enhance the overall customer experience. Having a voice assistant integrated into a mobile app offers further benefits: It ensures that information about a car or another product is accessible at all times, even outside of the car, and enables the customer to easily navigate through the app via voice or text. Every piece of information concerning the car can be found by the customer in the mobile app without the inconvenience of contacting a call center, searching the Internet, or consulting the vehicle manual. The accessibility of a digital assistant is one of its greatest advantages: By being available 24/7, providing a hands-free experience, and allowing customers to choose the method of communication they feel most comfortable with, digital assistants can help to create an exceptional customer experience.



SUMMARY

Based on the examples described, it clear that automation can take place in different processes, in a variety of ways, and through different technologies, such as robotic process automation, machine learning, and many more. With this in mind, the approach chosen for optimizing processes through automation must be equally versa-tile and therefore holistic.

The holistic approach described above allows the core components and technologies suitable for optimization to be identified quickly and easily. Once adapted to the corporate strategy, the best solution can therefore be found for each business process with potential for optimization.

The intelligent automation approach provides a strong foundation from which to implement your digital strategy.

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ENABLING YOU TO SHAPE A BETTER TOMORROW

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