Westernacher
NONSTOP INNOVATION

WESTERNACHER WHITE PAPER

From manual to digital: How process automation revolutionizes the supply chain.

Digitization has improved the supply chain, but three main obstacles hinder further development: low efficiency due to manual labor and errors, lack of visibility leading to missed opportunities, and latency from the feedback loop. This paper explores how automating repetitive tasks can increase efficiency and focus on value-adding work, as well as ways to obtain real-time data for better decision-making. By automating and connecting supply chain processes, a zero-latency supply chain can be achieved.

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Introduction.

With the advancement of digitization in the supply chain over the last decade, businesses benefit from improvements brought by the new technology, but there are still three main obstacles that keep the supply chain industry from further development.

Low efficiency

Repetitive work and processes performed by manual labor are often the main reasons that businesses don't reach their full potential. Furthermore, inevitable human errors within these tedious processes will further lower the business's efficiency.

Lack of visibility

Without visibility, businesses may lose real-time access to the data which may result in the loss of valuable opportunities. Within the current fragile supply chain environment, brought about by the global pandemic and area instability, visibility has gradually become a critical requirement rather than an advantage for businesses and industries.

This paper will discuss how to achieve better efficiency by fully automating the monotonous, day-to-day tasks in the supply chain field. Companies can then focus on more engaging and value-adding work. Furthermore, this paper will also introduce ways to achieve better visibility to help companies gain real-time data to make improved and more responsive decisions.

Zero latency

Today's solutions are interwoven with multidirectional communication. This means sharing updates both upstream and downstream in real-time. By connecting these areas and automating them – we can greatly reduce this feedback loop to achieve a zero-latency supply chain.

Overview of SAP RPA.

SAP Robotic Process Automation (RPA) is a software technology that simulates human actions when interacting with digital systems and software.

Software robots can identify, extract data, and perform a wide range of defined actions like humans. Software robots can, however, do it faster and with greater consistency than we can. Employees are then able to focus on more important, meaningful and creative work.

Focus on more meaningful, creative, and strategic tasks.

With the combination of other modules, SAP RPA can help companies restructure existing processes and automate most of the tedious and repetitive work.

For example, with the integration with SAP RPA, SAP Integrated Business Planning (IBP) can divide products into different categories based on their importance and variabilities. SAP RPA will take over the repetitive predictive work that is of less importance. The planner will then have more time to make strategic decisions on areas with a higher impact.

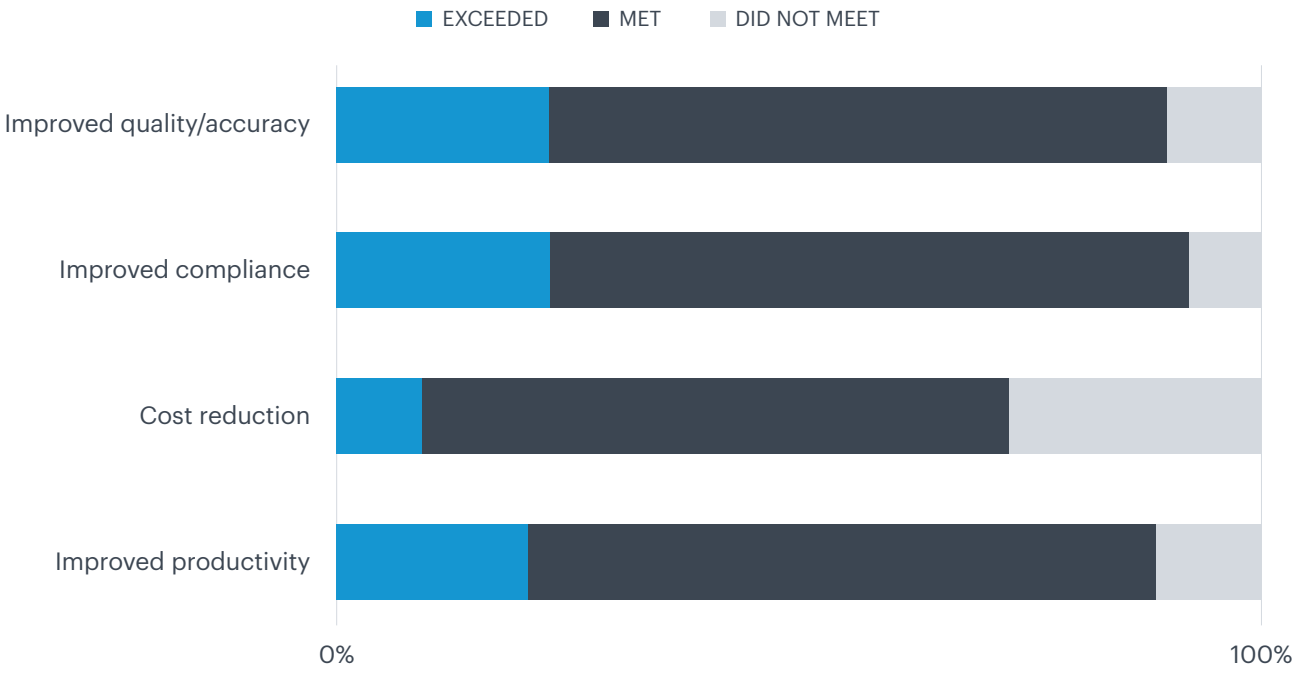
Reduce error and cost. Improve compliance, quality, and productivity.

It is unavoidable for individuals to make mistakes, especially when they are performing large

amounts of repetitive work. Over the past decade, business owners have been trying to come up with solutions that can both reduce expenses and improve the quality and accuracy of their business, such as the development of Lean Six Sigma, and Toyota Production System (TPS). However, those developments are still trying to "reduce" rather than "eliminate" human error. On the other hand, with the development of SAP RPA, businesses can actually "eliminate" human error while reducing labor costs.

Process automation is already delivering value and achieving significant benefits, 53% of respondents have started their process automation journey. The number is expected to reach 72% in the next two years.[1]

Furthermore, the cost of the process automation will be covered by the benefits that are generated within 12 months, if there are an average of 20% of full-time equivalent capacity taken by robots. According to the survey, 86% of the respondents indicated that their expectations of productivity improvements were met or exceeded, and 61% of them indicated that their expectations for cost reduction were met or exceeded.



[1] Deloitte's third annual RPA survey.

Low-code / no-code development

Previously, if business users wanted to develop an app or new processes, they would need the help of an IT team. However, with SAP RPA, restructuring and automating business processes can now be easily done by the business team themselves.

With low-code/ no-code development, businesses no longer need to wait for a technical expert to realize their needs through a programming language. Business users can innovate the process on their own through the intuitive drag-and-drop method to tackle their business needs and get results faster.

Moreover, if anything needs to be changed within the automated processes, business users will only need to add or remove certain steps within the platform, instead of having to wait for assistance.

Within low-code/no-code development, businesses can implement their innovation in a cheaper, faster, and more agile way.

Combining with end-to-end business processes

With the combination of Business Process Management (BPM), SAP RPA manage business processes by bringing all activities (human and automated) into a sequence structured process flow. This can help the company collaborate and foster teamwork.

Furthermore, with the support of the extension standard process from SAP S/4HANA, TM, Ariba and various SAP applications, business users will not need to worry about any additional integration, thereby avoiding any challenges due to the incompatibilities within different systems.

Finally, prebuilt capabilities, templates, predeveloped content, and bots from a rich ecosystem of partners and our community will enable users to fully focus on revolutionizing their business process across different modules.

Embedded AI capacities

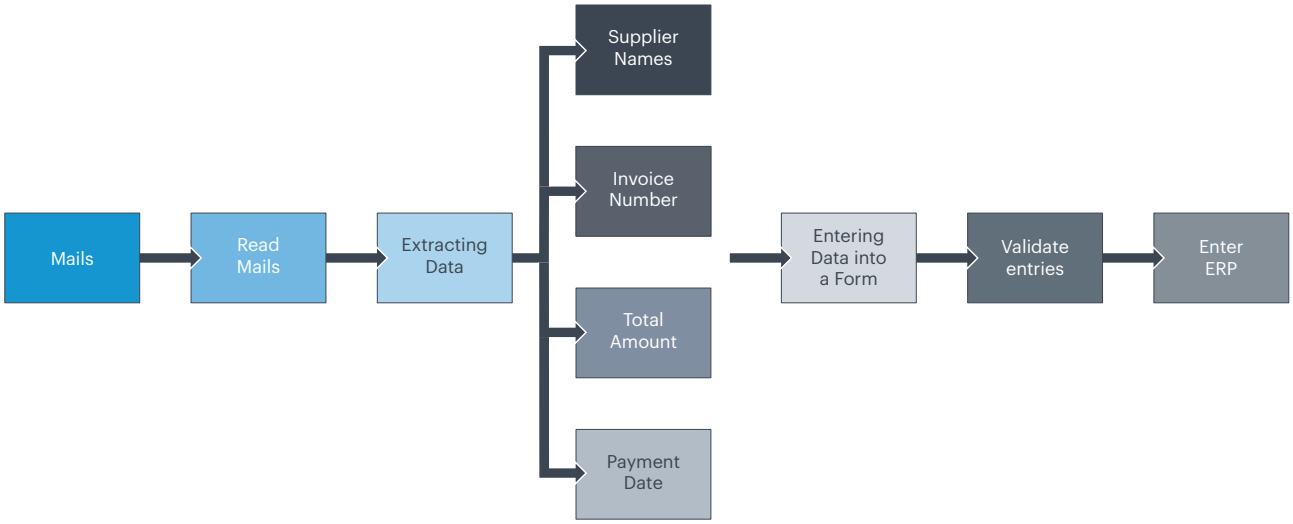
Despite the fact that the RPA bot can help business users significantly improve their efficiency and productivity, they are not yet able to help users draw any conclusions. With the help of machine learning, these bots can become more intelligent.

Extracting data

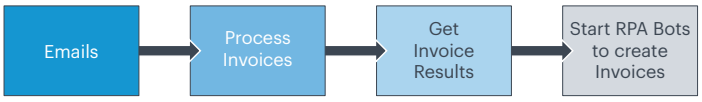
With integrated ML functionality combined with RPA bots, SAP Intelligence RPA can help

businesses automate their end-to-end process. A powerful ML system will enable capability for bots to not just process data but also analyze it.

Take data extraction as an example. Previously, businesses received potentially millions of invoices from their suppliers about their upcoming payments. With technological advancement, the only change in this process is from mail to email. Staff will still need to read those attachments and manually enter the data into their ERP system.



Manual Process



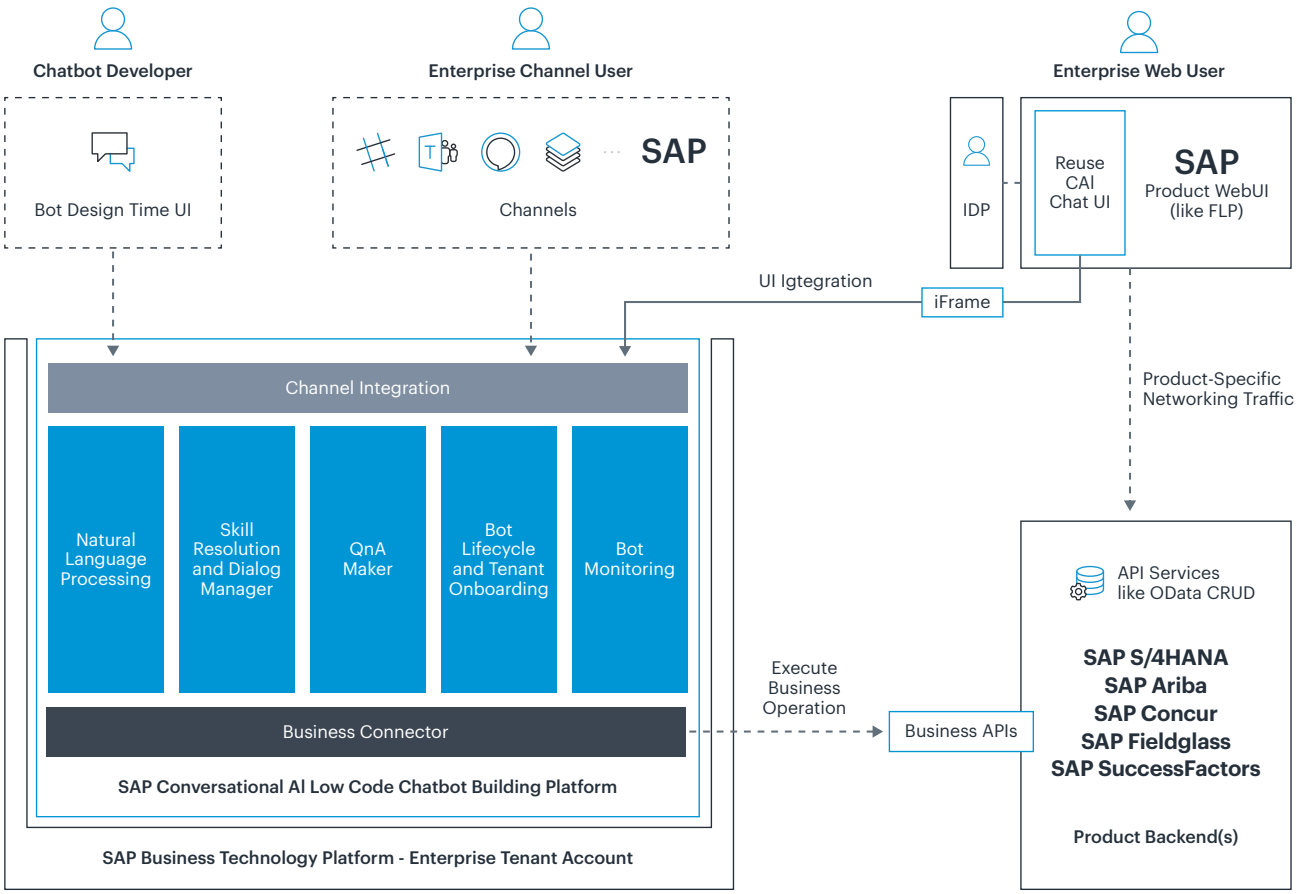
Automatic Process

The SAP Intelligence RPA bot will periodically query mailbox related invoices with attachments. The ML capabilities will recognize the word in PDF files and automatically convert them into data with the required format. Finally, the automated bot will create supplier invoice information into user's ERP system as required.

Conversational AI

SAP Conversational AI can be implemented in different departments within businesses. It can help business users to facilitate processes and handle time-consuming tasks. The implementation of SAP Chatbot enables better customer service, facilitates problem-solving, and simplifies notifications and alerts.

Building Blocks and Integration into SAP Solutions



Here are some benefits of SAP Conversational AI in different user cases:

Customer Service

- SAP Conversational AI can handle multiple business users' requests at the same time.
- It can respond to customers 24/7. This is especially useful for global enterprises that have customers in different time zones.

- It can be integrated with different platforms such as WhatsApp and Microsoft Teams. Business users will not need to open their laptops during travel time. They can access information anywhere and at any time.

Supply chain management

- Different SCM modules and applications can be integrated.
- They can connect suppliers, customers, manufacturers, and business partners on one platform.
- They can respond to different supply chain data requests based on order number or customer ID.
- They can monitor and send alert messages to key users according to the parameter previously set up for the warehouse, vehicle resource, etc.

Advanced ML algorithm makes planning more accurate

Different from previous mathematical prediction methods, with ML integrated, prediction based on a different model and by learning the pattern by themselves can be achieved.

According to the Arla[2], SAP IBP and RPA can help increase the overall forecast accuracy for its UK market from 82.43% to 84.85% (a 2.42% increase). For all relevant SKUs and for other markets, whole categories increased by more than 5%.
Time spent on manual, repetitive forecasting tasks was reduced by well over 10%.

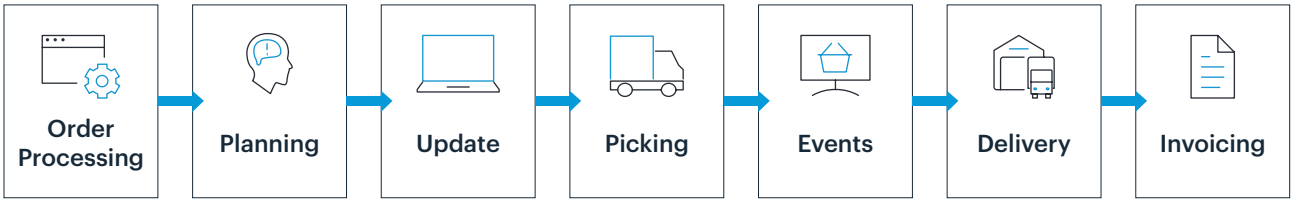
[2] SAP Arla story.

Industry examples.

SAP RPA's role in digitalizing the supply chain

Over the past decades, companies have already realized that the supply chain is a vital part of business. The ability to manage this process will reflect greatly on the performance of a company. Despite millions of dollars having been invested, a completely digitalized supply chain process may still not be fully realized.

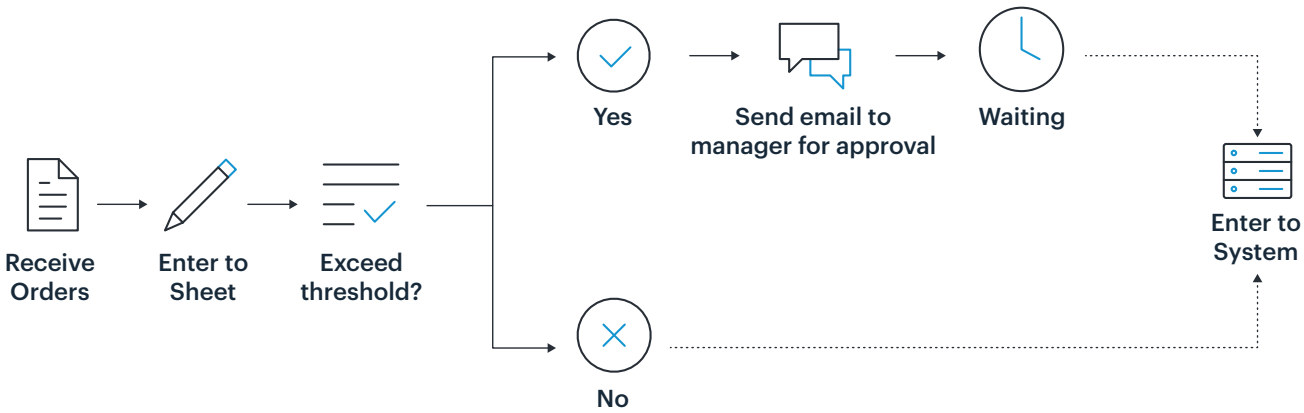
SAP RPA can help companies solve the pain points of their business processes. With the following examples and real case implementations in different industries, we can have a better understanding of the use case of SAP RPA.



Order processing

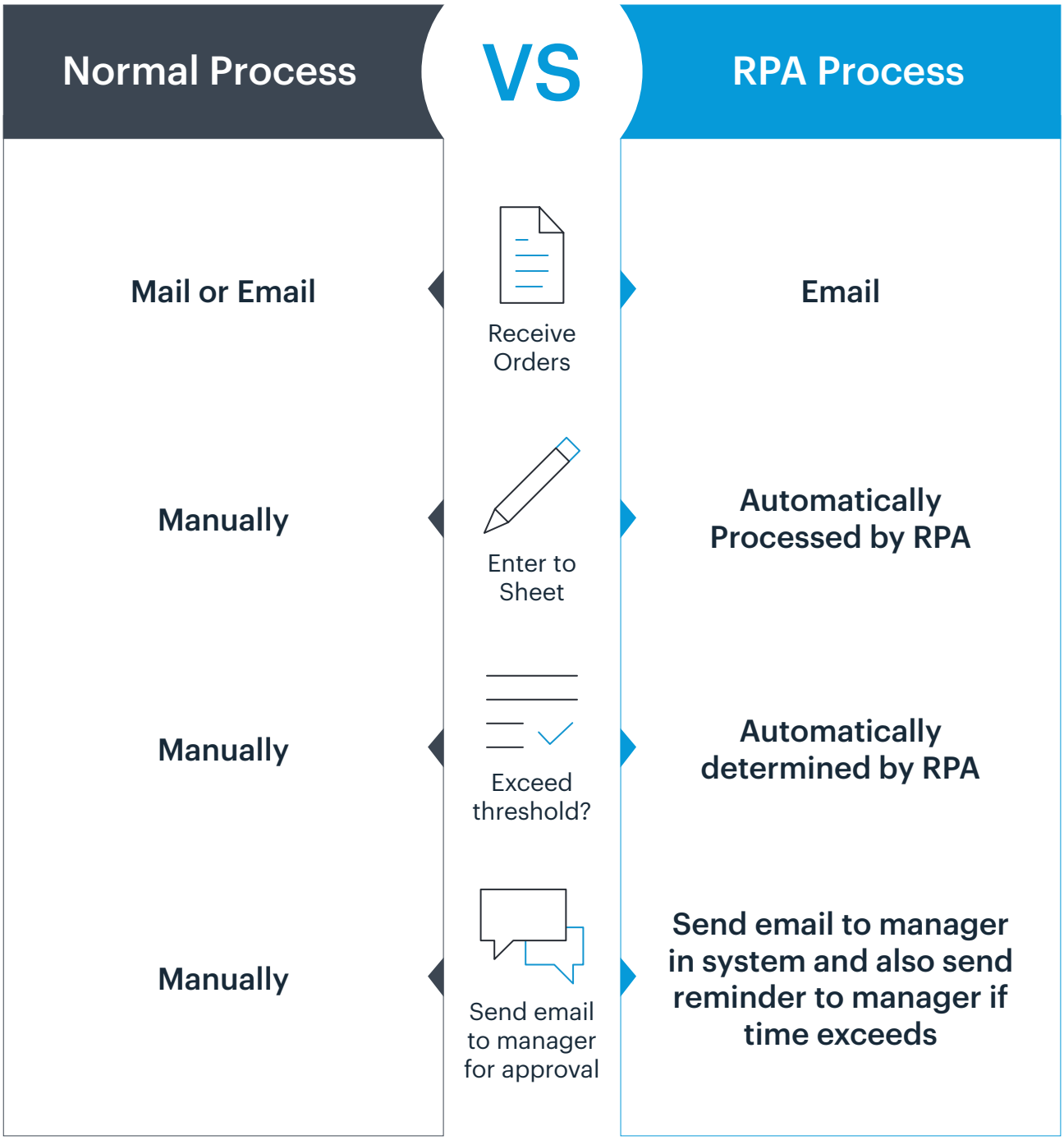
Processing orders can be a frustrating process, especially in large quantities. It is inevitable that errors may occur. Correcting errors takes time and may be costly.

The following is an example of a typical order processing process:



These steps can take days to process, especially when dealing with large sales orders. In some circumstances, companies may lose sales opportunities because of a lack of efficiency.

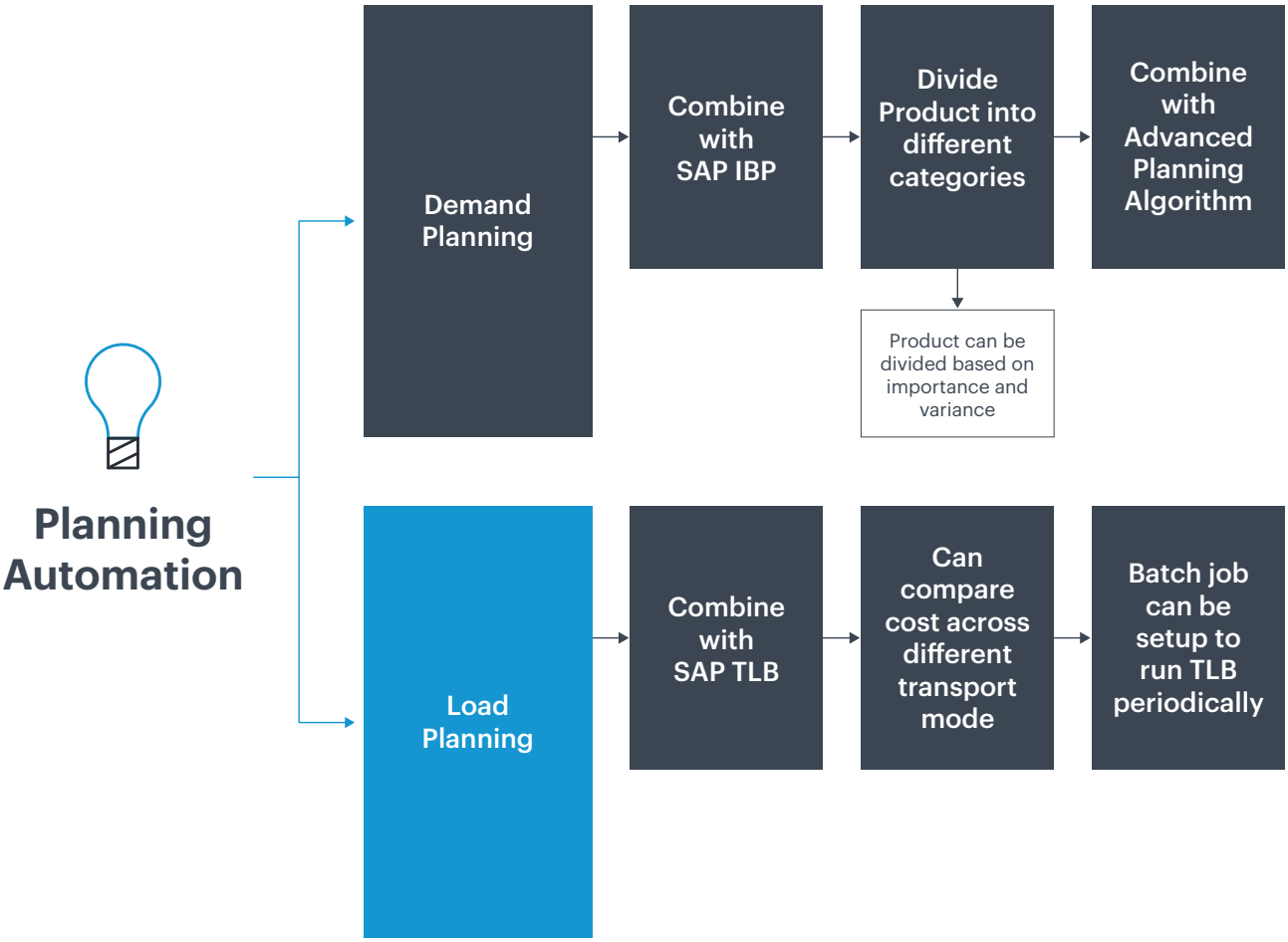
The use of SAP RPA will enable the company to greatly reduce the use of manual labor as they will be able to hand over the relevant paperwork to the SAP RPA bots. This will greatly reduce cost and errors.



According to LY iTECH[3], a global precision manufacturer, SAP RPA successfully eliminated repetitive manual process for scenarios such as importing orders received externally and processing daily production orders, as well as working on exceptions and verifications. This intelligent bot helped the company save 300 hundred-person hours per month and greatly reduced human errors, which resulted in improved data accuracy.

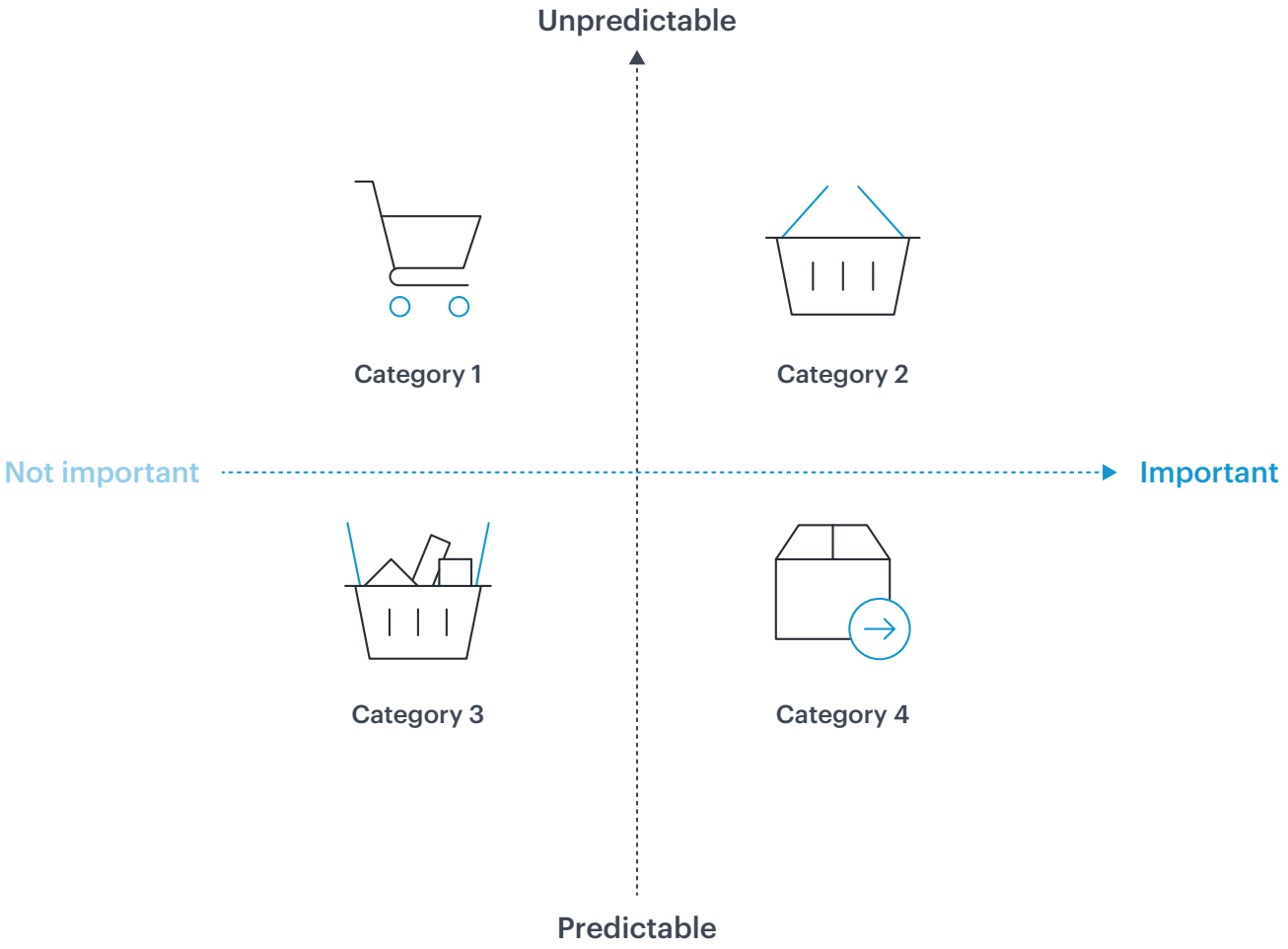
Planning

The capabilities and speed of businesses to react to changes are essential for business to survive and thrive, especially during these challenging times.



[3] SAP success story blog LY iTECH.

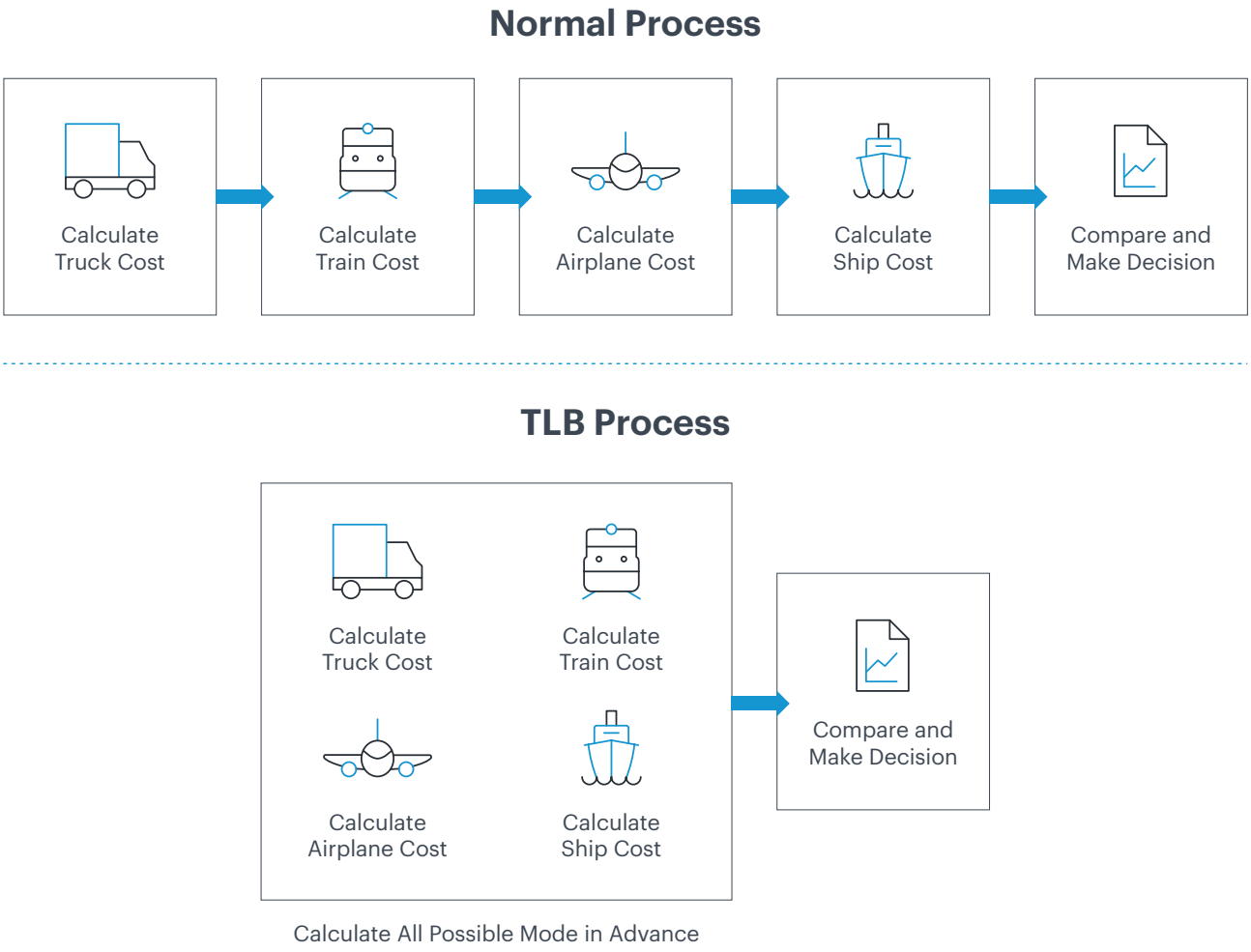
Demand planning – Based on the importance and variability of products, products are divided into four different categories. SAP RPA will take over the planning activities in Category 3 as their demands are the easiest to predict and some errors in the prediction will not have a huge impact on the business.



For other the other three categories, SAP Intelligence RPA can also take over the planning process with its advanced machine learning algorithms, if needed.

Furthermore, with the help of process automation, all jobs can be run in the backend of the system with the parameter setup in advance. A huge amount of time will be saved, and planners will be able to focus on complex planning activities. An alert will be automatically triggered by the system when certain parameters exceed the limit set up in the system.

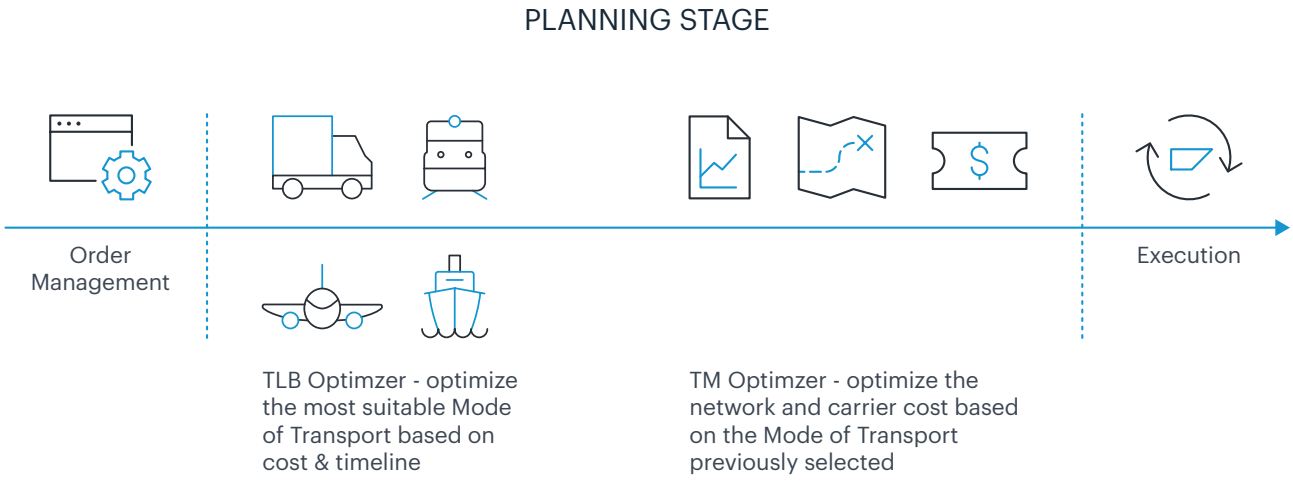
Transportation Load Building (TLB) – With the growing transportation resource shortage, improving the utilization of transportation resources is not just a topic for logistic service providers. Being able to optimize the resource utilization for shippers can also help companies save costs.



This is unlikely to be a big issue for companies that only have one transportation lane, but it could be a big issue for companies that have multiple transportation lanes to manage. In this ever-changing environment, conditions may change so quickly that planners are not able to recalculate them in time.

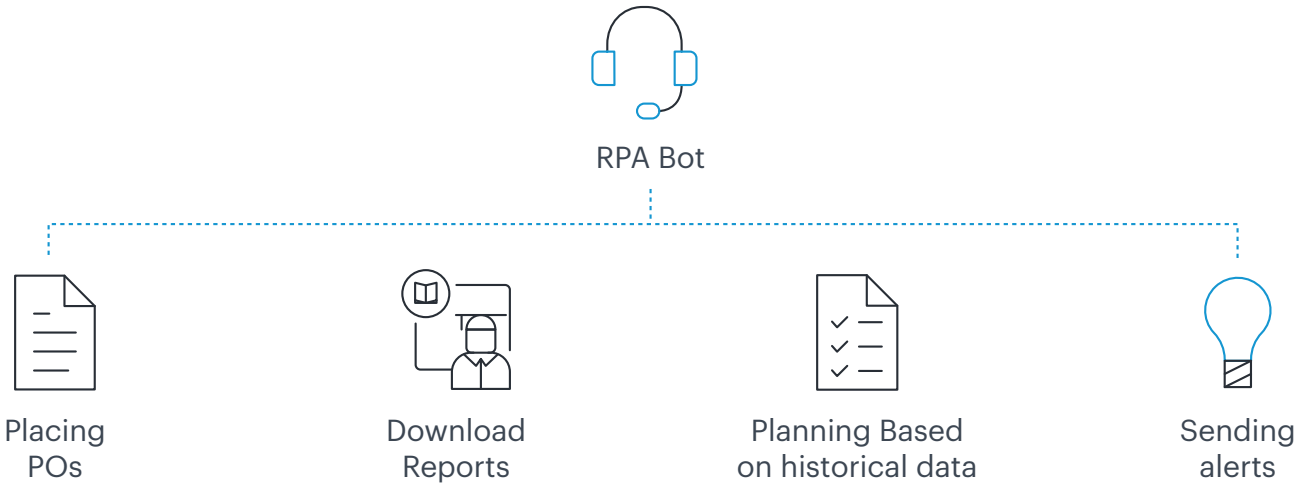
Similarly, planners can also set up a batch job that runs automatically in the system with predefined parameters. Planners will only need to check the loads in the Fiori app occasionally to see if there are any modifications that need to be made.

Comparation between TM optimizer vs TLB optimizer



Picking

Currently, in warehouse management, many business users work remotely and keep a social distance because of local policies. This can have a significant impact on the efficiency of the warehouse.



With the SAP RPA custom bot, the warehouse manager can remotely trigger the bot once confirming the goods have been received. The bot will then automatically perform activities like placing POs, downloading reports from a third party system, planning based on historical data, and sending alert messages based on predefined product levels, etc.

According to the Standard Manufacturing[4], a cleaning and sanitizing product manufacturer faced a great demand fluctuation during COVID-19. SAP RPA helped them to:

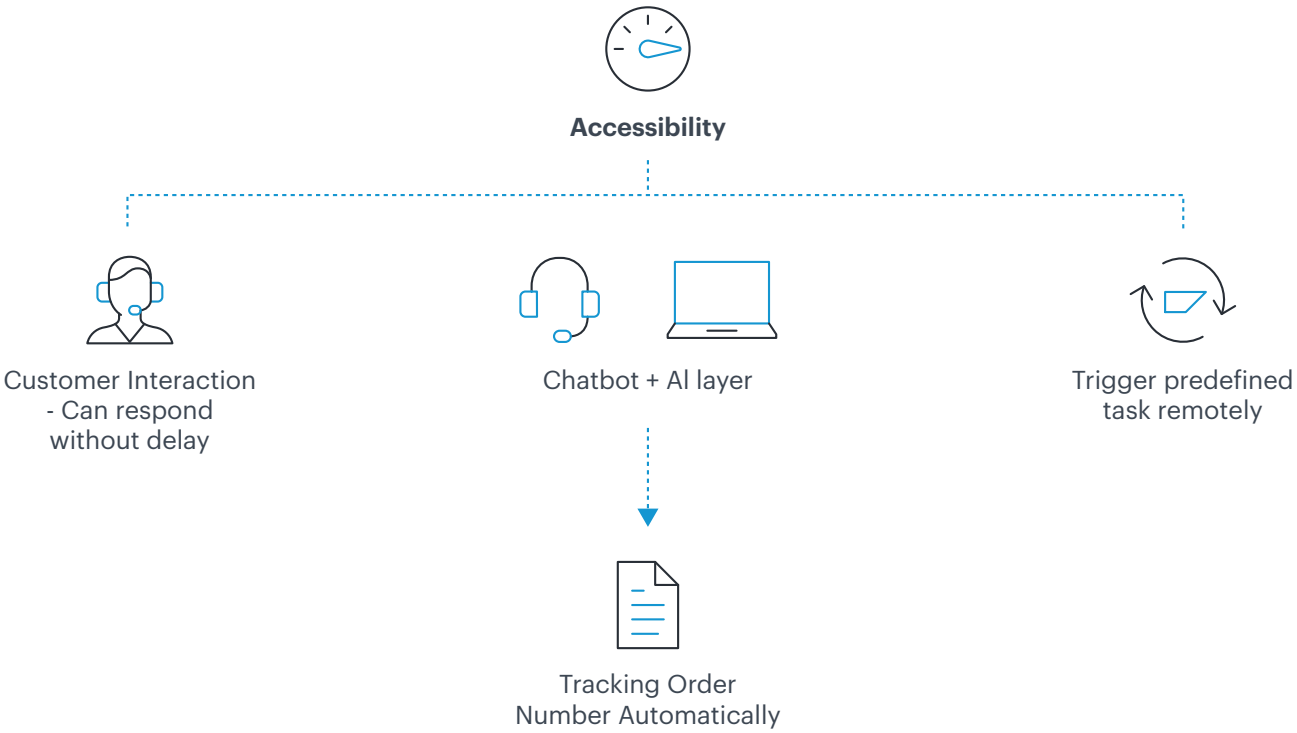
- Achieve a 28% increase in revenue with a lower operations expense-to-revenue ratio
- Get a 7x year-over-year increase in inventory turnover
- Improve their ability to cope with massive amounts of data, using automation and intelligent technologies offered through SAP Intelligent RPA
- Decrease their workload significantly, allowing the sales team to focus more on customer engagement, rather than sales operations, and provide faster responses to customers

Events monitoring

Visibility and accessibility are becoming more and more important for businesses. However, because of varying limitations, staff may cause a delay in responding to various issues.

Accessibility – When businesses are dealing with customers who are based in a different time zone from them or they want to get real-time data during a trip, they will have to wait until they have the opportunity to log into the system. This may result in a loss of valuable opportunities.

[4] SAP success story blog standard manufacturing.



SAP Conversational AI is the perfect solution that helps to solve these problems. With the integrated AI layer, it enables users to customize their intelligent chatbots in their system to automate tasks and workflows.

10x

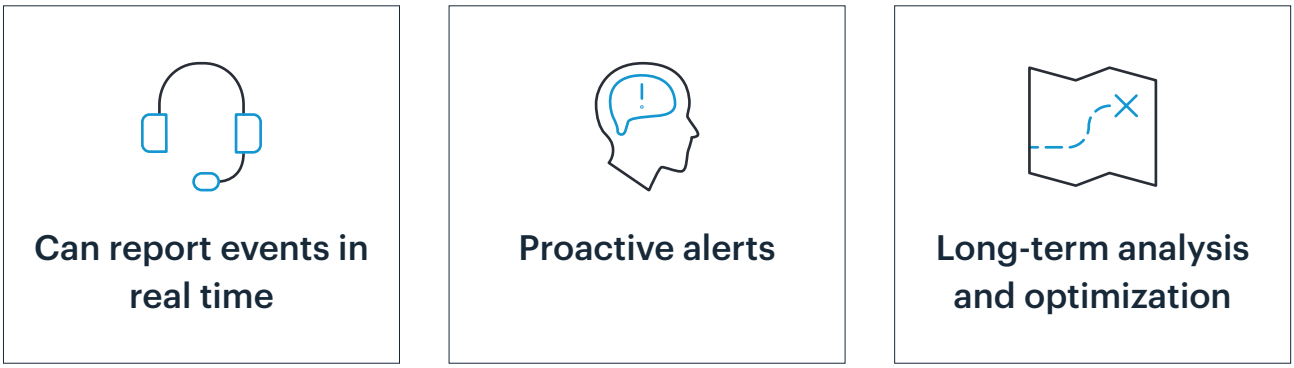
Speed on data entries related work

20%

Time on plant inspections

According to Uniper[5], a powerhouse of the world energy market, implementing SAP RPA helped them cut their time on the plant inspections in half and achieve 10 times the speed on data entry-related work.

Visibility – The Internet of Things (IoT) refers to interconnected physical devices that can monitor, send, and exchange data. With the combination of SAP RPA, it can perfectly fit today's need for real-time visibility and connectivity to all parts of the value chain.



When a fleet is en route, real-time tracking of the fleet can be difficult to achieve. The status often depends on the reporting done by the driver. This makes the data onerous to collect and analyze, not to mention generating proactive alerts based on the data.

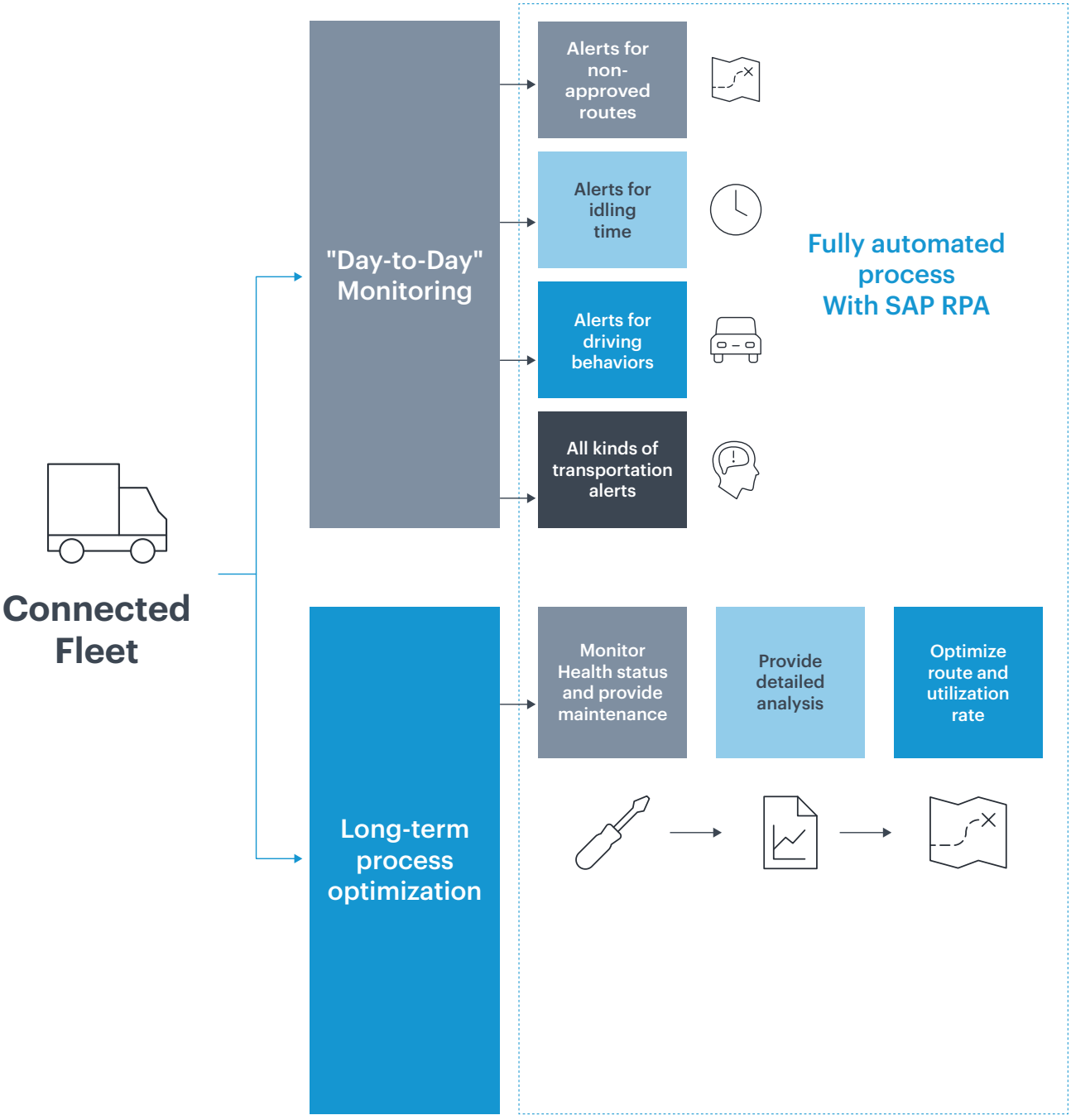
With the combination of the RPA and IoT, drivers will not need to do any reporting. The IoT within the fleet will collect the data and the RPA will automatically process the data and report back to the center, if needed.

[5] SAP Uniper story.

Delivery – Westernacher Connected Fleet

Connected Fleet is a perfect solution developed by Westernacher, based on the SAP BTP, for the scenarios mentioned above. With sensors installed on the fleets, the supply chain team can obtain real-time data for shipment statuses from the shipping location to the destination location.

There are two types of business applications that can be used for business fleet management.



"Day-to-Day" monitoring – Connected Fleet can help businesses monitor fleets daily. There are alerts that can be set up for non-approved routes, idling times which exceed thresholds, non-regulation driver behavior, as well as various other kinds of transportation alerts which can help adjust arrival times based on traffic patterns.

Long-term process optimization – With Connected Fleet, businesses can also monitor the fleet health status and enable predictive maintenance to prolong the lifespan of the fleet. During the transportation stage, it will also take utilization rate, route, capacity, delivery time, and fuel consumption as parameters to provide a detailed analysis of customer's fleet. It will also help optimize the route and improve the utilization rate.

With the combination of SAP RPA, Connected Fleet fully automates the key processes, so that fewer human resources are needed to monitor fleets. Also, we can further define key measurements for each sensor to generate proactive alerts in the system, identifying risks in advance and avoiding further loss.

Adding visibility with Westernacher Supply Chain Control Tower.

Supply chain visibility refers to the ability of a business to track the flow of products and information through the supply chain, from raw materials to finished products. It is a critical aspect of supply chain management as it enables businesses to identify bottlenecks, manage risks, and optimize their apoperations.

Supply chains are facing challenges from port congestion to blocked routes like never before. Moving products end to end from the ocean is more complicated than ever. It has become a major blind spot for shippers when planning the availability of goods for manufacturing or delivery to stores.

In today's globalized economy, supply chains have become increasingly complex and interconnected. As a result, businesses are facing a growing need for supply chain visibility to manage their supply chains effectively. In the following, we will explore the importance of supply chain visibility, its benefits, and the challenges involved in achieving it.

Importance of supply chain visibility

Supply chain visibility is critical for businesses because it enables them to:

1. **Identify bottlenecks:** By tracking the flow of products and information through the supply chain, businesses can identify bottlenecks and inefficiencies in their operations. This enables them to take corrective actions and optimize their supply chain processes.
2. **Manage risks:** Supply chain visibility enables businesses to identify and manage risks in their supply chains, such as supply disruptions, quality issues, and compliance violations. This helps them to reduce the impact of

these risks on their operations and improve their overall supply chain resilience.

3. **Improve customer satisfaction:** By having visibility into their supply chains, businesses can provide more accurate and timely information to their customers, such as delivery times and product availability. This improves customer satisfaction and helps businesses to retain their customers.
4. **Increase operational efficiency:** By optimizing their supply chain processes, businesses can reduce costs, improve productivity, and increase profitability. Supply chain visibility plays a critical role in enabling businesses to achieve these benefits.

Benefits of supply chain visibility

The benefits of supply chain visibility include:

1. **Improved inventory management:** Supply chain visibility enables businesses to track their inventory levels in real time, which helps them to optimize their inventory management and reduce the costs associated with overstocking or stockouts.
2. **Reduced lead times:** By having visibility into their supply chains, businesses can identify bottlenecks and inefficiencies in their operations and take corrective action to reduce lead times. This improves their ability to respond to customer demand and reduces the time it takes to get products to market.
3. **Improved collaboration:** Supply chain visibility enables businesses to collaborate more effectively with their suppliers, customers, and logistics partners. This improves communication and helps to reduce the risks associated with supply chain disruptions.
4. **Enhanced supply chain resilience:** By managing risks and optimizing their supply chain processes, businesses can improve their overall supply chain resilience. This enables them to respond more effectively to supply chain disruptions and maintain business continuity.

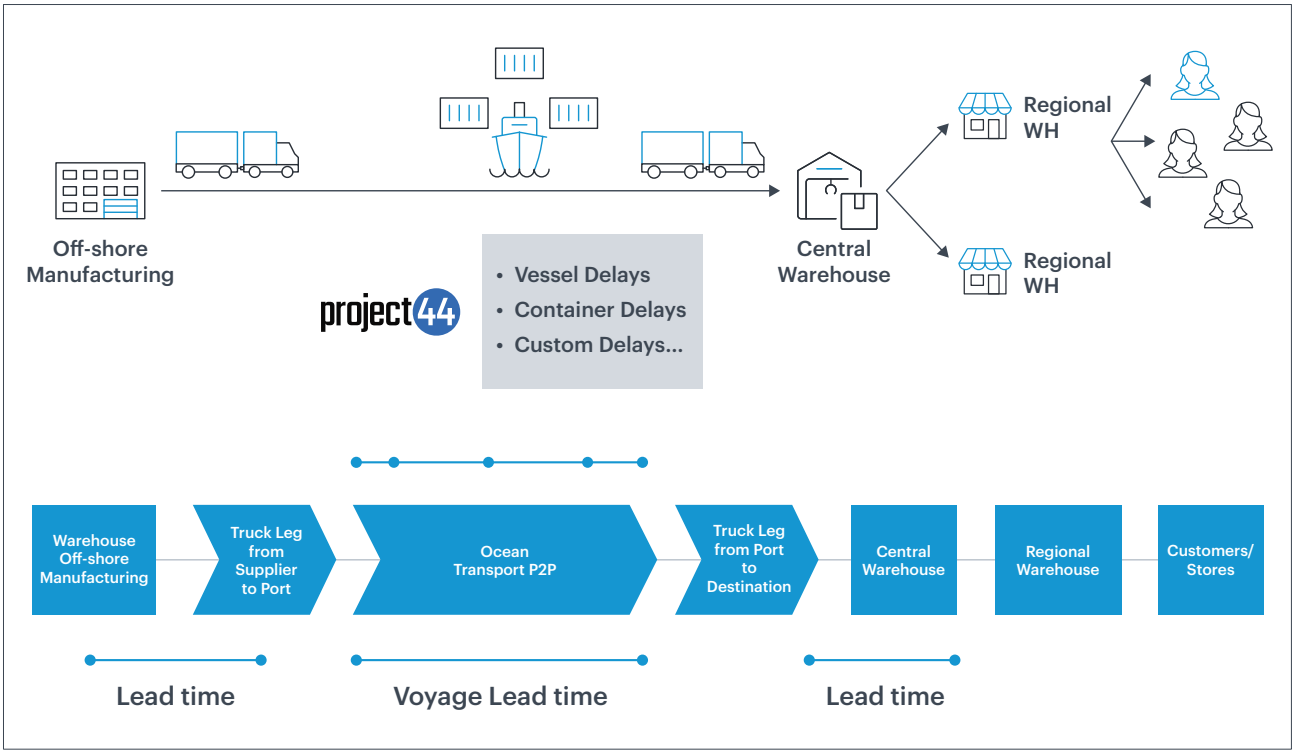
Challenges of achieving supply chain visibility

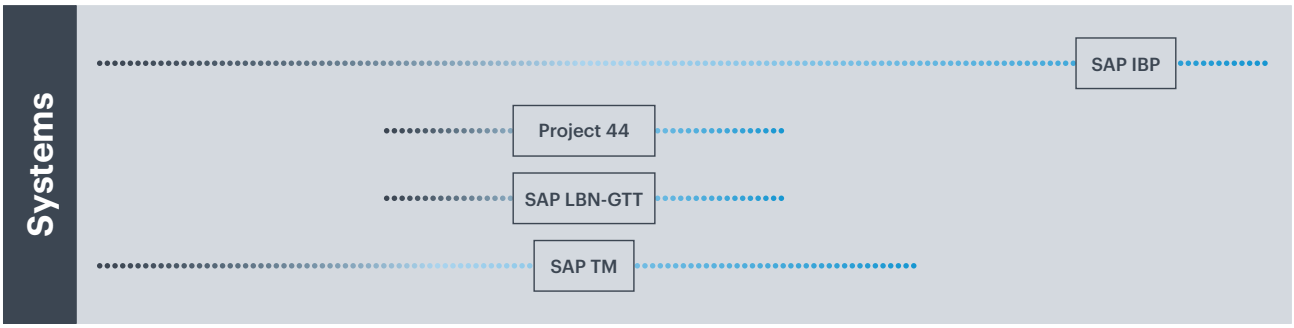
Achieving supply chain visibility is not without its challenges. Some of the key challenges include:

1. **Lack of data:** Supply chain visibility requires access to timely and accurate data from multiple sources. However, many businesses struggle to collect and integrate data from disparate systems and sources, which can make it difficult to achieve visibility.
2. **Complexity:** Supply chains are becoming increasingly complex and interconnected. This can make it challenging to track the flow of products and information. This complexity can lead to bottlenecks, inefficiencies, and supply chain disruptions.
3. **Cost:** Achieving supply chain visibility often requires significant investments in technology, processes, and people. This can be a significant barrier for many businesses, particularly smaller ones.
4. **Data security:** Supply chain visibility requires the sharing of sensitive data between multiple parties. This can create security risks, particularly if the data is not adequately protected.

At Westernacher, we follow a holistic approach to provide visibility and a value-driven framework for business by combining SAP products with Westernacher innovation. We utilize four SAP products to derive the customer value in a holistic and scalable fashion as demonstrated in Figure 1 below.

1. **SAP IBP:** SAP IBP provides the capability for visualizing the real-time monitoring of the shipments on a control tower and connecting the real-time visibility to the demand forecast/ delivery.
2. **SAP TM:** SAP TM supports transportation demand planning and has a predictive logistics capability to respond to the frequent changes that occur as a result of gaining real-time visibility. It also automatically reduces the impact to multi-modal transportation plans.
3. **SAP BN4L-GTT:** Global Track and Trace acts as an intelligent layer between the company's internal landscape and external parties to receive the visibility data.
4. **Project44:** Global logistics technology company project44 provides visibility data from the carriers or freight forwarders.





SAP IBP	SAP TM	SAP GTT	Project 44
Understand where items are in the supply chain	Perform Transportation Planning and Receive Execution Information	Understand the container location	Provides Near Real time container tracking information from multiple carriers
Identify critical situation through Alerting	Understand where container is	Keep track of Container Journey	Provides Delays from Carriers
Identify and tracks actions	Respond to impact of delays in Transportation	Generate Alerts for Container Delays	
	Predict the ETA at warehouse	Understand Impact of delays in Transportation	

Fig. 1: Holistic Solution Approach for Visibility

Once visibility is gained, it is important for businesses to move towards enriching their capabilities in the control tower. This can include sustainability and pro-active alerting, leading to a more autonomous future. Businesses can achieve this in a four-stage approach as described in Figure 2 below:

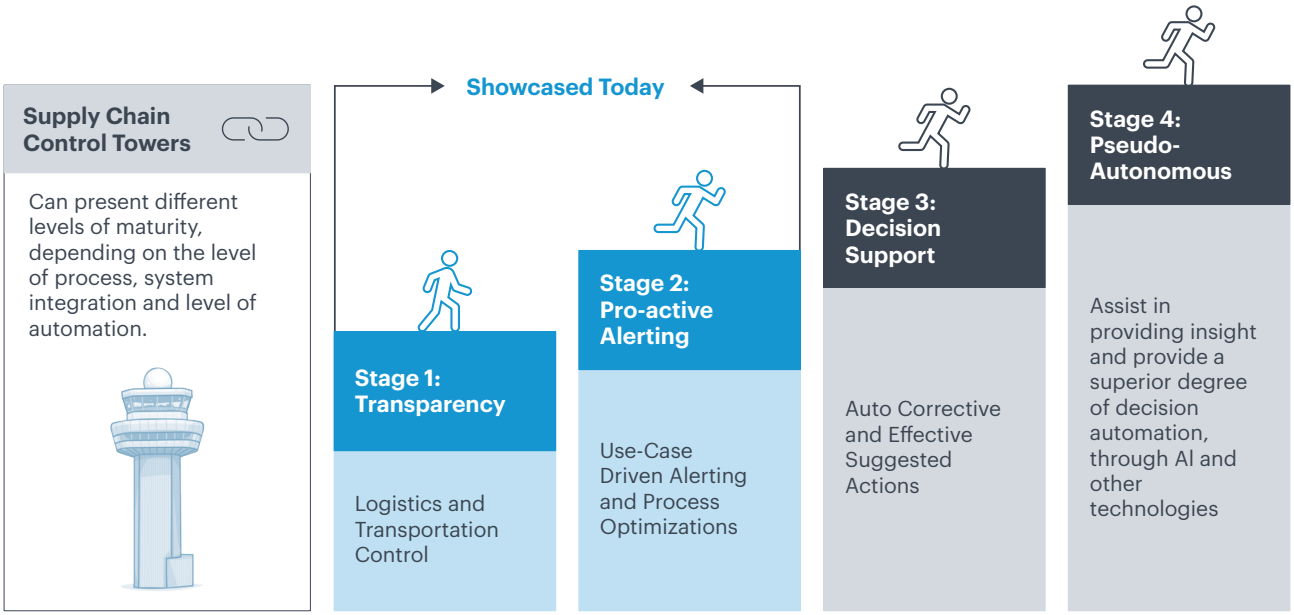


Fig. 2: Stages towards Self-driving Supply Chain

Conclusion.

Supply chain visibility is critical for businesses looking to optimize their supply chain operations and improve their overall supply chain resilience. By identifying bottlenecks, managing risks, and optimizing their operations, businesses can reduce costs, improve productivity, and increase profitability. However, achieving supply chain visibility is not without its challenges. Businesses must be willing to invest in the technology, processes, and people necessary to achieve it. While data security concerns and the complexity of modern supply chains are real, the benefits of supply chain visibility far outweigh the challenges. As supply chains continue to become more complex and global, the importance of supply chain visibility will only increase. By prioritizing supply chain visibility, businesses can position themselves for success in an increasingly competitive marketplace.

Start your digital transformation with Westernacher.

Westernacher has been innovating business and IT for more than 50 years. We are successful in helping our customers with many different transformation initiatives by providing solutions for operational, organizational and technical issues:

Technical:

From implementing TM, YL, EWM, S/4HANA, SCE and other SAP solutions to developing custom ABAP and Fiori solutions.

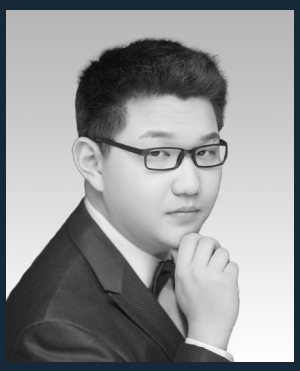
Organizational:

Supporting businesses in their transformation into becoming a merchandise-focused retail organization. Providing an engaging vision and training to realize quick wins and removing (cultural) barriers.

Operational:

Developing innovative business processes to make the most of the new technology and information. Improving KPIs and creating KPPs to move the company from a reactive stage to an orchestrating stage.

To provide you with a better understanding, we offer an Inspiration Day, where we show you what a SAP TM- centered IT landscape looks like and how it might impact your company. This is achieved through demonstrations and discussions with our logistics experts.



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