



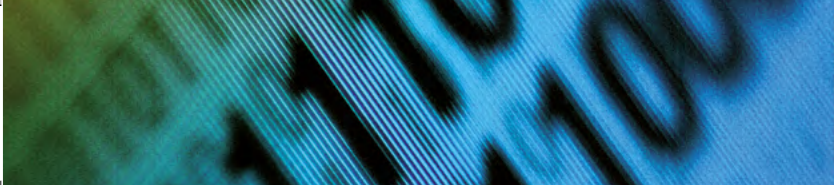
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AUTOMATION TECHNOLOGY

**Maximize Your Resources, Modernize and Optimize
Your Goods and Materials Flow to Gain a Competitive Edge**

PSI Technics leverages over 20 years
of experience in the field
of intralogistics.
Renowned customers from around
the world benefit from our
intralogistics products and services.





OUR PERFORMANCE ANALYSIS APPROACH

You have been working to streamline your intralogistics facility for years or even decades. Today, your value chain is as complex as it is sophisticated. More importantly, it is absolutely imperative for the success of your company to remain flexible in today's hyper-competitive environment. To be able to take full advantage of the complete potential your facility has to offer, evaluating intralogistics processes and components from a single point of view is not enough. Industry 4.0 is but one of the trends successful companies are considering that has opened up revolutionary possibilities for productivity increases.

We examine your intralogistics facility from a variety of perspectives to provide you with a com-

prehensive analysis of your intralogistics processes and to reveal any hidden optimization potential.

Our consultation and analysis portfolio consists of the following modules:

- >> **MODULE 1**
Motion Analysis
- >> **MODULE 2**
Analysis of the Logistics Process
- >> **MODULE 3**
ROI Analysis

MODULE 1 :: Motion Analysis

The motion analysis includes an in-depth motion path evaluation of your rail-guided vehicles and conveyor systems

Highly precise laser distance meters that are attached via magnets record the complete motion sequence of your system and transmit the recorded data to a powerful computer that outputs graphical representation of the system's motion path.

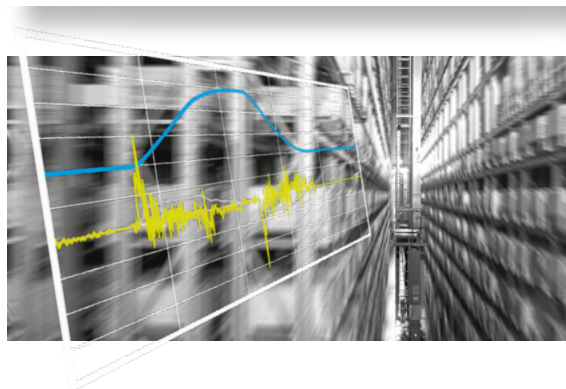
We use the recorded data (e.g. distance, acceleration and velocity) to perform a detailed analysis of the system's kinematic behavior to detect a wide variety of crane- or track-related weak spots – such as oscillations, skewing, positioning disturbances, uneven rail joints, extensive wheel flange or guide roller wear – and subsequently analyze and document the results to clearly identify optimization potential.

Sample applications:

ASRS and rail-guided vehicles, such as stacker cranes, hoists, crane systems, shuttle cars, freight elevators

Your Benefits:

- >> Reveals causes of wear and disturbance throughout the system and enables the categorization of potential causes of failure
- >> Highlights significant maintenance and repair cost savings
- >> The analysis data represent the untapped potential of your system
- >> A proven way to determine potential throughput increases while reducing system wear and tear





MODULE 2 :: Analysis of the Logistics Process

We examine your intralogistics process – from incoming goods to the picking and packing for outbound logistics.

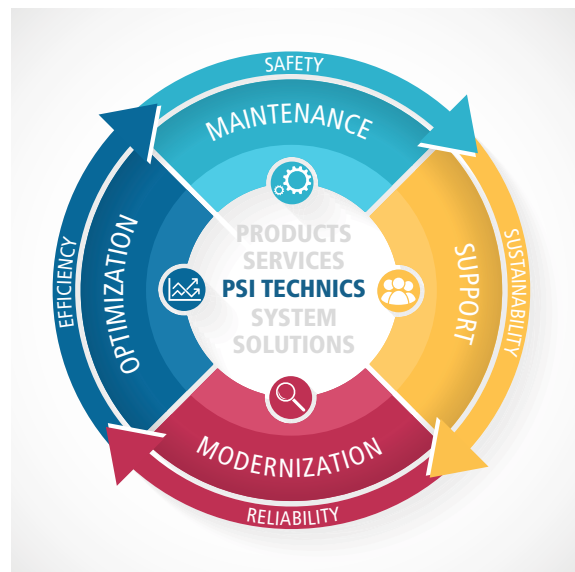
We take an in-depth look at your warehouse and identify optimization potentials in your value chain. Our approach includes analyzing and evaluating your warehouse management system (WMS), the material flow of individual goods as well as picking zones, motion-related processes and handling times for incoming or outgoing goods.

- >> An in-depth examination of your intralogistics process
- >> Analysis of weak spots and optimization potential
- >> Helps to ensure that every link in the production chain works perfectly together
- >> Risk and safety assessments

All of the above enables us to evaluate your warehouse strategy to identify and eliminate bottlenecks and offer specific recommendations and proposals that allow you to fully exploit your facility's automation and optimization potential.

This ensures that your intralogistics workflows are perfectly integrated into your supply chain, which enables greater cost and time savings with regard to upstream/downstream processes.

Our know-how and experience keep intralogistics facilities of renowned production companies across all industries moving – whether it's about steel warehousing or production workflows in the automotive industry.



Your Benefits:

- >> Thanks to our long-standing experience in the field of process automation we provide customers with relevant services that are tailored to their needs
- >> Comprehensive support and optimization, including third-party processes and products
- >> Accelerated warehouse motion sequences and reduced system wear
- >> Continuous process monitoring
- >> Cost-effective integration of new products or processes into existing facilities
- >> Extensive technical know-how
- >> Industry-independent
- >> Fast response, available 24/7



MODULE 3 :: ROI Analysis

Maximize your resources and optimize your goods and materials flow to gain a competitive edge

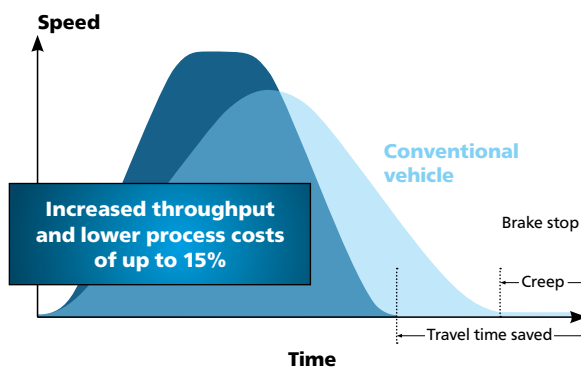
We calculate potential cost savings and turnover increases for you that are based on our analysis data for enhanced ASRS throughput obtained from modules 1 and 2, providing a clear overview over the results, so you can make an informed decision about potential optimization investments.

By leveraging our experience with mechatronic systems in intralogistics facilities we are able to translate motion- and process-related data into Key Performance Indicators (KPI) and provide recommendations to improve the productivity of your existing equipment.

We also calculate the investment risk that is associated with potential modernizations as well as the corresponding ROI.

Example: Increased productivity and throughput offer economic advantages

- >> Throughput increases enable profitability gains
- >> Energy savings
- >> Maintenance and repair cost savings
- >> Savings due to reduced failures and disturbances
- >> Reduced mechanical stress and wear for an increased facility lifespan



Increased life-span

Cost savings

Up to 99,999% repeatable, error-free positioning

Reduced wear

Up to 97% less oscillations

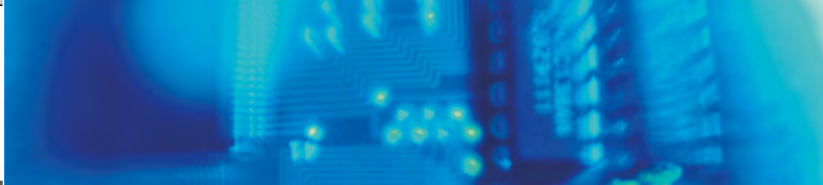
Up to 30% less mechanical stress

Up to 10% energy savings

Extended maintenance cycles

Up to 98% faster end positioning

Longer potential life



AUTOMATION TECHNOLOGY

We Assist You Every Step of the Way to Give You a Competitive Edge

If desired, we assist you with all aspects of the modernization process of your intralogistics facility. Our modernization approach consists of **five steps**:

1.

A comprehensive analysis of the current warehouse conditions

We examine your intralogistics from the above-mentioned perspectives to provide you with an in-depth analysis of the actual condition of your facility. Apart from a Motion Analysis of your rail-guided vehicles we examine your intralogistics processes and perform a profitability analysis.

2.

Revealing modernization and optimization potential

Based on the analysis of the current warehouse condition, we reveal modernization and optimization potentials for rail-guided machines, material and information flows, warehouse logistics, warehouse management as well as energy management, aiming to reduce costs, increase throughput and ultimately enhance the productivity and longevity of the critical supply chain assets in your facility.

3.

Custom recommendations and solution proposals

We provide you with specific recommendations and proposals that will help you to fully exploit the optimization potential that we identified in step 2.

Our long-standing expertise in the automation and intralogistics industry ensures an efficient and reliable modernization process.

4.

Optimization and modernization services

Should you decide to take advantage of our recommendations and proposed solutions, we offer to take care of the optimization or modernization for you. Many renowned international clients rely on our services which highlights our extensive and proven expertise in the industry. All modernization and optimization steps are clearly laid out in a custom proposal based on the preceding analyses.

5.

Continuous support and periodic re-evaluation within the context of a Continuous Improvement Process (CIP)

If desired, we also assist you after the successful modernization of your intralogistics facility. We support this process by providing continuous assessments for rail-guided vehicles and logistic workflows to identify and reduce cost drivers, bottlenecks and risk factors early on. This ensures that your facility operates at peak performance at all times, easily adapts to new requirements, minimizes the risk of downtimes and unexpected costs for repairs or accumulated modernization requirements.



AUTOMATION TECHNOLOGY

Renowned Companies That Demand High Quality



Our services are in demand – they are used by renowned international companies across all industries, for example:

- Daimler
- Novelis
- Rhodius
- Robert Bosch
- Salzgitter Stahlhandel
- Volkswagen

For additional customer references and applications reports please visit www.psi-technics.com/E

Today's competitive environment is only going to get more challenging in the future. Businesses that seek to understand the strengths and opportunities of their intralogistics systems will position themselves for long-term, mutual success in a rapidly changing world.

Creative engineering and a wealth of experience enable us to offer consultation services that are tailored to your needs. We provide you with expert advice, custom design and service, as well as all required hardware and software components to improve your intralogistics – from a single source.

Summary of benefits:

- >> Identification of weak spots and optimization potential in your intralogistics facility
- >> Consultation and implementation from a single source
- >> Increased throughput and profitability based on proven and effective measures
- >> Reduced maintenance and repairs
- >> Comprehensive optimization of warehouse and production processes



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PSI Technics GmbH
support@psi-technics.com | www.psi-technics.com/EN