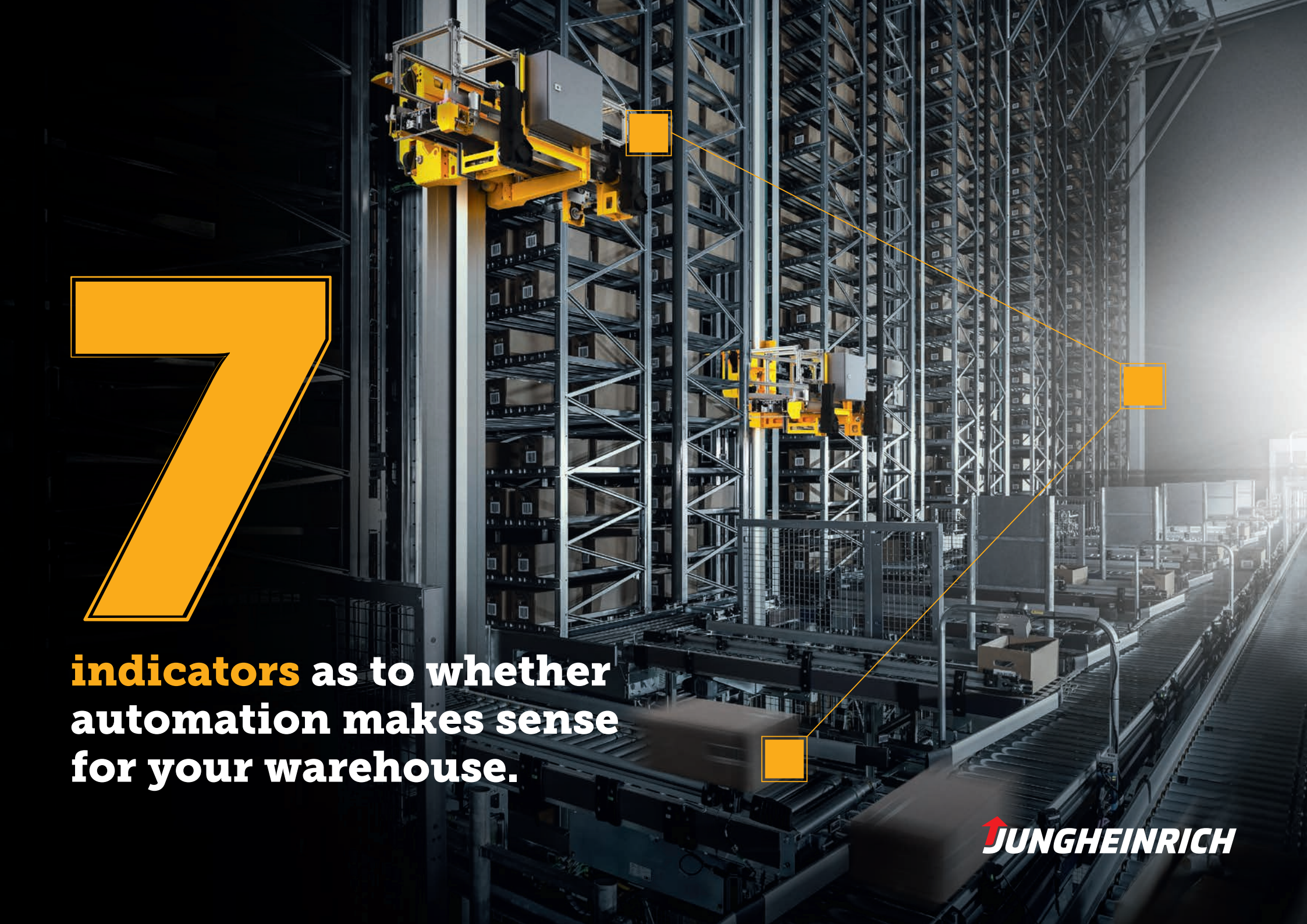




indicators as to whether
automation makes sense
for your warehouse.

 **JUNGHEINRICH**

Recognising automation potential early on.

The question of which areas of the warehouse would benefit from partial or full automation and where manual processes would be the best choice has a different answer for every company. These 7 indicators can help you assess whether your facility is suited for automation.

1

Level of standardisation in your warehouse.

The following rule of thumb applies: The more standardised your load carriers are (e.g. euro pallets, industrial pallets, wire mesh boxes or KLT containers), the more suited your warehouse is for automation. If repetitive standard tasks already need to be performed manually on a frequent basis, this is also a positive indicator that automation would pay off.

2

Complex assortment of goods.

As a general rule, the greater the diversity of products that you move in your warehouse, the greater the need for automating processes. This helps prevent mistakes that can lead to costly returns. Partially or fully automating certain process steps is usually the right measure in this situation. This keeps the flow of material in your warehouse stable at a high level and eliminates the sources of errors in assembling customer orders.



3

Sharply rising cost pressures.

Explosively rising logistics costs are often a sign of a lack of process transparency. Quite often resources are not properly deployed per order. If employees are still running around with papers in hand to the racks in some parts of the warehouse, the need to take action is obvious. Unstructured person-to-goods order picking is not only inefficient, the error rate is also extremely high. Furthermore, the frequency of injuries and damage to goods is usually significantly higher.

5

Growth driver.

Quite often an automation project following an especially successful business phase can secure that growth over the long term. After all, strong growth phases can often push warehouse performance to its limits. With the appropriate structural prerequisites, automation draws optimal performance out of your warehouse layout by optimising both space utilisation and process optimisation.

6

Lack of qualified personnel.

Finding qualified personnel for operating a manual warehouse is often difficult. Moreover, physically challenging manual labour in the warehouse is almost impossible to perform ergonomically. At the same time, seasonal fluctuations require a scalable system. Implementing (partial) automation is a good idea so that you always have as many employees as you need – even in busy times. This generally replaces the person-to-goods picking principle with the more efficient goods-to-person principle. In addition, automation enables the flexible use of multi-shift operations, which can increase the cost-effectiveness of your facility, if needed.



7

Logistics solutions for your industry.

Automation may not often be acutely necessary, but it is always an investment in your company's future. It pays off to keep an eye on your competitors and their automation level – and to always stay a step ahead. Automation cannot be implemented overnight. Companies that start early define the agenda and keep their competitive advantage with regard to productivity and resource efficiency.

4

Complexity of your IT structure and lack of transparent processes.

Incremental expansions of IT structures over time often introduce a high degree of complexity into material handling processes which eventually reaches its limits. Moreover, many companies still have entire sections of their warehouses – especially order picking, consolidation and goods issue – organised manually on a paper basis. This leads to unstructured order processing with a growing number of employees working on the same activities. In this situation, a digitalisation project primarily has a “liberating” effect. The comprehensive, IT-supported processes immediately establish transparency and optimise how you control and manage your resources long-term.



Automation with Jungheinrich.

Even when many indicators point towards automation: The question of which areas of the warehouse would benefit from automation and to what degree has a different answer for every company. Not only does Jungheinrich have the expertise and experience in consulting and planning, it has the right automation products for your needs. As a general contractor, we deliver a turnkey system from a single source. We can also work smoothly with third parties as needed.

Automated pallet warehouse

Achieve peak performance in multi-shift operations – up to 24/7 – and optimise your space utilisation. With an automated high-rack stacker in a narrow aisle warehouse up to 13 metres high or with stacker cranes in an automated pallet warehouse up to 45 metres high.



Digital products and assistance systems

We deploy intelligent software and sophisticated hardware components to deliver complete digital networking in your warehouse. All of the processes and movements there are transparent and can be monitored and controlled. We have a large portfolio of assistance systems to ensure maximum safety and efficiency in everyday operations.



Mobile Robots

Mobile Robots enable you to bring peak efficiency to your flow of goods. They handle repetitive tasks involving large handling volumes with a high level of safety and efficiency. An integrated 360° safety system ensures safe use in mixed operation, while automatic charging provides even greater efficiency in multi-shift operation.



Manual systems

Depending on the individual requirements in your warehouse, manual trucks or systems can also be used in mixed operations mode with automated components. The most cost-effective solution for your warehouse's bottom line is the focus here.



Conveyor technology

Choose innovative pallet and case conveyor technology customised to meet your needs. The result: a highly efficient flow of goods through fully optimised processes.



PowerCube

Innovative, ultra-compact and scalable: with unique space utilisation of up to 12 m in height, the Jungheinrich PowerCube sets new standards in the field of automated storage systems. As a compact container storage system, it can be customised in terms of throughput, number of containers and shuttles. Benefit from up to four times the storage density and easy integration into your IT landscape.



Robotics – fully automated workstations

Depalletisation, palletisation and order picking can also be automated. Depending on the application, the optimal robot and gripping technology is used.



Vertical control system and software concept

The SPS, system visualisation and standard warehouse management system are modular and easily integrated. We develop them in-house to ensure that we deliver optimised, custom processes and meet the highest performance requirements for every kind of logistics system. We can respond easily to any changes in the future and with our 24/7 service we are always by your side.



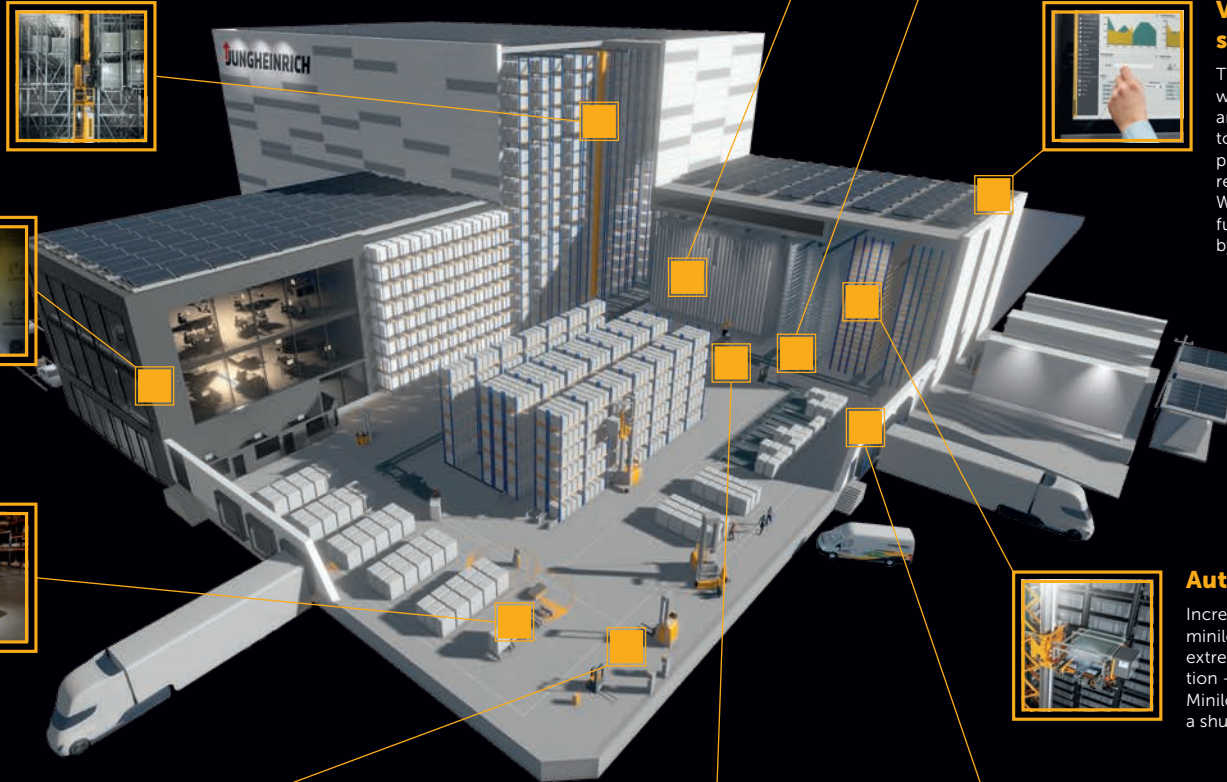
Automated miniload warehouse

Increase throughput and efficiency in your miniload warehouse through maximum speed, extreme precision and optimal space utilisation – with the high-performance Jungheinrich Miniload for small parts, or the next higher level, a shuttle system.



Dynamic small parts warehouse

Paternoster or vertical lift racking can offer efficient, customised storage of small parts in small storage spaces. This enables you to achieve maximum throughput with optimal space utilisation.





Customised automation solutions from a single source.

Depending on the individual requirements in your warehouse, manual trucks or systems can also be used in mixed operations mode with automated components. The most cost-effective solution for your warehouse's bottom line is the focus here.

1. Planning & configuration.

We will work with you to plan and configure the logistics solution that meets your exact needs, based on our experience with numerous industries and different company sizes.

2. Implementation & system integration.

When it comes to implementing your automated warehouse, we offer everything from a single source. As the general contractor, we ensure an implementation with pinpoint accuracy and link all components to one entire system.

3. Service & support.

Following the handover of your logistics system, we are always at your side with our unique customer service network that is unrivalled in the industry and our 24/7 service hotline.

ISO 9001 The German production facilities
ISO 14001 in Norderstedt, Moosburg, Landsberg
and Kaltenkirchen are certified.

CE Jungheinrich trucks conform to the
European Safety Requirements.

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