WDP
WAREHOUSES
WITH BRAINS

WHITEPAPER

Beyond four walls: automating your warehouse for a smarter future

How brownfield automation turns existing warehouses into growth engines

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INTRODUCTION

Driving innovation beyond the warehouse

Across Europe and beyond, logistics faces a structural paradox: demand continues to grow, while space, people, and time are becoming increasingly scarce. New warehouses are more difficult to permit, slower to develop, and more capital-intensive than ever.

At the same time, standing still is not an option…

This reality is driving a shift in mindset. Instead of asking where to expand next, more organizations are asking how to extract greater value from what already exists. **Brownfield automation** provides a compelling answer. It enables companies to increase throughput, storage density, and service reliability within existing facilities – incrementally, pragmatically, and often faster than expected. Most importantly, it ensures continuity: operations continue while transformation takes place.

In today's fast-moving logistics landscape, staying ahead requires continuously reimagining what is possible within existing warehouses. At **WDP**, we have always believed our role extends beyond providing four walls and a roof. We are committed to helping our customers unlock intelligent value within those walls. This means looking beyond square metres and focusing on how buildings, operations, and technology can work together to support long-term growth.

We do this in close collaboration with trusted, long-term partners, bringing proven innovation into daily operations. Two of these partners, **Movu Robotics** and **DCwise**, contributed their expertise to this whitepaper. Together, we explore how automation in existing warehouses can transform operations and future-proof supply chains. Through practical insights and real-world perspectives, including testimonials from **Distrilog** and **TD Synnex**, it is demonstrated that an older warehouse is not a limitation, but an opportunity when approached with the right strategy.

Explore the following chapters and discover how to enhance efficiency, flexibility, and resilience within the warehouse you already operate. This whitepaper is not about technology for its own sake, but about enabling sustainable growth within real-world constraints.

We hope it inspires you to see new possibilities within your own logistics environment.

Joost Uwents
CEO WDP

CHAPTER 1

Automation is no longer optional

Monday morning. Several key operators are absent, while inbound trucks are queuing. Although the week has just begun, customer service is already asking whether cut-off times will be met.

Sounds familiar?

Once a future ambition, warehouse automation has now become an operational necessity. Many organizations are reaching the limits of their existing facilities:

Storage capacity

Driven by e-commerce, product portfolios are expanding and becoming increasingly fragmented. Outdated warehouse layouts are inefficient and struggle to meet evolving demands.

Throughput capacity

Customer expectations continue to accelerate, bringing requirements such as shorter lead times, higher accuracy, omnichannel complexity, and greater transparency. Next-day delivery, supply chain uncertainty, and peak periods like Black Friday place significant pressure on throughput capacities.

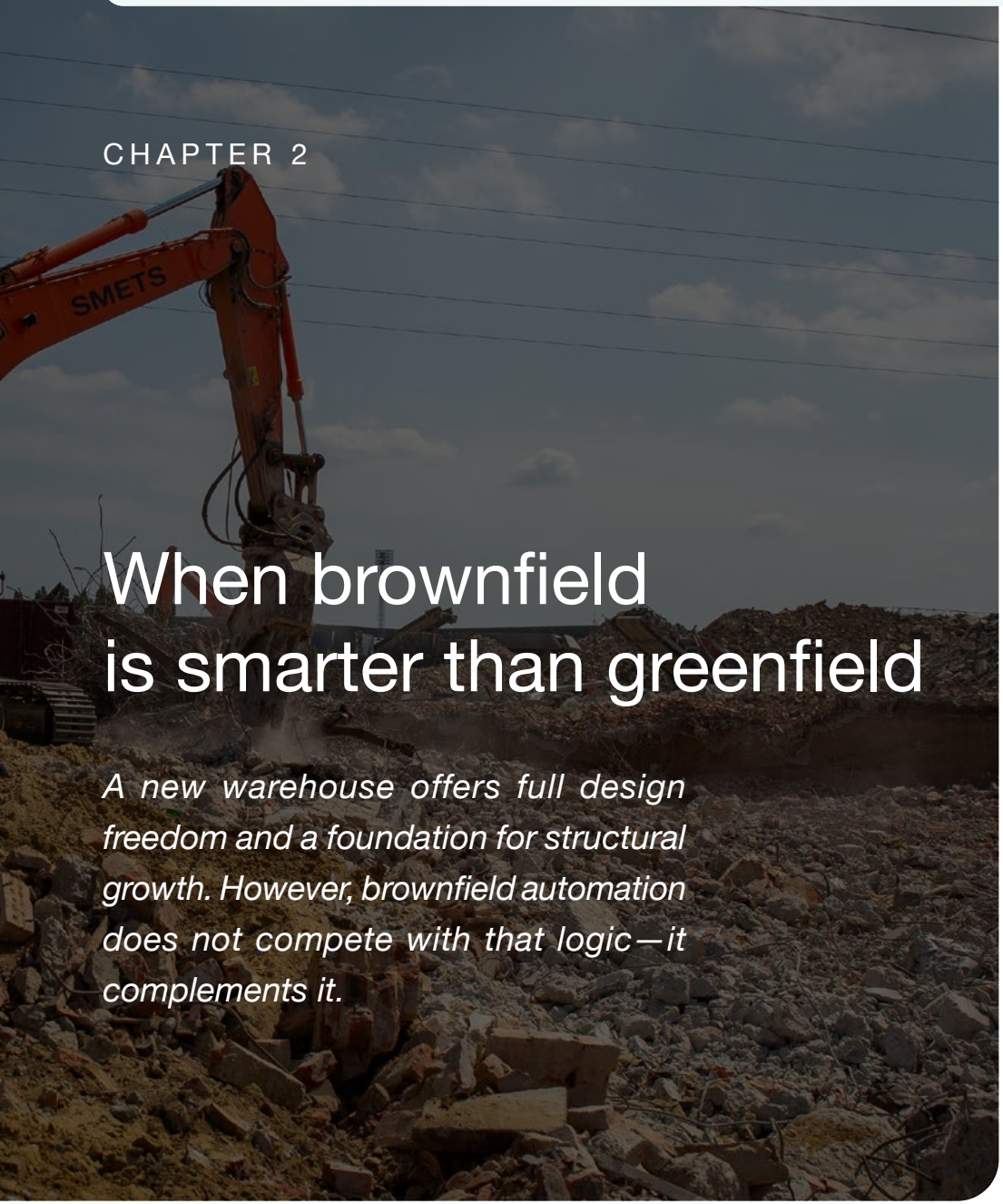
Workforce

Many warehouses face persistent labor shortages due to ageing workforces and difficulties in attracting new talent. At the same time, rising labor costs add further complexity.

Sustainability

To reduce their footprint, warehouses must comply with ESG requirements by lowering waste and improving energy efficiency.

Resilience has become a board-level priority. In warehouse operations, volatility is no longer the exception; it is the norm. Companies are faced with two paths: building a new, modern facility or automating their existing operations. While the first option is often not a possibility, brownfield automation offers a practical and effective way to address each of these challenges.



CHAPTER 2

When brownfield is smarter than greenfield

A new warehouse offers full design freedom and a foundation for structural growth. However, brownfield automation does not compete with that logic—it complements it.

There is a common misconception that automation and brownfield are not a natural fit. While automating existing warehouses comes with its own challenges, brownfield solutions bring advantages that can – depending on the context – make them the smarter strategic choice.

Before deciding, these S-words must be considered: **space**, **scale**, and **staff**.

Space

In strategically located areas, available land is often scarce. Meanwhile, relocating to a less favorable location can negatively impact both efficiency and service levels. In addition, the complexity of securing permits and building a new site often makes brownfield a more viable option.

Scale

Is full-scale automation truly necessary? Not every operation requires a completely new facility. For more targeted improvements, brownfield automation can significantly reduce both investment costs and time-to-market. Brownfield enables phased investments aligned with business growth, rather than a “big bang” that requires large capital commitments.

Staff

Relocating a warehouse introduces workforce risk. Employees may choose not to move, opting instead for jobs closer to home. Brownfield automation helps retain experienced staff, which is an increasingly valuable and hard-to-replace asset.

"Our team was a key factor in our decision to pursue brownfield automation rather than relocate to a new site. While we explored potential locations in the surrounding area, we ultimately chose not to risk losing the people and expertise that are central to our success. As our most productive warehouse in Europe, we were confident in the existing layout and therefore decided to expand and partly automate our current facility."

Brecht Van Hulle
Sr. Logistics Director Benelux at TD SYNNEX

Brownfield is not a compromise, but often a financially and strategically sound decision. In fact, optimizing existing warehouses with automation can, in some cases, double the capacity within the same building. Before exploring its full potential, it is important to first understand what brownfield, and automation in general, truly entails.

CHAPTER 3

The misconceptions of automation

Companies often hold misconceptions that hinder their understanding of automation. Addressing these is essential if we want to pave the way for meaningful and effective automation.

“Automation will disrupt our operations.

Brownfield automation is comparable to performing surgery while the patient remains fully active. With many warehouses operating 24/7, even minor disruptions can have significant financial consequences. However, most automation initiatives can be implemented without heavily impacting ongoing operations. The key is to define a clear vision and develop a well-structured plan before getting started. An effective approach allows for step-by-step implementation while daily activities continue uninterrupted.

“Automation is all or nothing.

A common pitfall is overthinking the decision to automate. For many companies, it feels like a leap into the unknown. Some believe their operations are too small to benefit, others assume it requires substantial capital investment, and many mistakenly view automation as an all-or-nothing choice. This highlights a broader misunderstanding of what automation truly entails.

DCwise supports its customers by conducting warehouse scans to identify opportunities and quick wins, providing a high-level assessment of improvements in storage and processes.

Automation will solve all our problems.

Finally, some organizations simply expect too much from automation. There is often limited understanding of what automation can and cannot solve. If underlying processes are flawed, automating them will not fix the problem; it will only replicate inefficiencies. In other words, you cannot automate your way out of structural issues.

Once these misconceptions are addressed, they create space for a more realistic perspective. Which leads us to the next question: is brownfield automation possible in every warehouse?

"Adapting our warehouse to support Automated Guided Vehicles involved some challenging months. Throughout this period, a clearly communicated roadmap ensured that operations continued without disruption, allowing us to maintain full service to our customer. We did not miss a single order."

Benjamin Van Ransbeeck
Continuous Improvement Manager at Distrilog Group

CHAPTER 4

Can any warehouse be automated?

Are you considering automating your warehouse? Then the key question must be: is it feasible? Is it the most viable option for your business?

Automation should be seen as an extension of your business strategy, not a replacement for it. Choosing an automation solution often commits a company for many years into the future. That's why it's essential to think long-term before embarking on this journey. What will your business look like in 10 years? What are your growth ambitions? And ultimately: does this mean you should opt for a brownfield or greenfield approach?

As mentioned earlier, brownfield projects offer many advantages, but they are not always feasible or desirable. Each case must be evaluated individually, as it involves a careful trade-off between multiple criteria. In some situations, the business case simply isn't strong enough. For example, if a building is too low, the number of pallets that can benefit from automation may be limited, making the investment too costly.

A trusted partner can help you make the right assessment, aligned with your strategic objectives.

Here are some key factors to consider when evaluating automation:

Warehouse height

how many pallet levels can you accommodate? Automated solutions allow for much denser storage, potentially doubling your current capacity.

Floor flatness and load capacity

the floor must be able to support the required loads. However, it's a common misconception that it needs to be perfectly flat. And even when floor flatness is inadequate, there are solutions to correct this without having to replace the floor.

Pallet quality

ensure your pallets are suitable for automation. For example, avoid boards that are loose or sagging. Validate how pallet, case or tote profiles impact density.

Pallet standardization

automated warehouses require consistency. While different pallet types can be used, aim to minimize variation and define a common standard.

IT infrastructure readiness

most warehouses are well-equipped, but cybersecurity requirements and system integration can sometimes slow down implementation.

Scalability

confirm your future options and need to expand before fixing the layout.

"Carefully evaluate whether you have a strong business case and recognize that not everything needs to be automated. In our case, we chose not to fully automate AGV operations in the warehouse, retaining certain tasks for our human team. Some processes are simply too complex to automate efficiently and can ultimately increase project costs."

Benjamin Van Ransbeeck
Continuous Improvement Manager at Distrilog Group

CHAPTER 5

How to start with brownfield automation

Once you have decided to automate your existing warehouse, a clear roadmap is essential.
In this chapter, we outline the key elements that should be part of your transformation plan.

01

Avoid automating for the sake of automation.

Automation initiatives should be driven by a long-term vision. Focus on the future and implement solutions that support your strategy and meet your customers' needs. It's also important to keep an eye on your competitors and success stories from other warehouses.

02

Adopt a phased approach.

A "big bang" implementation is not always necessary. Starting small allows you to learn, adapt, and build on early successes before scaling up.

03

Ensure you have the right data.

What are your objectives, and do you have sufficient insight into your current operations? For example: what types of pallets are you using? What volumes do you need to store? How many pallets move in and out of your warehouse on a typical day? How many internal movements are required? Many companies lack this data. You don't need a lot of information but having the right foundation is crucial to designing an effective brownfield automation solution.

04

Shift your mindset.

Automation requires a different way of thinking. Instead of asking how it can simply improve existing processes, consider how it can fundamentally transform them.

05

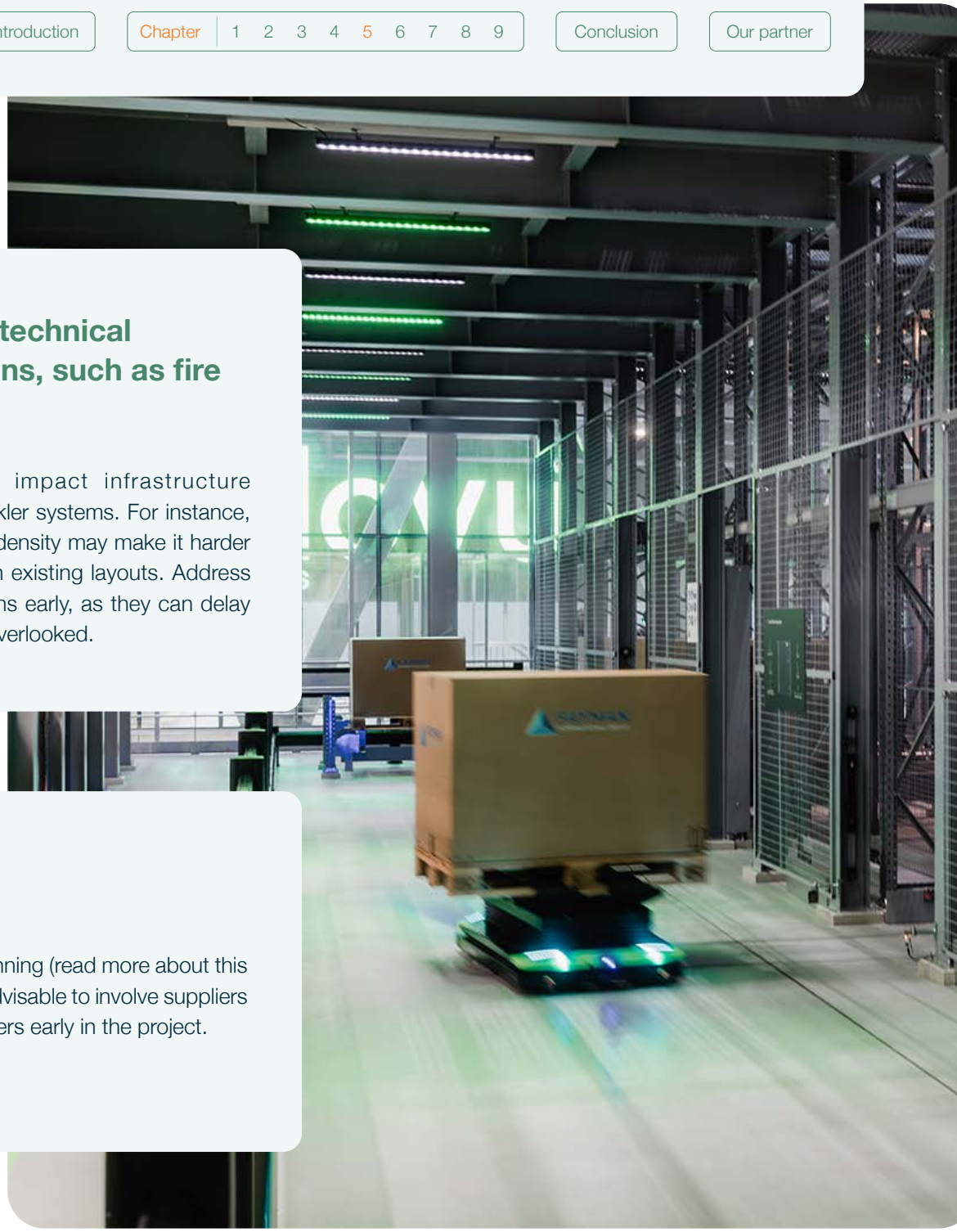
Account for technical considerations, such as fire safety.

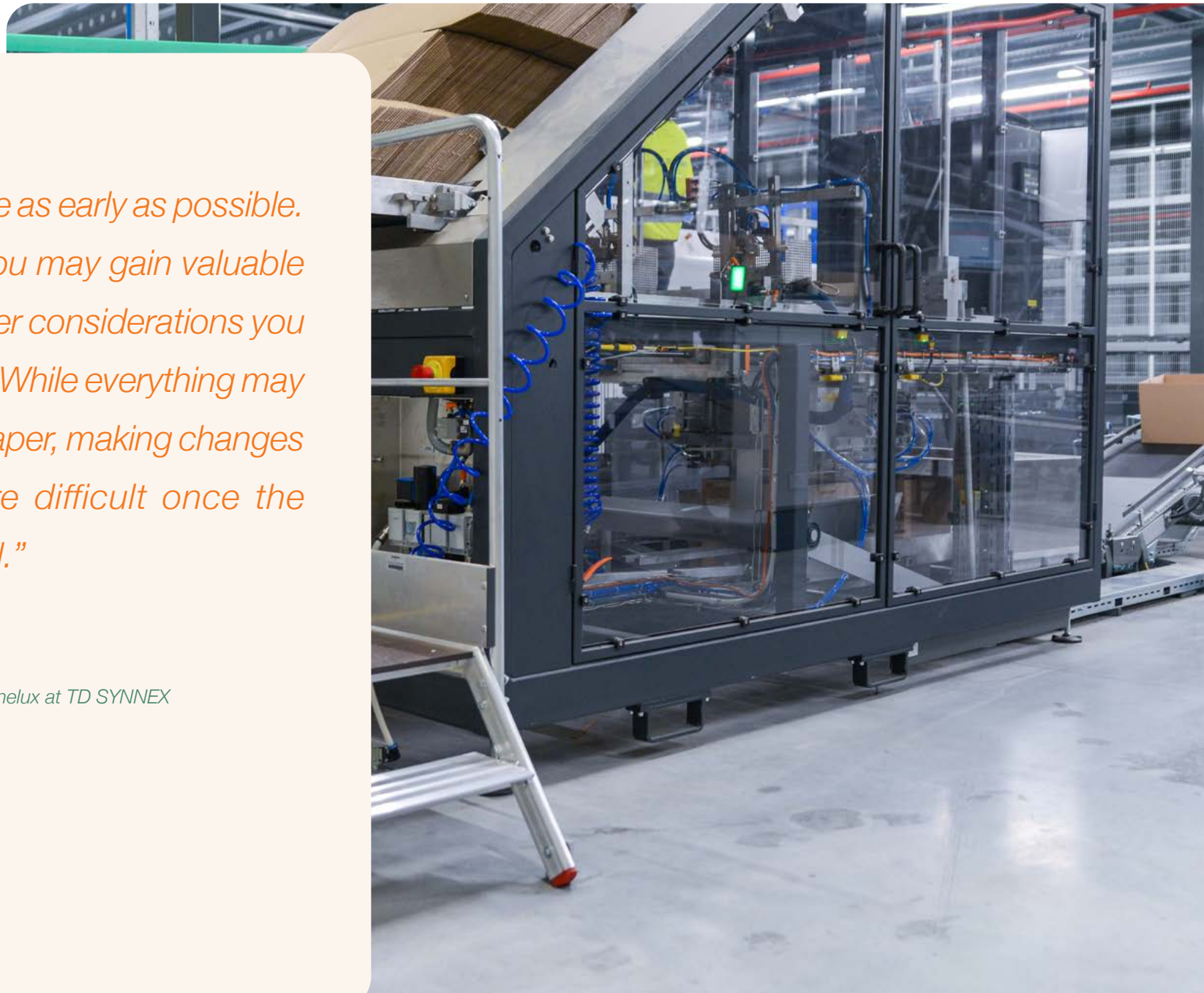
Automation can impact infrastructure elements like sprinkler systems. For instance, increased storage density may make it harder to control fires with existing layouts. Address these considerations early, as they can delay implementation if overlooked.

06

Develop a robust plan.

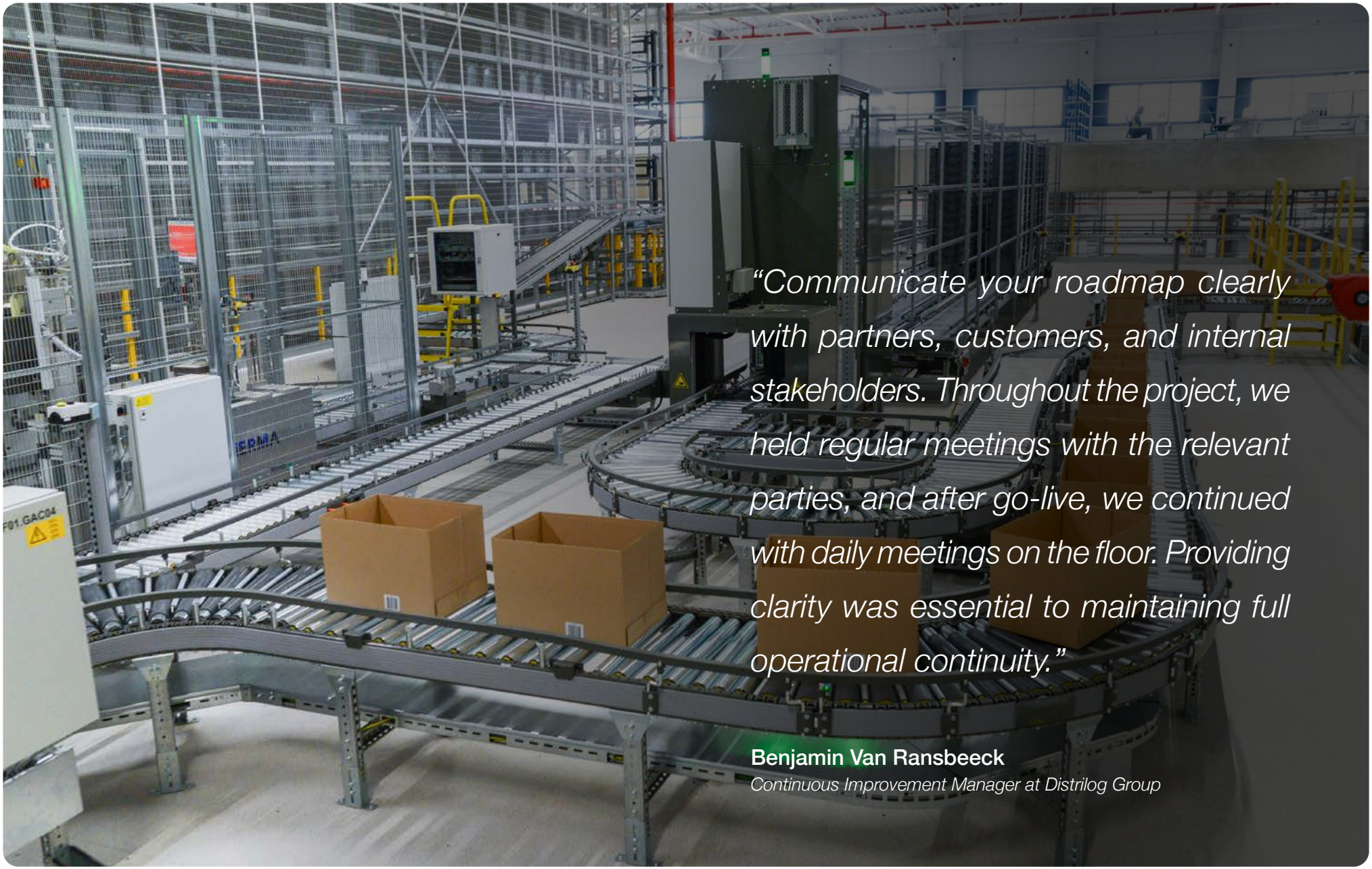
An effective automation blueprint should be clear from the outset. It defines your objectives, timelines, responsibilities, and key milestones. This clarity also helps ensure you bring the right technical expertise into your team from the beginning (read more about this in Chapter 7). It is also advisable to involve suppliers and other external partners early in the project.





“Involve your people as early as possible. Seek their input; you may gain valuable insights and uncover considerations you hadn’t anticipated. While everything may seem feasible on paper, making changes becomes far more difficult once the project has started.”

Brecht Van Hulle
Sr. Logistics Director Benelux at TD SYNNEX



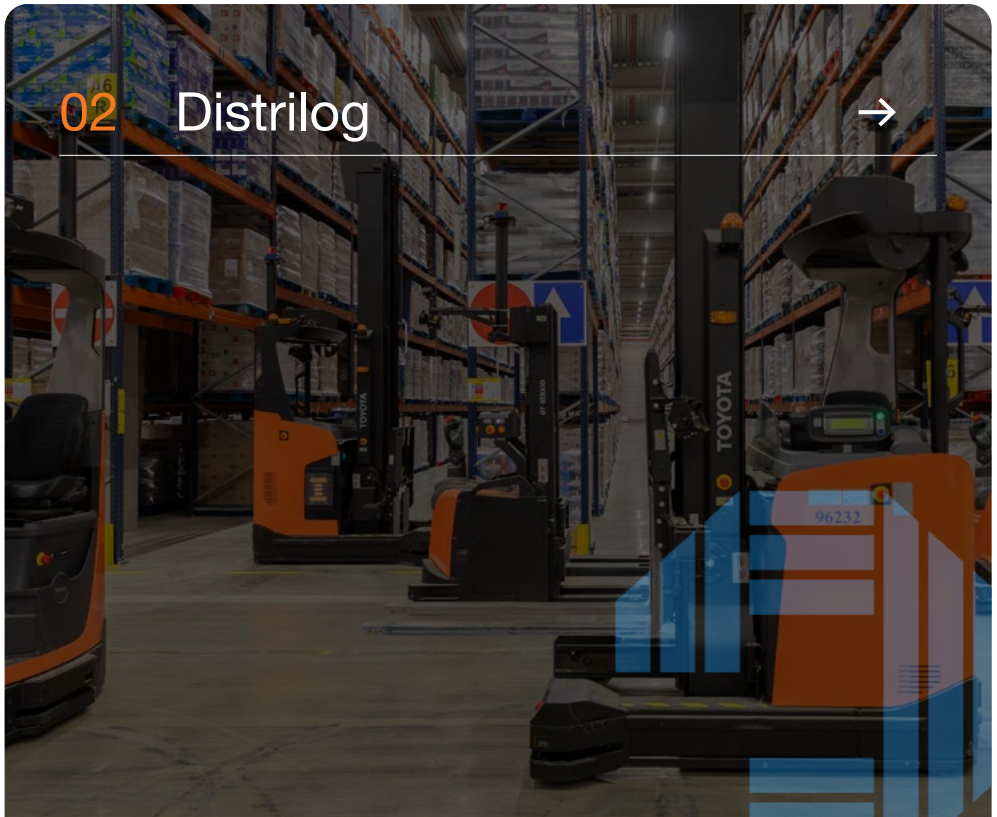
"Communicate your roadmap clearly with partners, customers, and internal stakeholders. Throughout the project, we held regular meetings with the relevant parties, and after go-live, we continued with daily meetings on the floor. Providing clarity was essential to maintaining full operational continuity."

Benjamin Van Ransbeeck
Continuous Improvement Manager at Distrilog Group

CHAPTER 6

Success stories

Setting up a roadmap also involves learning from other warehouses. In this chapter, we provide success stories and examples of automation opportunities.

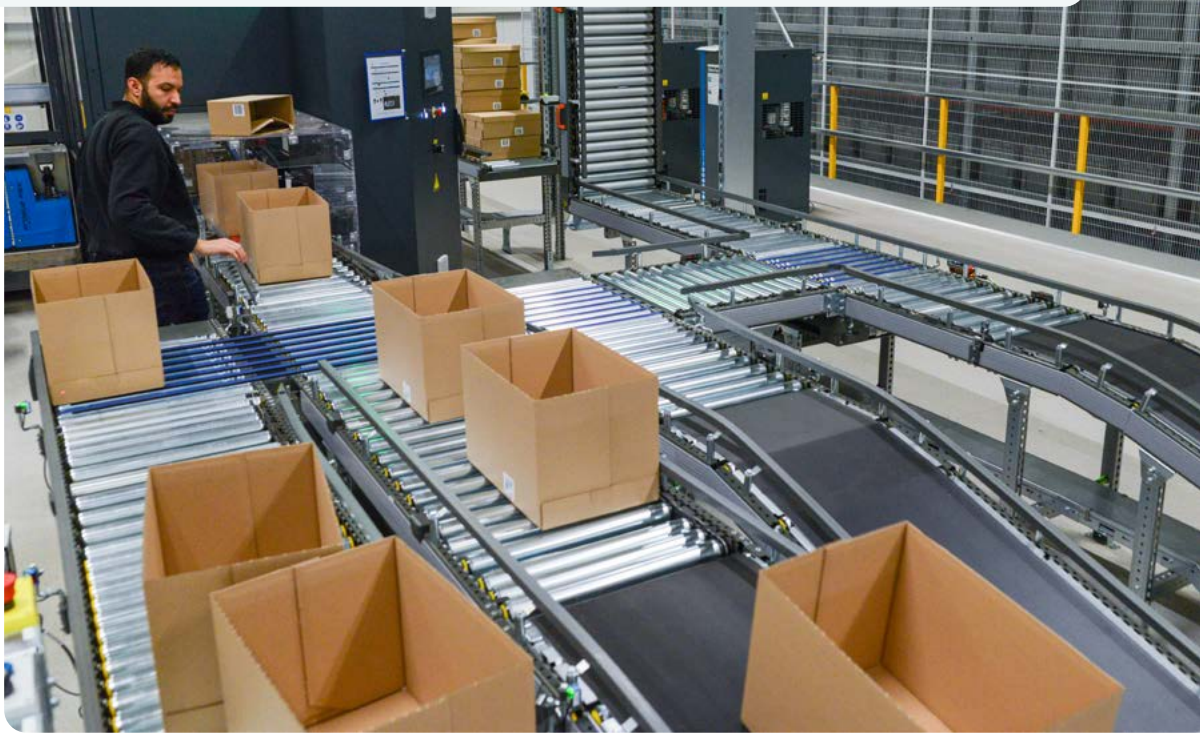


01 TD SYNNEX automates new hall in 28-year-old warehouse

A global distributor of technological equipment, TD SYNNEX acts as the bridge between suppliers and resellers – including SMEs, corporate customers, and retailers. Their warehouse in Aalst handles a wide range of products: from USB sticks, SD cards, and cables, to smartphones, PCs, and large-format displays. Established in 1998, the facility had seen limited changes over time, making it both a mature and highly valuable operational environment.

To manage the diversity of products, the warehouse is divided into zones, including original packs, which can be shipped in their original packaging (such as printers), and repacks, which require additional handling before shipment (such as smartphones, cables, and USB sticks). Automation has played a key role in optimizing these processes, particularly for repacks, which are now integrated into automated systems.

"In 2020, we reached full capacity in our warehouse, forcing us to choose between relocating or expanding our existing site", says Brecht Van Hulle, Logistics Director at TD SYNNEX. "Together with WDP, we opted for expansion, estimating that an additional 15% of space would support sustainable growth for the next 10–15 years. As TD SYNNEX was exploring automation across its European warehouses, our site provided an ideal pilot for a brownfield approach."



Challenges and success

A new 3,200 m² automated hall was added to the existing warehouse. It is equipped with a shuttle system, goods-to-person solutions, automated box creation, and a high-capacity sorter handling 7,000 SKUs. Designed for efficiency and scalability, the system can store up to 12,000 totes and significantly improves both storage density and operational productivity.

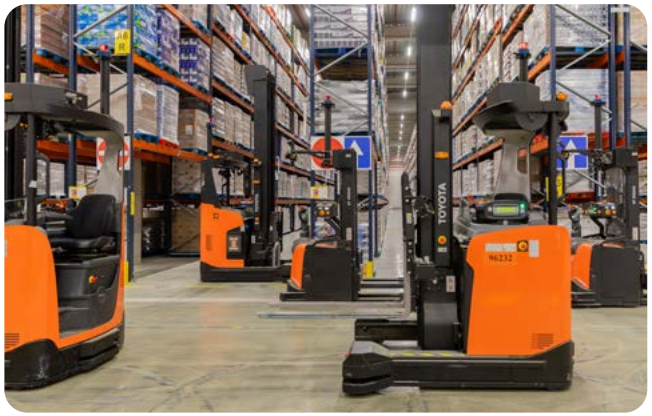
Implementing the project came with several challenges. From a technical standpoint, integrating the automated systems with a new warehouse management system required extensive testing and training. Infrastructure considerations, such as ceiling heights and the placement of conveyors, demanded close collaboration with architects, supported by WDP's expertise. Equally important was the human aspect: while the project ensured long-term job security, it was essential to involve and reassure employees throughout the process.

"One of the main challenges was noise during construction and implementation, particularly given our proximity to a residential area. Maintaining open communication with employees and residents was key to minimizing disruption and ensuring continued operations throughout the project", explains Brecht Van Hulle.

The newly automated warehouse has made TD SYNNEX a more attractive employer. By combining automated and manual zones, the company has been able to save up to 200 boxes per day. In the end, this project has proven successful from multiple perspectives, including employer branding, economic performance, and environmental impact.

02 Distrilog increases efficiency with Automated Guided Vehicles

Distrilog is a Belgian transport and logistics company and a proud family business, founded in 1991. Today they operate 21 sites with a total of 450,000 m² of warehouse space and 500 trucks, serving customers across the Benelux in industries such as retail, food, DIY, and chemicals.



As a growing company, Distrilog places strong emphasis on automation and innovation, while also supporting customers in addressing their sustainability challenges. What sets the company apart in Belgium is their ability to handle all temperature ranges within both their warehouses and transportation network – from deep freeze and chilled environments to conditioned storage, such as for chocolate, and fully ambient conditions with no temperature requirements.

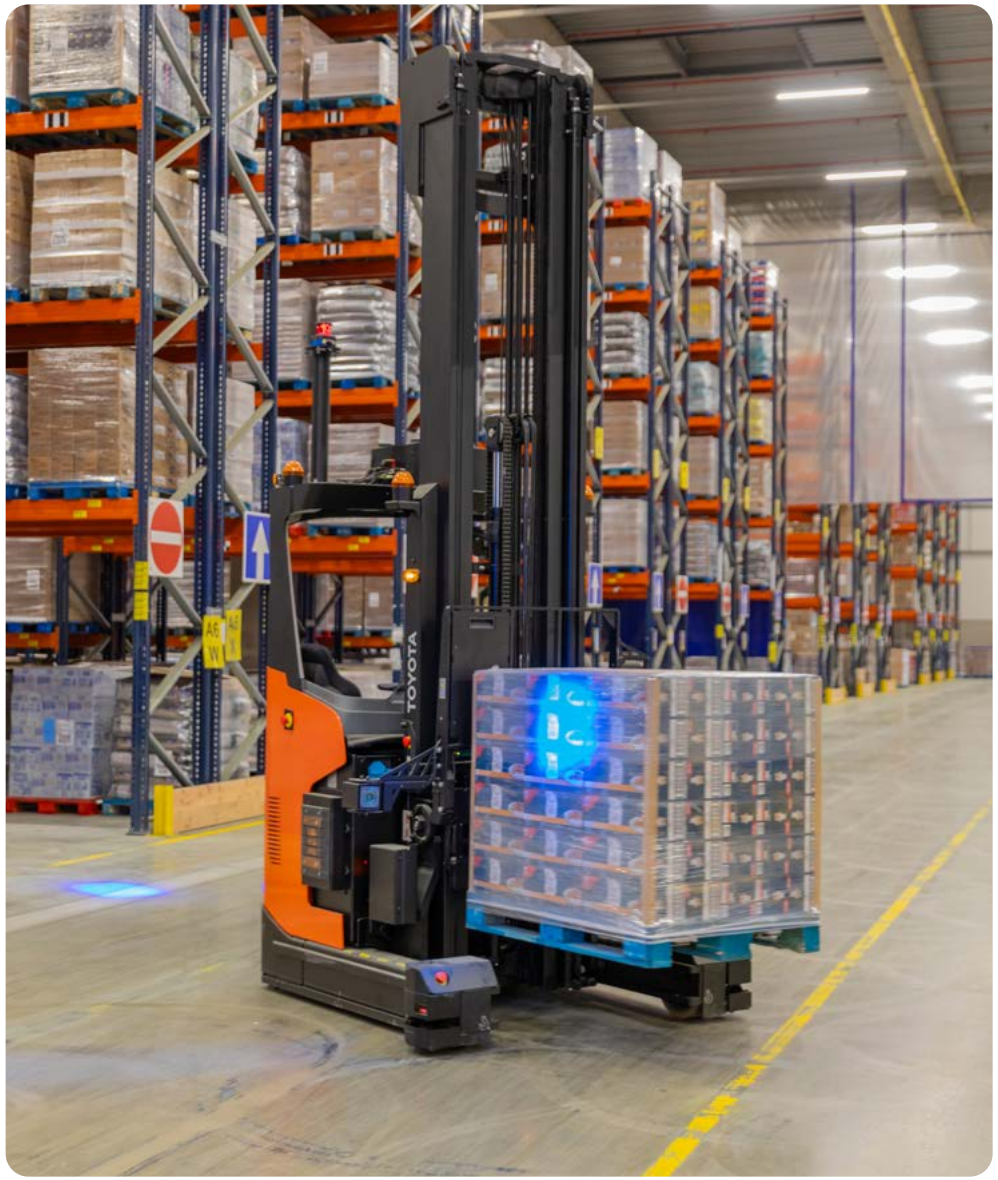
Distrilog's focus on automation is driven by several factors, including labor shortages (particularly for reach and truck drivers), rising salary costs in Belgium, and increasing customer demand for optimization. These challenges make capital-intensive automation projects more attractive, not only from a cost perspective but also in terms of safety and scalability

Automated Guided Vehicles

Together with a customer and an automation partner, Distrilog's experts assessed a business case and decided to implement Automated Guided Vehicles (AGVs) in their warehouse. This helped improve the efficiency, while addressing workforce shortages and enabling future growth.

"The AGVs operate similarly to traditional reach trucks but are equipped with cameras and sensors that enable them to drive autonomously", says Benjamin Van Ransbeeck – Continuous Improvement Manager at Distrilog Group. "It also required some adaptations to the warehouse, including reflectors, wider aisles, and enhanced connectivity through improved access points. These changes took us several months to implement but the warehouse remained fully operational throughout the process."

The system can now operate fully autonomously while still allowing manual control for flexibility and error handling. "This project provided us with valuable learnings that will help reduce the implementation time for future automation solutions across our warehouses", Van Ransbeeck continues. "The AGVs also represent a long-term investment, as they can be easily redeployed to other customers or relocated to another warehouse if needed."



CHAPTER 7

No automation without people

Automation has a significant impact on people. It changes the way they work and can therefore generate resistance. That's why change management is a critical pillar of any automation project.

Automation introduces new roles focused on system operation, monitoring, and optimization. In this environment, warehouse employees increasingly act as coordinators rather than manual operators. In practice, many of the core skills remain the same, such as working accurately and maintaining pace, but automation also provides upskilling opportunities.

For employees with an interest in technology, warehouse automation can open up new career paths. Those who choose to deepen their understanding of automated systems often become key "super-users", supporting operations and ensuring continuity. Their roles evolve from manual, repetitive tasks to more system-oriented responsibilities, requiring technical insight and ownership of processes.

To ensure employees develop the right skills, it's essential to involve them from the start and actively listen to their ideas. When people feel engaged, they are far more likely to embrace and support new ways of working.

Movu™ robotics

Movu Robotics supports change management through a state-of-the-art experience center at its headquarters in Lokeren. Here, the company showcases the latest technologies in live operation, including its growing range of robots and shuttle systems. Customers and partners experience firsthand how automation can support and simplify daily operations.

Some resistance to automation stems from concerns about job security. In reality, automation in warehouses does not necessarily replace people. Instead, it helps address labor shortages at a time when finding skilled workers is increasingly difficult. It enables existing staff to become more productive and extends careers by reducing physical strain. In doing so, automation helps close the gap between workload and workforce availability, allowing warehouses to better handle peak periods and unexpected disruptions.

In brownfield environments, the most effective solutions are those where people and machines are designed to work together – as a team. Therefore, ask yourself these questions:

Which tasks are repetitive, heavy or ergonomically challenging?

Where do walking and driving consume most time?

Which roles will remain human-led?

What skills will be required after training?

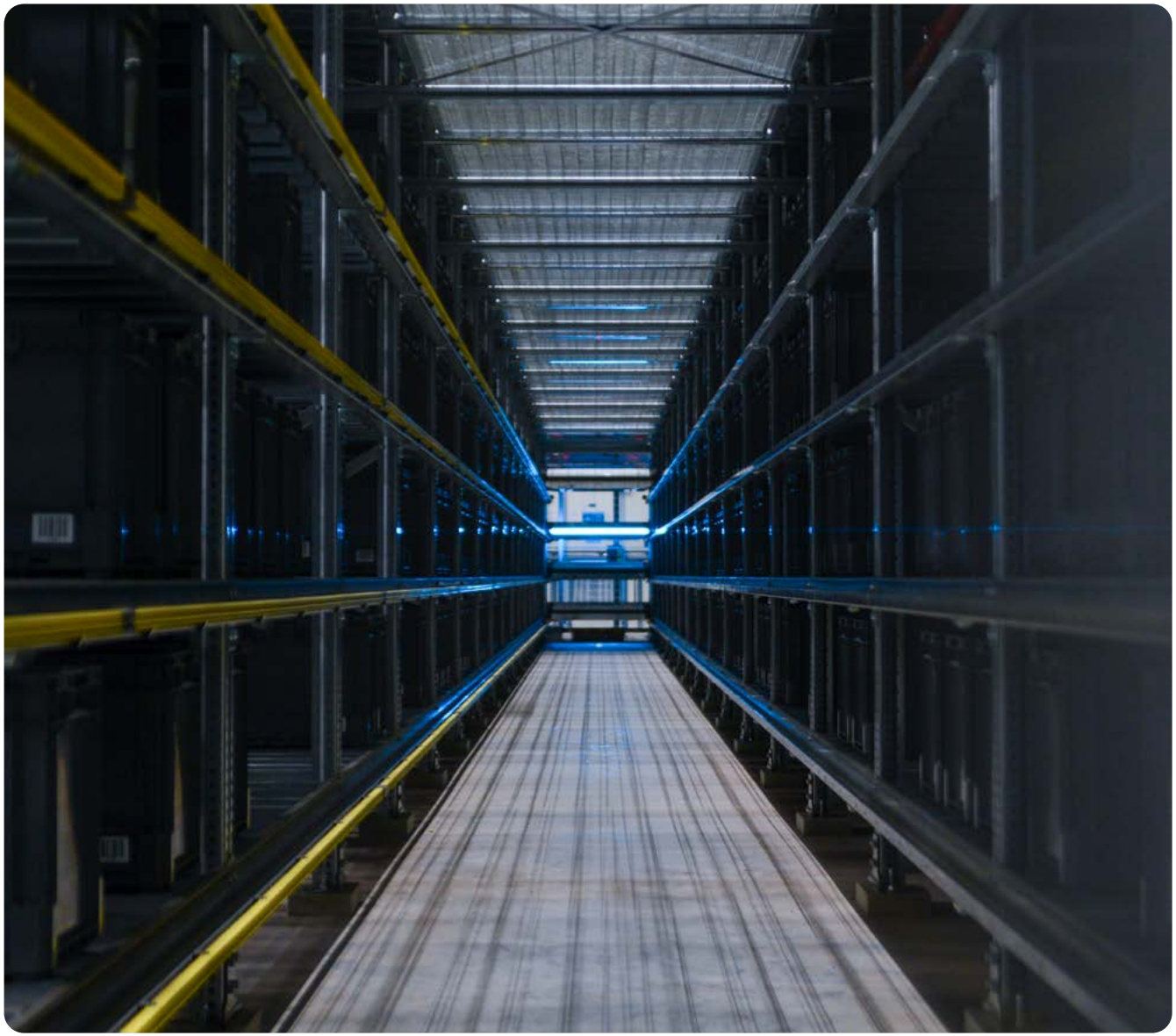
How will teams be trained and involved?

"People will always remain necessary in most warehouses. Of course, they may need to develop new skillsets and change their way of working. Working with Automated Guided Vehicles, we will always need someone to monitor them and handle errors. Ultimately, automation makes work safer and more pleasant."

Benjamin Van Ransbeeck
Continuous Improvement Manager at Distrilog Group

*"Although we knew that our project would ensure job security for the next 20 years, we needed to convince people that automation was **not** meant to replace them. That's why we involved our people in the story as early as possible, allowing them to contribute."*

Brecht Van Hulle
Logistics Director at TD SYNNEX



CHAPTER 8

From implementation to monitoring

Once the implementation is complete, the journey is far from over. With automated warehouse systems running, continuous monitoring and improvement become essential.

"The electric light did not come from the continuous improvement of the candle." This famous quote by Oren Harari illustrates that incremental improvement alone is not always sufficient to achieve meaningful progress. Automation should therefore not be approached as a one-off initiative but as part of a broader and ongoing transformation. It should encourage companies to reassess existing ways of working, move beyond legacy constraints, and adopt solutions that fundamentally change how operations are designed and executed.

Automated systems generate valuable data that can be used to monitor and analyze performance. However, the challenge lies in filtering relevant information and extracting actionable insights. **DCwise** therefore leverages a "Storage Control Tower", operating as a non-intrusive layer on top of a Warehouse Management System (WMS). This enables a structured and sustainable cycle of continuous improvement.

Also keep this in mind... In brownfield automation, a phased approach is often more effective than striving for perfection from the outset. Remember: this is a marathon, not a sprint. No project should be rushed without thorough testing. Automation and system integration require full attention as they should support your operations, not complicate them.

CHAPTER 9

A glimpse into the future

Technological developments never stand still. An increasing number of warehouses are expected to adopt brownfield automation. What will warehouses look like 10 years from now?

We asked for the vision of two warehouse automation experts from the WDP partners who contributed to this whitepaper.

"In the coming decade, we expect to see a continued rise in warehouse automation, driven largely by ongoing labor shortages. Automation will also become more accessible to smaller companies, thanks to off-the-shelf solutions and more flexible financing models that reduce the need for large upfront investments. However, even as we move toward increasingly autonomous warehouses, people will remain essential for supervision, optimization, and exception handling."

Dave Van Casteren
Logistics Expert at ***DCwise***

"In time, many warehouses, especially high-bay facilities, will evolve into dark warehouses. These are fully automated environments that can operate with minimal human intervention, using robots and AI. Software will also become significantly more advanced, from putaway algorithms to visual detection systems. Today, fully automated warehouses are rare, as the most advanced companies have automated around 80% of their operations. But in the future, we expect to see more fully autonomous or 'dark' warehouses emerge."

Karel Boone
Chief Sales Officer US at ***stow Group (Movu Robotics)***

CONCLUSION

Ready to do more without moving out?

As demonstrated throughout this whitepaper, brownfield automation does not have to be complex. With a step-by-step approach and a clear roadmap, most warehouses can benefit from automation without large upfront investments or disrupting ongoing operations. Automation is not about reshaping reality to fit technology, but about integrating technology into existing realities.

At WDP, we believe technology should always serve people. Every solution must be tailored, thoroughly tested, and implemented with both operational continuity and human impact in mind. Ultimately, automation must empower teams, enhance performance, and create a more resilient logistics operation. To achieve this, we collaborate with experienced partners who bring state-of-the-art solutions and deep expertise in implementing automation in warehouses.

We would like to thank Karel Boone (Movu Robotics) and Dave Van Casteren (DCwise) for their valuable contributions to this whitepaper. We also extend our thanks to TD SYNNEX and Distrilog for sharing their success stories.

Our partners

Movu™ robotics

As part of stow Group, the world's largest racking manufacturer, Movu Robotics believes that any warehouse can be made more efficient through automation. Headquartered in Lokeren, the company offers low-threshold robotic solutions designed to make automation accessible and easy to implement, enabling facilities to operate more smoothly – day and night, year-round.

Regardless of the scale of your operations, Movu provides solutions to help make your warehouse faster, more efficient, and future-proof. To help customers visualize these possibilities, Movu operates a fully functional experience center where automation solutions can be seen in action.

LEARN MORE →

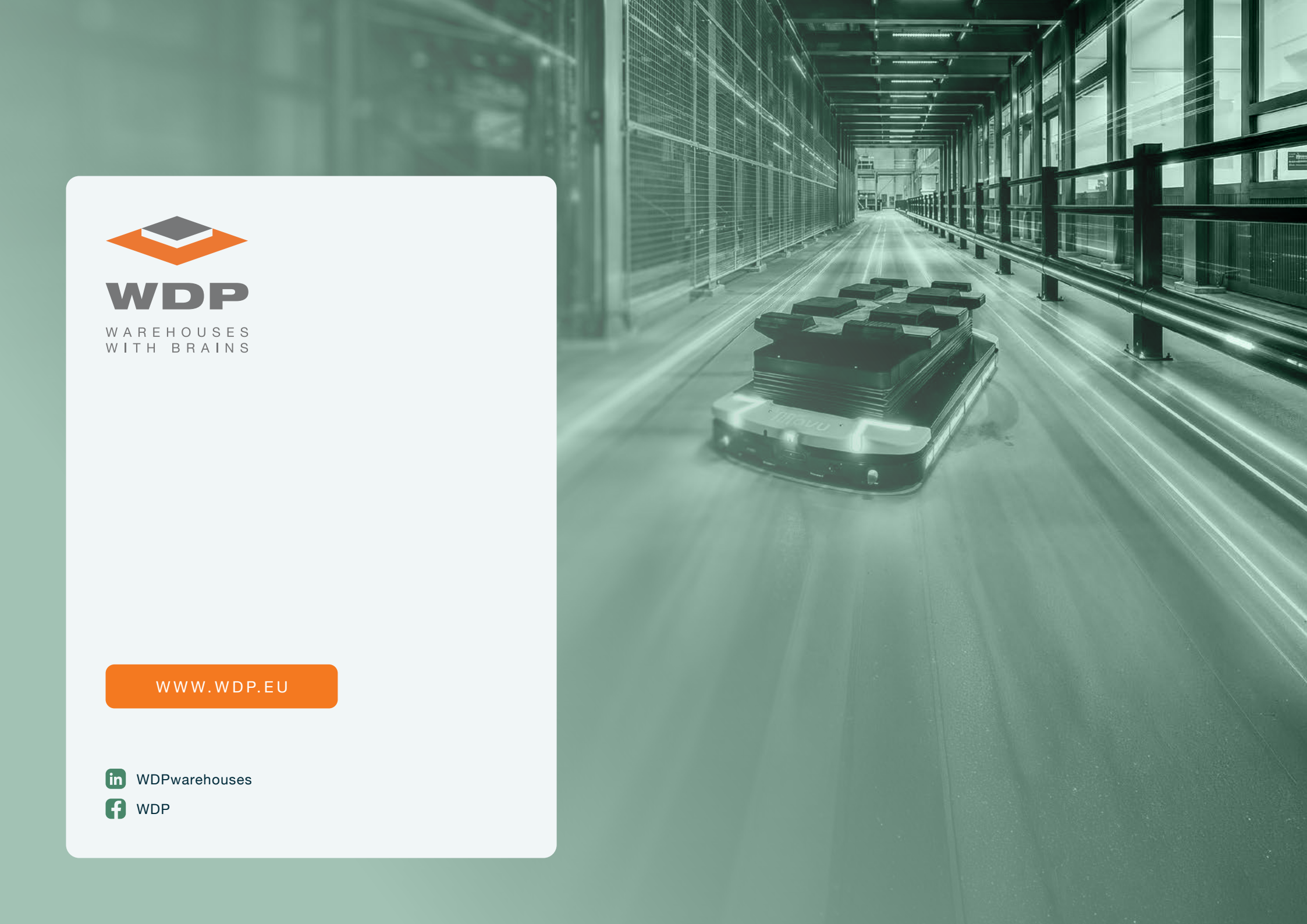
DC wise

DCwise combines deep expertise with practical solutions to improve warehouses of all types. Headquartered near Brussels, the company addresses a wide range of warehouse challenges – from operational inefficiencies to scalable performance improvements.

As an independent logistics consultant, DCwise brings in-depth knowledge of warehousing and intralogistics. To support brownfield automation, the company offers warehouse scans and improvement studies that help assess the feasibility of automation projects.

After implementation, DCwise continues to support its clients by ensuring ongoing optimization through expert advice, analytics, and hands-on assistance.

LEARN MORE →



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