

2020

Trends in Czech Logistics

**How and what companies deal
with in the field of warehousing**

September 2020



A study

mapping the trends forming the logistics market in the Czech Republic

About the study

The SKLAD Association carried out a study which actively maps the trends forming the logistics market in the Czech Republic. 123 managers involved in logistics participated in the study - including companies from retail/wholesale, e-commerce, automotive and manufacturing. By means of an interview survey and during detailed interviews, these experts shared their observations from both current and planned investments, future strategies, and the impact of the COVID-19 pandemic. This research project took place from March to July of 2020.



About SKLAD

The individual companies in the SKLAD Association specialise in fields closely connected with manufacturing and logistics centres. In 2014, we created this independent initiative to provide comprehensive services within the industrial segment. Altogether, our members have been operating in the market for 100 years.

Coordinating many suppliers on a project is often quite challenging. With us, that worry fades away. We are a partner who covers the entire process of selecting a hall, setting the processes and all subsequent areas. Our services are built upon close cooperation, effective action, and the realization of set objectives, without needless complications. We supply current information from the field, which is another reason why we co-participated in this research project.

Petra Troblová

Executive Manager
SKLAD



Spolek Kompetentních Logistiků a Dodavatelů



Logistics today

As was shown by the expert interviews, the terms “Just in Time” / “Just in Line” are the key phrases of today’s world of logistics. Delivering goods to the customer as quickly as possible (ideally that very same day) is the mantra across the field. The “I want it now” mentality of today’s customer is omnipresent. Sharply rising consumption places great demands on logistics. Increasing demand makes for larger volume expedition. With this comes rising demands on warehouse spaces and their equipment, managing processes, workplace safety and human resources. Corporate logistics must be several years ahead of the business.

The development of IT technologies and automation is the path to maintaining a satisfied customer, while simultaneously delivering a positive ROI (return on investment).

In logistics, everything is submitted effectively. For companies, everything they do needs to be “worth it”, and all of their current activities are evaluated from this perspective. Practically speaking, this means having the chain optimized for that given moment from process, technology, and labour intensity perspectives, which is applied through the purely practical standpoint of “cost per case”.

Effectiveness plays the primary role in planning for the future.

The technology of today offers options never-before-imagined, for instance, Warehouse Management Systems capable of modelling or performing predictive analysis. Logistics follow the trends of the field; however, they are evaluated quite realistically. Investment in development must provide a quick return – ideally within the order of several years.

“I’m comfortable in saying that, regarding the fields of registration flow and data collection, we are in a very good standing. If I were to give us a mark as you would in school, I would

award us a B for reasons involving motivation to further steps and development. For us, WMS is our standard. We’ve implemented automatic forklifts and automatic warehousing. On-line data collection from every manufacturing facility has become nothing but a given for us. In the future, it will be important for us to have an even more detailed overview of what stock supply we have, in what quantities, and in which batches and locations. It will be necessary to know how to trace goods to great detail, and that’s both in terms of time and quantity.”

Tomáš Zvěřina
Logistics Manager
Magna Exteriors (Bohemia)



Logistics today - impact of COVID-19

For now, we cannot say for sure in what way the COVID-19 pandemic will change the future of logistics. It is still too soon to tell.

The research project, which was conducted from March to July of 2020, showed that the pandemic has fundamentally impacted the present, however, it has yet to intervene with the strategic thinking of these companies in terms of long-term plans. The companies accommodated all of their processes to the hygienic requirements put forth by the government, and they have been waiting to see what will happen next.

"The advantages of a higher degree of process automation are on display, and not only during this period of the pandemic."

Libor Mihalka
CFO
LogTech

The short-term effects of the pandemic vary per sector. While e-commerce and retail/wholesale recorded having a "second Christmas" in their interview, the automobile industry has experienced an 80% downswing. There have been outages and delays in transport and deliveries. The increased demands on hygiene and limited employee contact have upped operational costs.

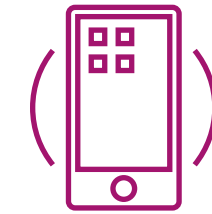
On the contrary, retail/wholesale companies are expecting the least negative long-term effects of all. The e-commerce and 3P logistics sector have often seen an opportunity to grow during the current situation, to expand their portfolio and, in relation to this expected progress, the need to improve operational and logistical efficiency. However, approximately 40% of the addressed companies are beginning to reappraise their investments – either they are postponing them for the future or beginning to direct them elsewhere.

Main trends

Technology expands human possibility, accelerates automation, and reduces human error

9/10

An overwhelming majority of the addressed logistics professionals are planning on automating their warehouses within the next 5 years.



New technology, such as mobile printers and manual scanners, are already being used by the employees from 70% of companies.

ROI

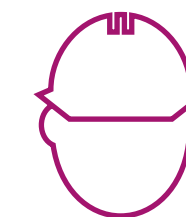
Effectiveness and quick-return investments take up the primary spot when planning for the future.



Sustainable development and ecology continue to play the largest role in making decisions about the evolution of logistics.

**up to
-80%**

The COVID-19 pandemic and its safety measures caused an interannual downswing of up to 80% for some companies.



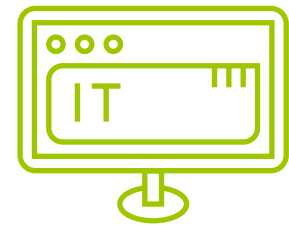
Currently, workplace safety is the most frequently discussed topic from the perspective of investments.

Main trends

The main topics currently fluctuating in the world of logistics are as follows:



human resources and work safety



IT / warehouse managing systems (WMS)



technology and automation



CRS, green logistics

Without people, none of this is possible

The extremely low unemployment rates, which were considered the standard in the Czech Republic over the past few years, drove the price of human labour incredibly low. Logisticians began investing in automation in order to free themselves of the human factor to some extent.

Nevertheless, all of the addressed companies agree that no matter how good the management system is, it cannot replace quality personnel. The current situation in the labour market has changed due to the pandemic, and more people are available to work. The question is, then, how they will prove effective in the long-term.

“With the arrival of COVID-19, the situation has improved a bit. However, it’s necessary we keep certain limitations in mind. For instance, everyone is talking about which sectors got hit and where the most layoffs are coming from. Take gastronomy, for example. There are very few workers from this field that would like to work in a warehouse, and even fewer of these would want to work there in the long-term. You can tell, of course, that they’re interested in working. However, as soon as the situation calms down and the tourists come back, they will return to their own field, which, of course, is something we can’t hold against them. Then, from the perspective of the company, the question arises whether we should invest in a person like this if we notice a distinct dissimilarity between the individual sectors and a large probability that this given person would want to return to the field they were forced to leave due to the current circumstances.”

Radoslav Palla
Managing Director
4PX Express CZ



Main trends

Semi-automation vs. complete automation/efficiency

Logisticians agree the use of new technology, IT systems, and robotic machines play a key role when searching for efficiency. The extent of automation is dependent on a field's operations. Thanks to the variety of goods, retail/wholesale are not expecting complete automation in the near future – not that it would be impossible, rather that the investment would not pay off.

"Interviews with the experts from the retail/wholesale world proved that human labour is still needed in the warehousing business. They make up a significant share of costs as companies are striving to optimize their use. They can either replace them or increase their effectiveness. Increasing effectiveness translates to investing in software, replacement refers to automation. Increasing effectiveness by using software is already under way. Today, automation

remains more expensive than human power. Should its cost significantly grow in the next 5 years, automation will take off – companies will have no choice."

Barbara Hrabalová

Head of Ipsos Actify
Ipsos

On the other hand, the automotive industry is building completely automated warehouses:

"We can't shy away from investing in automation. For example, on the first of July we began operating a robotic sequence of batteries, which has provided economic savings."

David Strnad

Head of Logistics
ŠKODA AUTO

Whatever the role of human labour across the varied fields, every logistician we spoke to is planning on investing in technology to make people's work easier and reduce errors.

The most current example is equipping workers with technology:

- manual scanners, mobile printers, and sensors are quite common components of the equipment used in warehouses
- in the near future a great expansion in local technology, RFID, voice control, and wearables is expected
- currently, there is the complete automation of handling devices and robots in the field of automating warehouses
- predictive analysis and machine learning, and possibly drones, will broaden within the next 3 years
- virtual reality is expected to arrive within 10 years

"Equipping workers with modern technology is the easiest and quickest starting point for warehouse and manufacturing automation. And that's true whether we're talking about today's barcode scanners, RFID or progressive technology which takes advantage of augmented reality, for instance, in the form of smart glasses."

Marek Písečný

Territory Account Manager CZ & SK
Zebra Technologies CZ

Main trends

Green logistics is an obligation

Czech logistics strive to be green. Logisticians agree that ecology is one of the factors which influences their future investment planning – including compostable foils, controlling their CO₂ footprint, transport planning and handling technology with Li-Ion batteries for green, energy-efficient warehouses.

“Companies are particularly responsible within this field. Carriers are dealing with a new CO₂ Euro norm for lorries. If they have Li-Ion batteries, then they’re interested in every kilometre travelled, as they are trying to reduce their carbon footprint as much as possible. Nevertheless, you come up against a lot of restrictions in this field. Like with cars running on CNG in Prague, for example. Here there are so many restrictions that it isn’t even worth driving them. According to the addressed experts, no train connection to Ostrava exists, which could transport goods reliably and on time.”

Barbara Hrabalová

Head of Ipsos Actify
Ipsos

“The construction of distribution centres has significantly expanded over the past 10 years – they are and will be low-energy, and include solar panels, scattered plants, and housing for employees. Hopefully, in the near future, we will witness the construction of level distribution centres in cities, located as close as possible to final customers, just like they have in Japan, for instance. It isn’t effective for anyone when lorries get stuck in traffic for hours as soon as they get close to larger cities.”

Marek Cvačka

Managing Director
ESA group

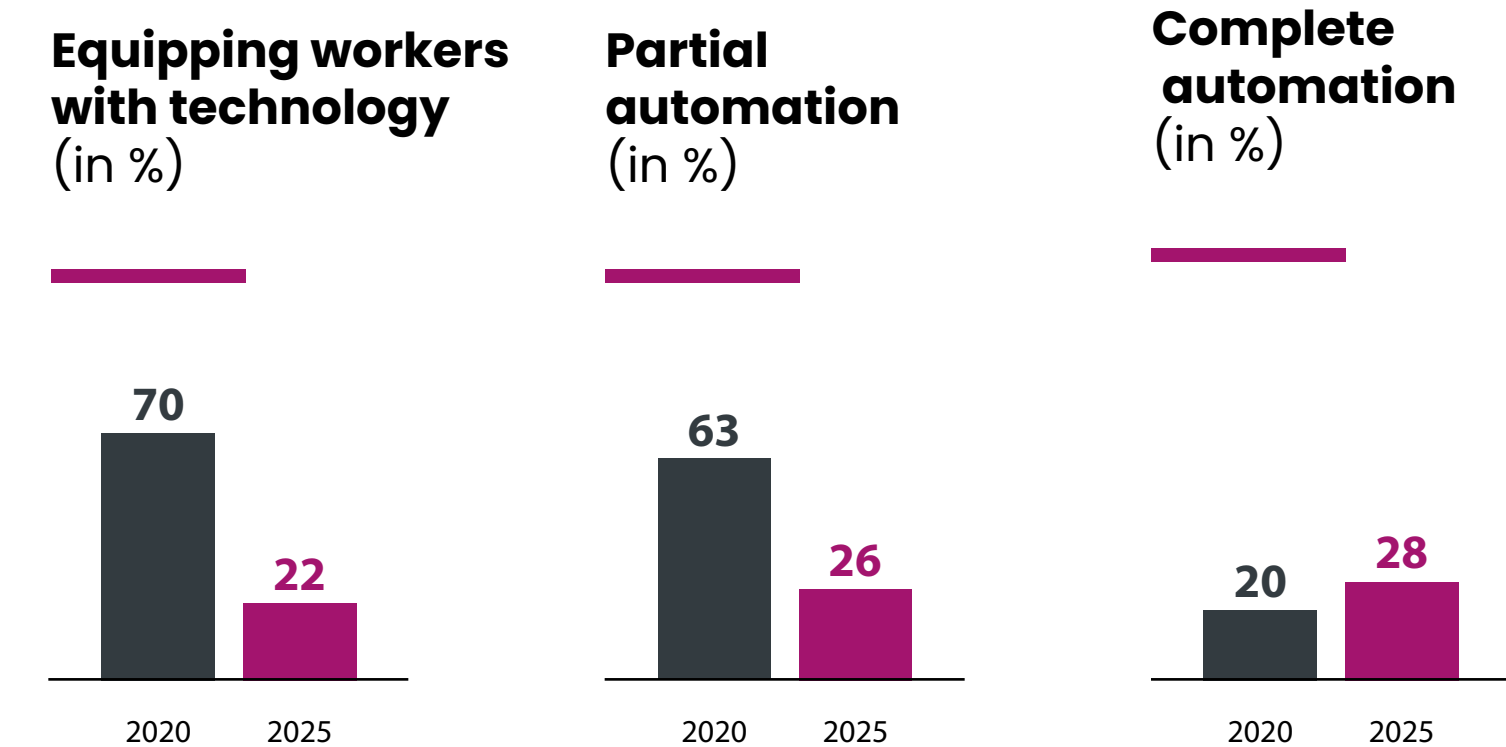


Time horizon for future trends

For most companies, complete automation is not the topic of conversation.

What are the current and future trends

Time horizon for putting trends into practice



The topics companies are currently dealing with today are equipping employees with new technology and partial warehouse automation. We will gradually pass over to complete automation within the next five or ten years.



Future trends

Warehouse workers in the Czech Republic are currently equipped with manual scanners, mobile printers, sensors, and mobile telephones with scanners. In the near future, local technology, RFID chips, voice control, and wearables is expected to expand.

The most up-to-date topics regarding warehouse automation in the Czech Republic are completely automatic handling equipment and robots. Current predictive analysis and machine learning, as well as drones, make up the next phase. Virtual reality is not expected to arrive for another 10 years.

Time horizon: Equipping workers with new technology

Handheld Barcode Scanners	94%	2%	4%
Portable Barcode Printers	81%	12%	7%
Sensors	78%	17%	5%
Mobile Phone Scanners	75%	18%	7%
Location Systems	66%	23%	11%
RFID Chips	60%	25%	15%
Voice Control	42%	39%	19%
Wearables	32%	42%	26%
Virtual Reality	12%	33%	55%
	2020	2025	2030

Time horizon: Warehouse automation

Automatic Handling Systems	39%	29%	32%
Robots	36%	29%	35%
Predictive Analytics	29%	36%	35%
Machine Learning	19%	38%	43%
Drones	14%	38%	48%
Virtual Reality	10%	23%	67%
	2020	2025	2030



Detailed perspective on key areas of warehousing

1. Situational analysis and warehouse optimization

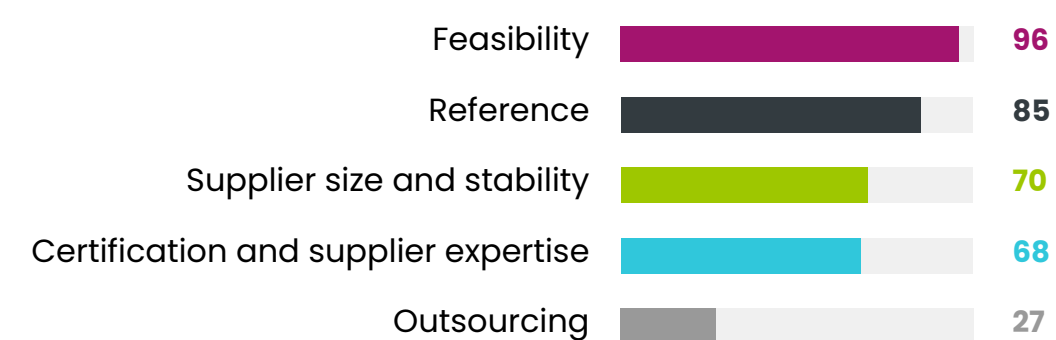
Most companies are worried about optimally adjusting internal logistical processes and capacity utilization.

The correct solution is a thorough audit of the current situation, analysing the received data, and then designing the optimal warehousing and internal logistics solution. Implementing a comprehensive solution can then be carried out with the support of experts, or can be outsourced.

71%

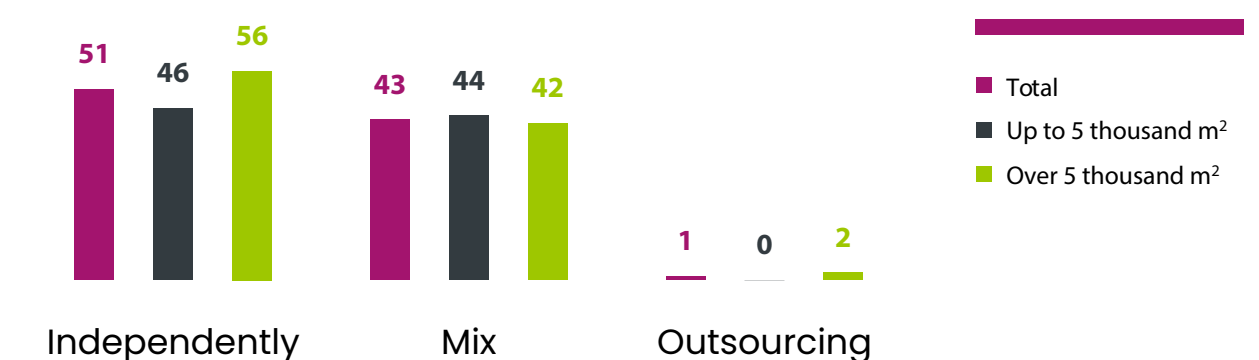
of the addressed companies plan to invest in their warehouse analysis and its optimization in the following 12 months.

Criteria importance when selecting a supplier (in %)



In terms of their partners, companies are primarily searching for stability, sufficient experience, and the ability to implement the proposed solutions.

Solution method (in %)



Companies devote themselves to this either internally or by cooperating with carefully selected external partners. Companies with larger warehouses tend to make their own path. 68% of companies that cooperate with external partners are satisfied.



Effective and properly managed internal logistical processes remain one of the deciding factors of the success of manufacturing and commercial companies



Antonín Líbal
Board Member of
JK Logistika

SKLAD's view

"We have the experience and tools to be able to evaluate the current realization level of all the processes within the business, and we can suggest changes which will lead to a more economical and effective process management. And that's whether we're talking supply, material flow, technology, or human resources."



Martin Řehoř
Director for Logistics
ADLER Czech

View of an expert

"We place great emphasis on procedural logistics. Our processes are always subject to revision. We even have a special team of programmers, networkers, analysts and testers for this very purpose."

2. Storage facilities

Companies are willing to pay more for location

While price remains the gate in many situations, i.e. “the first deciding factor”, the correct locality continues to be more important for industrial properties. Especially the overall supply chain and flow of goods in terms of suitability.

50%

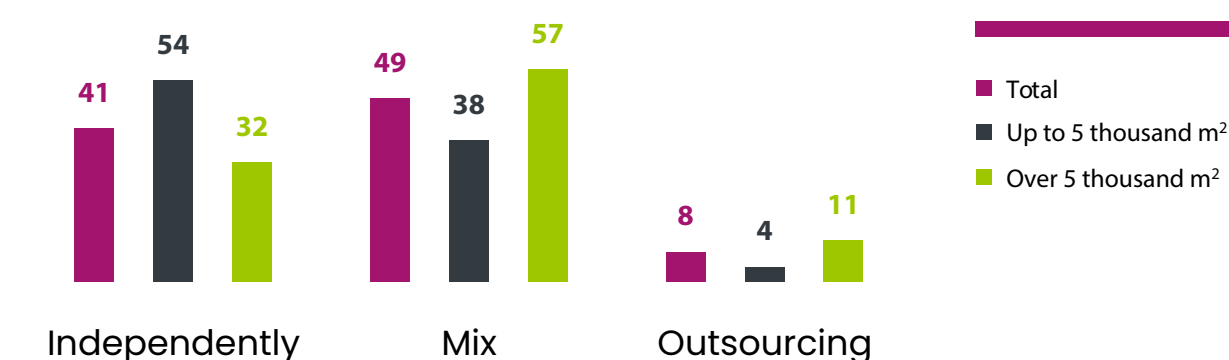
of the addressed companies plan to invest in new storage facilities within the following 12 months.

Criteria importance when selecting a facility (order)



Companies primarily pick new storage facilities according to their location, price, and equipment quality.

Solution method (in %)



Companies are looking for new storage facilities either independently or by working together with external suppliers. Companies with warehouses over 5 thousand m² tend to deal with this by working together with external suppliers. Companies with warehouses 5 thousand m² or less tend to search independently. 69% of the addressed companies were satisfied with their cooperation with external suppliers.



Transport accessibility is the primary criteria of logisticians when selecting a location



Robert Sgariboldi
Head of Industrial Agency
108 AGENCY

SKLAD's view

"Upon selecting new storage facilities, emphasis is placed on the overall effectiveness and economic operation. It isn't only about net costs for construction or renting a property, but mainly about the given location's suitability for the needs of the user's operation from the perspective of supply chain placement, transport accessibility and the availability of a qualified work force. This results in different availability of suitable buildable land within the individual regions of the Czech Republic and, of course, the price in various locations according to their attractiveness for the end user."



David Strnad
Head of Logistics
ŠKODA AUTO

View of an expert

"Our goal is to expand the supply chain close to the manufacturing place while bearing in mind the logistical costs and complexities of transport in the Czech Republic. More than 2,000 lorries arrive at our facility in Mladá Boleslav, which means the entire process needs to be arranged and managed."

3. Technology for warehouse management

A Warehouse Management System is capable of running even the most complex processes

Modern WMSs enable comprehensive solutions which cover the entire warehouse, yet the companies' satisfaction rate with their supplier is only 51%.



53%

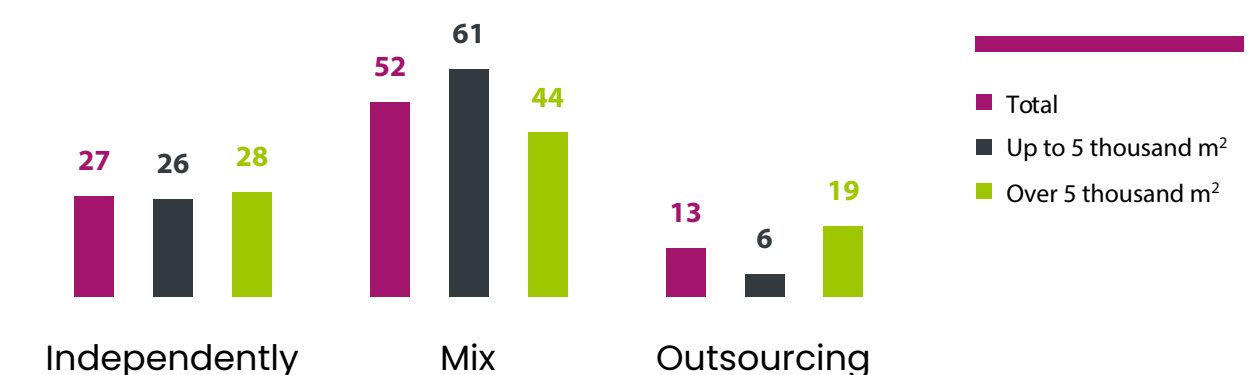
of the addressed companies plan to invest in a WMS within the following 12 months.

Criteria importance when selecting a supplier (in %)



Project return on investment and the option to configure solutions and their complexity are the main criteria for selecting a WMS.

Solution method (in %)



Companies deal with this area more often when cooperating with external partners than when working independently. Only 51% of companies that cooperate with external partners are satisfied.



In order for a WMS to operate at an optimal level, it needs to be tailored to fit each company



Rostislav Schwob
Supply Chain Solutions Director
Aimtec

SKLAD's view

"Nearly anything can be programmed. The key, however, is understanding the concrete needs of the given customer, not simply supplying the system. Find a partner experienced in your field, which can also be a great help in terms of vision and further solution development. How do you know when you've found the right partner? An expert is capable of providing best practices from various projects, thus saving both time and money. From the moment you begin working together they guide you, and they improve on and make adjustments to you and your vision. You understand what they are saying, and you trust them."



Ondřej Zíka
Director for Logistics
Globus Czech Republic

View of an expert

"If you are making inquiries regarding a new warehouse system today, in most cases you will find the majority of what you need. It does matter, of course, just how complicated your internal processes are. I think that the possibilities of warehouse systems are significantly broader than their actual application."

4. Warehouse automation

Automation presents an effective medium to improve productivity

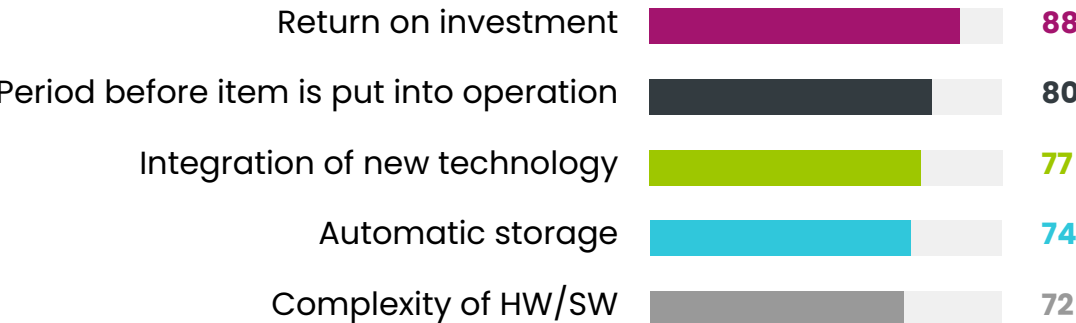
Increased performance while maintaining the same number of employees is a key component for a company's development today.



76%

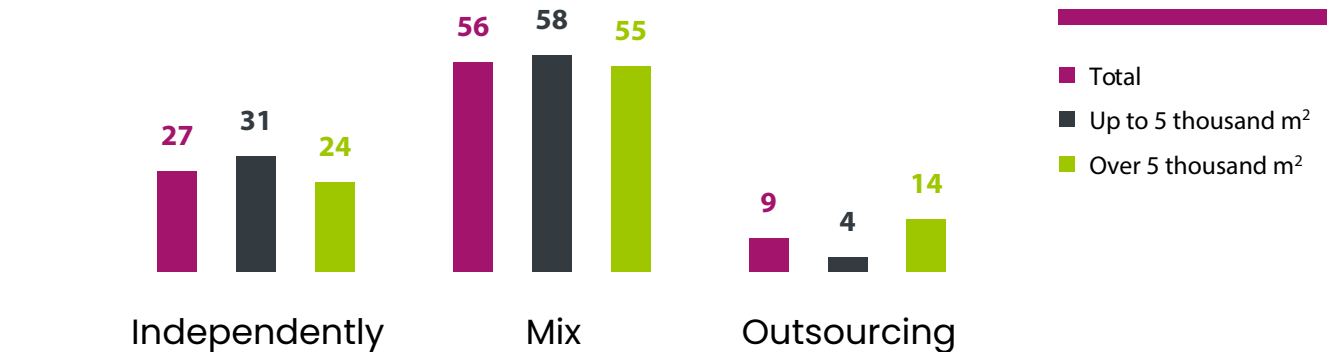
of the addressed companies plan to invest in warehouse automation within the following 12 months.

Criteria importance when selecting a supplier (in %)



The projected return on investment, the period before operation, and the integration of new technology to the current systems are the main criteria for making a decision.

Solution method (in %)



Companies deal with this area more often when cooperating with external partners than when working independently. For 60% of these companies, the reason being is increasing productivity, and for 22% it is human personnel. 44% of companies were satisfied with their cooperation with external suppliers.



The current technical automation possibilities enable the complete automation of all warehouse and logistical processes



Zdeněk Bláha
Procurator
Blumenbecker Prag

SKLAD's view

"Companies run into investment restrictions, but are aware of the other benefits of automation, such as a safer work environment for employees, the ability to maintain business operations, and the remote administration and management of logistics during emergencies. The recent wave of the pandemic and the uncertainty of further market developments were also tested."



Radoslav Palla
General Manager
4PX Express CZ

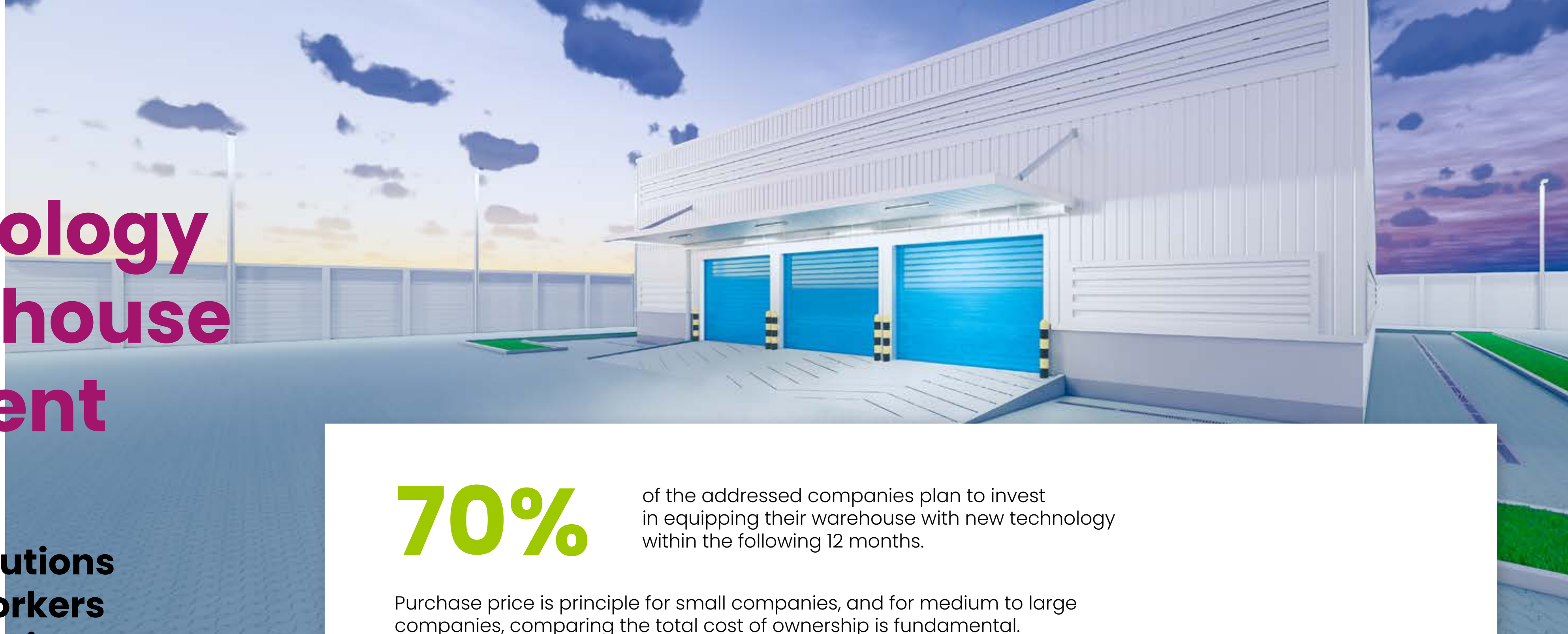
View of an expert

"The main trends in logistics can first be seen in automation, as, in my opinion, the work force availability in our field will not improve, and that applies also to the use of smart technology, which should first and foremost make people's work easier, while also minimalizing it, until hopefully finally eliminating human error all together."

5. Technology for warehouse equipment

Many various solutions exist that help workers to accelerate and improve the quality of their work in a warehouse

There are small, medium, and large companies on the market. We operate in fields such as logistics, the automobile industry, mechanical engineering, retail, service providing, chemistry, and now the fast-growing e-commerce field. And every company in their designated field has their specific requirements and view on what will bring them the best possible results.



70%

of the addressed companies plan to invest in equipping their warehouse with new technology within the following 12 months.

Purchase price is principle for small companies, and for medium to large companies, comparing the total cost of ownership is fundamental.

Criteria importance when selecting a supplier (order)

For companies with a warehouse measuring up to 5,000 m²

1. Price
2. Safety elements
3. Quality and scale of services
4. Comparing total cost of ownership (TCO)

For companies with a warehouse measuring over 5,000 m²

1. Comparing total cost of ownership (TCO)
2. Price
3. Quality and scale of services
4. Safety elements



There is no good or bad time for investing



Tomáš Hnízdil
Commercial Director
STILL Czech Republic

SKLAD's view

"It's apparent that nowadays, companies are interested in investing in warehouse equipment, and in that investment they see options to optimize, which could bring them economic savings, extra space and personnel, now and in the future. Acquisition costs aren't everything, the warehouse layout is also important, as is selecting the right technology and the associated total cost of ownership, which is the view of most medium and large companies, regardless of their field of business."



Miloš Navrátil
Executive Director
SC Metal

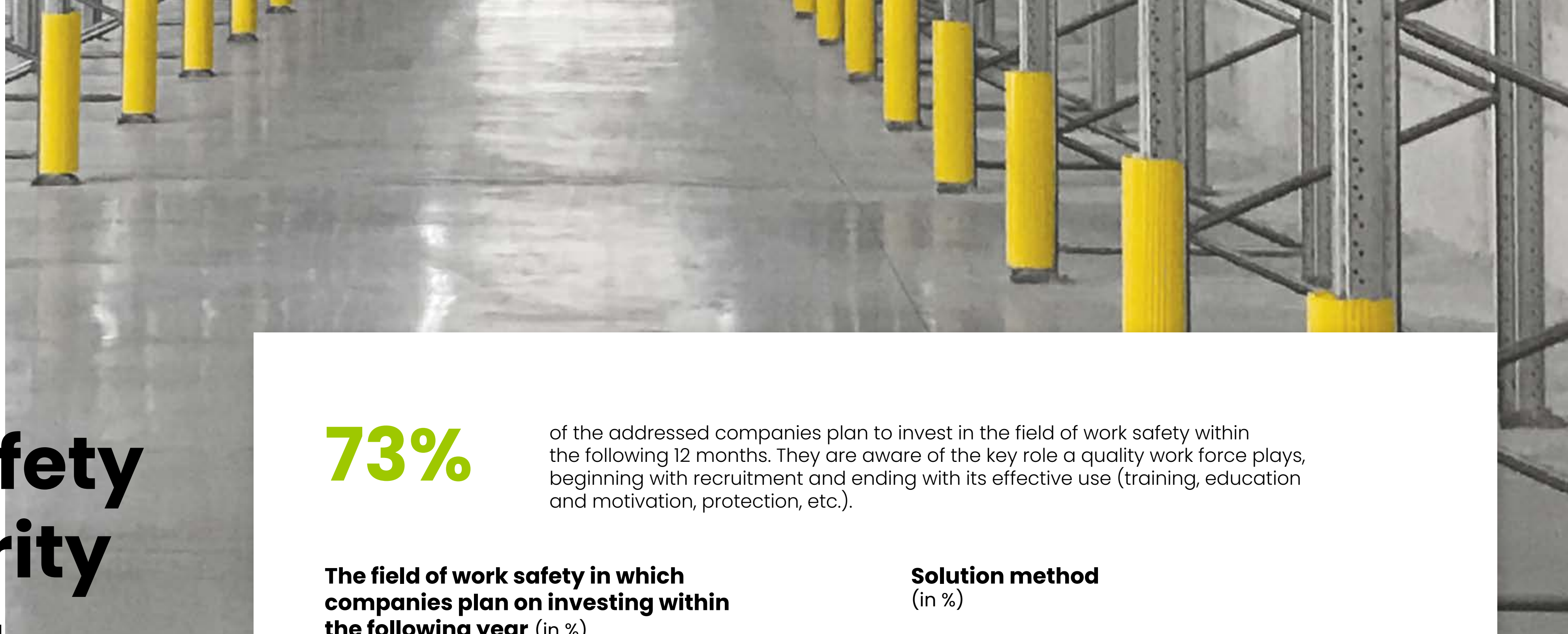
View of an expert

"I'm not aware of any company that isn't battling with space. Today, one square metre is as good as gold. Thanks to our mobile shelving system, we've saved 600 m² which is an entire manufacturing hall for us. Thanks to this system we can significantly increase performance."

6. Work safety

Work safety is a priority for most logistical operations

Anti-collision systems and protective barriers are in the forefront of interest.



73%

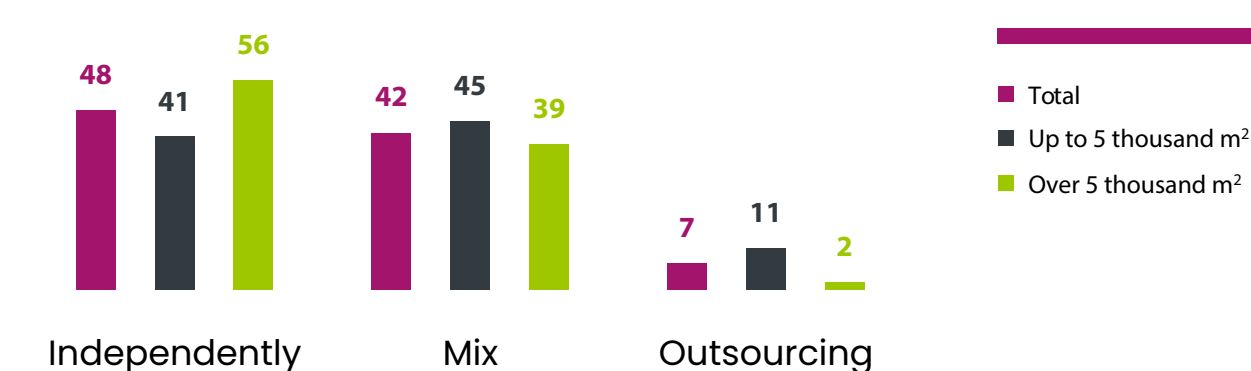
of the addressed companies plan to invest in the field of work safety within the following 12 months. They are aware of the key role a quality work force plays, beginning with recruitment and ending with its effective use (training, education and motivation, protection, etc.).

The field of work safety in which companies plan on investing within the following year (in %)



The most important areas companies are planning to invest in during the next 12-month horizon are risk of collision between handling equipment and pedestrians or with other means of transportation and property damage caused by technology.

Solution method (in %)



Companies with larger warehouse capacities independently handle work safety more often than they cooperate with external partners. Companies with warehouses measuring 5 thousand m² or less are more inclined to cooperate with external partners. 90% of companies were satisfied with their cooperation with external suppliers.



Investing in work safety is investing in effectiveness



David Lošťák
CEO
HAPPY END

SKLAD's view

"I'm glad that Czech businesses are drawing closer to the western standards of work safety. It has something to do with competition in the labour market - no one today wants to work in a dangerous or unhealthy workplace. With increasing pressure on the speed and price of logistics, it's also becoming clear that any accident or incident means costs, not only for the liquidation of the damage, but it also has a direct impact on the flow of the logistics process. So, the cost of work safety is not just a legal requirement, but a return on investment."



Miloš Navrátil
Executive Director
SC Metal

View of an expert

"For us, protecting people and materials is our priority. Of course, we hold training about work safety and using technology, however, prevention is always better. We have an unbelievable number of options thanks to technology - as is standard. Forklift trucks are equipped with movement sensors, various laser barriers exist, variable aisle signage, convex mirrors, demands for comfort of work aids are increasing, etc."

In conclusion

For now, it may seem that a future full of completely automated warehouses and flying drones is not awaiting us



A final word

In the future, the world of logistics will revolve around the optimal use of IT/software systems that will completely manage warehouses. They will provide a flawless overview of every stocked/unstocked product and its exact location. Stocking/unstocking will take place (semi) automatically – pickers will not search for goods via scanners, rather they will be automatically delivered to them (as for the automobile industry, even this function will be completely automated). In an ideal workplace, connecting a warehouse's tracking system with delivery would be possible, thus 100% covering the product's journey, both in the warehouse and while travelling to the customer. Drones, or even online cameras, will be used when taking inventory. Nevertheless, it may seem that a future full of completely automated warehouses and flying drones is not awaiting us. In the future, this trend will

continue, and automation and technology will play an increasingly important role. Most often, investments in technology are planned with a practical and rapid impact on the efficiency of the overall process – for example, RFID technology or automated handling equipment. What is certain is that the world of logistics will only grow faster and faster, meaning there will also be a need for quality personnel able to react and adapt.

“The study showed that it viewed the world of logistics rather soberly. Despite the fact that from the fourth Industrial Revolution's point of view, innovation is a necessity. The fact that any investment must be returned to the company in the short term, or within a few years, still rings true.”

Petra Troblová
Executive Manager
SKLAD

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The research for the SKLAD association was conducted by IPSOS between March and July 2020.



Spolek Kompetentních Logistiků a Dodavatelů



The SKLAD Association members are:

