

AIMagazine

INDUSTRY 4.0 IN PRACTICE



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From paper
to automated
data collection

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Automotive
should learn from
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automating your
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HELLA GROUP:
Warehouse's
capacity grew
by nearly one half

Aimtec Sappy

More than 15 years of logistics, production and supply chain digitalisation with SAP ERP



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Amphenol

Amphenol-Tuchel Electronics GmbH

Improving detailed overview of production with SappyMES

Fehrer

Material flow digitalisation and semi-automation of internal logistics



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Complex management of logistics, quality and planning in SAP ERP in plants all over the world

2006 >

< 2011

2015 >

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2020 >

„Do you also want to benefit from using Aimtec Sappy? Get in touch.“

Jan Vápeník

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Don't fear the unwalked paths

It's been 25 years since Roman Žák and I founded Aimtec.

It's been 19 years since our first AIMagazine.

At Aimtec we've always been eager to try things that were revolutionary for their time.

When we began handling integrations in 1996, we were the very first in the Czech Republic to deal with them. But being a step ahead has always paid off for us – even at the cost of getting a bit roughed up sometimes. After all, it's hard to learn without a few bruises.

When we organised our first Aimtec Open Race in 2009, many people didn't understand why an IT firm was dabbling in bicycle races. But today this regular event is renowned among cyclists and is an affair of the heart for us, one we look forward to each year, and one that helps us to spread the positive atmosphere that's so vital to us at Aimtec.

In 2002 when we wrote in the first AIMagazine about a project where we replaced faxes in automotive with EDI communication, few would have guessed that nineteen years later they'd see its thirty-sixth issue, with references from companies like Novasport and Hella.

This year we're celebrating Aimtec's twenty-fifth birthday, and if there's one wish we have for Aimtec and AIMagazine, it's a simple one. The courage to risk – but also patience, and the stamina to maintain things and keep doing so even when none of us are feeling good.

I hope that in this latest AIMagazine, you'll find inspiration for these bold strokes, as well as tips on how to endure and make your projects and companies more efficient!

Jaroslav Follprecht

AIMagazine³⁶

Trends, interviews, technologies and success stories from the world of logistics, production and supply chain digitalisation

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We learned while doing – and always valuing decency and good relationships

An interview with Jaroslav Follprecht

Aimtec is celebrating its 25th birthday. That’s why we couldn’t resist asking its co-founder Jaroslav Follprecht what has changed and what events most strongly shaped the company – but also how hard it is and has been to find work-life balance.

Tell me how Aimtec is unique for you. Has your perception of it changed over the years?

It hasn’t changed for me. It’s still all about regard for basic values, like respect among colleagues – in short, a polite and pleasant atmosphere. In this day and age this can be quite rare, but I think that at Aimtec, we’re managing.

What’s the next planned milestone for Aimtec’s development?

We’re working on many changes, but I see this as more of a natural development and a reaction to trends in the field, technological development and the market. The cloud is one example. It’s a hot topic in all our divisions. This also concerns every phase of delivery – from sales to execution to customer-

system support – and it means a real change in people’s thinking. We’re also preparing our internal support systems so that, using cloud systems, we can give customers access to them and raise our delivery quality to the next level.

Before founding Aimtec with Roman Žák, you left a major firm, which bothered you with its rigidity. Today Aimtec has 200 people and a

global reach... Have you had to make compromises here?

Back then we worked for a European firm with about 300 people, and it was bought off by a multinational with over 70,000 employees worldwide. It’s logical that for this colossus, some “inflexibility” in decisions and an impersonal approach in relationships are natural. The inability to give customers sought-out

solutions that would bring them true added value and to fully harness human potential was among the main reasons why we chose our own road.

For many people order and rules fall under rigidity, but those are unavoidable – in part due to our line of business. A punk company would never hold up in the professional world of automotive suppliers with its clear

and strict standards. At Aimtec what’s important for us is a spirit of innovation and sufficient room to adapt to the market and its needs, along with an effort to preserve our human side, enable employees to find fulfilment and care for good interpersonal relationships.

What would you note as the milestones where Aimtec grew up the most or learned helpful things?

The first one awaited us right at our founding. We weren’t aware that two company cultures joined Aimtec’s original seven founders. Roman and I went into it with the goal of founding a prime company oriented on bringing customers the highest quality from the world of IT. We rejected bribes and opportunism. But we ran headfirst into another of the owners whose view differed and who brought us projects below our standard. We then told ourselves: we don’t need this, and we don’t want to betray our values right from the start. So we decided to part ways with certain colleagues and then shape the company as suited us.

Another milestone came in 2000 with the “millennium problem.” This was about how on those computers where the year – back then – was only identified via two digits, the year 99 was immediately followed by the year 00 – that is, the year 1900. Nobody knew what would happen, whether planes would crash, cars would stop driving... We expected this situation in IT would bring us many new opportunities, but everyone got scared, and development business practically froze. Aimtec stood before bankruptcy. We were four owners back then, and the other two proposed shutting down. But that seemed a shame to Roman and me, so we decided we’d do everything to survive. It paid off; we made it through that impasse.

The crisis in automotive in 2009 pushed us ahead even further. It dawned on us we’d have to transform the company so as to “become secure” and look more to the future, plan and focus on profit. That’s what healthy companies do.



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How have Aimtec's operations changed? Surely there are many decisions around shaping strategy – affecting customers as well.

Definitely. They include for example a change to our business process and a focus transition from independent companies to corporations and groups. The goal for this kind of firm, especially among automotive suppliers, is process standardisation throughout the company. We utilised that and fine-tuned our delivery methods so that after a successful pilot project, we could “roll out” standards from headquarters into branches while keeping the flexibility of their added-value processes. However, that meant a change to Aimtec's operations, from marketing to the sales department all the way to deliveries and client support.

Would you place the coronavirus pandemic among the things that have influenced Aimtec?

Yes, for both good and ill. Since Aimtec has been built from the start with the goal of maximising the use of modern technologies as a “paperless company” where employees could work from anywhere, we were fortunately prepared for the shift to work from home. We were able to deliver some portion of our projects remotely even before the coronavirus. However, the pandemic has enabled us to deliver projects without any physical presence, as we did in a recent delivery to South Africa. I see the shift started by the pandemic in how online access has begun to be routine for everyone. I can't imagine having arranged online meetings two years ago with for example a plant manager in Germany. But today this is common. Naturally, Aimtec was negatively affected by not being able to meet each other, which has always been fundamental for us. Training young colleagues remotely ranges from difficult to impossible. Delivery efficiency drops. Collective creativity vanishes.



In light of all we've mentioned – what would you advise to rising young entrepreneurs who are considering founding their own company?

It's important to say what kind of company you really want. In our time we learned as we went; nobody had any guides to help us solve our problems. We shaped Aimtec based on how we saw things at the time. On how it should stand on values and long-term effort. It's true we didn't think back then we would one day be celebrating 25 years of Aimtec. But I do see that today companies often launch with the goal of a good exit. Entirely different rules apply then. In any case, you need to endure and embrace risks.

And one last, rather “soft” question. How well have you balanced work and life during these 25 years?

Both Roman and I are control freaks when it comes to keeping our personal lives organised. Our approach can be summarised into a few simple rules. Write down everything important in life at the professional and personal levels, then divide time and interest evenly

between them. Yes, it may sometimes seem unpleasant, and it sometimes must be forced. But we have to consider how, when one thing vanishes, we need others left to lean on. That's why we must give time to it all. This can be learned.

Tereza Drahoňovská

Jaroslav Follprecht

CEO, Aimtec

is Aimtec's Managing Director and the Vice-Chairman of the Board. He co-founded Aimtec in 1996 along with Roman Žák. Today they both lead this company with a global reach that has roughly 200 employees and revenue of over CZK 350 million.

He graduated from the University of West Bohemia in Pilsen, majoring in electronic computers and control systems. In his free time he likes to head out and ride a snowboard or scooter.



From paper to automated data collection

Comprehensive MOM solutions for logistics and manufacturing have amplified plant efficiency and brought simple production planning



”

Our data can now be relied upon thoroughly. Thanks to this, we know when materials are available and manufacturing interruptions no longer occur. We can thus ensure that the final assembly line runs continuously, without any interruptions, which was previously often impossible.

The new mode of operation has given us a way to make predictions for a period of up to one year, simulate various scenarios and identify production bottlenecks. Even though data sanitisation meant a major time investment for us, it definitely paid off. It shortened our stock-taking period, and we now meet our plans practically every time.

Robert Reiss,
Executive Officer, NOVASPORT



from both people and machines. The planning of all orders – including the guaranteeing of their successful and timely fulfilment – is based upon it. This enables a smooth flow among manufacturing, logistics and quality control without the need for checks by humans, which is one of the specific of MOM projects such as this one.

About NOVASPORT

NOVASPORT was founded by its parent company LEKI in 1992. In 1999, this firm's rapid growth brought a decision to build new spaces in Tachov, increasing both manufacturing capacity and employee count.

Its collection of ski, hiking, and walking sticks for the winter and summer seasons, with a variety of structural and visual designs, grew to include nearly 400 models. Other sporting goods such as gloves soon followed. The LEKI group exports its products worldwide.

In light of its high annual growth, NOVASPORT has focused on increasing its manufacturing productivity,

manufacturing efficiency and manufacturing-resource capacity by deepening the digitalisation of its processes. This new work method has demanded new technology for precise and swift planning based on relevant data.

Aimtec has provided the tools for process digitalisation and optimisation via a comprehensive MOM (Manufacturing Operations Management) solution that blurs the boundaries between logistics and manufacturing. It includes online real-time data collection from manufacturing halls and warehouses, a new planning system and transparent order management.

Before deployment

- > **Manufacturing and assembly of 1.2 million poles per year**
- > **Ten-step manufacturing**
- > **Manufacturing processes at eleven departments stretching out over nearly 12,000 m²**
- > **Know-how transferred personally, without unified processes**
- > **Guided multi-step manufacturing, with numerous dependent processes**

Project goals

Visibility for individual orders' statuses and rapid resource planning, all relying upon data directly from the shop floor – these were the project's primary goals. But several barriers stood in the way. Initially all orders were fulfilled on the basis of paper planning, while data collection was uncoordinated, and the master data was unusable. Disparate processes were slowing down manufacturing as well. The master data needed to be sanitised, and more comprehensive monitoring needed to be introduced, while planning based on newly set rules had to be introduced as well. Therefore, two projects were launched at NOVASPORT at once – one with the goal of providing a maximum

of production-status information; the other with that of setting up the plant's planning.

Aimtec's solution: DCIxMES and Asprova

Aimtec deployed a special solution for a digital image of the state of manufacturing and for subsequent advanced planning that is integrated with NOVASPORT's existing ERP system, as well as collection of the right data. Thus there was no need to switch to another ERP system.

A unified data foundation was created for the entire plant from both its manual and automated work centres, and

New technologies

Touch terminals and televisions at the level of individual work centres:

- > displaying of order statuses at work centres,
- > easier monitoring for the production supervisor thanks to an overview all in one place.

Time savings for planners due to how the production plan is designed:

- > no need to determine status and design a plan,
- > conflict resolution by the planner without the need to deal with other complications.

After deployment

- > Supplies to the shop floor based on real needs with automatically issued requests
- > A solution for planning and data collection integrated into the existing ERP system
- > Time savings for planners via rapid and clear order planning
- > Reduced stock-taking time and continuous operation of the final assembly line without interruptions

The degree of digitalisation

One major step was ensuring automatic data collection and rapid planning through a superstructural solution supplied by Aimtec. Manual recording of production status has been eliminated, enabling NOVASPORT to completely move away from paper and pencils towards a digitalised order-status overview in real time, in ways ranging from shop floor status visualisation to plan fulfilment to machine operation. Thanks to this comprehensive MOM approach, manufacturing, logistics and quality control have been interwoven into a single managed process, and yet the data is still stored in the corresponding databases, which function separately, or as a unit.

Other superstructural solutions implemented at the plant:

- > Solution add-ons provided to cover all areas of manufacturing and logistics
- > A DCIx WMS system for managing logistics processes

- > An administration and communication portal for suppliers
- > A system for quality control throughout the entire manufacturing process, from receipt to shipping



Main benefits

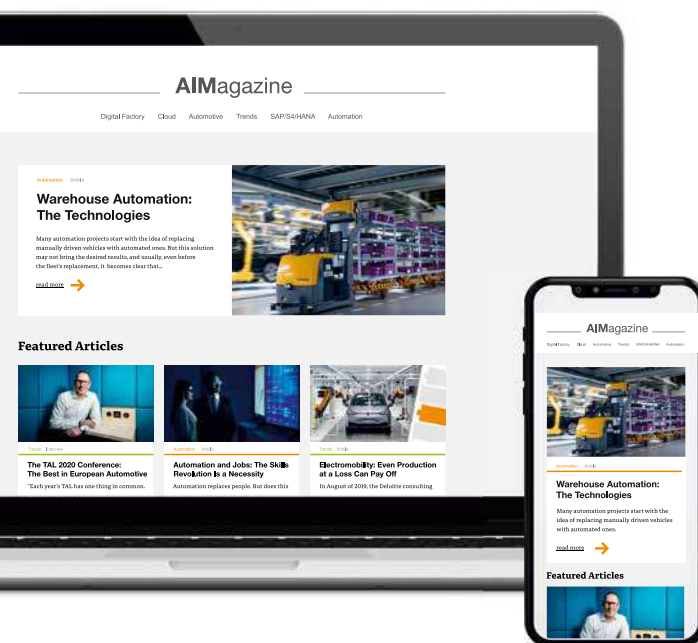
- > Growth of overall capacity by 20%
- > A significant reduction in stock-taking time, by over 4 days, thanks to increased data quality
- > A visual overview of individual orders
- > Quality control that is integrated into the entire manufacturing process, from receipt to manufacturing to shipping

AIMagazine

Discover the world of production and logistics digitalisation.

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Automotive should learn from e-commerce. Through data and digitalisation.

An interview with Ivan Marinec

If you want to succeed, learn from the best. That is why we've interviewed Ivan Marinec, with his rich portfolio of experience from operations and logistics management in automotive. Over 20 years in this field have given him a unique perspective on the current turbulent situation and more importantly on the trend of digitalisation in automotive manufacturing. We asked him for tips as well as lessons learned that have helped him to start his own company.



There is a really good tool for this named DEEP. It collects all core data from SAP, creates data package cubes and marks missing or incorrect data. Great tool!

And my second recommendation for managers: Do not allow any reports in Excel to be delivered to your desk. Simply ban that and require KPI reports exclusively from ERP or MES. This is truly the best indicator to reveal where your company is.

Where do you see the biggest challenges or on the contrary, the biggest opportunities in current automotive logistics?

There has been unbelievable progress in the last decade, in general, everywhere. Automatisations, digitalisation, robotisation and the IoT have simply changed everything and opened up new perspectives. Those who remain analog will not survive.

The future trend is obvious: all companies must rethink the way they manage indirect processes – I mean the supply chain, internal logistics, procurement and purchasing and more – they must automate, digitalise.

I'll give an example: there is a VDA/GTL standard for transport labels. These labels are affixed to pallets normally and could be used for a firm's internal-logistics WMS too. But many companies still relabel each pallet with their own internal label during the receiving process or incoming inspection. Why do they do this? It's expensive and prone to error by mislabeling.

Or there's the process of freight transport ordering or the choice of a transport partner. Everyone should forget here about e-mail or the phone. Let's make this digital and 100% compliant! It's quite simple, and 50% less administration effort is guaranteed!

Salary increases are unstoppable, so companies have to adapt their processes to new trends – to be simpler, faster and smarter.

It is always good to have positive opportunities, but to be honest, what are the current problems we face? And is there a solution?

The biggest challenge now is broken supply chains. Completely. Nowadays electronic components are the biggest bottlenecks, causing multiple production stops by OEMs and up to dozens of thousands of incomplete cars parked in OEMs' yards.

At the same time, sea and air transportation costs have exploded in recent months. Costs for FCL (Full Container Load) are now four times higher. Lead times for some commodities are much longer. As the constraints will last many months, it is time to get parts shipments under control via the implementation of real-time monitoring of the shipments. You cannot be "blind"; you must be able to have full shipment control. This is becoming a MUST for overseas shipments now.

What are usually the most common challenges your customers are facing?

There has been a significant decline in the number of car launches, due to legislative pushes for massive CO2 emission reductions and less than 100% unity and clarity in the opinion that electric vehicles alone are the future of Europe. The lifetimes of car lines are being prolonged, and new model launches are being delayed. This uncertainty complicates resource planning in the project management of many Tier 1 and Tier 2 suppliers.

As a solution for our customers, we propose full or partial outsourcing of project preparation to an expert company with qualified professionals.

Another aspect that is gaining in importance is increasing complexity. Our customers must manage and plan many more items, products and technologies compared to the past. This is due to the fact that OEMs are increasing the number of cars in their portfolio but reducing the average number of produced units. I'll give

you an example: The Skoda Octavia was initially solely assembled on the assembly line in Mlada Boleslav in a volume of 1,200 cars a day. Now that assembly line is shared with the Enyaq; that means the line produces only 800 Octavias plus 400 Enyaqs as an addition. For Tier 1 suppliers, this means increased complexity.

And more complexity means you cannot handle that with a pen and a paper. It means you have to digitalise to remain effective and competitive.

We can probably agree that we learn the most from our mistakes; do you have anything you've learned in this area? Do you have any examples of an "ah-ha" experience?

I have always been considering the supply chain and logistics in automotive as the highest standard for other industry and service areas.

The never fading effort to make the process robust enough, extremely shortened delivery times, process synchronisation – this still remains excellent.

However, I am really fascinated by the sector of e-commerce logistics right now. Tremendous progress has been made in the past years in terms of process digitalisation, warehouse process automation and transport planning and monitoring.

I think that we all are impressed by the way e.g. Alza is doing its business or how quickly Rohlik delivers food to our homes.

Ivan Marinec
Managing Partner, AIM PARTNERS

The managing partner of AIMPartners and automotive logistics and an operations expert with more than 20 years of experience in the field and specialising in data and its accuracy – but also working with SAP, MES, Asprova and much more. He began his career at Skoda Auto in their Pre-series Logistics department, and continued to Saint Gobain as a logistics manager. At Magna, Ivan Marinec acted as the head of logistics, and later operations manager and plant general manager. After leaving Kostal Group and the position of operations technical manager, Ivan started his own company providing interim and project management and a consultancy focusing on the supply chain, logistics and shop floor processes.

aimpartners.cz/en

E-commerce is showing us that there is always room for process improvements. Hats off.

Let us (the automotive fanatics) adopt the e-commerce mindset. At least in something.

Tereza Drahoňovská



What are your secret tips for operations management at a manufacturing plant? Do you think there are any "common mistakes"?

Quite often companies invest huge sums into new advanced machinery and technological improvements, and yet they struggle with the fact that all levels of management at manufacturing plants need reliable, correct and complete data to be able to make the right decisions. How do you manage the shop floor effectively with incorrect or even missing data? It is not possible. I see this area as slightly underestimated by management –

the necessity of data-collection completeness and data integrity.

Some companies declare digitalisation and Industry 4.0 strategies and targets, but frankly speaking these companies sometimes cannot use even the base functionalities of SAP. Why? Because users do not trust the data. Why? Indeed, because the data is really incorrect. Be honest here: how many of you are still receiving KPI reports in Excel?

In my opinion, there is only one direction: to start up – or support if already existing – a team maintaining SAP/MES data to improve data completeness and accuracy.

Ivan Marinec will be one of the speakers at the Trends in Automotive Logistics 2021 conference, which will take place on 21 September 2021 in Pilsen.

Get more tips on data and digitalisation. Book your place today!

talconference.com/en

TAL 2021: Innovations in Logistics

A digital-first approach to logistics innovation by idealworks

When BMW’s new spinoff, the fully owned subsidiary idealworks, was founded in November last year, the message was fairly clear: This Munich startup – which is partnering with major players such as NVIDIA Corporation, ADLINK Technology, and SICK – is reimagining autonomous logistics and changing the way intelligent robots work. We spoke to idealworks’ CEO, Michael Schneider, about the startup’s first year of business, its goals for next year, and his presentation at TAL 2021.



Michael, for those who haven’t heard about idealworks yet – why should they take you into account?

At idealworks, we reimagine logistics for the benefit of our customers. Our expertise reaches far beyond the boundaries of a newly established startup. Being born out of BMW Group’s logistics innovation division established in 2015, we challenge ourselves to provide industry-driven solutions, proven in highly complex environments. The idealworks in-house development approach enables us to provide a range of customer-centric, fully integrated solutions: our intelligent and collaborative autonomous mobile robot, the iw.hub, our uniquely compact control unit, iw.brain, and our cloud-based, VDA5050-compatible fleet management software, AnyFleet. These rank among the most innovative and future-proof offerings on the market.

Idealworks has now been around for about a year. What is the status quo so close to your first anniversary?

In the process of transitioning from an in-house solution provider to an independent company, we have been able to leverage our expertise to become an all-round provider of innovative logistics solutions for hardware, software, and services well beyond the automotive industry. For the time being, our focus lies on companies across all industries within the European Union and the UK, before we begin to tap further markets overseas next year.

They say the first year in business is the hardest. Any lessons you’ve been learning from this time?

Let’s just say our first year was rather challenging due to well-known external circumstances that still have a lasting impact on the general business mood. Yet, we were able not only to navigate our company through the business-critical first few months, but also to successfully implement pilots with major customers and to market our products through numerous digital formats. So to speak, the overall situation gave us the



Michael Schneider
CEO, idealworks

A renowned automotive expert with vast international experience, Michael brings both strategic and operational leadership excellence. In more than 17 years spent in consulting and automotive, at Rolls-Royce Motorcars and the BMW Group, he has successfully transformed organisations.

[idealworks.com](https://www.idealworks.com)

time required to set up our processes entering the next phase of innovation, where we gave room to an open, flexible communication and corporate culture as well as agile working right from the start. Our most important learning? Organisations have hierarchies; ideas do not.

What are your plans for the next few months and your second year of business?

As a spinoff, we are working hard to establish a customer-centric approach that suits our clients’ requirements of innovative, flexible, and multi-purpose solutions best, not only to introduce our product range and company to new potential customers coming from a wide range of industries, but also to develop truly interesting ideas for presentation. In the next couple of months, we will be offering iw.hub Demo Days to potential customers, taking us all the way to our prospects’ locations, on-site. Moreover, we have already grown to a team of about 40 employees and will continue to expand our workforce. We are eager to further exploit the market’s immense potential for autonomous logistics systems, both within Europe and beyond. It goes without saying that we want to continue this path — internationally.

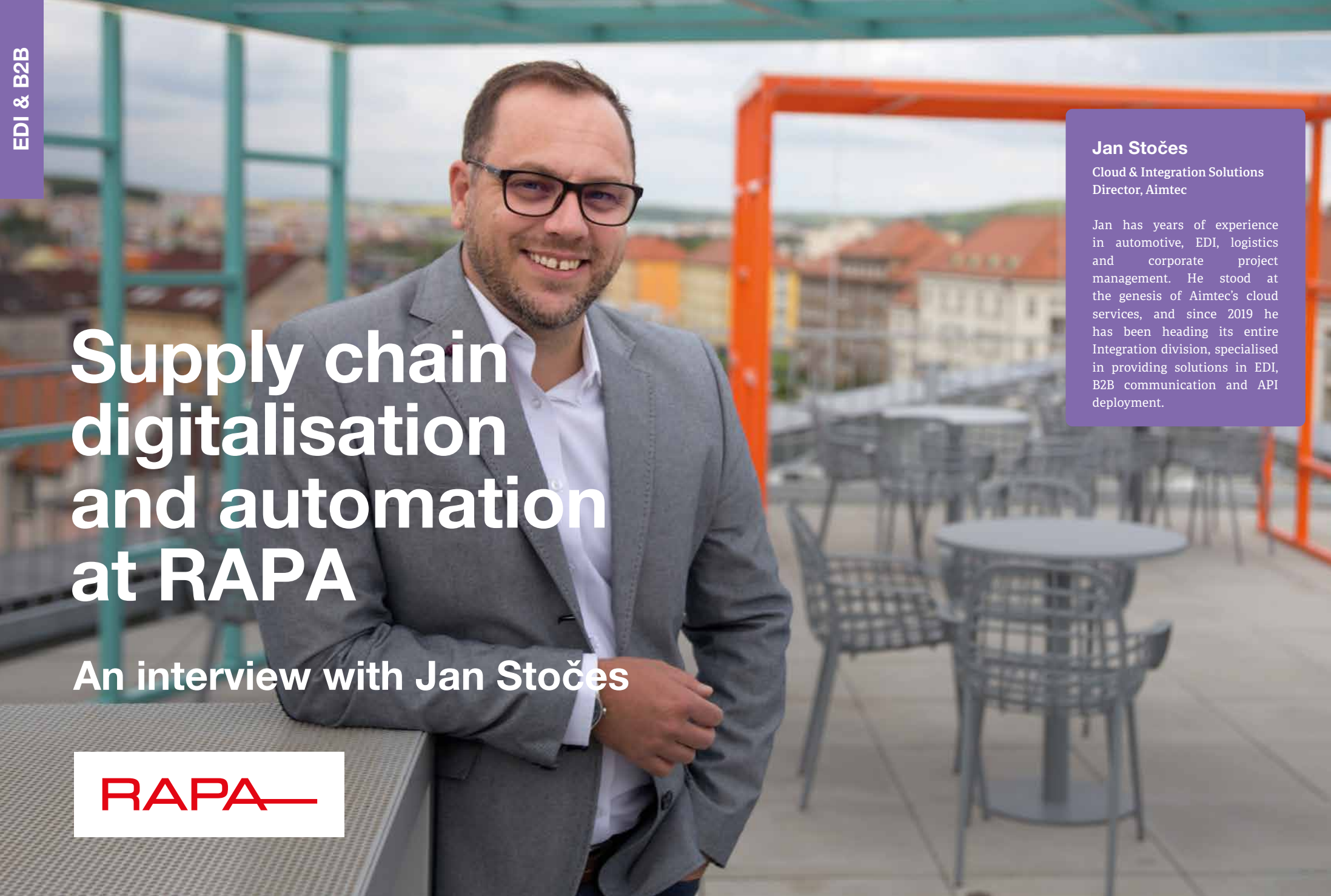
Rumor has it that idealworks will be part of TAL 2021...

That’s true! Our Digital Design Lead, Dylan Sheppard, and I will be speaking about our approach to AMR development and how we’re using technology such as the NVIDIA Omniverse platform to support a much faster, easier integration of our products into new customer ecosystems. What makes us different from other companies in this field is our digital approach. We are not just a hardware company that provides an out-of-the-box solution to our customers. Our mission statement as a logistics service provider is to have a modular, powerful stack of technology behind all this, enabling us to adapt our software and stay flexible to meet new customer needs. This is a big topic for us and is too much to share in this interview, but we look forward to showcasing this in detail at TAL in September.

Marie Nováková

Would you like to join us at this year’s Trends in Automotive Logistics conference to find out more about the future of logistics?

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Supply chain digitalisation and automation at RAPA

An interview with Jan Stočes



Jan Stočes

Cloud & Integration Solutions
Director, Aimtec

Jan has years of experience in automotive, EDI, logistics and corporate project management. He stood at the genesis of Aimtec's cloud services, and since 2019 he has been heading its entire Integration division, specialised in providing solutions in EDI, B2B communication and API deployment.

For more than 70 years, RAPA has been known as a specialist for solenoid valve technology, and in total this company has 100 years behind it. Today, hydraulic and pneumatic components and system solutions for the automotive industry as well as numerous customers in the healthcare and industrial sectors are produced under the RAPA brand. This company with roughly 1,000 employees cooperated with Aimtec to resolve a lack of know-how in integrations and to digitalise the supply chain. We talked about the details of this solution with Jan Stočes, Aimtec's director of Cloud & Integration Solutions.

RAPA looks like a truly ideal EDI solutions customer. What problems did you meet?

RAPA was already using an EDI solution – for communicating with its customers and several suppliers. But it had reached a phase where it was no longer able to fulfil their requests fully and on time. Its internal IT staff had experience with EDI, but without traditional EDI specialists, they lacked expert know-how. In combination with rising requirements, this generally left IT with only enough

time to fix basic EDI problems. Due to the risk of a rise in erroneous ASNs and the defect charges they bring, RAPA turned to Aimtec – and so we started work on a ClouEDI migration.

Can you say what the largest customer benefit was?

In addition to its headquarters in Selb, Bavaria, RAPA is represented by subsidiaries in North America and China. It primarily supplies the automotive industry. In this industry, the automated

procurement of goods is very complex and enormously important to ensure smooth processes in manufacturing. Therefore, the entire supply process is supported with EDI (Electronic Data Interchange). A solution for the exchange of information between customers and suppliers is thus indispensable. This applies in particular against the background where RAPA must be able to exchange structured data with the customer without any problems in the context of time-critical production methods such as just-in-time or production-synchronous procurement.

EDI fixed “today” problems. But what about the system’s “tomorrow”? What challenges have you readied it for?

In the first phase, we primarily aimed to meet customer requirements. That meant sending ASNs free of data errors and reducing the defect-charge count. In the second phase it was time to digitalise and automate the supply chain. RAPA has dozens of suppliers, and now that they're integrated, message exchange is entirely automatic – and moreover monitored and validated by Aimtec. This eliminates the need for manual ordering by the purchaser, PDF generation and a subsequent e-mail

that may not always arrive. Instead, the system itself creates a call-off and sends it to the supplier.

What are you most proud of in this project delivery?

The form of cooperation we established. The RAPA team has a clear vision and knows the importance of good workers and the value of their time. That's why it benefited them to let Aimtec fully digitalise their supply chain, preparing them for new projects.

”

Our cooperation with Aimtec was always highly professional, reliable, and firm. Aimtec with its experience and competence completed our migration project on time and with the right quality and budget, and we achieved all our project goals. We are happy to be working with Aimtec, and we have already started our next EDI extension projects.

Thomas Schott,
Vice President of IT, RAPA

Tereza Drahoňovská

”

Defect charges for undelivered or erroneous ASN messages or labels are common in automotive. Aimtec and RAPA shared one goal – no defect charges that could endanger our customer's rating. Even though at the start of the migration, the ERP system wasn't ready for some requirements, especially around specific information in EDI messages requested by automakers (package owner and DUNS number), we quickly succeeded with several deployments, in part thanks to reliable workarounds.

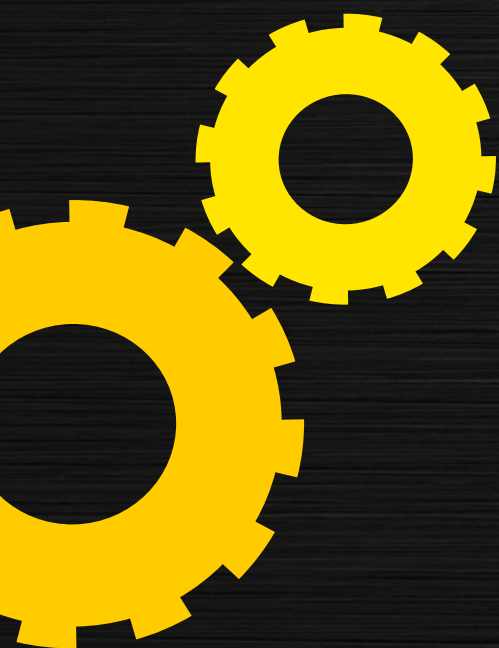
Klára Jechová
EDI Consultant
for the RAPA project, Aimtec



5 tips to start automating your logistics

Launch your logistics and warehouse automation project successfully

The automation of logistics and manufacturing is steaming ahead. This trend has been helped along by the constant pressure for efficiency, along with the digital transformation and a shift towards greater freedom from human capital. How can you maximise logistics automation's potential while making sure your project goes smoothly?



1

An enthusiastic leader with a vision and personal responsibility

The leading personality in automation projects doesn't have to be a company's owner or CEO. Taking their place is a person who knows all the processes in detail, has the team's trust and has room to explain and then implement their vision – a logistics manager. Sometimes an owner or CEO may take their place, but something will always be missing – this primarily tends to be expertise and time.

RISK: What if I don't have an enthusiastic leader for my automation project?

Without a long-term vision for the ideal state of logistics, a project will often jam up quite early and never see execution. If the project leader does not know what they actually want, they'll be unable to formulate requirements for suppliers' proposals either. Also, due to the confused task description, not even the smartest supplier can help. Seek advice and education. Reference visits to plants where a similar system is already running are a great help.



2

A strong internal team you can rely on

You might think: "Is the team really so critical? After all, we have a capable manager with a clear vision!" Although your leader knows what, how and why, without an experienced team they still can't shape it into functional steps that are a good fit for the individual roles and logistics functions. It often happens that a project will be shelved due to uncertainties in its internal team. After all, trust is utterly essential.

RISK: What if I just don't have a strong internal team?

One leading personality can handle the project kickoff, but such individuals will soon run out of steam. It may seem like cooperation with people from various specialisations will slow the project down, it radically increases both the solution's chance of success and its sustainability!



3

An experienced technology partner who explains both the pros and cons

Not many projects made it all the way to execution without partners. A technology partner will avert quite a few catastrophes. They offer experience with dozens of projects, explain it through specific examples, and if things don't go according to plan, they'll suggest which way to turn. They will point out the boundaries, preserve your requirements and exclude anything that might be too expensive or risky.

RISK: What if I can't find a strong technology partner?

Every change or shift to a different advisor brings sunk costs, as well as a transformation of the project itself. That's why it makes sense to invest time into your choice and seek out partners whom you can trust and with whom you can share the above-mentioned vision. Verify whether a potential technical partner will be able to explain their stances and recommendations. And above all, that their foremost wish is to provide a solution to your problem.



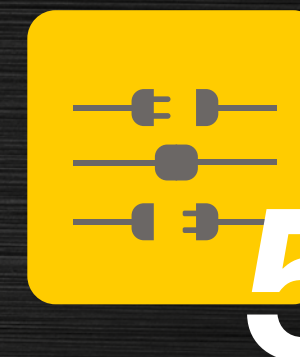
4

Company-wide support that paves your way

An automation project will affect your whole company. Don't forget to engage key users – not just from logistics, but also from IT, QC and production, and often the workshop as well. If at this point you already manage to kick off an open discussion on your project's ideal outcome for all parties, you're halfway there.

RISK: What if I want to just stick to the basic team, and not include other colleagues?

The outcome of your automation project has to work across the board. If you leave out one area or another, its workings can become significantly more complicated and end up worsening the situation. There's the threat of resistance towards the new solution, which can cause the solution to simply lie unused.



5

A flexible systems integrator who leaves room for growth

A systems integrator will also ensure solutions for irregular states, they'll know the scenarios you can encounter, and they'll ensure that you're truly approaching your defined goal. A good partner will account for the chance that your assignment and your conditions might change in mid-project – that you may want to involve new technology in a few years. That's an everyday part of automation projects!

RISK: What if I choose a poor systems integrator?

Your project will still launch even with a rather inexperienced systems integrator. But you may soon encounter unexpected problems. These may be limitations in the resulting solution, missing links, or an inability to innovate. Once you run into complications like these, it may be too late. Exchanging your solution or integrator is very expensive, and additionally, your company has just been through the entire system-building process. A systems integrator is a partner for at least a decade. That's another reason why it's critical to have a long-term vision.

Tereza Drahoňovská



Warehouse capacity grew by nearly one half

Complex solution included partial automation and a 29-month ROI



About the HELLA GROUP and Hella Innenleuchten – Systeme Bratislava

HELLA is a global company that employs roughly 36,000 people in 35 countries. The HELLA Group develops and manufactures lighting and electronic components as well as systems and, as a technology leader, is an important partner of the automotive industry on the market for more than one hundred years. With almost 8,000 people working in research and development, HELLA is one of the most important innovation drivers on the market.

As the Group developed, the Slovak branch stood before a problem also faced by many of our other customers: the need to make major optimisations to a warehouse and its capacity without disrupting normal operations. This is needed because JIT/JIS projects are

in progress here for seven models of automobiles. The solutions considered included both an ASRS (Automated Storage and Retrieval System) – a fully automated warehouse – and lengthening the warehouse's racks and simply narrowing its aisles while replacing its counterbalanced forklifts. But in the end, yet another variant won out: a partially automated warehouse.

Before deployment

- > Conventional pallet racks and forklifts
- > No transfer / dispensing points present
- > Five aisles, each 3.6 m wide

Project goals

The requirements for more effective operations at the warehouse and for an increase to its capacity had impacts in several areas. Besides its efforts to introduce automation elements, HELLA also strove to abandon external storage and increase the warehouse's internal storage capacity by 45% without needing to expand. Deployment had to take place during 24/7 operation that could not be interrupted. All this was further subject to the condition for the whole system to be integrated into the IT infrastructure with an interface to an ERP system.

Aimtec's solution: DCIxWMS

Aimtec enabled a comprehensive transformation of warehouse logistics that retained the existing rules. The DCIxWMS system manages the machines and the work queues for human operators – it provides planning and control for all intralogistics processes. It controls fourteen dispensing points on the conveyors, two semi-automatic VNA forklifts, logistics trains and storage in double-deep pallet and item positions.

New technologies

Integrated warehouse management, from put-away of received materials to conveyors to logistics train operations:

- > The tasks for individual workers tie into each other; the system sets the correct dispensing point and the filling order and method.

Monitoring of empty conveyors, automatic outbound transport of goods:

- > The logistics train driver knows in advance which goods on the pallet need scanning, and in what quantities.

Double-deep storage positions:

- > One pallet can be stored behind another, increasing warehouse capacity.

Level of automation

Even though a fully automated warehouse was one variant in consideration, ultimately partial automation won out in light of the nature of operations. For this plant, it was essential for employees to have access to the warehouse so that they could enable replacement processes in manual crisis mode if needed.

The benefits of a partially automated warehouse

- > The degree of automation is tailored to the customer; an expansion potential can still be harnessed, all the way up to a fully automated (ASMR) system.
- > This is a more economical variant with a significantly faster ROI.

After deployment

- > Two aisles, each 1.45 m wide, with double-deep storage
- > Dispensing points integrated into the racks
- > Picking points on 14 electric conveyors
- > Two semi-automated VNA forklifts
- > Shortened line-feeding routes



Main benefits

- > Management and planning of all intralogistics processes and technologies
- > More efficient put-away of materials based on a customer-defined strategy
- > 45% increase in warehouse capacity
- > Automation of the picking of materials for production
- > Faster and more efficient supplying of production lines
- > A 29-month ROI for the entire solution
- > Increased safety and comfort for warehouse workers



Considering the entire project's complexity, we are aware of the importance of the control system. During the project, we had to harmonise the physical construction with a comprehensive analysis of the processes and the design of the DCIxWMS software so as to comply with our existing rules while simultaneously increasing their efficiency as much as possible. All of this was done with the utmost professionalism and the participation of all interested parties, who ultimately contributed through their know-how to a superb solution.

Ivana Klubalová
Managing Director, 4LOG.IK

Formerly:
Head of Logistics,
Hella Innenleuchten–Systeme Bratislava



Logistics demands a start-to-finish approach. That's why SKLAD is here.

Members of SKLAD – the Association of Competent Logisticians and Suppliers – help manufacturers and distributors to meet requirements and needs at their logistics operations. What were the main reasons why this association was founded, and what does it bring to logistics – its main field of activities? We've interviewed its executive manager Petra Troblová.

What were the original idea and main reasons behind this association's founding?

The first deliberations on creating a shared platform for companies working in logistics go all the way back to 2013. The market had been sending impulses for some time showing that customers would welcome a service with a comprehensive solution for their logistics needs. We're very glad to see that SKLAD is a highly stable grouping – practically unchanged from our beginnings.

Who out of the suppliers on the market had your interest? Whom did you approach as potential partners?

Developers, consulting firms and suppliers of racks, handling equipment, assembly lines, conveyors, IT systems and more. In short, everyone who handles logistics at the customer from some point of view. We first addressed companies where we had already been cooperating with them long-term and had good experiences with them. Then larger multinationals too, as well as

smaller tigers who were still finding their footing and appeared to have major potential for the future.

Why turn to a grouping of suppliers and not individual firms at one's own discretion?

If you've ever coordinated multiple suppliers within a large logistics project, you know how difficult that is. We can aid and advise about a wide spectrum of customer needs – from choosing a hall to designing and deploying solutions to choosing technologies and keeping work safe.

Our advantage is that the partners know each other. They've been seeing each other at the same customers for years and trying each other out in practice. They know what to expect from each other. They can reach agreements quickly. They bring customers new, modern and comprehensive solutions. They help these customers to jointly create visions for innovation and future growth, giving them an indisputable competitive advantage.

Can you tell us about some of your joint projects?

For example we've helped Sellier & Bellot to implement an automated warehouse, and we're launching an automation project for the major auto components supplier BRANO GROUP. Our members cooperate on projects for customers as Adler, Magna, NIKA Chrudim, ASBIS, SC Metal, SPORTISIMO and Škoda Transportation.

Let's look a bit more at the opportunities and trends on the logistics market. What's the most common demand that customers currently want to tackle?

In warehouse logistics, we're seeing growing demand for more comprehensive projects. Based on our data, a full 76% of the firms across multiple sectors wish to invest into this area.

Clear project coordination and proven partner cooperation are more important for automation projects than anywhere else. After all, in most cases these projects see participation by multiple suppliers

S K L A D

Petra Troblová

Executive Manager, SKLAD

From doctoral studies at the Department of Industrial Engineering and Management at the University of West Bohemia in Pilsen, Petra Troblová has worked her way up to lead the marketing department at Aimtec. She is currently serving as the executive manager of the SKLAD association.

offering different technologies that need to be integrated into one functional whole.

SKLAD recently received a write-up in the specialist media in connection with a unique study of Czech logistics. Are you preparing something more on this front?

Last year, we helped to implement the above-mentioned Trends in Czech Logistics study. We prepared it in cooperation with the Ipsos research agency. When its results were published, the strong interest in this kind of information soon made itself clear.

That's why we've decided to follow up with a regular newsletter in which we'll provide further information on automation and digitalisation, the industrial real estate market and work-safety standards at logistics operations.

What other activities is SKLAD planning, and how will it build up logistics and automation know-how?

We most frequently share know-how gained in joint reference projects, and we present news and trends in modern technologies for warehouse logistics. It's also our goal to create a knowledge base and answer questions, such as what process to use when preparing a rental contract for industrial real estate, or what needs to be done to ensure safe work at a warehouse.

Marie Nováková

Members of the SKLAD Association:



Zebra Intelligent Cabinets

A safe place for your mobile devices

In recent years, mobile terminals and printers, industrial tablets and more have become a part of modern warehouses and production lines. A single plant can have even hundreds of these items in its inventory. How do you handle and store these smart devices? Intelligent cabinets from Zebra Technologies create a central hub for your warehouse equipment, in which stored devices can be secured and monitored similarly to warehoused items.

Zebra, technologies and the cabinet

Zebra Technologies is a leader in mobile industrial computing technologies and barcode readers – but also e.g. internal location systems. This company has spent many years creating innovations and technologies that you'll find in every area of industry, health care, the public sector, e-commerce and more. Zebra Intelligent Cabinets answer the growing need to manage technologies and

optimise their handling, security and storage. Mobile devices will no longer lie about your warehouse – instead, they will find their place in a “smart cabinet” holding many benefits.

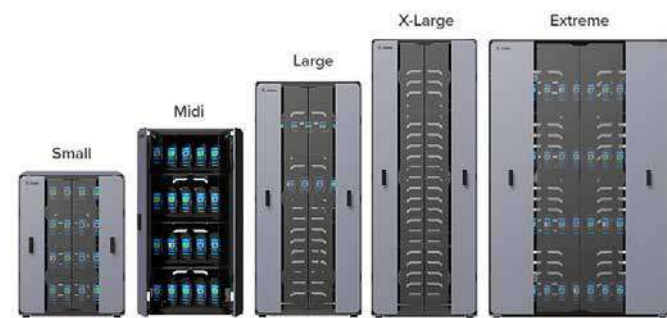
Flawless awareness and total security

Logistics managers and CIOs value firm awareness and security above all. Zebra AMS (Access Management System) gives

a real-time picture that includes an overview of e.g. whether or not devices are in the cabinet, whether they're charged, and who is currently using them. You'll be able to monitor which operator worked last with a specific device and whether they returned it to the cabinet at the end of their shift. That lets you create more effective work habits among your employees. You can lock all the devices in the cabinet, manage access and eliminate the risk of damage to them. Also, thanks to the overview of the most-used devices, these cabinets will help you decide how to expand your company's tech inventory.

Always charged, always ready

For operators, the cabinet means certainty that the stored devices will always be ready for use. Charging



You also need to think about setting aside space for the cabinet: “Right from the start, Zebra included several sizes in their designs for these intelligent cabinets. The smallest fits five devices, while the largest ones can fit up to a hundred different devices. But in major plants, even this capacity may not be enough. Zebra has thought of this too. Cabinets can be combined and mutually integrated,” notes Antonín Steinberger, Presale Technical Consultant at Aimtec. In his opinion, an intelligent cabinet makes the most sense for companies that own at least thirty to fifty Zebra mobile devices.

Integration with other systems

These cabinets use the Zebra AMS cloud platform, which is available on Zebra mobile devices as a pre-installed app. Thanks to this platform, the cabinets


can be connected to Windows Active Directory – leaving just one more step for integration into a firm's whole ERP, WMS or MES system.

An investment with quick ROI

The purchase price of an intelligent cabinet mainly depends on its capacity. However, this investment pays off quickly, by eliminating time lost searching for devices and by increasing their usage rate. Overall, the earlier the users of mobile terminals, readers or tablets pick up the new work habits offered by these cabinets, the sooner the investment pays off.

Zdeněk Eliáš

Key features



Security for the devices inside




Central docking station



Real-time overview of devices



Zebra Access Management System



Integration with other systems

When does it pay to buy an intelligent cabinet?

The first prerequisite is central access to the devices you are storing. To fully harness the potential of intelligent cabinets, you need to be storing compatible devices with the Android operating system. For older devices with the Window mobile OS, these cabinets can only serve as a place for storage and charging.

Have Zebra intelligent cabinets caught your eye? Are you considering purchasing them for your enterprise?

Aimtec's Antonín Steinberger will be pleased to answer all your questions.

Antonín Steinberger

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Aimtec's founders win a prestigious award

The Pilsen Region's EY Entrepreneur of the Year® for 2020

Jaroslav Follprecht and Roman Žák have won the regional round of the 2020 EY Entrepreneur of the Year competition for the Pilsen Region. The expert panel emphasised the perseverance, vision and hard-working nature of Aimtec's founders and owners, who have managed to transform these traits into innovative digital solutions for their customers, domestically and abroad. The pair have

also earned attention by successfully building up a company that succeeds while staying socially responsible.

During the rating process, the jury – made up of previous winners such as the winner of EY Entrepreneur of the Year 2019, Oliver Dlouhý (founder of the global travel search site Kiwi.com), and other experts – focused on both entrepreneurial

spirit and other areas, such as innovation, strategic management and national, or global, impact.

“Doing business and running a company as a duo has its difficulties. Through their story, Aimtec's founders Jaroslav and Roman have been showing us all how to successfully jointly build a company for over 20 years,” stated Magdalena Souček, Country Managing Partner at EY Czech Republic, for the iDnes.cz news server.

Entrepreneur of the Year is the only globally recognised competition of its kind and sees regular participation by entrepreneurs from nearly 60 countries worldwide. It first arose in the USA and has been held within individual countries at the regional level since 1986. Competitors in the Czech Republic simultaneously compete in further categories such as EY Tech Entrepreneur of the Year and EY Beginning Entrepreneur of the Year. The competition's goal is to highlight and present business success stories, thus inspiring both beginning and experienced entrepreneurs.

Tereza Drahoňovská

The Best Regional Office? Yes, at Aimtec



The Office of the Year competition – now in its fifth year – organised by the Prochazka & Partners consulting agency has revealed the winners for the most impressive office spaces of last year. Aimtec has won the prize for the best regional office, i.e. one located elsewhere than in Prague, placing the company side-by-side with such major-player winners as Fortuna, FTV Prima and Jägermeister. An expert jury made up of leading office-market experts selected the winners.

During the gala award ceremony, held on 17 June 2021 at Žofín Palace in Prague, prizes were presented for a total of ten competition categories. The purpose of the competition is to acknowledge companies that strive to actively adapt their spaces to their employees, and also to motivate other employers to prioritise this viewpoint.

In this year's Office of the Year competition, the organisers emphasised

the importance of the work environment during this time when employees are gradually returning to the office. According to the jurors, the following will influence what offices will look like in the future: “As a result of Covid-19, we are seeing more use of mobile soundproofed workplaces for one or more workers, as well as more intensive dividing up of whole offices into smaller units,” juror Jaroslav Vendl has noted for the news site E15.

Aimtec moved into its new offices across from Pilsner Urquell on 1 January 2020. The firm's two floors and terrace in the modern Hamburk Business Center complex, as well as the location itself, were strategically chosen so as to keep the Aimtec headquarters in the city centre and ease employees' commute to work. The interior design was provided by a duo of architects, Jiří Zábran and

Markéta Škopková from PRO-STORY s.r.o. Their office design factored in the need for cross-team cooperation and the logic of the activity-based office.

Tereza Drahoňovská

”

Looking back I'm glad that we made zero compromises in our new offices. This award is the culmination of a project that has taken a couple of years to complete and I believe it gives a lot of joy to our employees. Aimtec's founders have our enormous thanks for their faith in the project, and so do the architects, who became our friends during their work.

Andrea Chejlová
Chief Facility Officer, Aimtec

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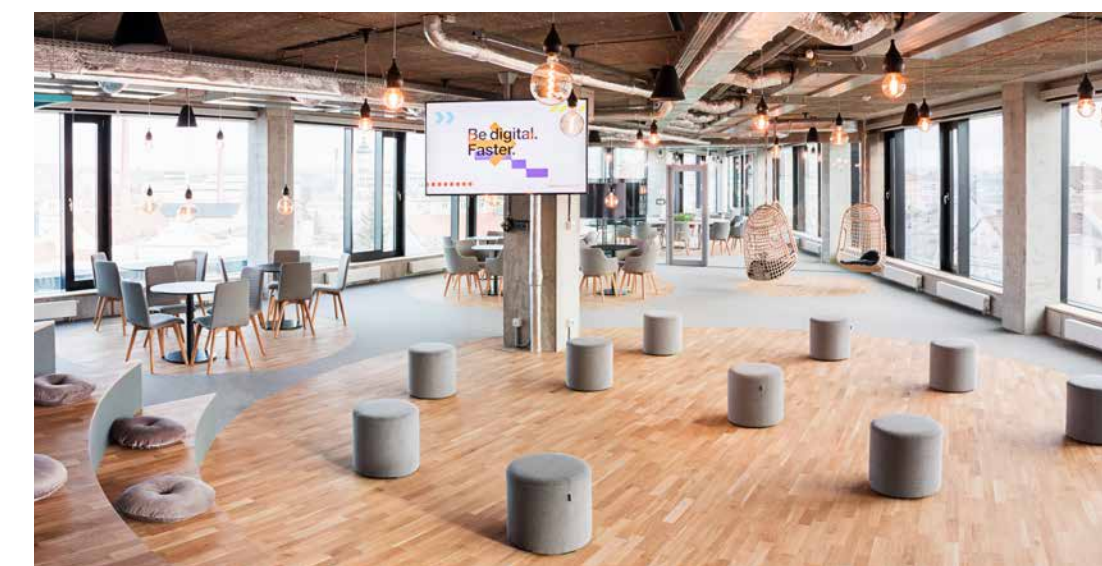
We're self-taught. What we do didn't come from school, we learned it all on our own.

Jaroslav Follprecht
CEO, Aimtec

”

We're proud of what we've built. In the present situation, it's an oasis of something good for our company. We wish to persist and build it on and on.

Roman Žák
Chairman of the Board, Aimtec





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