





Dear business partners, colleagues, and readers, this is the 2023 issue of the annual MTX Group Magazine. This year, we have decided to show you not only all the interesting things that have happened, but also those to come, along with what we are working on.

The color of this year's cover is a hint that this issue is mostly about sustainable business. Europe is on a path towards decarbonization and sustainability. We at MTX Group apply critical thinking to everything, including ESG. It is in our DNA and has helped make us successful. We do not want to blindly become a part of the "green movement", but rather, we view sustainability as a natural part in our efforts to build a long-term, efficient, safe and profitable industrial group that invests in technology and people, striving to bring added value to Czech industry. As a group, we are aware of and committed to our shared responsibility to protect the environment, our employees, and communities. We are here for our customers and we will always respond to their requirements in this regard.

Looking back at 2022, it was a record year for us in terms of sales, despite the global economic hardships. This was mainly due to the good work of our colleagues, our responsible approach, and strategic investments that enable us to be more competitive in terms of sustainability. As a group, our revenue was 71.1 billion CZK and our EBITDA was 5.1 billion CZK.

This shows that our investment strategy is working well and we plan to keep investing in sustainability moving forwards. Over the past 5 years, we have invested 6 billion CZK in robotics, automation, and state-of-the-art decarbonization initiatives. In the coming years, we are planning further sustainable projects worth over 7.5 billion CZK. In this issue of our magazine, we will give you an insight into our focus on our key projects in the field of green technology, decarbonization, renewable energy sources, recycling, the circular economy, waste management, the vertical integration of production processes, efficient logistics, and other input material conservation. We are modernizing the companies within our group to ensure that they respect the environment, their surroundings, local communities, and society at large. Our customers are increasingly demanding such a sustainable approach. And while a certain level of social responsibility has long been par for the course for all of us, environmental issues (our carbon footprint in particular) are now increasingly affecting customer relationships.

Sustainability is also reflected in our social activities. We want to be both an attractive employer and a good neighbor. We are building a corporate culture that welcomes modern trends. This includes digitizing and simplifying our processes and fostering a positive working environment. Educating both our employees and the children in the schools with which we partner is very important for us. We are working on retaining and transferring our extensive know-how. We consider that to be a part of sustainability as well.

We are putting our energy into a range of areas and this magazine offers insight into a few of them.

Allow me to take this opportunity to thank my business partners, colleagues and their families for their support and hard work. We hope you will remain a part of our journey.

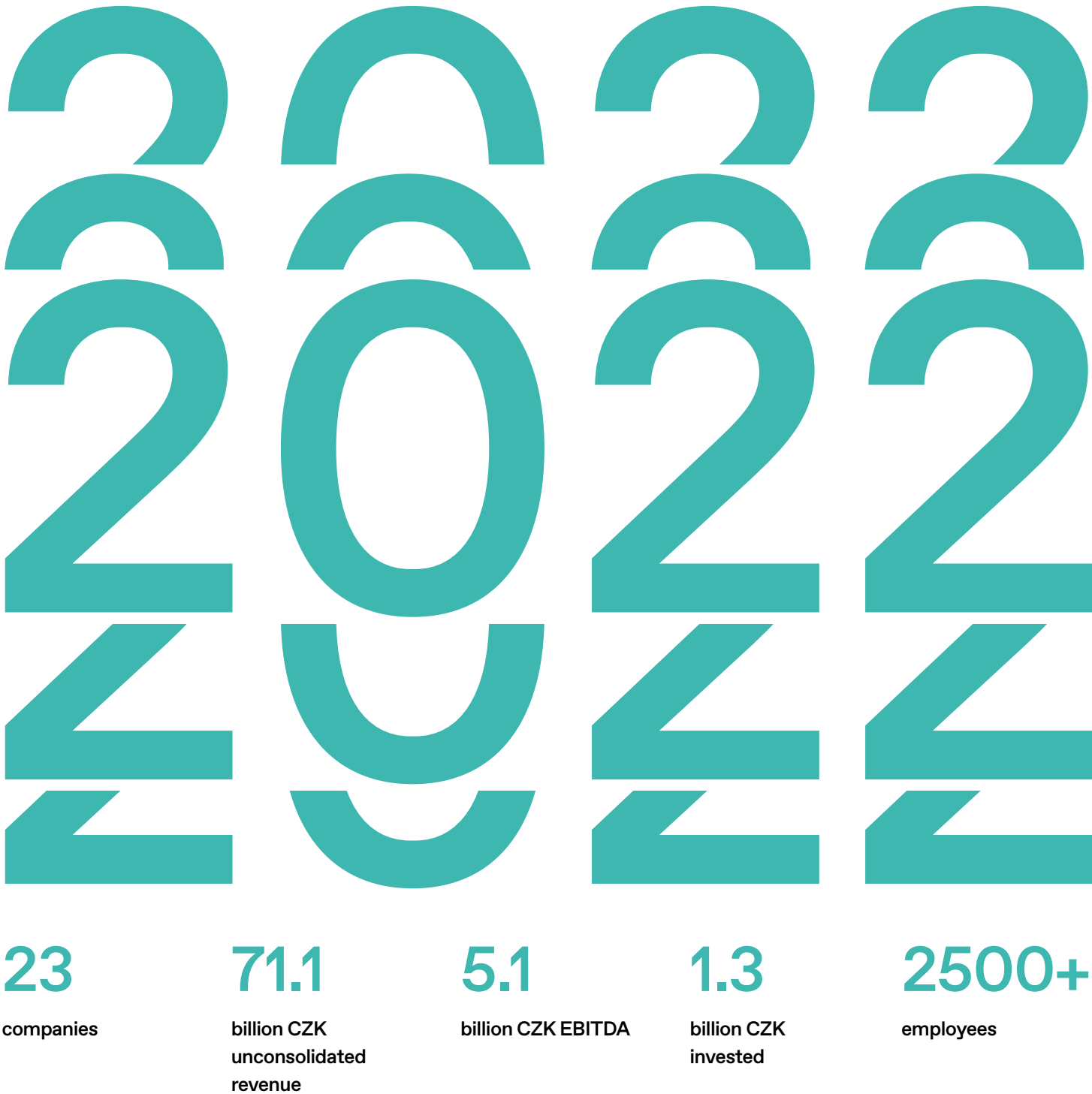
Happy reading,
Petr Otava

MTX Group Magazine

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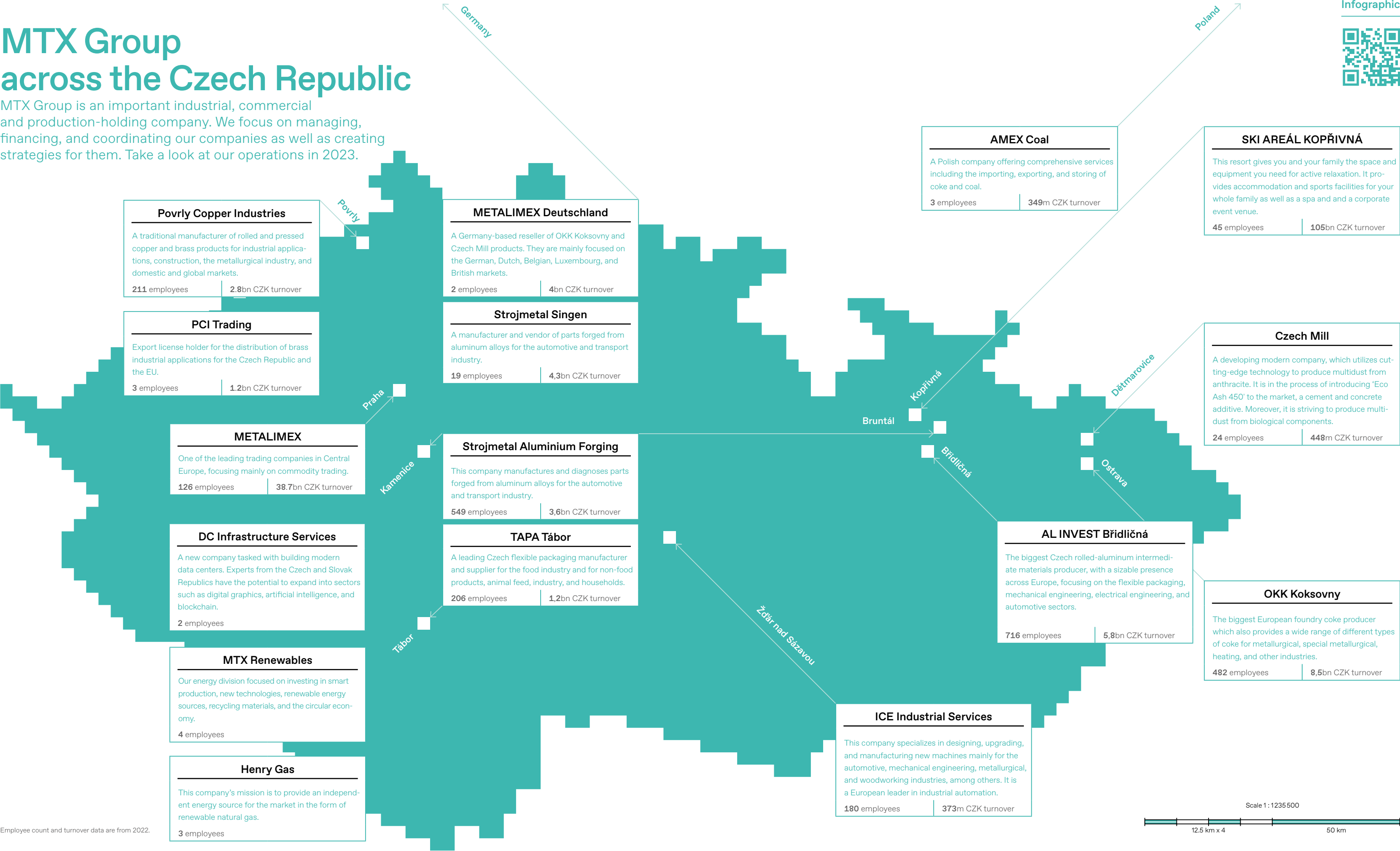
2022 in a nutshell

MTX Group has proven that it can grow even during difficult times. In 2022, we achieved record revenue and 5.1 billion CZK in EBITDA. We owe our success to our strategic investments that help us stay ahead of our competition and to be more sustainable in the long run.



MTX Group across the Czech Republic

MTX Group is an important industrial, commercial and production-holding company. We focus on managing, financing, and coordinating our companies as well as creating strategies for them. Take a look at our operations in 2023.



Our ESG strategy is reasonable and progressive

Over the last couple of years, corporate social responsibility has become more important for businesses. Environmental protection is a major part, especially decarbonization. MTX Group needs to adapt to these requirements and is looking for reasonable and rational ways to do so.

Text: Luděk Vokáč

Many industries now consider a product's carbon footprint an important quality parameter. "Just as consumers evaluate mechanical properties, corrosion resistance or price, they now require products have a small carbon footprint, too," explains David Bečvář, the Vice-Chairman of the Board and Chief Strategy Officer of MTX Group.

Bečvář admits that it is not always easy to meet all these requirements. "However, in this form, it is a clearly defined brief for us and we can try to meet these requirements with concrete measures," he says, indicating what MTX Group's ESG strategy is based on. In this case, our philosophy is similar to the one of the group as a whole: always listen to your customers, and not only meet their current requirements but also anticipate their future needs and prepare for them in advance. "We've never blindly followed trends. We always want to be prepared and react quickly to any potential changes," Bečvář explains.

After all, the group's ESG strategy is nothing new but neither is it set in stone. "If you translate ESG (environmental, social and governance) into a long-term sustainability strategy, you'll get something we have been working on for a long time. We've always wanted our business to be sustainable. We want to do business today and also decades from now," says Bečvář. The individual facets change over time, with a business's carbon footprint taking on increased importance of late.



We've always wanted our business to be sustainable. We want to do business today and also decades from now

Decarbonization in three areas

Industrial decarbonization takes place in three areas and each of them has a different deadline by which they should achieve carbon neutrality. The first area is direct fossil fuel consumption, which should be carbon-neutral by 2039 – at least based on the requirements of automotive industry customers. This means manufacturers will have to offset their carbon emissions as a result of fossil fuel combustion (gas, gasoline, diesel, coal etc.) during the production process. “In our case, the easiest way is to reduce fossil fuel consumption. However, some of our technologies don’t yet have a suitable substitute for gas, so we need to look for other solutions,” explains Bečvář.

What other solutions? In some cases, fossil fuels can be replaced by electricity. However, a quick substitution is not always the right choice. “Today, Czech electricity has a bigger carbon footprint than the gas we use for our processes. At the same time, we are quite certain that electricity won’t be 100% green by 2039, and thus not carbon neutral,” says Bečvář, explaining the complication. Plus, using electricity for processes that require thermal energy is significantly more costly than using gas.

One solution might be biofuels, hydrogen, or other alternative fuels. However, MTX Group is not idly waiting around for a solution to reveal itself. Nor does it want to find new partners to decrease its carbon footprint. The group includes Henry Gas, a company that specializes in creating sustainable energy from waste using environmentally friendly processes. Their portfolio includes, for example, hydrogen. The group is also experimenting with other solutions. For example, Czech Mill does not only make multidust from hard coal, but also out of ground sunflower-seed husks. “Unfortunately, burning it produces more carbon dioxide than burning hard coal multidust,” says Bečvář. Some seemingly easy solutions might therefore not be as efficient as they appear.

The second area in which we can decrease our carbon footprint is electricity consumption. MTX Group is trying to use as much clean electricity as possible. It even produces its own. As part of the group’s new energy division, MTX Renewables, it plans to build solar and wind power plants. “We have encountered a lot of resistance from the public when it comes to wind farms. It takes around 10 years to get a building permit for a wind power plant, so we have a long and difficult journey ahead of us,” adds Bečvář. But, as usual, the group is looking for meaningful ways to solve this issue. “We want to build wind power plants in places where it makes sense for them to be and where there is a lot of wind. Not just because we would like to have them there,” expands Bečvář.

Similarly, MTX Group is looking for meaningful ways to decarbonize its activities in the third area, i.e. decarbonizing input materials and investments. In this case, the industry is generally aiming to be carbon-neutral by 2050.

Sustainability is the way to go

However, Bečvář says this area will probably be the biggest challenge for the entire industry. “The cleanest primary aluminum you can get today has a footprint of 4 kg of carbon per 1 kg of metal. And honestly, nobody has come up with a solution to completely remove carbon dioxide from all their production processes. It doesn’t seem that humanity will be able to properly solve this issue by 2050,” says Bečvář, describing the pitfalls of this requirement, but adds: “That certainly doesn’t mean we shouldn’t at least try to become carbon-neutral, environmentally friendly, and sustainable.”

One way to dramatically reduce the carbon footprint of primary materials is recycling. “Recycled aluminum and copper have a negligible carbon footprint. Primary materials will never be able to match that. We put a great emphasis on recycling and we’re also looking for our own ways to recycle. At the same time, we need help from our customers and the industry as a whole,” says Bečvář.

In his opinion, the industry lacks a comprehensive metal recycling chain that would include not only relevant collective systems but also, and more importantly, manufacturers of the final product. “Only a car manufacturer knows exactly the individual parts its cars are made of and how to properly disassemble them,” says Bečvář, by way of suggesting a possible solution. Similarly, the group wants to recycle metal waste in the food industry, which is still relatively underdeveloped. That is why MTX Group likes to discuss recycling in some detail with its customers and explain the challenges and steps that need to be taken. “Scrap metal needs to be properly sorted and cleaned in order to do as good a job as a primary metal,” says Bečvář.

We have never blindly followed trends. We always want to be prepared and react quickly

A good neighbor and an attractive employer

MTX Group’s long-term sustainability strategy does not only cover decarbonization and environmental protection. It also includes the extensive modernization of its traditional factories, with the aim of reducing noise pollution and making the whole factory more aesthetically pleasing. “We’re trying to bring our brownfield sites to life and to use them as meaningfully as possible,” explains Bečvář.

He also thinks that it is paramount that MTX Group is an attractive employer. “Having an energy-efficient factory with a low carbon footprint that nobody wants to work in isn’t sustainable,” declares Bečvář. That is why the group puts a great deal of faith in modern solutions and automation. That should also help attract and retain experienced workers and the knowledge they possess. These days, such workers are irreplaceable but they cannot work for the group forever. “An important part of our strategy are modern control systems that can capture, describe, and utilize their knowledge,” mentions Bečvář, outlining an important detail that constitutes just one piece of the ESG puzzle.

ESG (Environmental, Social, Governance)

ESG refers to the three key factors used for assessing the sustainability and ethical impact of an investment. Nowadays, more and more investors and stakeholders consider ESG criteria to be essential when making investment decisions. Sustainable and ethical businesses are better prepared to face future challenges and thus offer longer-term and more stable returns.

Environmental:

Focuses on the environmental impact of a business. It includes factors such as carbon emissions, water consumption, biodiversity conservation, and waste management.

Social:

Evaluates how a business treats people. It includes factors such as working conditions, community relations, customer protection, and adherence to human rights.

Governance:

Covers the way a business is managed. It includes factors such as board structure, management remuneration, internal inspections, and transparency towards shareholders.

Billions invested

Text: Luděk Vokáč

In the upcoming six years, MTX Group plans to invest in 25 projects to meet their ESG goals and customer requirements. The biggest investment amounts to 4.2 billion CZK and is planned for AL INVEST Břidličná. This plant will undergo a complete reconstruction and modernization as part of the ALFAGEN project. Part of this modernization includes two new modern aluminum semi-finished product manufacturing plants with cutting-edge technology.

“We will create a modern and attractive workplace to further motivate our employees. We want to maximize the use of recycled aluminum and reduce the energy demands of our production. We also want to incorporate more renewables to cut our products’ carbon footprint,” explains Miroslav Záhorec, the Vice-Chairman of the Board and Chief Operating and Financial Officer of MTX Group. “We’re not waiting for our customers to tell us what they need. We want to be one step ahead and offer them good alternatives that will help them meet their environmental and carbon targets,” he adds.

The remaining investments are along the same lines. For example, 1 billion CZK will be invested into Strojmetal’s new forging line in Bruntál. The investment is expected to decrease the line’s energy consumption by about 40%. “At the same time, Strojmetal is establishing close cooperation with our company AL INVEST Břidličná. The two factories are essentially neighbors and them working together is a good example of our emphasis on vertical integration. They can help each other a lot,” says Záhorec, outlining further planned developments.

Meanwhile, at the opposite end of Czech Republic, MTX Group wants to invest 1.5 billion CZK into Povrly Copper Industries. This factory currently specializes in the manufacture of brass semi-finished products for the weapons industry, but is aiming to expand its portfolio and return to pure copper products. Formerly known as Měď Povrly, Povrly Copper Industries has a rich history in copper, which is why it has remained part of its name. “It will also start manufacturing products for other industries, such as energy and automotive,” says Miroslav Záhorec, further explaining the investment.

Another 1.2 billion CZK will be invested to build solar power plants and other energy infrastructure. These investments are backed by MTX Renewables. In addition, Henry Gas is exploring using industrial waste to fuel power production. Other innovative technologies will help us, among other things, improve our recycling of metals, which are one of the most important inputs for MTX Group. “Recycling metals is a commonplace for us. Recycled metal used to have limited usage options, but our new technology significantly increases the ways it can be used, allowing us to meet the increased demand for products made from recycled metals,” explains Záhorec.

In the coming years, MTX Group will invest over 600 million CZK into the city of Ostrava. The larger part, about 400 million CZK, will be invested in public spaces. More specifically, the group will restore the site of the former Jan Šverma Coking Plant. The remaining 200 million CZK will be invested into modernizing OKK Koksovny. Their product too can play a part in reducing their carbon footprint. Currently, coke is an irreplaceable part of stone wool production, which is used as thermal insulation for buildings, reducing their energy consumption.

“Our goal is to invest into truly meaningful innovations that not only help us be more environmentally friendly, but also develop our operations sustainably in the long run. That is real sustainability,” concludes Záhorec.



25 innovations for greater sustainability



Company	Project/Investment name	Brief description of the project	Start Finish
1 AL INVEST	PureAl®	Development of an aluminum alloy for cold forming made entirely from scrap	2019 → 2022
2 AL INVEST	Energy Conservation II	Reduction of natural gas consumption	2021 → 2022
3 AL INVEST	ALFAGEN	Factory modernization and reduction in energy consumption	2023 → 2028
4 AL INVEST	Renewable Resources	Purchase of land for the construction of solar power plants for MTX Renewables	2021 → 2022
5 MTX Renewables	Solar Power Plants	Solar power plants construction	2023 → 2024
6 Henry Gas	Henry Gas	Production of hydrogen from plastic waste	2022 → 2025
7 Czech Mill	Biomass	Development of technology and production process of milled biomass for industrial combustion plants as a partial alternative to fossil fuels	2022 → ongoing
8 Czech Mill	Stabilization of Black Coal Multi-Dust	Stabilization of black coal multidust through the use of additives for self-heating and fermentation in silos	2022 → 2022
9 Czech Mill	ECO ASH 450	Development of production process for concrete mixture input material made from industrial waste from heating, metallurgy, and power production	2021 → 2022
10 Czech Mill	Lighting	Complete replacement of on-site halogen lighting with LED lighting	2022 → 2022
11 ICE Industrial Services	CORAL	Concrete 3D printing – residential construction and defense	2022 → 2024
12 OKK Koksovny	Modernization of Coke Quenching	Modernization of the coke quenching tower for the 9th and 10th battery to limit particle emissions	2023 → 2025
13 OKK Koksovny	Dedusting Technology Modernization	Modernization of the unit extracting fugitives emitted when pushing coke out of battery chambers	2023 → 2024
14 OKK Koksovny	Desulphurization Catalytic Unit Modernization	Replacement of an obsolete unit designed for catalytic purification of gasses that have been polluted with organic compounds	2025 → 2027
15 OKK Koksovny	Benzole Fumes Removal	Acquisition of an HVAC unit extracting the largest sources of fugitive emissions in the Benzolka operating unit	2022 → 2023
16 OKK Koksovny	Microturbines	Using microturbines to produce electricity	2025 → 2027
17 OKK Koksovny	Installation of Coke Oven Battery Dedusting	Streamlining the displacement of emissions from extruding coke from coke furnace batteries	2023 → 2027
18 OKK Koksovny	Implementation of Energy-Saving Measures	Replacement of energy-intensive equipment with more economical versions, OP PIK public support project	2020 → 2022
19 OKK Koksovny	Research and Development of Coke Furnace Gas Conversion	Research into extracting hydrogen from coke furnace gas as an alternative fuel source – cooperation with VSB-TUO	2020 → 2022
20 OKK Koksovny	Waste Production Reduction	Participation in projects focused on recycling, environmental protection, natural resources, and human health	
21 OKK Koksovny	New Product Development	Replacement of part of the coal charge with renewables	
22 OKK Koksovny	Occupational Safety	Projects in the field of occupational health and safety, digitization of PPE; digitization of training, including exit tests	
23 OKK Koksovny	Voluntary Agreements with the Moravian-Silesian Region and the City of Ostrava	Agreements declaring a positive environmental stance, including donations to the Fund for Children in Need and to local cultural and social activities OKK Koksovny	
24 OKK Koksovny	Restoration	Restoration of the former J. Šverma coke plant	2021 → 2023
25 Povrly Copper Industries	Modernization	Modernization of zinc and copper semi-finished products and implementation of conductive copper production	2022 → 2030

A full-page portrait of Ondřej Douša, CEO of MTX Renewables and Henry Gas, standing in front of a dark brick wall covered in green ivy. He is wearing a light beige suit over a white t-shirt. The image is used as a background for a text overlay.

OD

Ondřej Douša,
CEO of MTX Renewables and Henry Gas is
planning visionary green investment projects.

“No matter what you think of them, renewables are
not only moral, but also a political and economic
reality of modern developed society.”

Making MTX Group sustainable and carbon neutral

By 2030, we plan to invest almost 7.5 billion CZK in sustainable projects, green transformation, and new technology. We take sustainability, the environment, and social responsibility very seriously. That is why we are focusing on visionary ESG projects such as MTX Renewables, a new green division of MTX Group, and its subsidiary, Henry Gas.

Text: Jana Bohutínská



MTX Renewables is built on many years of experience, cutting-edge technology, and strategic partnerships. It focuses on both traditional and technologically demanding renewable resources. Henry Gas is focused on hydrogen production, something which we believe has quite a promising future.

Focused on renewable sources of energy, this project is a direct response to the changes in business, markets, politics, and our use of resources. It deals with pressing issues such as climate change and the way businesses respond to it, reducing our carbon footprint close to zero, and moving the energy sector away from fossil fuels and towards renewables.

Another important reason to invest in our own sources of energy is to cut costs. Energy is crucial for our business, but prices keep rising and are difficult to control. That is why we want our factories to be as energy self-sufficient as possible and, where feasible, to switch from fossil fuels to renewables.

Environmentally-friendly and employee-friendly production is of paramount importance for our customers, who closely monitor the carbon footprint of the entire supply chain, all the way down to the primary raw materials. The shift towards decarbonization and renewables is abundantly clear. Our automotive and packaging customers have high demands in terms of sustainability and the carbon footprint of their suppliers, as well as various social aspects of their business, which also affects our approach to production and the supply chain.



MTX Renewables: Sun, water, wind and technological innovation

When we say renewable energy sources, we mean the traditional ones: sun, water, and wind. However, MTX Renewables also has more technologically demanding renewables in its portfolio. “They correlate with our efforts to research and develop new technologies that will make our business significantly more environmentally conscious and help shift our perception from an ESG perspective,” explains Ondřej Douša, CEO of MTX Renewables and Henry Gas.

MTX Renewables plans to build its own solar power plants, the aim of which is increased flexibility and to decentralize our individual factories’ energy sources. The point is not to connect the plants to the grid but to produce clean energy for our operations. We want to be self-sufficient and energy efficient. Our shift towards renewables is necessary but not easy and requires major investment.

For example, one solar power plant will be built on a plot of land next to AL INVEST in Břidličná, and at Strojmetal in Bruntál. “Building solar power plants right next to our factories is not at all common. In these two cases, we have succeeded and we can send the power directly to our factories,” says Ondřej Douša. These and other solar power projects will be implemented at the end of 2023 and start of 2024. The advantage is that we will use our own solar power locally, without the need for a transmission system. In the next phase of the project, we will be able to share the power with our other factories.

We are also focusing on wind power plants, especially in Moravia, where conditions for both wind and hydroelectric power plants are ideal. What is interesting about hydroelectricity is that we are returning to our roots – to what our ancestors did in their factories. For example, AL INVEST in Břidličná or Povrly Copper Industries in Ústí nad Labem are factories that historically used hydroelectricity due to being located next to water, an indispensable part of their operation. Therefore, it is also a good idea to explore the use of water for energy production.

By 2030, we plan to invest almost 7.5 billion CZK into sustainable projects, green transformation, and new technology. In the second round of investments, between 2030 and 2039, we will continue developing new technologies, which includes the production and utilization of hydrogen. We strive to be carbon neutral. The shift towards clean energy will also make us more self-sufficient and help us keep costs under control.

What will our green investments achieve?

- MTX Renewables is one of our investment projects that focuses on renewable energy sources. We plan to invest over 1.1 billion CZK into it. Henry Gas is aiming to produce hydrogen from industrial waste and we plan to invest 100 million CZK into that project by 2025.
- The expansion of cutting-edge green technology and renewable energy sources in industry, recycling, and sustainable waste management.
 - Material and energy conservation. “New technology will save MTX Group almost 24 megawatt hours per year, which amounts to 30% of our energy consumption. Furthermore, using new and green hydrogen will save us an additional 10% compared to now,” says David Bečvář, Vice-Chairman of the Board and Chief Strategy Officer of MTX Group David Bečvář.
 - After the modernization, MTX Group will become the leading global aluminum semi-finished products manufacturer in terms of energy consumption per product kilogram.



30%
of energy saved thanks to
new technologies

A lesson for the energy sector

Germany, the windy heart of Europe, is witnessing an energy revolution, which clearly demonstrates how important renewable energy sources (RES) are in the 21st century. Our western neighbor’s wind power plants are not only a technological triumph, but also a reflection of their political and moral integrity. In our country, the progress of RES is slowed by nonsensical criticism and overly complicated red tape. A simple trip beyond our borders towards Dresden will show you it is all worth it. Renewables and decarbonization should be the basis of not only moral, but also of a political-economic reality. And renewable energy should be one of the key inventions of the modern era.

Waste? Energy!

In addition to traditional renewable resources, we have also been experimenting with new research and development projects, innovation, and unique knowledge. At Henry Gas, a subsidiary of MTX Renewables, we are experimenting with hydrogen production, which has a promising future.

Text: Jana Bohutínská



100m CZK

will be invested into making
hydrogen from waste by 2025

Henry Gas is looking into the future of hydrogen in our country. The project is based on our robust knowledge base, our many years of experience, and our major financial investments. “If someone wanted to stand at the starting line at the same place we are today, they would need 5 years of experience and 300 million CZK in investment,” reiterates Ondřej Douša.

The path to hydrogen is not easy. You need to own modern technology, which we had to invent or purchase from our American partners. The entire hydrogen production process starts with industrial and municipal waste, particularly plastic waste, which needs processing methods other than the now obsolete landfilling or incineration, which is not entirely supported by the European Union. In the future, there might be an opportunity for us to work directly with municipalities and show them how they can utilize their municipal waste. We plan to establish partnerships with municipalities in the form of PPP projects, a part of which is a bespoke business model. Using waste to produce hydrogen is based on the principles of circular economy – municipal waste can be recycled into fuel for local public transport, for example.

The hydrogen production process starts with sorting and crushing waste. Then, it is formed into pellets, which can be sold separately as a coal substitute. A key technological process is thermochemical material decomposition, or, put simply, chemical recycling, which allows us to make renewable, low-emission synthetic gas. About 30% of this gas comprises hydrogen.

During this year’s pilot installation, this gas was sent to a heating plant, which burns it in the same way as they would burn natural gas. A renewable, low-emission synthetic gas is an alternative to fossil fuels that meets decarbonization indicators and which can be produced from local waste in the Czech Republic. In the next phase, the hydrogen is extracted from the gas. The hydrogen market is still relatively young, but when it develops, we will be ready.

The private sector is a leader in technological progress

“Our ambition is not small; we have big goals. However, we’re convinced we can achieve them. Worldwide. Because we’re ahead of our competition. We have many years of experience and investment rounds up our sleeve,” says Ondřej Douša about Henry Gas, reminding us of further innovative energy transformation projects to come. In his opinion, biomethane also has a promising future in the Czech Republic. It has the potential to have a 15–20% share in the country’s energy mix. That is why biomethane production and trade is also a part of the MTX Renewables portfolio. It is worth mentioning that hydrogen can also be the final product of solar, hydro or wind energy, and it is also possible to make it from biomethane. Hydrogen is the keystone that connects our work transitioning towards clean energy and decarbonization.

“I would like to point out that we don’t rely on public funding in our development of renewable energy sources. We only invest private capital. I want to praise Petr Otava’s visionary spirit; the private sector is a leader of technological progress,” adds Ondřej Douša proudly.

Why Henry Gas?

The name refers to the British physicist and chemist Henry Cavendish (1731–1810). In 1766, he described the properties of hydrogen in his article on gasses. Although the name *hydrogène* was given to the gas by Cavendish’s French counterpart Antoine Lavoisier, Cavendish is considered to have discovered hydrogen.

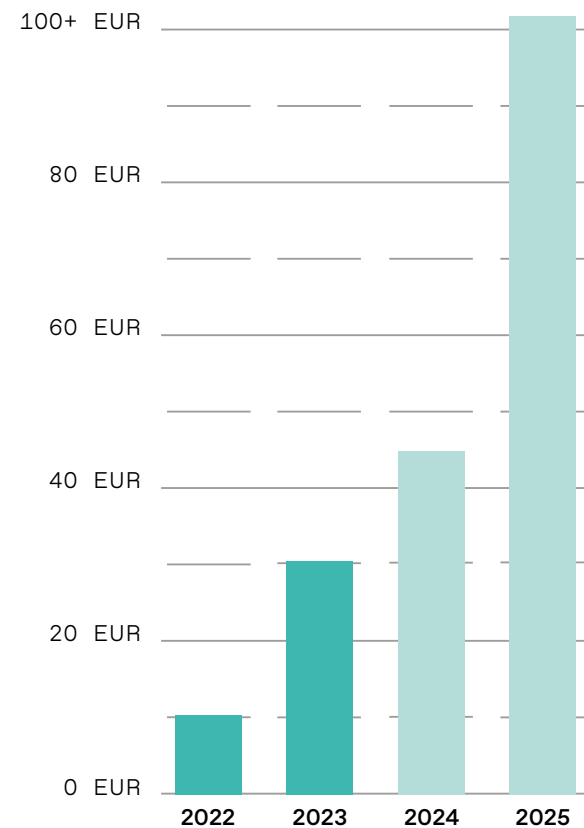


Companies’ carbon footprint is particularly important in Europe

The commodity trade has been quite busy of late. Recent years have brought dramatic changes to the market and, above all, price increases. Commodity prices are now mostly falling, but a new challenge is emerging in the form of their carbon footprint and of the products made from them. METALIMEX, MTX Group’s commodity trader, is adapting to this new reality.

Text: Luděk Vokáč

The “green surcharge” for a ton of low-carbon aluminum



Each of the past couple of years was completely different. METALIMEX, which trades commodities for MTX Group and then sells its products, had to deal with a highly turbulent market full of unknowns. 2023 is no exception and will surely keep METALIMEX very busy. Its Chief Commercial Officer, Daniel Trnka, says that new challenges are on the horizon.

How does this year compare to previous ones?

In general, end-user and consumer demand is cooling. The boom after the first wave of Covid in 2020 has been steadily declining since 2022. Increased interest rates and overall uncertainty in the market mean that end customers are not as eager to spend. As a result of this lower demand, commodity prices are falling to a new low. Even energy prices that were extremely high just a short while ago are now falling, albeit remaining above average. This works in our favor in terms of purchasing input materials, but at the same time we must try to maintain margins even in the face of reduced trading volume. Environmental and social responsibility are different challenges altogether.

How does ESG affect your business?

Very significantly, and its importance will grow. In our business, ESG is a matter of sustainability, particularly our carbon footprint. And that’s simply because other aspects such as ethical and socially responsible trading, anti-discrimination, and other facets of ESG have been a matter of course for us for many years. Moreover, MTX Group is continuing to reduce the carbon footprint of its products over the long term as it goes hand in hand with lowering energy consumption, increasing production efficiency, reducing waste, and improving waste management, including recycling. But today, the pressure in this area is enormous, and it is practically certain that the pressure to reduce our carbon footprint will drive a rise in commodity prices.

Recycled aluminum has a minimal carbon footprint. We want to be global leaders in using it

Why is that?

Materials with a small carbon footprint will simply be subject to various “green” surcharges because of high demand and limited supply. Some customers’ requirements are unrealistic. I will give you an example: Customers see that a producer can make one ton of aluminum with a carbon footprint below 4 tons of CO2 per ton of metal from aluminum electrolysis, anode production, or aluminum casting, which is the current threshold for “green” aluminum. They then make it their goal to buy products made of this type of aluminum. However, only a very limited amount of this kind of aluminum can be produced using geothermal or other renewable energy sources. Certainly not enough to satisfy the entire European market. But the demand is already here and anyone who can make “green” aluminum will set their prices accordingly. At the beginning of this year, this green premium was 10 USD per ton of aluminum. Now it is 30 USD, next year it will probably start at 45 USD, and for 2025, I have already seen forecasts of multiples of these values.

How can you adapt to this?

As a trader, we need to look for suitable sources of commodities and enter into strategic partnerships. The companies in the group have more options. We put a great degree of faith in renewable sources and particularly in recycling. For example, recycled aluminum has negligible carbon footprint and MTX Group wants to be a global leader in its usage. We are looking for suppliers who are close to us geographically, not only because the logistics are easier, but also because of the impact on our carbon footprint. Importing input materials from China, for example, is just not worth it in this respect. On the other hand, it is not possible to exclusively buy raw materials locally because they are not mined and produced in Europe. Personally, I see great potential in trading commodities with a smaller carbon footprint. But at the same time, I think that if we don’t want to overheat the market, customer requirements need to become more realistic. We can support them

in this and help explain how carbon footprints work. It also helps us a little as we don’t want to disqualify ourselves from global trade with these requirements.

Do customers all over the world have these requirements?

We trade globally, not just in the Czech Republic or Europe, and we can clearly see that carbon footprints are mostly being discussed in Europe. Emission allowances, green certificates for electricity and other carbon taxes and tariffs, some of which are not approved yet, increase the economic demands of production in Europe only. This may reduce the competitiveness of European businesses on the global market.

METALIMEX

A company focused mainly on commodity trading. It is one of the leading traders in Central Europe.

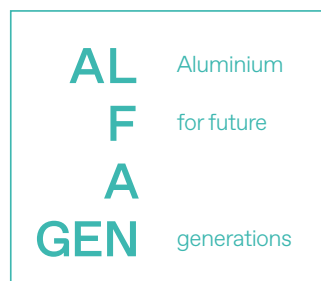


Modernization in Břidličná

The AL INVEST Břidličná plant will undergo major modernization in the coming years. It includes, among other things, a complete revitalization of the site and construction of new facilities. Following this 5 billion CZK investment, AL INVEST will become a cutting-edge 21st century factory with emphasis on automation, vertical integration, and permanent sustainability.

Text: Luděk Vokáč





Big changes are coming to Břidličná. They are working on the plans right now and between 2026–2028, the plant will undergo major renovation. “It’s comparable to the 70s when the plant was transformed into its current state,” says David Bečvář, Vice-Chairman of the Board and Chief Strategy Officer of MTX Group, highlighting the scope and importance of the project.

What exactly is planned for Břidličná?

We will make our 2020 vision come true. We call it the ALFAGEN project (Aluminum for future generations). We are still in the preparation phase, which requires a total investment of more than 5 billion CZK and which will completely transform the factory and bring it into the future. In essence, the ALFAGEN project will be a practical demonstration of how we implement our sustainability strategy. Sustainability is a fundamental pillar of the project and is incorporated into all its parts.

Specifically, how is sustainability reflected in the project?

As part of the project, we will significantly modernize our production, replacing old technological equipment with new, less energy-intensive versions. Another way we want to conserve energy is by reconstructing buildings and building completely new ones in line with the latest standards. We expect to reduce energy consumption by more than 30%. As a part of this revitalization, we will also remove environmentally obsolete technology. In the future, we want to increase our focus on recycling, so we plan to work more with aluminum scrap.

What are your decarbonization goals?

Immediately after the implementation of the ALFAGEN project, we expect to see a reduction of the carbon footprint of our products by about 50%, and by 2039, we want our plant to be carbon neutral.

AL INVEST Břidličná

The biggest Czech rolled-aluminum intermediate materials producer, with a sizable presence across Europe focusing on the flexible packaging, mechanical engineering, electrical engineering, and automotive sectors.



ALFAGEN is synonymous
with sustainability

5 billion CZK
total investment
into the ALFAGEN project

How do you plan to achieve this?

The 2028 goal is more palpable in this regard. We are still discussing what will happen after that. But the main pillar is using state-of-the-art technology while reducing energy consumption as much as possible. Furthermore, we want to implement renewable sources. Our substation is being prepared to draw electricity from the future MTX Renewables solar power plant. As mentioned above, another way we want to reduce our carbon footprint is through aluminum recycling. In this area, we want to focus on metal cleaning. Food industry waste, for example, needs to be cleaned from organic compounds. Of course, these compounds can be burnt during melting but we would lose their energy and increase the carbon footprint. We want to use the energy from these compounds and one of the group’s subsidiaries, Henry Gas, can help us with that. Together, we are looking for a way to efficiently use the energy stored in waste. As a result, we might turn the waste into hydrogen and use it in our operation.

Does the project mean that the portfolio will change as well?

Our goal is to increase the added value of our products. That is why we want to focus on vertically integrating added value. This means integrating processes and solutions that have been delivered directly from third parties to our factory. We want to be fully able to prepare the raw material, i.e., aluminum, and manufacture a final product from it. Vertical integration can also take place between the companies in the group. So, as part of the investments, we will build, for example, a cast aluminum rod production line, which will serve as a semi-finished product for forging at the nearby Strojmetal Bruntál plant, or even for Strojmetal Kamenice. Strojmetal will take this semi-finished product and turn it into a final product, such as automobile suspension arms.

We also rely heavily on our own development, both in production processes and final products. When it comes to materials, the main goal is to use recycled ones, which is why we are intensively testing our own PureAl® formula, a material made of up to 100% recycled mate-



↑ Ivo Mrhal, Head of ALUM Technology and Technology Guarantor of the ALFAGEN Project



rials. But we are also developing other solutions; for example, we have managed to reduce the thickness of our cooler foils by about a quarter while maintaining all the required properties. This enables our customers to make lighter cooling units.

How do these changes affect employees?

In terms of permanent sustainability, it's important for us to retain our workers while also attracting new ones. In this respect, we have a great partnership with the town of Břidličná. Our plant is an integral part of the town. Both parties are aware that they are important to each other and must cooperate. We want to continue to develop this partnership, but at the same time, we are also looking beyond Břidličná so that we can attract young, promising talent with the right education. That is another reason we need to build a modern and employee-friendly plant that people want to work in.

How do you plan to achieve this?

One way is through our new clean operations, which are attractive in of themselves. At the same time, we fully realize that we need to rely not

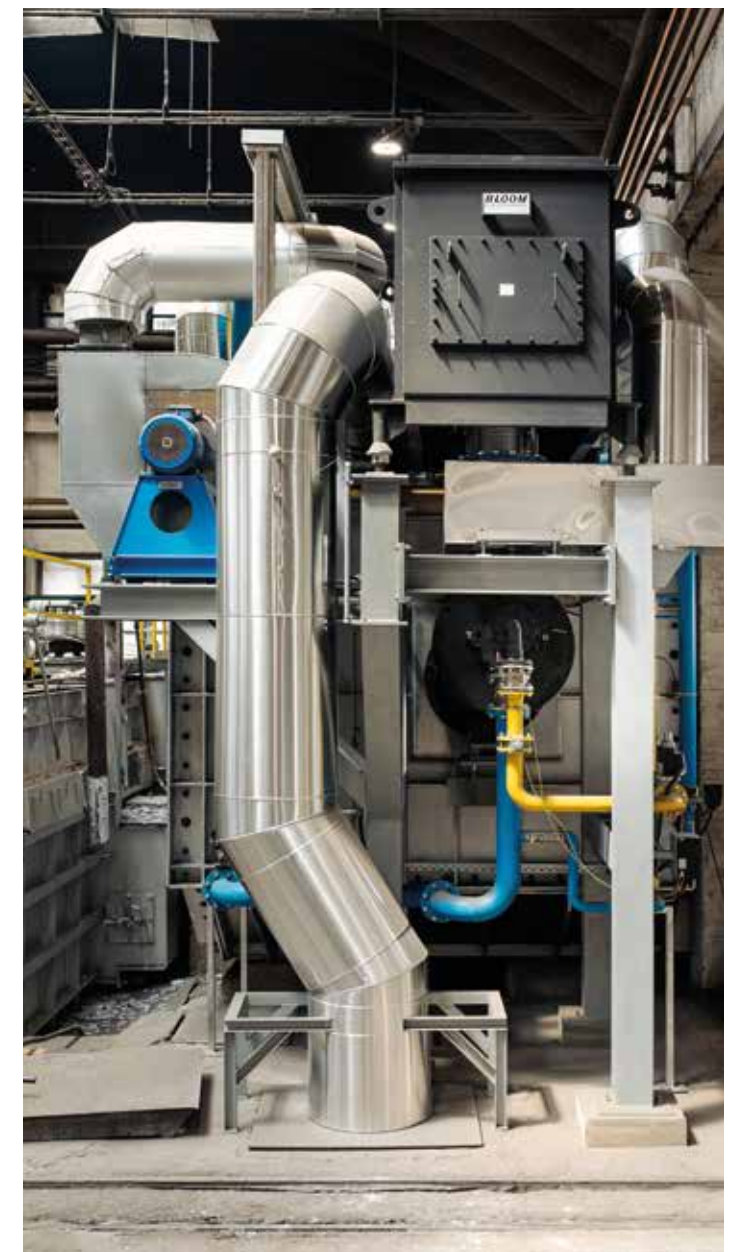
only on a high degree of automation, but also, above all, on the complete digitization of our plant. It is the only way to future-proof our operation. We are working on a comprehensive control system that will help us manage all our processes and serve as a knowledge center. Today we have a lot of different technologies in the plant that only a few experienced employees know how to use. Naturally, these employees sometimes leave us and it's almost impossible to pass on their experience.

So, we need to make sure that their knowledge is retained in the modern equipment itself so that their successors can learn from it. We want the factory to be safe, for the technology to be intuitive, and for the training to be as simple as possible. We want to attract people to work here. That is why we are also working on simulation tools that will help us verify and test upcoming solutions in the digital realm before we eventually decide to deploy them.

Břidličná will be
**carbon
 neutral**
 once the project
 is complete

50%

reduction in carbon footprint
after project implementation





Petr Šůva, director of TAPA Tábor, talks about plastic packaging production, its future, and the challenges in recycling it.

Environmental responsibility in the contemporary packaging industry

Take a peek behind the scenes at TAPA Tábor, a leading flexible packaging producer established in 1911. Read about its history, its current and future plans, along with the challenges in recycling plastic packaging and environmental protection.

Text and photos: Jindřich Kodiček

The roots of this company date back to 1911, when it was established under the name of Lučební továrna. Back then, it specialized in using animal and industrial waste. After the war, the company became Jihočeské papírny and processed paper for packaging, paper adhesive tapes, flypaper, and similar products.

Just like with other industries, the requirements of the paper industry escalated, so the company started laminating paper with polyethylene. Laminated paper became its staple product. Its current director, Petr Sůva, talked to us about the current state of affairs and the future.

Where has the current management led TAPA Tábor?

Today, we are the largest Czech manufacturer of flexible packaging and a major Central-European player. TAPA employs over 200 people and together, we have a turnover of over 1.2 billion CZK. This equals to about 10,000 tons of printed material per year.

Where can we find your products?

In both households and industry. We make packaging for food, drinks, sweets, animal feed, and other products. To be specific, we mainly make packaging foil with flexographic print, bags, sacks, and aluminum foil. About 60% of our production is supplied domestically and the rest is exported abroad. We export to Germany, the Netherlands, France, Austria, Luxembourg, Belgium, Spain, Hungary, and Slovakia.

Let's say a company in southern Spain makes pet food and needs your packaging. What does the process look like?

That is a very standard scenario. Our sales department will come up with the technical and business conditions, our graphics department will receive their visual materials and adjust them to fit our production. In three weeks time, their packaging is loaded and on its way. In special circumstances, we can speed up the process and have everything ready sooner. High quality and competitive rates go without saying but our customers also value a quick turnaround and flexibility.

What is your most typical product and how is it made?

Although it doesn't make much sense, it all starts with supermarket chains. They dictate their conditions to our customers whose products we make packaging for. The composition of the packaging is determined by the warranty period, marketing requirements, number of materials, and recyclability. Then, we make a 1–4-layer material with print between the layers, each of which has its own specific function.

Nowadays, customers place a high demand on sustainability and the circular economy. Is that possible when manufacturing plastic packaging and could your operation be environmentally friendlier?

During production, we generate a thousand tons of technological waste. Some of the waste we produce is made of just one single material, so it can be further processed and recycled.



TAPA Tábor

A leading Czech flexible packaging manufacturer and supplier for the food industry, as well as for non-food products, animal feed, industry, and households.



What about the remaining waste and packaging made from multiple materials?

It is virtually impossible to break up these plastics into individual layers and sort them for individual and economically meaningful recycling. Unfortunately, most of the plastic waste households throw into the recycling bin is very difficult to process because the sorting plants often can't tell how many layers an item of packaging has. So even if we make a piece of single-material packaging, it can't be effectively recycled because we can't separate it perfectly. PET bottles, soda cans, and cosmetics containers are exceptions because they are highly recognizable and usually made from one type of plastic or metal which makes them easy to recycle into a single-material granulate. According to the available data, we can only recycle about one third of the contents from recycling bins.

Why can't multi-material plastic packaging be recycled?

It is very difficult to guarantee the physical properties of products made from such recycled plastics in a year, five years or even ten years. These products might become deformed or even release residues.

So, what happens to the remaining two thirds of plastic waste that can't be recycled?

First, let's look at the numbers. Only about 10% of waste ends up in

plastic recycling containers and we can only recycle a third of that. This means that about 90% of all waste and two thirds of the contents of "yellow containers" are landfilled. In the Czech Republic, there are simply not enough incinerators (for making heat and electricity) in which we could efficiently use this waste. There are only three incinerators in our country which is not enough. Switzerland is smaller than us, has fewer inhabitants but it has 33 incinerators. The entire developed world uses energy-rich waste for heat and electricity production and only sorts easily sortable PET bottles, cans, and paper.

Some people say the right thing to do is stop using plastic packaging and start using more environmentally friendly alternatives. What is your take on that?

Plastic is currently irreplaceable for its exceptional physical and chemical properties, which only keep improving. More and more industries and sectors are starting to use it each year. Irresponsible people are to be blamed for plastic pollution in rivers, oceans, and landfill sites. It's not plastic's fault. If there weren't scrap recycling centers, forests, rivers and lakes would be full of it. In my opinion, the circular economy should be based on reusing unused materials for production or burning them in a controlled manner to make electricity or heat, thus closing the cycle. Recycling and electricity/heat production must be profitable.

Where do you see TAPA Tábor in 10 years from now?

"It might not sound very modest, but we are respected and recognized in our industry and we are among the best companies in the group. We will be happy if it all stays that way. That means maintaining the same turnover and profitability. We also need to have a regular and responsible investment strategy. All that should make us competitive for years to come."



AM

Andre Materne is the director of Strojmetal Singen, a company that develops and sells forged aluminum and aluminum alloy parts for the automotive industry.

Customers want to know how we are looking to improve

"Sure, now's the perfect time," says an energetic voice on the phone. Andre Materne is driving from Singen, located near the German-Swiss border, to Prague. This experienced manager and director of Strojmetal Singen is keen on using his time as efficiently as possible.

Text: Pavla Francová

Strojmetal Singen GmbH

A producer and vendor of forged, machined, and assembled parts from aluminum alloys for the automotive and transport industry. It also manufactures aluminum parts.

Do you come to the Czech Republic often?
Yes, every two weeks. We discuss various issues with our customers such as our offer, as well as new investments, all to ensure that we stick closely to our strategy.

What exactly do you do in Singen? What are you in charge of?
We take care of marketing and sales, as well as manufacturing forged aluminum and aluminum-alloy parts and components. In addition, we oversee business development, looking for new growth opportunities in the market and for geographical expansion. In Singen, we are expanding our marketing and sales departments to be able to penetrate the market with new products such as battery housings or special heavy parts for the MacPherson front suspension. We hired several new managers from our segment with similar experience. A third of our workforce are women and our average employee age is 42 years. This means we have a good mix of experienced and newer employees with a good education from renowned universities.

Who are your customers?
95% of them are car manufacturers. We are very proud to be one of the main suppliers of forged parts and components for Mercedes, AMG, BMW, Porsche, Audi, VW, Ford, GM, Volvo, Aston Martin, and tier 1 suppliers such as ZF, THK, Schaeffler, Raufoss, and Iljin.

What are you focusing on right now?
A lot of things. Primarily, marketing, sales and product development. Also, I'm looking for production opportunities in North America, another rapidly growing market in our sector. In addition to Bruntál and Kamenice, it would be our third premises. The recession, rising energy costs, and declining customer demand, especially in Europe, all present their own challenges. In such a serious situation, you need to have an excellent market network, which we, to our advantage, have managed to build over the years in Singen.

How are you coping with that?
This year as well as last year, we split the rising energy costs with our customers. It's still a sensitive issue.



Andre Materne

Andre Materne began his career in 1991 at Alcan, Canada's leading aluminum miner and processor. He remained in the industry and with the company and worked his way up through various management positions. He was there when Czech company Strojmetal began working closely with Alcan, as well as when they later founded their joint venture, Strojmetal Aluminium Forging, of which Strojmetal Singen is now a part. Andre Materne has been managing the latter for the past 12 years. Currently, there are about 20 employees who are involved in the sales and development of aluminum parts and aluminum-alloy parts, which are mainly supplied to car manufacturers.

MTX pushes us and supports us in a very ambitious and professional manner

How does ESG affect your work and customer requirements?
It is something I've been personally conscious of for over a decade, because when you're working with aluminum, sustainability is one of the key arguments. We recycle much better than our steel or carbon fiber competitors, which is a big advantage for us.

So, you haven't noticed any changes?
We definitely need to change the way we think about production and purchasing. We need to create a database to track the current situation and where we can define clear goals for the future.

Can you be more specific?
Customers want to see that we have a clear plan for gradual decarbonization. They want to know what we plan to improve.

What do you think of MTX Group from a German perspective?
It's a very diverse group that is spread across multiple industries. Based on the numbers I see, it's very well managed. On top of that, our Kamenice forge is one of the best in Europe. As a new owner of Strojmetal, MTX pushes us and supports us in a very ambitious and professional manner. Our customers appreciate this strong alliance. It makes us highly credible and helps us land profitable, long-term contracts.

Is there something your Czech colleagues have taught you or that you have taught them?
Rather than teaching, I'd say we support one another. I have been working with Czechs for 20 years and I can see we complement and support each other perfectly. Both teams are very experienced and well-coordinated. We know how to use the best of both worlds in order to experience as much success as possible.

What does the market currently look like?
We have a lot of profitable contracts lined up all the way to 2036, totaling 1.6 billion EUR. I think it's fair to say that our future is secure. The current state of the market, however, is a much bigger challenge. Our customers aren't making as many cars as they expected. This year is critical because we're 30% behind.

What can you do about it?
We need to share the additional costs caused by the current economic situation with our customers and suppliers in order to achieve a reasonable result in 2023. Forecasts say that the coming years should be better. In general, I'm optimistic about the market. We still need to get a bigger market share and we need to be cost-sensitive. As far as our carbon footprint is concerned, we need a clear approach from Strojmetal and MTX.

Kamenice wants to expand into product development

The Strojmetal Aluminium Forging factory in Kamenice in Central Bohemia is literally running at full speed. Its production capacity is virtually fully utilized and is slowly reaching its limits. Still wanting to grow, however, the factory is now aiming to increase the added value it delivers to its customers. The plan is to focus on social responsibility and decarbonization, as well as trying to engage in product development with customers.

Text: Luděk Vokáč





Strojmetal Aluminium Forging

This company manufactures and diagnoses parts forged from aluminum alloys for the automotive and transport industry.



Since MTX Group took full control of Strojmetal's plant in Kamenice in 2020, the company has been developing rapidly. This is despite its premises having very limited space with almost no room for growth. "Our employees may sometimes think that we're investing more in our plant in Bruntál. But it's because we are building it on a greenfield site and you can see the growth with your own eyes. The valley in Kamenice, on the other hand, gives our plant strict boundaries, which limit the potential to expand. That being said, we of course also invest in Kamenice. Our latest priority there is to engage in collaborative product development with our customers," says Miroslav Záhorec, Vice-Chairman of the Board and Chief Operating and Financial Officer of MTX Group.

How is Strojmetal doing as a whole and how is the Kamenice plant doing on its own?
We are doing very well; we have enough orders for both of our plants in Kamenice and Bruntál, which makes it easy for us to grow. Customer demand is high and we have worked, and are working on, our own solutions to meet it. We have managed to land new projects in Kamenice which prove we are able to flexibly respond to the requirements of our customers, efficiently manage our projects, and cooperate with our external capacity. Our customers value our ability to invest and deliver top-class solutions. However, we want to keep developing our strengths and innovate, which is why we have recently hired new employees in Kamenice.

What are you planning on innovating in Kamenice?
We definitely want to be more involved in the product development and pre-development phases for our customers. We want to be closer to them when they are deciding which direction they will go with product design. In essence, we don't want to wait for their agent to come to us and ask us to make them a specific part. Right now, we are in the talks with AMG, who we have already worked with on a number of contracts. With the help of AKKODIS and our own employees, we want to support their production capacity. It will certainly take a long time to establish ourselves in this field, but we have already taken the first step. The next step is expanding our diagnostics center.

In Kamenice, our current priority is to engage in collaborative product development with our customers

How will it work?
It will help us improve our existing technological processes such as heat treatment processes and so on. We are using it to mechanically test our products and we want to expand the possibilities of these tests.

Your growth seems to be focused on your customers' requirements. Is this vision yours or theirs?
In this case, it is 100% Strojmetal Aluminium Forging's vision. Our customers have their own production capacity and they don't ask us to help them with development. However, we think there is a huge potential in combining our experience as a manufacturer with the needs of our customers, which should reflect in the quality of the final product. So, as you can see, it's our initiative. We want to be one step ahead of our competition. It will be a service that they may or may not use. This service will also help us to better plan our investments and their returns, as well as to increase our production efficiency. As part of development, we can prepare for future products well in advance. In contrast, when a customer shows us their own product which they want us to manufacture, the implementation can take more than six months and, of course, requires more investment.





Our advantage is that there is no substitute for aluminum in our industry yet

What is your customers' vision and what are their requirements?
ESG has dominated of late. It's not that other issues aren't important, but traditional measures such as quality, price, and turnaround time are somewhat standard. ESG, especially sustainability, is a clear, relatively new trend. We feel a lot of pressure from customers to make our production and the entire supply chain sustainable. Our customers focus predominantly on the carbon footprint of our products. Mainly because the other aspects of ESG, such as the ethical sourcing of raw materials and fair employee treatment, have been standard practice for us for many years.

What does this requirement mean for you?
It forces us to look for new solutions. We are working with new materials, particularly with fully or mostly recycled ones. We are trying to work faster and more accurately while using fewer semi-finished products. Also, we are replacing traditional sources of energy with renewables. This actually applies to the whole group, not just to Strojmetal in Kamenice. For example, in terms of material availability, in our case aluminum, this creates enormous pressure on our input material's supply chain.



So, what are your material requirements?
Our customers, which mostly consist of car manufacturers for which we make suspension components and other parts, typically put pressure on us to use materials with good mechanical properties, that are lower in price, and have a minimal carbon footprint. In this respect, we have a great deal of hope for our partnership with another of the group's companies – AL INVEST Břidličná. Today, we are able to define input material requirements to a high standard for many of our suppliers, but with AIB our cooperation can be as close as possible. We can actually develop new materials or new ways of using existing ones. We can already clearly define the requirements for reducing the carbon footprint of our materials, but working with AIB on aluminum recycling, for example, will take us even further. Recycled aluminum has a dramatically lower carbon footprint than primary aluminum. However, some recycled materials are not suitable for particular products which is something we will be working on.

The advantage is that both companies have extensive experience with aluminum, for which there is no substitute in our industry. On the other hand, a number of steel products might actually be replaced with aluminum ones. So, our market is constantly growing. In general, our customers want us to supply more than forging, i.e. a semi-finished product. If possible, they want a finished product. This means that in addition to forging, we are also implementing machining and assembling other components. In this regard, we need to improve the production processes of our current technologies.

And all this is supposed to be covered by the diagnostics department?
Yes and no. This department will have plenty of time for product development and it will enable us to separate routine operations from our efforts to constantly test, model, and improve our current processes. To innovate, we need a solid team of professionals, both creative colleagues and experienced heads who know our information systems etc. Of course, our external partners can also help us innovate. If we give this team room to innovate, we can later implement the results in our operations.

MV

Marek Vejnar, Development Director at Strojmetal Aluminum Forging, and his team are in charge of CAD construction, forging technology, machining technology, CNC programming, and project management. His job also includes continuous improvement and research and development.



OH

Oliver Hander, Key Account Manager at Strojmetal Singen in Germany, is responsible for customer service and market expectations. His customers include Mercedes-Benz, Mercedes-AMG, BMW, and THK.



Our customers appreciate proactivity

We spoke to Strojmetal Aluminium Forging Development Director, Marek Vejnar (MV), and Key Account Manager at Strojmetal Singen, Oliver Hander (OH), about the development of new parts and how our customers are grateful when we come up with our own solutions that are both functional and efficient.

Text: Ondřej Chlupáček

What do you see as Strojmetal's biggest business and development advantages, compared to the competition?

OH Personally, I'd say that one of Strojmetal's biggest advantages is its vast experience in the field of aluminum forging. This allows us to manufacture parts that fit perfectly into the designated space in the car but also into our production process. We offer the whole range of geometries for car and van suspension. Another example of our added value is our parent company, MTX Group. With the support of the group, we can invest in the future and develop as a global player in the forging sector.

MV I would add that we are a very flexible company that is able to develop and implement projects in a short period of time. We have experts in construction and technology development as well as our own tool shop in which we are able to manufacture prototypes as well as final products. In today's unstable environment, customers truly appreciate flexibility and adaptability.

What distinguishes Strojmetal the most from the competition in the context of development?

OH Nowadays, the bulk of development in the automotive industry is carried out by specialists and external companies who don't supply the entire component in-house. This is what makes Strojmetal different. We supply complete components for the automotive industry and are able to develop and manufacture them entirely in-house.

MV Strojmetal has comprehensive expertise to develop and launch projects for demanding automotive industry customers. That is rare. It gives us an edge over our competitors.

What is the difference between development and pre-development?

OH Usually, the development of new car models begins several years before they are sold on the market. If a customer contacts Strojmetal with specific requirements involving development, it usually means they have already taken care of the pre-development. If we were able to participate in the pre-development process and support the customer even earlier, we would be able to adjust the design to better fit our production facilities.

Do clients appreciate a proactive approach and new ideas from a supplier?

OH They appreciate proactivity greatly. Customers, especially original equipment manufacturers, expect a strong supplier that is able to meet all current and future market requirements. New ideas and practices are always welcome and rewarded. That is why we need to be flexible and take a proactive approach to any future challenges.

How often do things change during projects and how do we deal with it?

OH Thanks to computer-aided design (CAD), you can now literally change the design with a click of the mouse. This is one of the reasons why the automotive industry is becoming increasingly accustomed to the number of design changes during and after the demand phase. Development and sales departments need to be able to handle them in order to fully meet the customer's expectations.

Take the recent improvement of BOGE parts. What does it consist of?

MV BOGE parts have specific structure and were never forged from aluminum. The last generation of cars used pressed sheet metal. It serves as a transmission holder for the Mercedes-Benz C-Class, E-Class, and S-Class. Due to the function of these components, they need to be highly geometrically precise. AKKODIS reviewed all of our designs of the parts and suggested improvements. For the next generation of cars, BOGE parts will be made of two pieces instead of one. The new design fully retains the part's functionality, saves material, and resolves the current technical production problems.

What other improvements are you currently working on?

MV The BOGE parts design analysis was unique and there is currently no similar type of project in the pipeline. But our multidisciplinary team, including technology, design, production, and quality control, is continuously researching potential improvements.



MTX Group invests in regions most impacted by the green transformation

Strojmetal Aluminium Forging (SAF) has been operating in Bruntál since 2020. Last year, it relocated part of its operation there, away from Kamenice. “You could think of it as an expansion of our Kamenice plant, just 300 kilometers away,” says the Vice-Chairman of the Board and Chief Operating and Financial Officer of MTX Group, Miroslav Záhorec.

Text: Luděk Vokáč

In 2022, Strojmetal Aluminum Forging opened its first robotic forging line for aluminum chassis parts in Bruntál. Since then, it has been continuously developing. The goal is to have three operational forging lines. “Today, we have a forging line with a capacity of 2,500 tons which we use to manufacture front upper control arms (FUCA) for cars,” explains Miroslav Záhorec, adding: “We are already working on the second forging line with a capacity of 5,000 tons. We will use it to forge front lower control arms for cars (FLCA). It should be operational by the third quarter of 2024. The third line has already been designed, since it is a twin of the second one.”

This means Bruntál has been developing rapidly. “It makes sense, we have a lot of room for development,” says Záhorec. This room is one of the reasons why the plant was built here in the first place. “In Kamenice, there is no more room for growth. We can only improve our existing technologies there. But in Bruntál, there is plenty of room and we want to use it to expand our already operational plant,” explains Záhorec. He also emphasizes that both of these plants are interconnected in terms of retained knowledge.

“Bruntál is a perfect example of successfully fulfilling our vision for company development using cutting-edge solutions,” says Záhorec. And it’s not just about state-of-the-art robotic lines. The plant has been working on its environmental impact and carbon footprint since day one. For example, the plant will partially cover its energy consumption from the MTX Renewables solar plant nearby when it is built or from the wind park that the company is currently planning. Another MTX Group member, AL INVEST Břidličná, will help the Bruntál plant with its carbon footprint.

“We want to work with AL INVEST on material development. More importantly, though, they will make cast aluminum rods specifically for our operation, with our required material composition,” explains Záhorec. Thanks to this partnership, Strojmetal (including its plant in



Kamenice) will be able to precisely define its requirements for the composition of its input materials, for example in terms of the percentage of recycled aluminum in the charge. Compared to primary aluminum, recycled aluminum has a dramatically smaller carbon footprint. Cast aluminum rods will also reduce the amount of waste generated during forging. Although waste can be recycled as an input material, producing less of it is more efficient and saves energy.

MTX Group also believes that Bruntál has a great deal of potential as regards attracting qualified employees. “We are trying to make our workplace a very attractive 21st century plant. We are working with automation, visualizations, virtual twins, and other digital tools,” explains Záhorec. Not only do these tools make working here more comfortable, they also help us find ways to increase production efficiency. “When we’re installing new technology, we already have plans for how to improve it,” says the director, adding: “After six months of initial operation and thanks to the partnership between our suppliers, our subsidiary ICE Industrial Services (led by experienced workers from Kamenice), and our new team in Bruntál, I can proudly say that we’ve managed to increase our production capacity by 20%.” Both Kamenice and Bruntál are nearly at maximum working capacity. As the plants keep developing, they also manage to land new projects and contracts. “Thanks to the extraordinary work done by our team, the plant was successfully qualified and chosen for serial production for Mercedes in 2023, which meant months of systematic preparations. We have successfully started production and can now focus on further development and investments,” concludes Záhorec.

In Bruntál we have a line with
a capacity of

2,500 tons

We are building a new line
with a capacity of

5,000 tons

A man in a dark blue blazer, light blue shirt, and dark trousers stands on a paved surface in front of a massive pile of dark, irregularly shaped coal. Behind the coal pile is a large, multi-story industrial building constructed of red brick. The building has a gabled roof with a section of corrugated metal siding on the left. A tall, thin, dark chimney rises from the building into the sky. The sky is overcast with grey clouds.

FH

Frank Holz is in charge of METALIMEX
Deutschland, which sells products from
OKK Koksovny and Czech Mill.



Even coke can help decrease our carbon footprint

The pressure of the green economy is huge and the industry has to move with the times. Frank Holz says that the question is how quickly things will change and what our chances are of moving with them. He and his colleagues, Sascha Schnell and Pavel Klein, are in charge of METALIMEX Deutschland. He specializes in selling the products made at OKK Koksovny and Czech Mill. He himself comes from a mining region around Aachen and has spent his entire professional career working for mining and trading companies. “I’m an optimist,” he says, with a convincing smile on his face.

Text: Pavla Francová

How did you start working for METALIMEX in Germany?
After graduating from high school in the mid-1980s, I started working for a German mining company. Although I was educated in IT and have a background in digitization I ended up in business. I even stayed in business when I moved to ThyssenKrupp in 2007, which I left seven years ago before co-founding the German branch of METALIMEX.

Why? What made you do it?
I’m a big advocate of local sourcing. I’m skeptical when something is imported from far away. I liked that production was very close by and I wanted to move away from a position in which I only buy and sell. Here I have a production team behind me that I can work with. Also, the cultural background was very important for me. Working for a Czech company is great. We understand each other and have the same mentality, which is nice.

Did you know of METALIMEX before?
Yes, I knew about the company and its management for many years. From that point of view, it was a carefully calculated move.

What was the initial plan when you started the company in Germany?
We didn’t start from scratch because we already had some customer relationships. Our business plan was to sell 120,000 to 150,000 tons of coke in Germany after two to three years.

Did the plan go as expected?
Even faster than we expected. After two years, we were selling 250,000 tons of coke a year. Since then, we have stayed at more or less the same level.

Why do you think it was so fast?
Customers were intrigued by not having to buy from an intermediary, but directly from the manufacturer. They want shorter supply chains and they prefer to deal with the manufacturer rather than the trader. So, we came up with the right idea at the right time.

And you’re not just in charge of the German market...
No, we also sell to Benelux countries, the UK, and one large customer from Northeastern Europe, but they only make up about a 10 to 20% share. Without a doubt, most of our sales are in Germany. The coke industry has moved and concentrated there a lot. Neighboring countries have either completely ceased production or relocated it elsewhere.

What is the market like right now?
We have had a difficult few years. 2018 was our record year but the pandemic in 2020 brought a big slump because the lockdowns halted production. In the couple of years afterwards, the market started to slowly come back to life, because everyone wanted to make up for their losses, but then the war started in Ukraine last year.

1,000,000 tons of
CO₂
saved by rail transportation

How has that affected your market?
We have been feeling the effects since the second half of last year. It started with a disruption to supply chains, which meant our customers could not operate as they had planned. This year, we are seeing the effects of a massive recession. A lot of our customers are stepping on the brakes and demand for our products is decreasing.

Who are your customers?
Mostly foundries, car manufacturer suppliers, and engineering companies that produce parts for wind turbines, for example. Another large sector is construction, in particular thermal insulation materials for houses. In addition, we also supply the steel industry and other industries.

What is your forecast for the end of the year? How do you see the market developing?
We probably went into this year more optimistically than we should have. During the first three quarters of 2023 we saw a slowdown, but I hope the last quarter will be rock bottom and then we can bounce back up. Hopefully, demand will go back up again next year. I don’t expect it to skyrocket, but I do expect gradual and steady growth.

How does ESG change the market? Have you noticed any changes?
It’s a big factor with a massive impact. We need to face the fact that our operation and its economy are old. It’s impossible for our product to be green. We can only reduce our carbon footprint by a small margin. Which is why it’s all the more important to look for ways to improve. Also, a lot of our customers will switch to other technologies and we need to prepare for that because it will decrease our sales for sure.

What’s your prognosis for this?
Nobody knows how fast the economy will change. It’s political and there’s nothing we can do about it. Looking at our rate of progress in the production of clean energy, for example, I think it won’t be as fast as the politicians want. We see this with our customers as well. Switching technology is very difficult and requires enormous investment. I reckon it will take at least another ten to fifteen years before the industry can completely do without our products.

Do you see any opportunities for you in this change?
Absolutely! Compared to the market volume, our production is small and flexible. Big players, such as the steel industry with its own coking plants, will gradually switch to other energy sources. However, this means their large coking plants won’t always be economical and will gradually be shut down or converted for other uses. This, of course, will open up new opportunities for us, which we will seize. In addition, transportation is becoming increasingly important. Long transport routes mean high emissions. Our proximity to our target markets will also mean more and more opportunities.

You mentioned coal and coke can’t be green. Yet, you are still trying to find improvements. What are they?
For example, we are considering using biomass to partially replace coal in coke production, which would decrease our carbon footprint. Another way to decrease our carbon footprint is transport optimization. Today, out of the 240,000 tons of coke we transport annually as METALIMEX, we transport about 120,000 tons by rail, 90,000 tons of which in special containers that can be easily lifted from a train to a truck and then unloaded at customers’ premises, for example with a dump truck. So, we use trucks for about ten kilometers but most of the route is by rail.

Do you see a future in rail transport?
Yes, and we want to use it even more but it’s virtually impossible at the moment because rail capacity in Germany is full. The existing infrastructure frequently undergoes maintenance, which means we sometimes struggle to keep the same volume on the railways. It’s a very efficient way to reduce carbon emissions.

Do you have a specific example to show how much you save in terms of emissions?
Of course, these are substantial numbers. In 2019, the entire German transport network emitted 164 million tons of CO₂ in total. We managed to save almost a million tons in a single year. That is a substantial amount that shouldn’t be underestimated.

Are there any other options?
Definitely. Besides adding biomass, we also want to improve the thermal value of our products. This is what our customers need. If less coke has better thermal value, we’re going to be transporting less coke. This will save on costs and reduce emissions.

How do you do that?
By reducing the water and ash content in the coke. When you take coke out of the furnace, it’s on fire. We must quench it immediately with water, because we want it to burn at the customer’s plant, not here. The problem is that some of this quenching water stays in the final product. For larger pieces, the water content can be 1 or 2%, for smaller pieces it can amount to 10%. The goal is to reduce this amount so we transport less water.

So, you’re not pessimistic?
There are other options as well. Carbon capture and storage is its own story. Some of our customers are very interested in this. Although science and technology are only in their infancy in this field, I’m very optimistic and hope we will see significant progress in the coming years. It could be a real turning point.

Each kilogram of saved CO₂ counts

OKK Koksovny is working on more environmentally friendly, safer coke production and, in the future, this will include bio-coke too. It voluntarily invests in public spaces in cooperation with the city of Ostrava and the Moravian-Silesian Region.

Text: Jana Bohutinská

OKK Koksovny

OKK Koksovny produces coke – a raw material used not only for ironmaking and iron casting, but also for a number of other industries. The company uses all types of coal suitable for coking. OKK Koksovny is the largest European producer of top-quality foundry coke. It offers a wide range of cokes for foundry, metallurgy, special metallurgy, heating, and other purposes. The remaining products in its portfolio are chemical coke products that are formed during high-temperature coal carbonization.



OKK Koksovny invests in the environment, safety, and modernization. Each year, these investments amount to around 300 million CZK. The key theme that surrounds these investments is their sustainability and adaptability to market changes as well as political and societal pressure for environmental protections.

“In some sectors, the opportunities are great in terms of sustainability, in others less, which is our case. In coke production, there are insurmountable physical and chemical laws which are associated with inevitable CO₂ emissions. There’s nothing we can do about that. We want to focus on the emissions that we actually can reduce,” explains Pavel Woznica, Executive Director of OKK Koksovny. However, these inevitable emissions remain a key discussion point and the company is working on how to deal with them moving forward, or at least how to compensate for them.

Voluntary agreements with Ostrava and the Moravian-Silesian Region

First and foremost, continuous investment in sustainability means that the company will continue to operate and comply with all legal requirements. However, the company is also voluntarily investing beyond the mandatory framework. It is also looking for investments that will streamline operations, which include energy savings and solar energy. “We need to identify every opportunity, every detail, to reduce energy consumption and thus, indirectly, our carbon emissions. Each kilogram of saved CO₂ counts,” points out Woznica.

The coke plant complies with every rule and uses the latest approved technology, but wants to go further still. The company has entered into two voluntary agreements with the city of Ostrava and the Moravian-Silesian Region. It has committed to keep investing in environmental and social schemes. These commitments concern the impact the coking plant has on the surrounding environment, despite being far from the biggest polluter in the region. This includes regular cleaning of the site of the coke plant and the adjacent streets, as well as increased battery maintenance. Part of the voluntary agreements is supporting cultural and sporting activities in the city and cultivating public spaces.

Current projects

Eliminating fugitive emissions from benzene distillation is an important environmental investment. This is a development project and the first rounds of investments have already shown results. This year, the technology will be improved even further and should be ready by next year. “We want to increase the performance of our unit and adapt it to our operation using the experience we have gathered. The effect will be more noticeable,” says Pavel Woznica, commenting on the project, which forms part of the voluntary agreement with the Moravian-Silesian Region. “I would like to highlight this investment. It reduces fugitive benzene emissions by extracting them and chemically breaking them down into simple compounds that don’t harm the environment. It also reduces odor pollution in the surrounding environment. We will always be open to innovation, especially when a new technology emerges that makes sense for us to utilize and will reduce our emissions. It’s definitely worth trying to reduce emissions even further,” he adds.

Another major investment is land remediation and restoration of the former Jan Šverma Coking Plant in cooperation with the Ministry of Finance. “It’s currently the largest environmental project in Ostrava. The end result is a clean site that reduces the environmental impact on the city,” says Pavel Woznica.

Bio-coke is on the company’s radar

The investments don’t end there. In cooperation with VSB-TUO, the company is researching hydrogen extraction from coke furnace gas as an alternative fuel source. Together, they also want to look into additional coke battery dedusting that goes beyond BAT — another voluntary investment. They are also working with MTX Renewables to focus on bio-coke production, since ESG and decarbonization are such a key priority for their customers. “Finding a suitable biological component is not easy, but I believe that MTX Renewables will help us succeed and give us a competitive edge,” concludes Woznica.



Introducing biomass multi-dust

The importance of environmental protection and sustainability is growing in Czech industry, even in companies that have been accustomed to only working with non-renewable sources of energy. Czech Mill, originally a coal mill, is well aware of this. Now, the company is adding biomass fuel to its portfolio. "Put simply, coal will run out one day. Replacing these environmentally harmful variants is the kind of added value that customers are predominantly calling for," explains Václav Szmek, Production Director.

Text: Mariana Novotná

Czech Mill – Czech multi-dust manufacturer

The industrial mill processes fuels, biofuels, and cement/concrete fillers in the form of microfine dust – multi-dust. The company was established back in 2006. At that time, it was built as a coal mill under the original name 'Coal Mill'. In 2022, it was renamed 'Czech Mill' and expanded its portfolio with the addition of other multi-dusts used as cement/concrete additives and biofuels.



Czech Mill has been working on the new product for several months. As Szmek describes, it is a mixture of black-coal multi-dust, which the company has been making since 2009, and 20% biomass. "In the lab, we started with almond husks and other nut husks. We even tried coffee grounds. In February 2023, we switched to sunflower husk pellets. June 2023 was the first time we industrially processed the biomass into the final product that we sell under the name Biofuel. Sunflower husks – or pellets made from sunflower husk multi-dust – are probably the most sought-after biomass in the lime industry, which makes up the majority of our customers. We are also experimenting with straw pellets," he says. "Normally, all these secondary raw materials would be landfilled when they could have been meaningfully processed. Our technology gives them a second life."

What are the advantages and disadvantages of the new product? The biggest advantage is sustainability and renewability. It allows Czech Mill to move away from increasingly depleting fossil fuel reserves. Václav Szmek says that another key advantage is that burning biological components is not subject to emission allowances. However, at the same time, he also admits that multi-dust has its disadvantages, such as a lower thermal value and worse bulk properties. "The biological component is light which makes it difficult to mill. The particles are simply not as fine as milled coal. When you move fuel from a silo through pneumatic tubes or a turnstile, it's harder to dump, which means it takes longer to load it on trucks," he explains.

However, he says the initial response is positive. "In addition to saving emission allowances, our first customer appreciates the way the new fuel behaves in the furnace and the way it combusts. They didn't mind about the lower thermal value," he says. This means several other companies might start using Biofuel in the coming months. "We haven't been able to have much success with black coal in some lime kilns. This new product will probably allow us to start working with them," Szmek adds.

Improving this new product is the main priority for Czech Mill in the coming months. The process is split into several areas. As Szmek keeps emphasizing, it's essential to gradually increase the percentage



50%
Compared to lignite, Biofuel
is 50% renewable and
sustainable

Biofuel – green biomass fuel

Biofuel is a highly refined, fine-grain fuel with a large active surface area. It is characterized by excellent flammability, reactivity and first-class combustion properties. It can also creep efficiently and it can be fluidized, making it easier to use as a liquid or gaseous fuel. Multi-dust is a modern energy source for boiler and process combustion plants. Compared to coal multi-dust, biomass has better ignition, but in terms of energy, it has almost half its thermal value. Its indisputable advantage is renewability and status as a 'green fuel'.

of biomass. "We started with 10% of the biological component added to coal, then we progressed to 20%, and in the next few months we would like to move to 30% or more," he says. However, even this goal has its limits, he admits. "A year ago, we thought we could go north of 50%, but the technological limits in our plant in Dětmarovice have shown that 50% is the ceiling. Going any higher would require additional investment. For now, the future is uncertain," he adds. The 50% mixture is very similar in character to lignite, which has been a long-term rival product for Czech Mill, but Biofuel would be 50% renewable and sustainable by comparison.

Szmek says another thought is to expand the portfolio of biological components and their storage conditions: "Biomass is particularly sensitive to storage conditions, so it's important for us to find and provide suitable, preferably roofed premises, so that we can safely store it year-round." The Czech Mill Production Director concludes his thoughts on the outlook for the future with the conviction that if everything goes according to plan, within half a year or a year, even customers who have so far only purchased products from black coal will switch to the new product.

Ocean, cranes, and tons of material

"For me, as an office person, it's exotic. I have invoices on my desk for huge volumes of various materials, but they are just papers. When you go to the port and see a 40,000-ton ship being unloaded, it's really something," says Petr Labuzik, Chairman of the Board of Directors of AMEX Coal, taking us on a virtual tour of the port in Gdansk.

Text: Michaela Raková

AMEX Coal was established in 2014 and Petr Labuzik has been managing it alongside Zdeněk Durčák and Petr Sobek from the very beginning. In Gdańsk, where the company rents part of the coast from the Polish state, it imports and exports energy raw materials for its clients.

"We had two options: either operate in the supply chain or establish a Polish company that would rent part of the waterfront near the sea from the state," explains Labuzik.

Labuzik. "We went with the second option, which is now a big advantage of ours, since we have our own part of the port. Having our own cranes, staff, and other services wouldn't be economically viable, so we rent them," he adds. "Since the company was founded, we have built very strong ties with our Polish colleagues, especially on a personal level, who bring a highly professional approach every single day."

The company with a turnover of almost 150 million CZK a year is managed by three people. "We carry out orders within the scope of our professional activities in the region of Central and Eastern Europe. A significant number of our clients are based in the region of Katowice and Lower Silesia, so we are in Poland all the time. We've just got back, my colleagues and I have been there for a week," continues Petr Labuzik.

The responsibility of all three executives is mainly business activities – negotiating terms and conditions with the customer and providing them with all the services that they need which are offered by AMEX Coal. Petr Labuzik actually has several roles within MTX Group. He also manages its subsidiary, Czech Mill.

The closest ocean

Why did MTX Group choose the port of Gdańsk? "Our customers are mostly from Central and Eastern Europe, mainly Poland, the Czech Republic, and Slovakia. Gdańsk, and partly also Gdynia, where we operate sporadically, is the shortest path to the ocean for them," explains Petr Labuzik. And it's not just about importing energy raw materials to Europe. AMEX Coal also dispatches coke for its customers. It obtains it from neighboring regions and exports it worldwide.



Its biggest customers are metallurgical companies, for which the company imports coking and thermal coal and also, despite its name, iron ore and other materials. Both in containers and in the form of bulk raw materials. "There is a high demand for our service and I'm convinced it will stay that way. AMEX Coal is ready to offer its customers complete logistics of energy raw materials, whether they come from Amsterdam or Brazil," says Labuzik.

Its major customers include U.S. Steel Košice, various companies in Poland, and subsidiaries of ČEZ. It also works for other companies within the MTX Group, such as OKK Koksovný and Czech Mill. But it doesn't favor them over external customers.

The Suez Canal and Ukraine

Our most interesting order from the past year came from Maputo, Mozambique. The cargo circumnavigated the whole continent of Africa and MTX Group employees were closely watching its month-long journey in real time on online radars. Labuzik says he and his clients are trying to avoid the Suez Canal – not only because of potential delays, but also safety concerns. "The ship that got stuck in the canal didn't affect us directly, but it indirectly affected our customers, because it delayed other links in the supply chain," he recalls about one of the unexpected events that affected the logistics industry, before going on to mention an even more significant one: "In 2014, nobody could have imagined what happened in Ukraine last year. When raw materials from Russia stopped coming in, the pressure on port capacity increased enormously, and not only in Poland. People were anxious and the outcome was unclear, which increased the demand for square footage in ports throughout Europe," adds Labuzik, describing the consequences of the Ukraine invasion.

The meter is running

Maritime logistics operates on a month-to-month basis, especially when shipping from overseas. "Negotiating with the client alone can take a month. Then, we wait for a month or two until the goods, for example American coal, reach the port. There, it is loaded onto a ship which sails across the ocean for the next 2–3 weeks. That adds up to three months," says Labuzik, describing the shipping process.

He says the whole process is like riding a taxi; you need to pay attention to the money throughout the whole process: "Ports have windows for loading and unloading, for example four days for loading and four days for unloading. The later we arrive, the more we pay, and vice versa. And we also pay for downtime. If a ship arrives at a Polish port and waits to be unloaded, then, figuratively speaking, the meter is running. That's our most important job – making sure everything runs smoothly."

"Logistics is an extremely interesting field with a promising future. Even if we stop using fossil fuels, we will still have other materials to transport. Maybe, thanks to the boom in clean energy, we will expand our portfolio and start shipping wind power plants, for example. The port crane's hooks are easily replaceable, so it's easy to load an entire wind power plant. Nothing is impossible," concludes the Chairman of the Board of Directors of AMEX Coal.

Povrly on the brink of modernization and a return to copper

The Povrly Copper Industries plant has started work on a massive modernization program that should be finished by 2035. The goal is to secure long-term stability and profitability by diversifying its portfolio, decreasing its carbon footprint, and increasing its production efficiency.

Text: Luděk Vokáč

In 2022, Měď Povrly was rebranded as Povrly Copper Industries (PCI). The new name was designed to make the company an international player but it also reflects a shift in its production program. The plant stopped processing pure copper and started using brass, i.e., a copper and zinc alloy. Copper still remains in the new name, but now it encompasses its various derivatives as well.

However, as part of the new strategy, which the company has been working on since the beginning of the decade and which should launch this year, PCI wants to return to pure copper over the next few years. “Theoretically, we could return to copper products right now, after some minor investment, but we are currently at full capacity with brass products,” explains the PCI plant manager, David Kozel. “These are semi-finished products for ammunition production and we don’t expect any significant decline in demand in this sector for the foreseeable future. So, our only option in order to expand our portfolio and return to pure-copper products is by modernizing the plant and increasing our total capacity,” says Kozel, adding that the two materials have very similar production processes and don’t require any significant change in the technology currently employed.

While PCI primarily supplies products to the defense industry these days, it is hoping to acquire new customers from other fields in the future, mainly automotive and construction. “We want to make copper products and semi-finished products for electrical equipment in cars and buildings. Since electromobility and smart buildings are on the rise, we think there’s potential in these areas,” says David Kozel. He says that the automotive industry is extremely demanding in terms of certifications. The upcoming plant modernization should make it easier to obtain them.

The PCI 2030 project

The plant modernization plan is called PCI 2030. It is actually a framework for how the company should gradually change and develop over the next decade and beyond. “Even though the name suggests 2030, we’re actually aiming to keep developing until the mid-2030s. Given the current state of affairs, maybe even beyond 2035,” explains Kozel. Many of the steps planned do not have strict deadlines, because they depend on the economic situation, customer demand, and, for example, whether resources from the Modernization Fund can be used.

“We want to remain a reliable and proven supplier of copper and copper-alloy products, developed and produced in-house. Our goal isn’t to dramatically increase our overall capacity. We don’t want to compete with the largest European manufacturers. On the contrary, we want to be more flexible and able to respond to unusual customer requirements and the requirements of smaller customers,” says the plant manager, outlining PCI’s long-term strategy.

The modernization process already got underway this year, and, after the July shutdown of the rolling mill, the plant has started production as part of the Velký Svitek (Big Roll) project. “We have increased roll size by 25% in half of our production, which has increased our capacity by about 12.5%,” explains Kozel. The company is also working on improving rolling accuracy and improving the press shop, which produces cups for ammunition manufacturers. “Next year, we plan to install a new cup press with a significantly higher capacity and production quality compared to our current presses. We are also developing our pressing tools to increase the cups’ dimensional stability. The common goal is to reduce waste, improve quality, and increase productivity,” says Kozel.

“At the end of 2023, we have a big decision to make about a new smelter. At the moment, we want to introduce continuous casting technology,” adds Kozel, describing the investment that will probably be the main focus of the modernization project. “We will construct a brand-new building for our new smelting plant, increase our annealing furnace capacity and, in the next phase of the modernization process, increase our cold-rolling capacity,” explains Kozel, outlining the next steps. The plant manager says the six-roll rolling mill that will replace the four-roll rolling mill is one of the largest investments of the whole modernization project. “Of course, we also want to balance our capacity so no bottlenecks are created,” adds the PCI Plant Manager.

Povrly Copper Industries

A traditional manufacturer of rolled and pressed copper and brass products for construction, the metallurgical industry, and arms manufacturers, both domestic and global.



12,5%
increase in capacity thanks to
the Big Roll project

Social Responsibility

The new technologies and modernized buildings will reduce the overall energy consumption of PCI’s production. “Although our customers aren’t as concerned with our carbon footprint as customers in other industries, we want to be prepared and make our footprint smaller,” explains David Kozel. For example, the modernized buildings will have smart roof design with solar panels and skylights which will bring enough natural light inside while producing electricity that can partially cover the plant’s energy consumption.

“We want to focus even more intently on metal recycling. We are preparing our own recycling line, which would allow us to sort scrap metal according to our very strict purity requirements,” says Kozel, describing another way to make production even more sustainable. Another advantage of the proposed modernization is improving the relationship the plant has with its surroundings – for example by reducing noise pollution and more aesthetically pleasing buildings.

“The modernization definitely won’t result in any layoffs. We want to keep our current employees and look to make new hires in other fields,” says Kozel on the plant’s relationship with its surroundings and personnel. After the modernization process is complete, the company will need both our current experienced employees and well-educated new recruits who will work with the new technologies. That is why PCI cooperates with the University of J. E. Purkyně in Ústí nad Labem and with high schools. The company and the schools want to modify the school curriculum, support education more broadly, and continuously expand their work together regarding internships and final theses.

A game changer in architecture



Modular bunkers at the NATO airport in Čáslav, a checkpoint for the Ukrainian army, a roof terrace in an apartment complex or benches in the Jihlava Zoo. These are some of the projects in ICE Coral print farm's portfolio, a project by ICE Industrial Services. It aims to transform the construction industry and make projects cheaper and faster. "Thanks to 3D printing, we are able to design architecture that would be either very expensive or almost impossible using traditional methods," says Jiří Vitek, head of the architectural team.

Text: Mariana Novotná

ICE Industrial Services

This company specializes in designing, upgrading, and manufacturing new machines mainly for the automotive, mechanical engineering, metallurgical, and woodworking industries, among others. It is a European leader in industrial automation.



3D printing is not unheard of in the construction industry. What makes your work unique?

Unlike other 3D-printing projects in the world, ICE employs an extremely comprehensive approach to 3D printing. It's not just about printer development, but material development too. The material is based on standard concrete from a typical concrete plant but we mix it with specially designed additives which enable us to use local resources. Another key factor is our print data preparation software, which contains a very complex environment from slicing to making print campaigns and evaluating them. Last but not least, it's about using this new technology to develop architecture. We are pushing the boundaries of what's possible, even in terms of objects.

And if we were to compare 3D printing with conventional industrial production?

The biggest paradigm shift is definitely adapting the product to the client's requirements. The classic curve of mass production, where each additional copy is cheaper and it pays to have a thousand identical pieces, no longer applies. With 3D printing, each product is unique, so it's possible to adapt it to the customer's wishes without significantly increasing the price. Another aspect is the work itself – automation will eventually make the heavy work redundant and people will be able to focus more on creative and specialized activities. For example, in our company, former bricklayers essentially become 'artists', engaging in less demanding manual activities such as smoothing out the edges of the print with a brush to make them perfect.

You said that 3D printing pushes the boundaries of construction and architecture. What makes it so revolutionary?

3D printing enables us to design architecture that would be either very expensive or almost impossible using traditional methods. Take our Between Conflicts pavilion at Designblok 2022, for example, which was

recently nominated for the Czech Architecture Award. Its walls are decorated with designs based on AI-generated images of Ukrainian children hidden in a forest, painted by Gustav Klimt and Alfons Mucha. Speed is another game changer. We printed a facility building for SKANSKA on a roof terrace and it was completed in two hours, on site. If we add in the design and data preparation time, we are able to receive an assignment on Monday and print the finished product by Friday.

We will print energy-efficient homes and schools

Speaking of your projects, what else have you printed?

In addition to the project for SKANSKA and the pavilion at Designblok, which will now be relocated to a castle in Žďár nad Sázavou, we have also printed two fully functional bunkers for the ammunition depot at the NATO airport in Čáslav. We have also printed a modular checkpoint for Ukraine and last year we printed a set of unique benches with lemur and tiger motifs for Jihlava Zoo. Last year, we also tested on-site printing, a small house. This year, we want to make a modular version and continue to prototype on-site printing. In the JUST Jimramov guest-house, we have printed benches and tables with a unique design. During the Architecture Festival in Brno, we introduced the 1:1 module for the Chapel of Closeness which we would love to build this year.



How can your method help in terms of social responsibility? What is your biggest dream?

Considering the current housing crisis and how slowly houses are built, our technology could be a game changer. Of course, we also have concepts that develop the ecological, economic, and participatory level so that we behave responsibly towards the environment and society. In addition to residential projects, we are also working with schools, including innovative teaching methods and environmental projects. We are looking forward to a set of buildings, which internally we're calling 'Cluster'. It's based on high-quality architecture that connects efficiently to the landscape and nature. Our active houses will be able to conserve, store, and use their energy efficiently. They will feature smart and pleasant shared areas that also provide enough privacy.



HR's take on ESG:
more than a passing
trend - a central part of
the group's strategy

One of the pillars of MTX Group’s success is a strategy based on ESG (Environmental, Social, Governance) principles and their complete integration into our everyday work. “This approach affects the way we manage our human resources,” says Jana Zimová, Vice-Chairman of the Board and Chief Human Resources Officer.

In terms of environmental protection, MTX Group is focused on decarbonizing our daily operations. “For example, in HR, we are becoming more sustainable by automating our processes and using online tools as much as possible. We detail a number of innovations and tools in this year’s issue of MTX Group Magazine. In addition to our own activities, we also train our colleagues in new and current AI/IT tools. Our environmental impact also depends on whom we hire. This is becoming more and more important in our field of work,” explains Jana Zimová.

In terms of social, the group focuses on inclusion and diversity in the workplace and supporting the communities in which it operates. “We are actively monitoring gender equality and equal opportunities for all of our employees. If someone’s good at something, we don’t care if they are a man or a woman. We care about the result,” adds Jana Zimová MTX Group is very active in the communities where its plants are located. It organizes events for employees and their families, and supports community life through sport, culture, and education.

Governance is a way of working. In the group, we comply with all legal and regulatory HR requirements. “We monitor the development of relevant legislation that affects our personnel policy and comply with it strictly. The rules give us a system and a stable, predictable environment,” emphasizes Jana Zimová.

We asked members of the MTX Group HR team about the specific areas in which ESG is reflected in human resources.

How are you able to work with the HR departments across the entire MTX Group?

JZ I believe in cooperation and sharing. Each of my colleagues works for a specific company within the group and is responsible for a well-run HR department. Cooperating with other companies in the group has its practical challenges: different locations, problems, customers, employees, professions, and sometimes even legislation or language. Despite these differences, we benefit from being a team. We unify a lot of things at group level and come up with solutions together. In general, I keep telling everyone in the team that the easiest way to address an issue is to ask the group if they have previously dealt with something similar.

We have regular bi-annual meetings but we also work together and share operational matters. If necessary, we meet on a call or video, work something out, assign tasks and learn from each other. Currently, we are set up in such a way that we don’t need coordination from upper management. We contact each other directly. Leveraging different talents has also worked well for me in managing HR projects. One colleague is good at automation, someone else comes up with a job evaluation process, whilst another colleague is good at HR marketing. It helps us learn from each other and solidifies the idea that we reap what we sow. We’re not a corporation and no one will do it for us – and that’s great!

What are the biggest HR challenges facing MTX Group as a whole?

JZ It’s rather obvious, but our biggest challenge is people. Being able to attract new, capable people and keeping them motivated to work for us. All this means a lot of work, because every person is different and it’s not possible to apply one model to everyone. We need to be flexible and good at coming up with solutions. Finding capable people on the labor market is a constant battle. Also, we need to deal with sociological trends such as the aging population and adapt as new generations enter the labor market. Talent retention and management training remains a significant issue. We want our managers to not only make their teams perform well but to also build a positive work culture. These days, everything is really fast and requirements in terms of knowledge, attitudes, and agility are changing. And we have to respond. There are a lot of challenges, but we consider them part of the job. Instead of struggling with them, we leverage them to move forward.

What do you consider to be the HR team’s greatest recent success?

JZ There have been a lot of successes... Over the past two to three years, we have set up all the main HR processes. Most of them are the same across the whole group, which has proven to be a good way to go. I consider our corporate academies that work with schools, EVP,

onboarding, training, and succession as great examples of success. We work closely with schools, 30 of which are high schools. We’re improving our adaptation processes to pass on our knowledge and trade skills. Also, we’re organizing a lot of educational activities. I would also pick out the group’s career page www.mtxcareer.cz and the automation of several processes as further examples of success.

I’m satisfied with the good work we’ve done to build relationships with our employees and communities. We’ve organized a number of successful events such as balls, open days, festivals, sports events, and cultural events. We want to employ people who live in the communities in which we operate and work with local authorities to organize activities after working hours. Our group has six key values, two of which are focus and profitability. We want our activities to have a focus and provide added value for our business. We also measure and evaluate our efficiency.

What are the main challenges that you are currently facing in your work?

[Jana Zimová, CHRO, MTX Group](#)
Securing enough qualified people for the group’s new strategic plans, assessing possible uses of AI, and employee motivation.

[Radim Vidlář, HR Director, AL INVEST](#)
Taking part in the ALFAGEN program, moving to the next level in all areas of the ACADEMY (labor market, adaptation, upskilling, succession), and successfully managing the transition to the SAP HR software that we will use from 2024.

[Jiří Žáček, HR Director, Strojmetal](#)
Finding new, high-quality employees, stabilization, and employee education.

[Jiří Fiala, HR Manager, Povrly Copper Industries](#)
Recruiting new employees, especially factory workers and highly-qualified technical professionals.

[Denisa Brancová, HR Manager, OKK](#)
HR digitalization and the implementation of a succession process that should help us replace retiring employees with new generations.

[Lena Antelmann, Head of Accounting and HR, Strojmetal Singen](#)
Training new employees so they can develop their potential as quickly as possible.

MTX Career

Find more information about working for MTX Group and our open positions at www.mtxcareer.cz.



What are your HR plans for 2024?

JZ Our HR approach is built on processes such as planning, onboarding, adaptation, succession, and retirement. Each year, we need to secure enough qualified and motivated people for our operation. Once they are in place, it’s time to work on quality, which is a never-ending process. We are planning to continue educating, with focus on specific needs. Also, we want to work with schools even more closely than before. We are planning further strategic partnerships with several institutions to support dual forms of education. As part of our active participation in the field of education, our long-term mission is to promote technical fields and showcase the beauty of production to young people. Succession remains a live issue – we have to continue working on the goals that we set out this year in this area.

We also want to continue automating some of our processes. This year, for example, we started off with e-learning, but there are other areas we still need to get to.

How would you explain your hiring process?

JŽ To find new employees, we use all the resources that the labor market offers, including recruiting people that our employees recommend. They in turn receive a reward for their help. We try to recruit high-quality employees, but the state of the labor market is challenging. When a new employee finally joins us, it’s the result of teamwork.

LA We’re an automotive trading company, so we’re looking for new employees online. In Germany, it’s a proven method that works. We use all kinds of job portals based on the position we’re looking to fill. After preselection, there are interviews with HR and their future manager. Of course, we need to check their references as well.

What are the main components of your onboarding program that help newcomers adapt quickly and begin to actively contribute to the company’s success?

RV Onboarding is extremely important and must not be underestimated. The way a new hire feels on their first few days or how they’re accepted and treated can affect their loyalty and motivation. To that end, we’ve prepared an onboarding program for new hires. They can find important information in an app that we use to share information within the company. The first part of the onboarding process is the first day on the job and the first few days at the workplace. The second part includes specific work activities. We have onboarding records in

which we document individual activities with dates, responsibilities, and adaptation quality control tools. The role of professional experts (mentors) who lead the adaptation process is irreplaceable. During the final evaluation, we take a look to see if the adaptation has been successful. Factory workers need to pass an interview and a practical test in their specific workplace with both HR and management present.

DB Communication is key when integrating new hires into the company. Both before onboarding and during adaptation. Then, there’s an individual approach – a tailor-made adaptation program for a specific employee. That means working with guarantors who coordinate and monitor the whole process. We also need to share information and pass on our knowledge.

What role does succession play in the long-term strategic planning of personnel development?

DB An important one. It can help us to quickly replace a key employee or manage the retirement of long-standing employees who have amassed invaluable knowledge. This is an extremely pertinent issue these days. Our job is to select employees with the potential to develop their skills, and the desire and ambition to grow – either by moving into a new position or by learning new things. So, succession is not only about identifying potential successors, but also about their controlled development. Which is why we need to be ready.

JF Succession is arguably the most important and difficult part of working in HR. It brings together multiple areas such as onboarding, competency development, skills training, and efficient communication. It’s also very important to recognize the needs, motivation, and aspirations of each of our employees.

Can you give us a successful example of succession within your company and explain how it affected the company’s performance?

JŽ We’ve incorporated strategic positions and the roles that are key to the company running smoothly and preserving knowledge into the succession system. For example, the production foreman position. My colleague who started as a factory worker has undergone special training and worked her way up to production forewoman. She’s a great example that anyone can work their way up from manual positions.

What are the main areas covered in the employee training programs that help increase expertise and work efficiency?

JF The main area is solidifying the knowledge and skills necessary for safe operation, acquiring new specific professional knowledge, and carrying out activities that help implement individual development plans. We help our employees to keep up with ICT literacy trends and teach foreign languages to certain employees, something which has proven to be very popular, motivating, and stabilizing.

DB For me, it’s definitely motivation – to be able to motivate people to educate themselves, work on themselves, and be able to apply their knowledge in their day-to-day work activities. Also, time management – the ability to find a healthy work-life balance – and learning from feedback which is a part of our everyday lives.

What are the long-term benefits of investing in employee training and development?

JF Employees are more motivated, which means higher stability and less turnover. Many of our colleagues are highly motivated by having the opportunity to grow both professionally and personally. As an employer, the benefit of investing in education is gaining new knowledge and staying competitive.

LA Our customers are demanding and we need to make sure we’re the best partners for them. Which takes us back to employee education. We need to be at the highest professional level possible and keep up with any new trends.

How does the group work with schools and what have been the benefits of this partnership to date?

RV Our goal is to make technical fields interesting to young people and improve awareness of MTX Group and AL INVEST in the region. We work with elementary schools, high schools, and universities. We’ve signed memoranda, presented at trade fairs, become members of regional working groups, and organized tours, among many other things. This year, AL INVEST was invited to an international collaboration project between employers and high schools from Poland, Slovakia, and Czechia.

Students and teachers are interested in the work we do, as evidenced by the number of internships, theses on topics assigned by our company, scholarships, and students of technical study programs. These activities often result in job offers, which is mutually beneficial.

JŽ We cooperate with all levels of education. Our main goal is to make technical fields interesting for young people. We have signed partnership agreements with schools. We offer schools and students field trips to our company, as well as internships, scholarship programs, part-time jobs, help with choosing the topics for their theses, including professional supervision, etc. Schools and students take full advantage of these opportunities. During the school year, around ten students attend our internships, and over the summer holidays, up to 60 students take turns in our part-time jobs.

How do you make sure the company communicates with its employees efficiently?

RV There’s no such thing as too much communication. We’re well aware of how important efficient two-way information sharing is for a company. In addition to formal matters such as articles of incorporation, annual reports, and other documents that our employees are familiar with, face-to-face meetings are also very important. Both formal ones, such as meetings between employees and management or meetings with trade union employees, as well as informal ones such as open days or our Fabrikafest. We have another interesting communication channel: a letterbox for questions, ideas, improvements, and whistleblowing reports. If all of these options are still not enough, any employee can come directly to their supervisor, a HR representative or myself.

JŽ We believe communication with employees to be an essential element of a successful company. We’re open to all forms of communication, both formal and informal. We’ve set up a system of regular meetings with our employees. Our departments also meet regularly and we use bulletin boards. Another effective communication channel is an employee’s pay slip – all our employees get those messages. Besides the information about the company that we are obliged to make public, such as the annual report, we also publish our own newspaper Ringhofferky, where employees can read about the company’s situation and intentions, employee stories, information about company events, etc. Our premises have letterboxes for questions, both personal and anonymous. For efficient two-way communication, we use Jobka. Informal communication takes place at our company events such as Children’s Day, football tournaments, our ball etc.

Innovation as a path to long-term success

The companies within MTX Group are constantly coming up with new technologies and processes. Besides the ones related to continuous or sometimes radical modernization, there are also surprising new developments that help increase the added value of our products and demonstrate the expertise of our employees. These are just a few of the many innovations of which MTX Group is proud.

Text: Luděk Vokáč

PureAl® AL INVEST Břidličná

MTX Group places great emphasis on recycling and using recycled materials in production. That is why AL INVEST Břidličná is developing its own material called PureAl®, which is an aluminum alloy with up to 100% recycled content. An alloy made purely from recycled waste can have a wide array of uses and some of our customers are already putting it through an intense series of tests. For example, one of our customers in the automotive industry has been testing PureAl® for more than nine months. When the tests are finished, the customer will be able to start using the material for mass production.

Downgauging AL INVEST Břidličná

One way to decrease the carbon footprint of our products is by making them lighter by using less primary material. AL INVEST Břidličná has found a way to make their HVAC foils thinner. By using a new material with the same thermal and mechanical properties, the new foil is 15–20% thinner than before. This reduction in thickness is called downgauging. Using less primary material makes the carbon footprint smaller for the manufacturer as well as for the customer and further down the chain. The customer is able to manufacture a lighter product which requires less energy to transport it, further decreasing its carbon footprint.



↑ Martin Bernatík, Senior Development Officer at AL INVEST Břidličná, who is working on the development of PureAl®

Sigma Povrly Copper Industries

Povrly Copper Industries (PCI) is collaborating with the University of J. E. Purkyně in Ústí nad Labem and with the Technology Agency of the Czech Republic on the Sigma project. The goal of this project is to find a way to manufacture deep-drawing sheets from CuZn5, an alloy of 95% copper and 5% zinc. PCI uses this material to make cups that are used as semi-finished products for ammunition manufacturing. The company wants to improve the quality of this material and improve its properties. Since the alloy has a strictly defined metal composition, the project mainly focuses on research and development, aiming to improve the production technology and process. Improving the material's quality should also reduce the amount of waste produced in PCIs as well as in the customer's operation.

Virtual ski pass Ski Areál Kopřivná

Last winter, the ski resort in Malá Morávka successfully implemented a unique new technological solution. They were the first in the world to launch a self-check-in system which doesn't require a chip or chip card, i.e. a physical ski pass. Visitors don't have to search their pockets for their pass or look for it under their many layers of clothing. Moreover, they don't have to physically pick up a pass which means no more queues. The new technology allows visitors to load the ski pass to their phones, which connect via Bluetooth to the turnstiles, making everything automatic.

Innovations Strojmetal Kamenice

Strojmetal is working on a new, specialized innovations department in Kamenice. Its sole focus will be innovation and will not be burdened with operational matters. This will free up time and space to develop new processes and solutions that will deliver improvements not only to Strojmetal, but to its customers, too. In addition to product improvements, the department will also work on production process improvements. To keep improving its processes, Strojmetal wants to start using a new ERP (Enterprise Resource Planning) system. This year, the company is analyzing the new system and should begin implementation in 2024. The following year, 2025, will be a transition period. The new ERP system should be fully operational by 2026.

We support sports, education, culture and the community



EDUCATION

SAF: Czech textbooks for Ukrainian children, improving public transport for schoolchildren

OKK: Donation to the Chemie event at the Silesian Ostrava Castle

PCI: Support for Povrly Primary School's extracurricular activities

ICE: Co-founding alternative primary school, Na Radosti

AIB, OKK, SAF, PCI, ICE, METALIMEX:

Partnership with schools (7 primary schools, 30 high schools, 12 universities) – professional teaching, field trips, internships and part-time jobs, supervision of final theses

METALIMEX:

Support for the PORG a.s. grammar school and primary school

COMMUNITY

SAF: Provision of a parking lot for Knihočáry, Children's Day, a Christmas concert, and a ball

OKK: Voluntary agreements with the Moravian-Silesian Region and the City of Ostrava, support for the City of Ostrava – a fund for children endangered by air pollution, removing an illegal dump

PCI: Support of various events (Standa Enoch Memorial, Carnival on Ice, Valtířov Festival, Pivofest Povrly, Italian Evening "On the Street") and communities (Povrly Community Centre, Povrly SDH), open day, theater for the children of employees and local kindergartens

AIB: Fabrikafest, funding for a retiree club, a ball, summer day camp

ICE: Employer meetings, support for sporting and cultural events, charity projects (long-term support of Sofinka Petrovická, a bike ride through the Žďár hills), development of the ICE Academy

SAK: Organization of ski lessons and summer camps, individual and group courses, and bike camps

CULTURE

SAF: Zuzana Mináčová's photo exhibition, partner of the Summer Cinema Kamenice

OKK: Annual support for various cultural events, support of the Ostrava Center for New Music, supporting young artists at the Czech Music Crossroads event

PCI: Supporting the open-air cinema on the football field

ICE: Supporting cultural events across the city, such as the Festival under the Green Mountain

SAK: Organization of the Ice Sculptures event in Kopřivná

SPORTS

SAF: Partner of SK Kamenice, Majorettes of Kamenice, main partner of the Kros Štířín event, the Run for Prematurely Born Babies

METALIMEX:

Support of the Pavel Kolář Centre of Physical Medicine, the Albatross Golf Club and the Záběhlíce Tennis Courts

OKK: Financial support for HC Vítkovice Ridera

PCI: Support for HC Dynamo Povrly, buying jerseys for the children's team

AIB: Support for TJ Břidličná football club, Biathlon Club Břidličná, Evening Run Břidličná, Dragon Boat Festival Slezská Harta

ICE: Long-term financial support of the Žďár nad Sázavou Ice Hockey Sports Club

SAK: Organization of various sporting events: A Day on Skis with MSK, Season opening and closing, Czech Enduro Series, Dirtzilla Opening

SAF Strojmetal Aluminium Forging

OKK OKK Koksovny

PCI Povrly Copper Industries

AIB AL INVEST Břidličná

ICE ICE Industrial Services

SAK SKI Areál Kopřivná

How self-managed teams lead ICE to education

In 2020, when we introduced self-managed teams at ICE Industrial Services, we noticed an interesting phenomenon. About half of the teams work really well, they work through everything themselves and agile management suits them perfectly. The other half also works hard, everyone is willing to go to meetings, fill out spreadsheets etc., but they don't work as efficiently. They do things right, but they often do the wrong things right! And when it comes to difficult solutions and decisions, they expect someone else to do it for them.

Text: Tomáš Vránek, CEO ICE Industrial Services

"Some people are enjoying the freedom of self-management but don't want to take on the responsibility," I say, complaining to leading Czech HR expert, Petr Skondrojanis.

"All agile systems come from Silicon Valley but this is the Czech Republic. 95% of people have never heard of Scrum," he says.

"Sure, Americans are different, but deep inside, we're all just people, aren't we?" I counter. I've spent many months in the United States and was able to become very familiar with their mentality.

"They might be just people, like us," says Petr, "but Czechs have had a different upbringing. They don't have the same mindset. Just look at the way we raise and educate children."

Remembering my own school years, I have to agree with him. The whole time, I didn't understand what we were supposed to learn or why we were supposed to learn it. School wasn't about understanding the bigger picture. Teachers praised children who were great at administration, who knew how to reproduce something, and who had properly drawn outlines in their notebooks, ideally six months in advance. Obedience, following orders, and meticulous administration were highly valued skills, especially back during the reign of Maria Theresa. She began to systematically develop them as part of her reform, which introduced compulsory education. To this day, we praise her for this enlightened act, but her motivation was most likely far less romantic. During the Industrial Revolution, we needed to raise a workforce that would stay loyal to the Habsburg monarchy. And just as employers are calling for better education today, the first industrialists of that time also demanded a better quality of workers for their newly established factories and manufacturing plants. They needed a literate workforce that was easier to manage.

That style of teaching of the Austro-Hungarian Empire proved very useful at the time. In addition to learning basic skills, the rigorous school environment taught children to be servants of the monarchy. The education system suppressed anti-Austrian ideas, which began to spread during the reign of Maria Theresa.



↑ At ICE Industrial Services, we have taken the education of young people into our own hands – we work with elementary schools, high schools, and universities. For example, we organize robotics clubs and automation camps.

School vs Life

The fact that our education system has not fundamentally changed since then is a social tragedy. According to Magdaléna Šustová, an education historian, the core curriculum and school structure have remained the same. Leaving aside the ideology of that time, the curriculum is not that different from the framework of today's education programs. What is taught in each class doesn't change and teachers still rely on frontal teaching and memory learning. These two methods do not require children to be active at all.

School tells us: Don't disrupt class! Sit, listen, and don't speak! Don't stick your nose into what's not your business!

While life demands: It's important that you understand the context and are able to make the right decision. What do you think? Tell us your opinion.

School: Don't copy from your classmate!

Life: Work together! Share your ideas. If you don't know something, ask.

School: Act normal! Get back in line.

Life: Look for an opportunity to attract attention, to be different. Think about how you can improve something. Take responsibility, be creative and innovative!

Na Radosti Elementary School

Seven years ago, we learned about the opportunity to create a new innovative elementary school in Žďár nad Sázavou called 'Na Radosti'. Immediately, we knew this type of school would be unique and that our country needs schools that don't turn children into obedient sheep with no opinions or responsibilities, fulfilling the orders of their superiors.

The Na Radosti Elementary School teaches children in a way that respects the uniqueness of each child. It listens to them, accepts their individuality, and appreciates it. It strives to unearth and nourish

their talents, providing them with a safe environment where they are free to experiment, make mistakes, and develop constantly.

The school sees education as far more than just knowledge accumulation. It aims to prepare children to lead successful and happy lives. It fosters our innate desire for discovery. Children learn with enthusiasm and are more productive. The school gives them creative freedom and opportunities for spontaneous activities, to research and pursue their interests. But most of all, it allows them to do what makes sense to them, what fulfills them. The goal is to teach them that they're responsible for their education. To teach them to learn freely and joyfully.

The children are confronted with different situations, teaching them to recognize their strengths and weaknesses. The role of the teacher – their guide – is not to evaluate, but to guide children in self-evaluation, to help them identify and formulate their mistakes and to find solutions. Healthy relationships between all members of the school community – adults and children – are a fundamental pillar for the school, based on mutual respect. Things are not taught in isolation, but in context, as in real life. This helps them to understand things in a broader context.

Taking responsibility for their own lives

Using rewards and punishments will only destroy their inner desire to learn something new. People who follow orders like sheep and don't develop their own opinions are doomed to mediocrity and failure in today's turbulent world.

Only those who are able to think and make decisions based on relevant information, and who can confidently structure their arguments, present their opinions coherently and thoughtfully, and take responsibility for them, will succeed in an ultra-competitive world. Those who know how to own all their problems, including their development.

The main goal of today's parents is to provide their children with an education which will give them the skills that will enable them to do so. Learning about the poet Vrchlický, the digestive tract of an earthworm, or the Samo Empire by heart are not among these skills.



125 years of working with metals in Povrly

125 years ago, the factory in Povrly started industrially processing non-ferrous metals. During the first few decades of its existence, it greatly expanded its production capacity and portfolio. Today, it employs over 200 people and exports to 25 countries around the world.

Text: Mariana Novotná

Founding the factory

The company dates back to 1898. That year, Moritz Bondy, a Prague-born Jewish merchant of metal goods and horsehair, decided to build a copper and brass processing factory. He was already collecting these metals and trading them. He chose the quiet village of Povrly because of logistical connections – it lies on an important railway connection between Prague and Podmokly. Also, it lies close to the left bank of Elbe which was an easy way to import raw materials by ship. Bondy's son, Maxmilian, built a copper mill, i.e. a rolling and drawing mill. He also founded KUPFERWEKRE ÖSTERREICH in Prague, which translates as 'Austrian Copper Mill'.

A successful first decade

At the beginning of the 20th century, industrialization and electrification made it easy to develop the factory rapidly, opening up great sales opportunities. The factory started production in 1901 and during its first decade of operation, it was expanded by the addition of a rivet plant with a rivet packing plant, a sheet metal rolling mill, a box plant, and a tube drawing plant. In 1907, the company started making products from copper and then from aluminum in 1909. It gradually acquired customers and, after the first ten years of operation, the factory was supplying to almost all major European countries.

Further development and the First World War

The following years were also a big success: worker facilities, the tube rolling plant and pickling shop were expanded. In 1913, the company opened an aluminum smelting plant. At the request of its customers, the factory produced copper, brass, aluminum and iron products – metal sheets, strips, wires, tubes, and rods. During the First World War, all of its production was focused on war supplies. The company didn't have sufficient capacity and had to expand further, so it bought the Ringhoffer Copper and Brass Mill in Kamenice (first the equipment and then the buildings in 1922). After the war, the company started building family houses for its employees, which took five years.



Post-WW1 and the first crisis

When Czechoslovakia became independent, the company was rebranded to KUPFERWEKRE BÖHMEN and became part of Czechoslovak industry. In 1919, the company was rebranded once more to Měďárna Čechy (Bohemian Copper Mill). After the war, the company continued to grow in step with the demand for semi-finished products made from non-ferrous metals. Between 1929 and 1930, the company had to stop purchasing more land and expanding production due to the recession, which had caused a downturn in demand. But soon after, in 1934, the company built two new factories: a bar mill and tube mill.

The German occupation

In 1940, during the German occupation, the company was liquidated because it was a Jewish property. The commissioner that was appointed closed the company in 1943, when it was forced to give up its trade, and was subsequently removed from the Commercial Register, but the factory itself continued to operate. However, it only produced iron and aluminum for war supplies.

The factory's development post-WW2

At the beginning of 1947, the President signed a decree that nationalized the company and rebranded it Česká válcovna kovů (Bohemian Rolling Mill). Its main task was repairing the damage caused by the Second World War. New construction didn't take place until the 1950s, when worker facilities were built and an apprenticeship center for non-ferrous metals was established.

The boom in Povrly

During the 60s and 70s, the copper mill employed over a thousand employees, a lot of whom were Povrly residents. The company wanted to keep their workforce happy, so it built them two new housing developments and an elementary school. In addition, the company played



History



a part in building a new water reservoir, a football field, and a restaurant. All of this was the work of Jiří Svoboda, the director of Kovohutě Povrly, who is still known locally as the Bata of Povrly. The factory supplied products throughout Czechoslovakia, as well as to West Germany and Switzerland. In the 1960s, it started making copper-chromium metal-lurgical products, especially electrodes for spot welding. In the 1970s, the company stopped refining copper, drawing wires, rolling metals, and drawing rods. Instead, it focused on making copper and brass-rolled products.

Later development

In the following decades, the success of the factory was mainly driven by the development of the electrical industry – equipment for the continuous casting of brass strips with subsequent forming and a format-ting line for sheet metal production was put into operation. Later, the sheet metal rolling mill was upgraded. Furthermore, worker facilities were modernized, the company started using computers, and began to focus on its environmental impact.

Further transformations

2006 marked an important change. Měď Povrly became a part of MTX Group, which opened up new markets and production possibilities, enabling them to expand abroad. In 2009, after the recession and due to the increased demand for cheaper and lighter materials, such as alumi-num and galvanized sheet metal, the company changed its production program and started making rolls and pressings for traditional industries as well as the arms and jewelry sectors. The company was renamed Povrly Copper Industries in 2022. It relies on the growing demand for conductive copper, which is the result of the boom in electrical engi-neering and electromobility. It is also striving to cut costs and decrease its environmental footprint by moving towards a circular economy.

1898	Establishment of a metallurgical factory
1900	First production
1918–1923	First residential construction
1919	Renamed Měďárna Čechy
1940	Liquidation due to Jewish heritage
1947	Nationalization of the factory
1950s	Production expansion
2006	Became part of MTX Group
2009	Production of semi-finished products for ammunition production
2022	Měď Povrly became Povrly Copper Industries

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