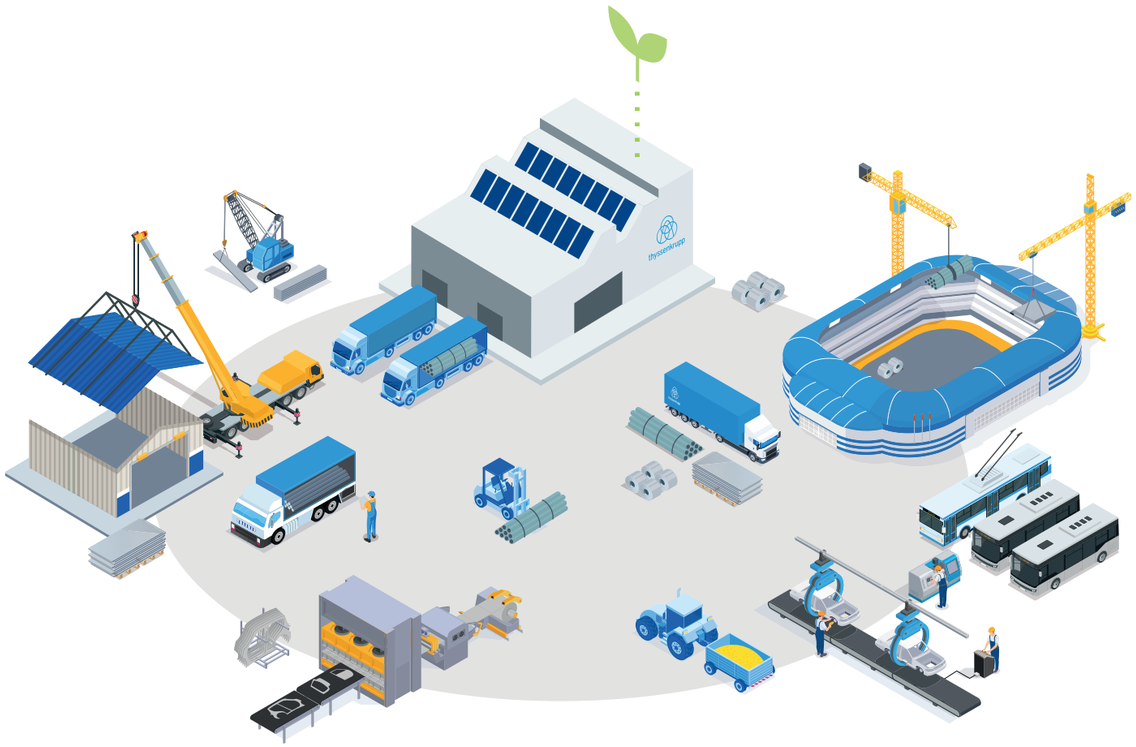
thyssenkrupp
Materials Services

Materials as a Service

thyssenkrupp



Materials as a Service

thyssenkrupp Materials Services in Eastern Europe is one of the market leaders; a large and mill-independent materials distributor and service provider. There is hardly anything in our everyday lives that has not been supplied, processed or moved by Materials Services. With our products and services, we ensure that day afterday cars can come off the production line, buildings can be built, plants can be manufactured and agricultural machines doing their job and energy is being supplied. We take on a key position in the economic fabric – and with it a great deal of responsibility.

Our world is changing with great dynamism. Increasing scarcity of resources, the absolute necessity for truly sustainable action, advancing digitalization in all areas of life - the circumstances are becoming increasingly complex – the entire economy is facing a major transformation.

In the recent years we have been continuously developing from a classic materials trader into an intelligent, sustainably oriented supply chain manager. From the former supplier of “Materials & Services”, we are becoming a company that offers “Materials as a Service”.

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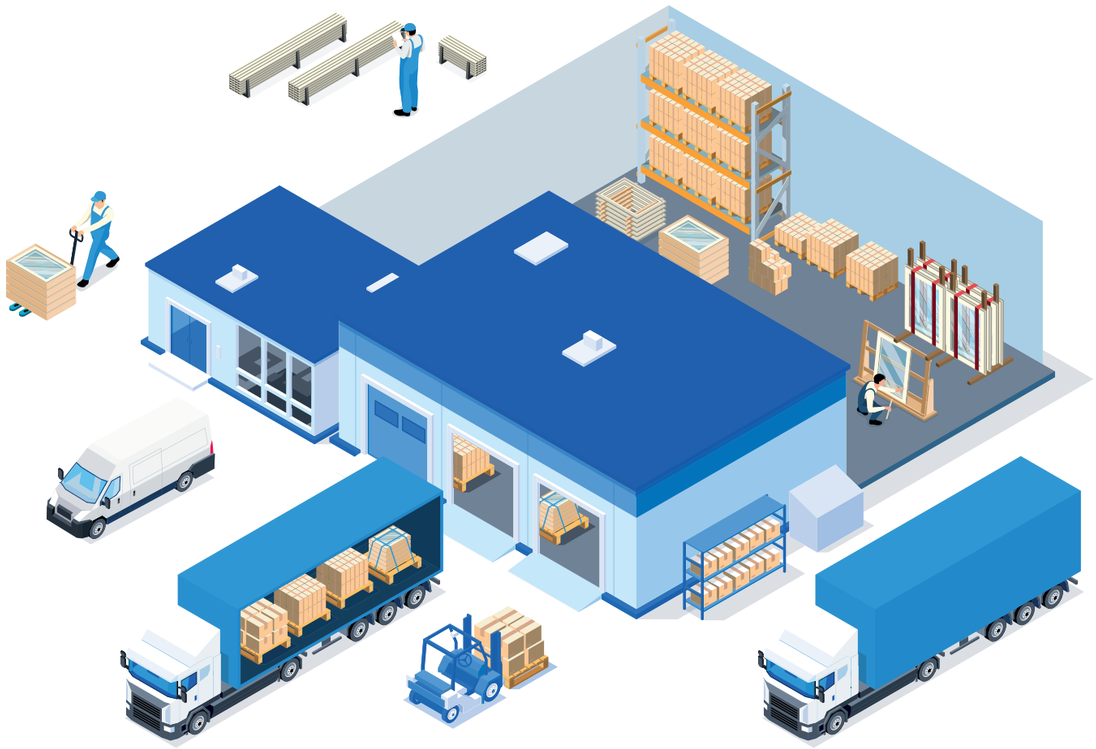
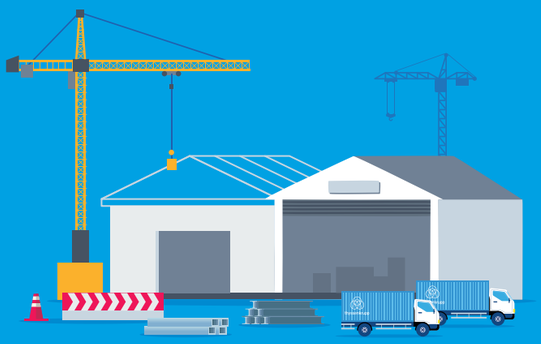


Expanding Romanian window producer relies on ready-to-use structures for a new production facility

Located in Alba Iulia, Crios is a Romanian family business established in 1994. The company produces and installs high-quality PVC window and door systems for residential and commercial buildings. Crios' product lines include frames and various types of glass, hardware, and accessories. Using modern production techniques and state-of-the-art equipment, the company ensures the highest quality products and timely delivery to customers and invests continuously in innovation.

The challenge

Crios' investment in steady development created the need for additional storage and production capacity. With the company reaching maturity, there was no space for storing new machinery and raw materials, such as aluminium windows frames and profiles and glass. The additional demands forced the company to set up a new building.



The MaaS solution

Crios and thyssenkrupp began negotiating over construction materials in demand and found that there was a massive lack of time and workforce to build the new facility. Ultimately, thyssenkrupp was assigned to deliver a ready-to-use metal structure and process the raw materials needed according to drawings provided by the PVC carpentry manufacturer. Within about two months, these were cut to length, drilled, welded, bent, blasted, and coated by subcontracted collaborators in accordance with Romanian laws and norms.

thyssenkrupp faced some challenges with the project, including the relatively short time allocated for raw material optimizations and some requested technical changes. However, it was able to supply high-quality products by the deadline, ensuring the satisfaction of Crios, and was granted the contract to construct the next two warehouses for the customer.

Traceable stocks and just-in-time delivery help reduce costs at a Romanian metal component manufacturer

Terwa has been manufacturing metal components for the construction and precast industry for over 25 years. Precision metal parts, welded assemblies, stamped pieces, and other metal products are among the products it manufactures for the automotive industry. From conception and design to after-sales services, the company handles the entire manufacturing process. Terwa delivers large volumes of products to customers worldwide through its state-of-the-art facilities equipped with laser cutting machines, CNC machining centers, and robot welding equipment.

The challenge

Terwa struggled to manage the logistics and considered outsourcing them to reallocate the resources to other business activities. The company needed a reliable supplier to offer consignment stock at its warehouse and report daily on the available materials and state of deliveries, supply materials on request, and ensure high traceability.

The MaaS solution

The services provided by thyssenkrupp included the storage of materials, daily reports on their availability in stock, and just-in-time deliveries Terwa had access to all heat numbers, which guaranteed traceability. As soon as any item reached the minimum level of stock, the customer was notified and could decide placing a new order. As part of the 6-month contract, thyssenkrupp secured approximately 400 tons of raw materials for the production of aftermarket components used by Audi, BMW, and other well-known automakers. Some items came with special grades, pickling and oiling, and cut-to-size. Additionally, ultrasonic tests were used to ensure the quality and safety of certain raw materials, and special packaging (small bundles wrapped in paper and barcoded) helped automate the manufacturing process.

It was challenging for thyssenkupp to reach an agreement with mills and suppliers about the best offer and timing to meet all customer demands, still, the company managed to achieve a flawless supply chain with no delays. This way Terwa could cut down on costs of personnel and space, which has increased their satisfaction, and they expect the cooperation to continue with higher volumes.

High-quality, stable material supply supports resource reallocation at a worldwide present Slovakian manufacturer

HS, a.s. is a private company established in 1954, headquartered in Slovakia. They develop, manufacture, and sell a wide range of reducers, gearboxes, drive systems, axles, and differentials for applications in construction, communal and agricultural technology, industry, and renewable energy sources. Worldwide deliveries of these products ensure HS's global presence. The company, which has 200 employees and operates on a built-up area of 20 000 m², makes significant investments in research and development and production equipment.

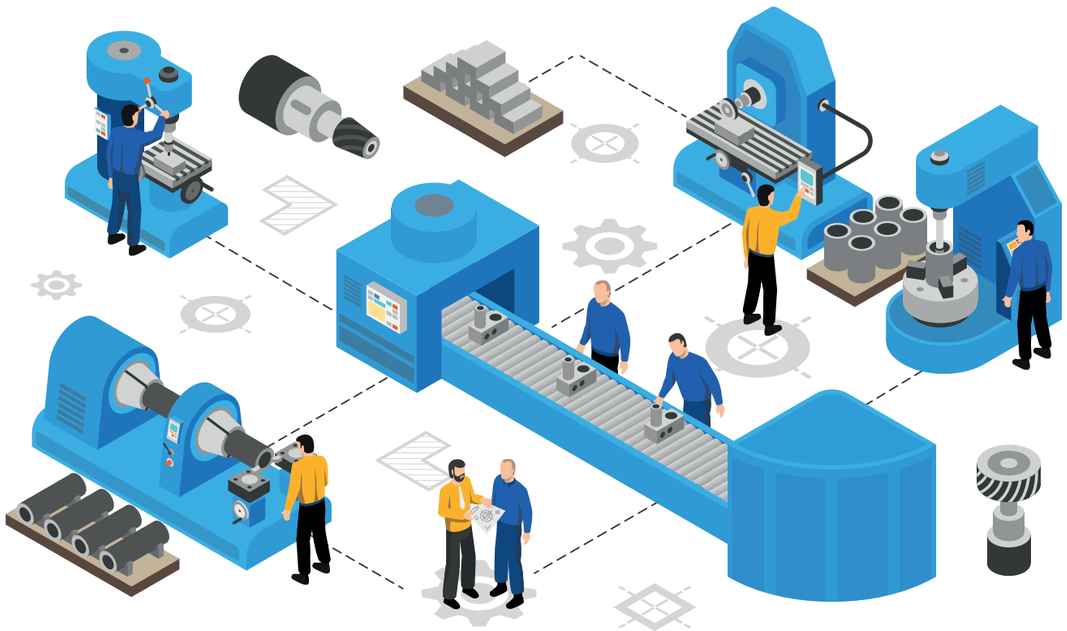
The challenge

thyssenkrupp Materials Services has been a supplier of steel round bars to HS that they use in production processes. They were experiencing a low level of cutting capacity as well as needing more storage space. Also, the company often faces shortages of the materials they need on the spot market, whereas delivery from the rolling takes a long time and is usually unpredictable. Thus, HS needed a reliable partner for material procurement, stockholding, processing, and on-demand delivery to avoid random supply changes, ensure core materials' reliability, and optimize operations.

The MaaS solution

Relying on its partnership with HS, thyssenkrupp extended the range of services provided to the manufacturer. The new scope included material acquisition, delivery, processing, and warehouse services. A consistent, high-quality material input was the essential requirement of HS, which made thyssenkrupp challenged to find a reliable mill to meet the specific demands.

In addition to the constant, balanced availability of stocks, price stability was guaranteed by the new supply system resulting in transparency, time and cost savings along the purchasing process. The enhanced cooperation let HS minimize its warehouse inventory, reallocate cutting capacities to the company's core activities, and repurpose manufacturing resources toward more value-creating services. An advanced approach of thyssenkrupp to the production process contributed to a reduced customer service response time and lower investment spending on production equipment. The MaaS solution has tremendous potential for other manufacturing companies in a similar situation.



Shape-cut thick plates using a water jet bring added value to the Hungarian branch of a German machine producer

The branch of a German-owned company has been present in Hungary since 2004. They offer various production and welding services, from large workpieces to machines and machine units for the automotive and electronics industry. The company operates in an area of more than 5,000 square meters. 100 highly skilled employees supported by an entirely new machine park work mainly on producing components and sub-structures.

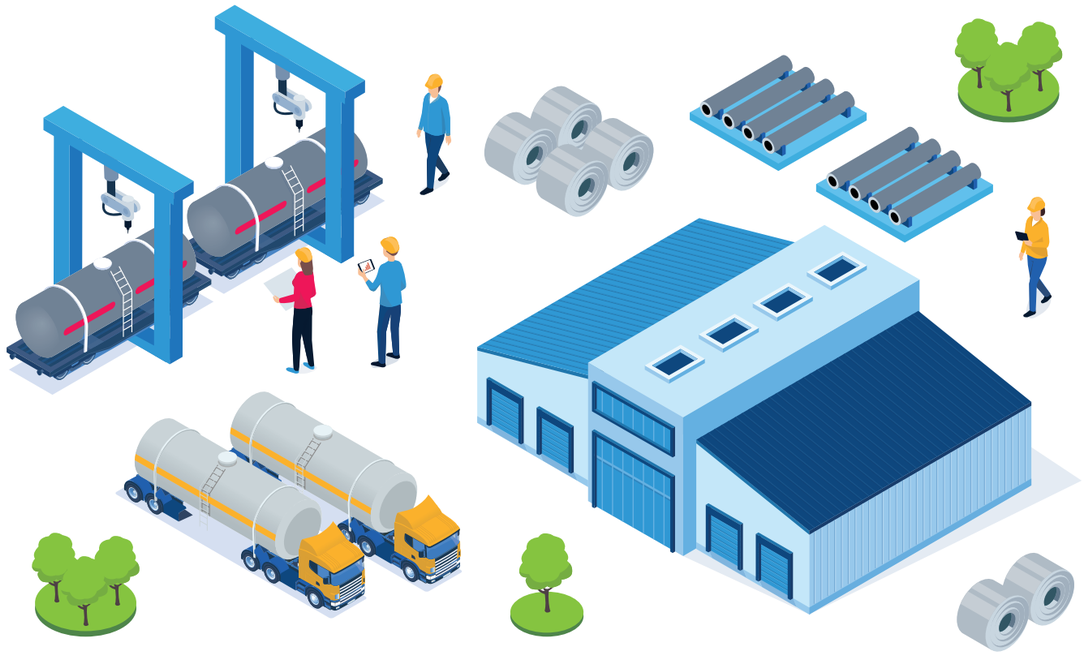
The challenge

Lacking the skills and capacity to carry out certain kinds of processing, the company needed a reliable partner to deliver them diecast, cast plate parts with protective film, cut to size.

The MaaS solution

thyssenkrupp Materials Hungary offered a package of services to meet all the project requirements. The plates came in two different thicknesses, one of these was an individual size, not available in stock. thyssenkrupp purchased the special-sized material and accurately cut the plates in-house with a circular saw to get the initial dimensions of the components. These were then shape-cut by a contracted partner with a water jet according to design and transported to the company's location.

The project was carried out in 3 months, from planning to the first shipment. Delivery dates during the service period were rescheduled, resulting in tighter deadlines. However, this didn't compromise the service quality or affect the timely performance, even though coordination of in-house machining with contracted work was challenged by the new timing. Top-notch service level, flexible approach, and high-level customer service of the tailor-made solution are just a few advantages other machine, electronics, and robotics companies might also benefit from.



Barcode-based tracking system helps automate materials handling at Europe’s leading freight wagon manufacturer

Tatravagonka is the European leader in solutions for freight railway transport. The company, headquartered in Poprad, Slovakia, has 100 years of experience producing freight wagons and a more than 30% share of the European market. The manufacturer is a reliable supplier of important transportation companies in Europe. Tatravagonka’s 7 specialized manufacturing lines have a production capacity of 2200 freight wagons and 6500 bogies annually. Products are available in standard construction or tailor-made to customers’ needs.

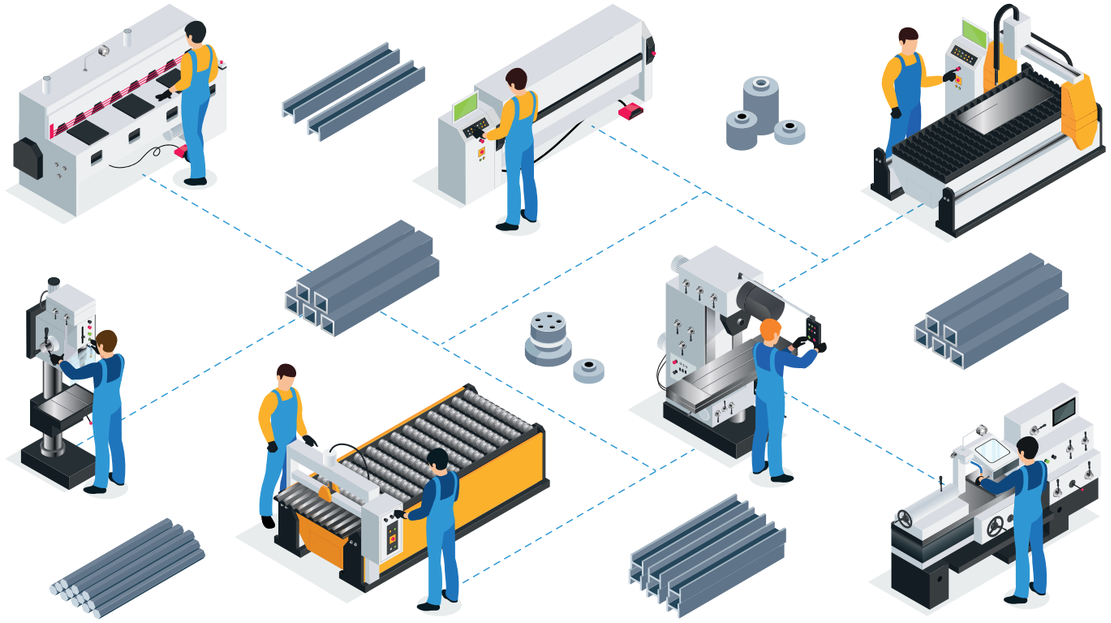
The challenge

thyssenkrupp Materials supplies flat carbon materials to Tatravagonka. The wagon manufacturer has recently switched to an automated material flow process that requires barcode technology. Barcoding allows tracking of individual items within the shipment. Using barcodes saves time in several materials handling situations, reduces costs, and improves operational efficiency. To optimize manufacturing operations, Tatravagonka needed materials shipped with barcodes compatible with their internal logistics system.

The MaaS solution

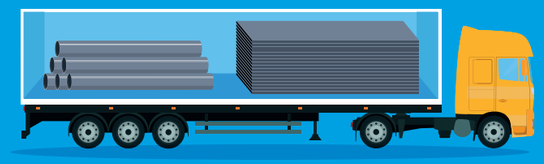
A tailor-made software solution has been developed and provided by thyssenkrupp to convert the data used in thyssenkrupp’s shipping documents into barcodes that include contract number, material number, quantity and quality of material, heat number, inspection certificate number, and delivery note number. Based on the barcodes, the system can automatically control and monitor the material flow through production, quality control, and expedition.

The project was carried out in a minimal timeframe with a high focus on creating a simple yet well-functional technology meeting all requirements. Due to its scalability, the solution can be flexibly adapted to changing needs and implemented at companies of any size using barcoding to easily navigate the complex network of material flow.



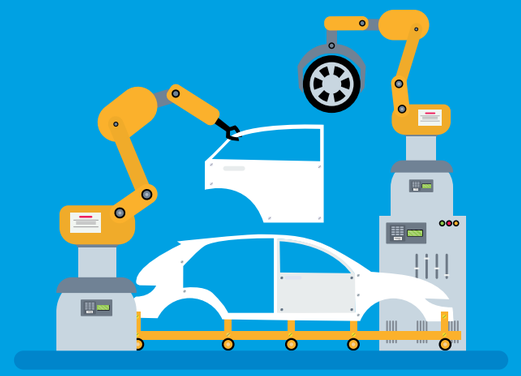
Cut-to-size plastic plates free up production time at Slovakian automotive supplier

Slovakian-based TechniCAD designs and produces mechanical structures, including molds for plastics, light metal alloys, aluminum shear press tools, and a wide variety of single-purpose equipment according to customers' needs. The company owns a 300 m² development workshop and an 800 m² warehouse space to serve its domestic and international clients from 8 EU countries. The special machine constructions are designed and manufactured mainly for the automotive industry. TechniCAD relies on unique CAD/CAM expertise to produce spare parts in line with documentation, small series, and prototypes by customers' request with high precision and quality.



The challenge

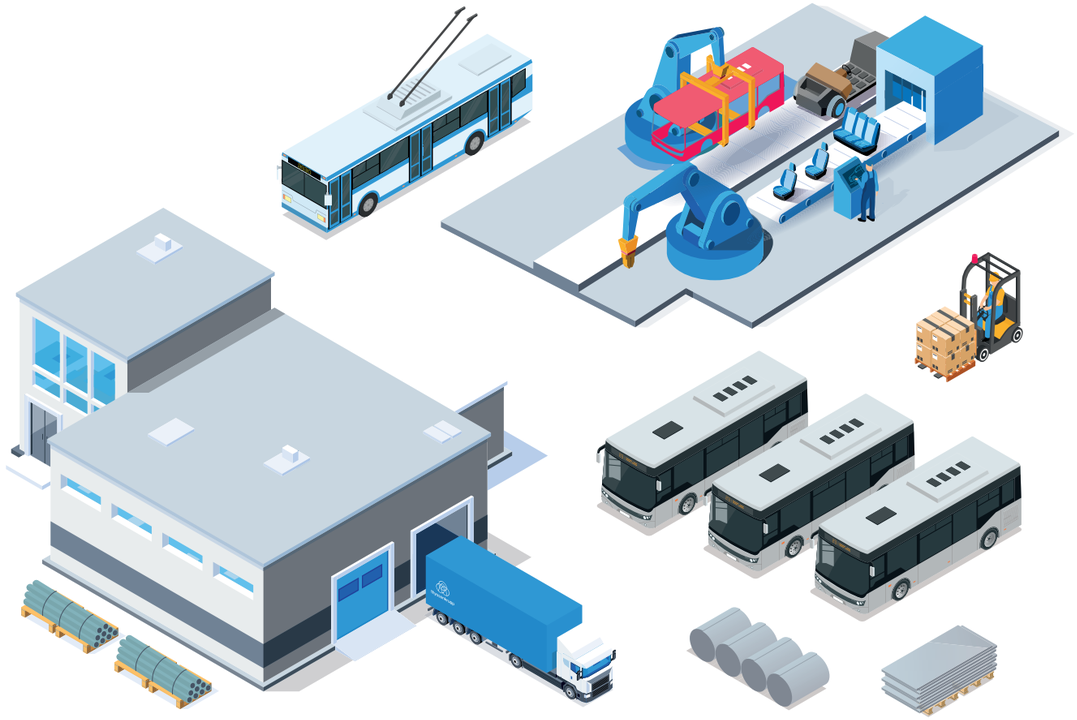
thyssenkrupp Materials Services has been a supplier of plastic plates to TechniCAD, the manufacturer used to cut to size in-house as part of the machining processes. However, these mechanical operations require considerable capacity and time investment, leaving little room for the company to accept new orders and work simultaneously on multiple projects. They were looking for a reliable supplier of precision-cut PE 300 materials ready to use in production to save time and increase operational efficiency.



The MaaS solution

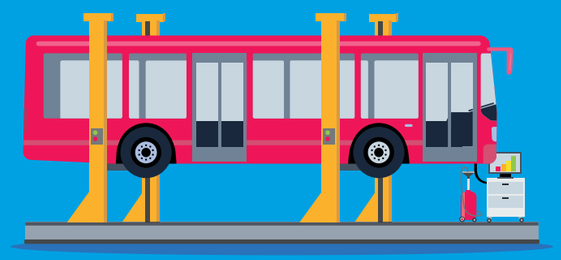
Expanding its cooperation with TechniCAD, thyssenkrupp offered a one-stop service shipping customized, ready-made plastic plates. PE300 is a high-density plastic, also known as HDPE or Polyethylene 300, and has excellent impact resistance even at low temperatures up to -30°C. It combines a low coefficient of friction with easy machining and is widely used in automotive and industrial applications. The cut-to-size, first-class items delivered by thyssenkrupp were used by Volkswagen Slovakia to support the safe handling of objects during the production process and in components of electric cars.

The project was carried out in 6 months, from planning to implementation. A consistent high quality matching the original provided by TechniCAD's experts was critical to meet the top-class automotive manufacturer's standards. The solution was a game changer in capacity planning for TechniCAD and provided tremendous added value from a trusted partner. The tailor-made service has a vast potential for other players in the automotive sector to benefit from.



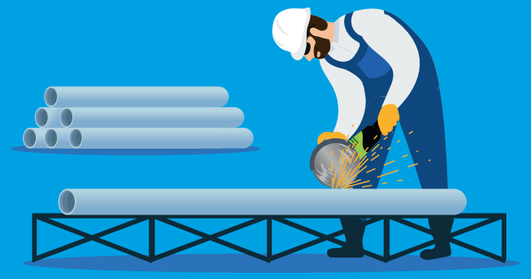
Polish bus manufacturer relies on prefabricated components to meet customer demands

The Solaris Bus & Coach Company is one of the top manufacturers of buses and trolleybuses in Europe. With 27 years of experience and more than 23,000 vehicles manufactured, Solaris contributes to improving public transport in hundreds of cities across Europe every day. The firm is pushing the boundaries of the industry with its dynamic product developments, especially in the area of electromobility. Solaris products have earned multiple awards for quality and innovation in Poland and other countries.



The challenge

thyssenkrupp Materials Services has supplied hollow sections and sheets of stainless steel to Solaris. As a subcontractor, it has also provided components assembled and welded in its service center for the steel structure of the bus chassis. A few years ago, Solaris identified a need for a reliable supplier of ready-made bus parts due to increased demand for buses.



The MaaS solution

Following a comprehensive verification process, the cooperation with thyssenkrupp expanded in 2018 with the production of steel constructions based on the bus manufacturer's design documentation. Among the production steps are laser cutting, bending, machining, assembly, welding, painting, and supply chain management. Over 100 tonnes of materials were used for the new project in 2022 alone.

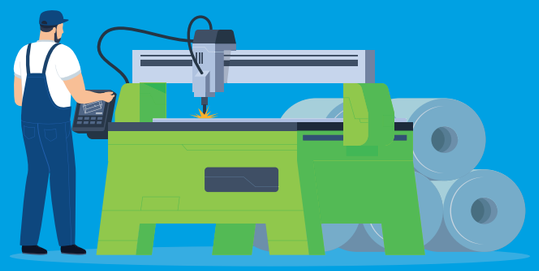
Developing proper processes was critical to minimizing production costs and meeting Solaris's quality and delivery requirements. The new service guarantees the repeatable quality of the supplied components, which allows the manufacturer to maintain the top quality of its products and widen its portfolio. The tailor-made solution also represents a major addition to thyssenkrupp's steel construction expertise that other global bus, train, and machine market players can benefit from.

Scandinavia‘s leading building contractor secures capacity with ready-made steel hall structures

Hallgruppen is a major supplier of structures and tents in the Nordic region and a full-service building contractor. Founded in 2015 in Oslo, the company has 14 offices in Norway, Sweden, Denmark, Latvia, and Germany, with over 110 employees. A wide range of industries relies on them for tailor-made or turnkey shelters, fabric structures, and buildings in more than 50 countries and all continents. They provide storage warehouses, weather shelters for short-term rental, fabric buildings with optional insulation, industrial and office buildings, and temporary shelters to organizations in construction, sports, agriculture, humanitarian aid, events, logistics, aviation, mining, and many others more.

The challenge

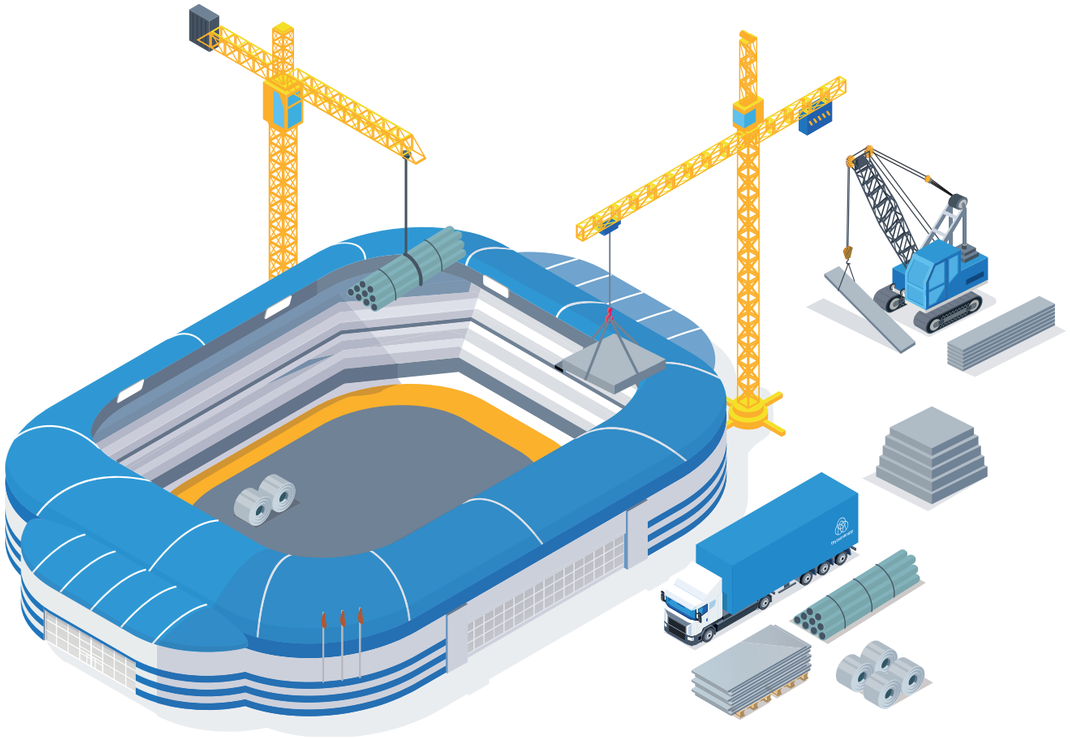
As a result of a lack of production capacity, Hallgruppen had difficulty coordinating all stages of production. Therefore the company needed a strategic supplier with the right manufacturing capabilities to support its core business activities and assist with implementation.



The MaaS solution

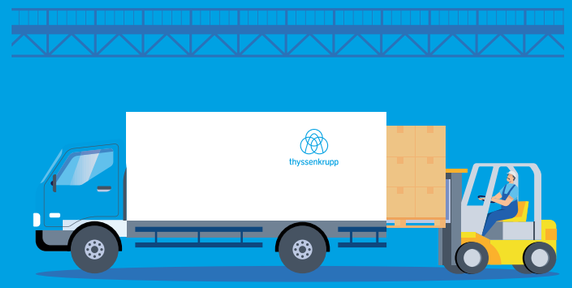
The cooperation between thyssenkrupp and Hallgruppen started in 2022. Since then, thyssenkrupp Materials has shipped light steel structures for halls that weigh about 20 tons each to Norway and Denmark. The volume of finished systems transported per month can exceed 180 tonnes. As a new subcontractor, the service provider is also responsible for cutting, bending, punching, welding, and galvanizing raw materials.

Providing high-quality processed products within tight deadlines is crucial to meeting Hallgruppen‘ delivery standards. Both parties benefit from the new service, as thyssenkrupp gains insight and hands-on experience in the Scandinavian market, while Hallgruppen can keep up with customer orders and developments. Due to mutual satisfaction, the service contract has lately been revised to include broader collaboration.



thyssenkrupp‘s expertise helps build a new stadium in Romania

CON-A was established in 1990 and becamed one of the largest privately owned construction company in Romania. With over 100 projects completed, CON-A excels at designing and construction industrial buildings. The company provides a wide range of services and products to deliver efficient and sustainable construction projects. A broad spectrum of projects with complex architectural features and high functionality have been developed due to the expertise the company has in consulting and design, manufacturing, supply of building materials and construction works.



The challenge

The construction company needed a reliable supplier of processed aluminum coils for the architectural facade of the Sibiu Stadium they started building in 2020. These were to be installed as decorative elements on the façade in the last phase of the project, leaving CON-A with little time to complete the extensive modernization project without a trustful partner.

The MaaS solution

As a long-term partner of CON-A, thyssenkrupp has found and developed a cost-effective solution for delivering the ready-made panels for the stadium. We ordered the coils and processed them involving third-party contractors. As part of the service, 4.460 meters (24 tons) of coils were cut to length, bent and perforated at the requested dimensions, according to the customer‘s drawings.

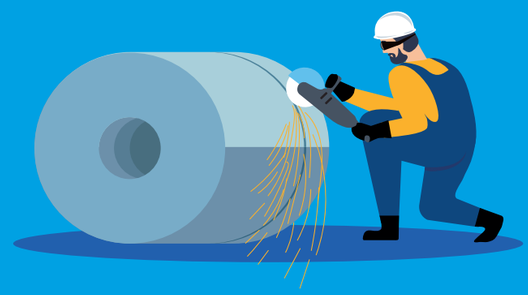
It proved particularly challenging for thyssenkrupp to source raw materials during a period characterized by aluminum shortages due to pandemic period. Nevertheless, the project was carried out on time, contributing to the most significant public construction initiated by the Municipality of Sibiu in the last 23 years. Consequently, tyssenkrupp was selected by CON-A for other two steel industrial projects. These successfully completed projects, opened doors for other future agreements concerning stadiums, bridges, sports halls, warehouses, and other steel-containing structures.

A global leader in automotive reduces costs with redesigned supply management and on-time deliveries

Marelli is one of the world's leading independent suppliers to the automotive sector. With around 50,000 employees worldwide, the Marelli footprint includes 170 facilities and R&D centers across Asia, the Americas, Europe, and Africa. The company's activity focuses on intelligent systems for active and passive vehicle safety and powertrain systems. Business lines include automotive lighting systems, body control systems, powertrain control systems, electronic instrument clusters, telematics systems, computers, suspension systems and components, and exhaust systems. Magneti Marelli also develops specific electronic systems for motorsport, such as Formula One, Grand Prix motorcycle racing, and the World Rally Championship.

The challenge

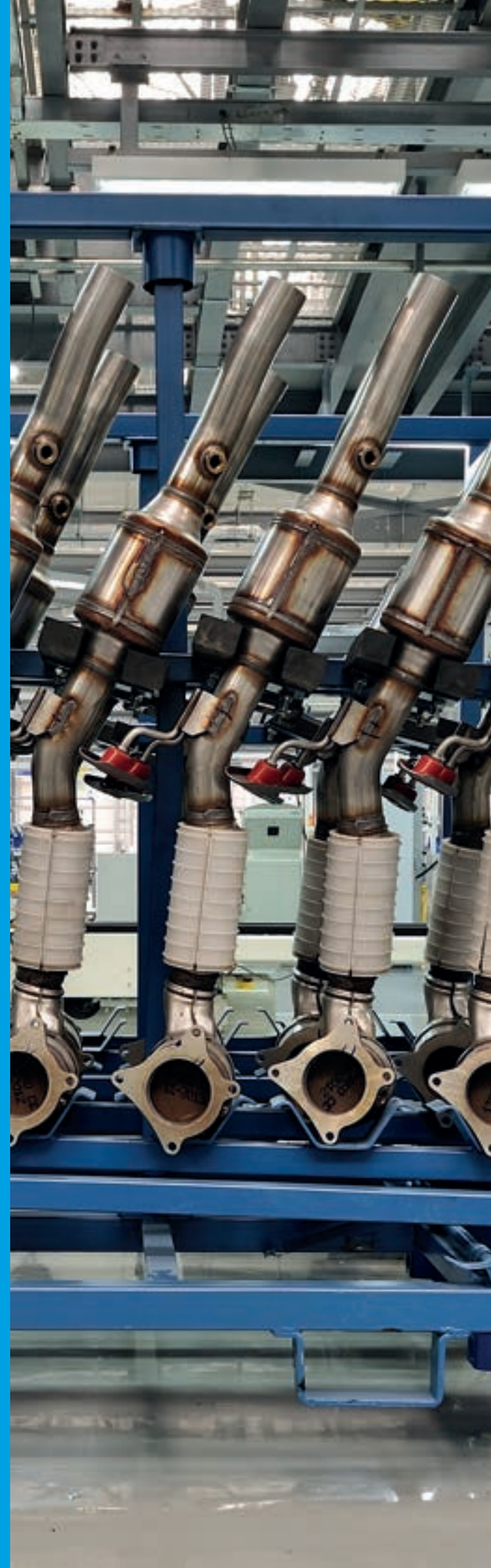
Magneti Marelli and thyssenkrupp started cooperation in 2017, and Acciai Speciali Terni (AST), an Italian stainless steel mill owned by the Arvedi Group since 2022, has been their raw material supplier. To reduce component production costs, automotive subcontractors are usually required to offer just-in-time delivery. With the aim of meeting this expectation and helping Marelli maximize their output, thyssenkrupp has expanded its service offering.



The MaaS solution

In the frame of a 12-month contract with Marelli, thyssenkrupp provided a list of new services to meet the demands for ready-to-use materials needed for exhaust systems. These included the purchase of mother coils, slitting and edging, cutting them into strips, and the weekly delivery of finished goods to four different locations. A total of 1300 tons of materials were delivered by thyssenkrupp, which was also in charge of designing the supply chain and managing it based on the indicated volumes in Marelli's forecasting system.

While maintaining a long-lead-time supply chain was challenging, thyssenkrupp never missed or was late with deliveries despite frequent forecast changes, saving Marelli significant production costs. thyssenkrupp gained immense experience and expertise in the automotive industry through collaboration with the manufacturer, leading to new supplier cooperations.



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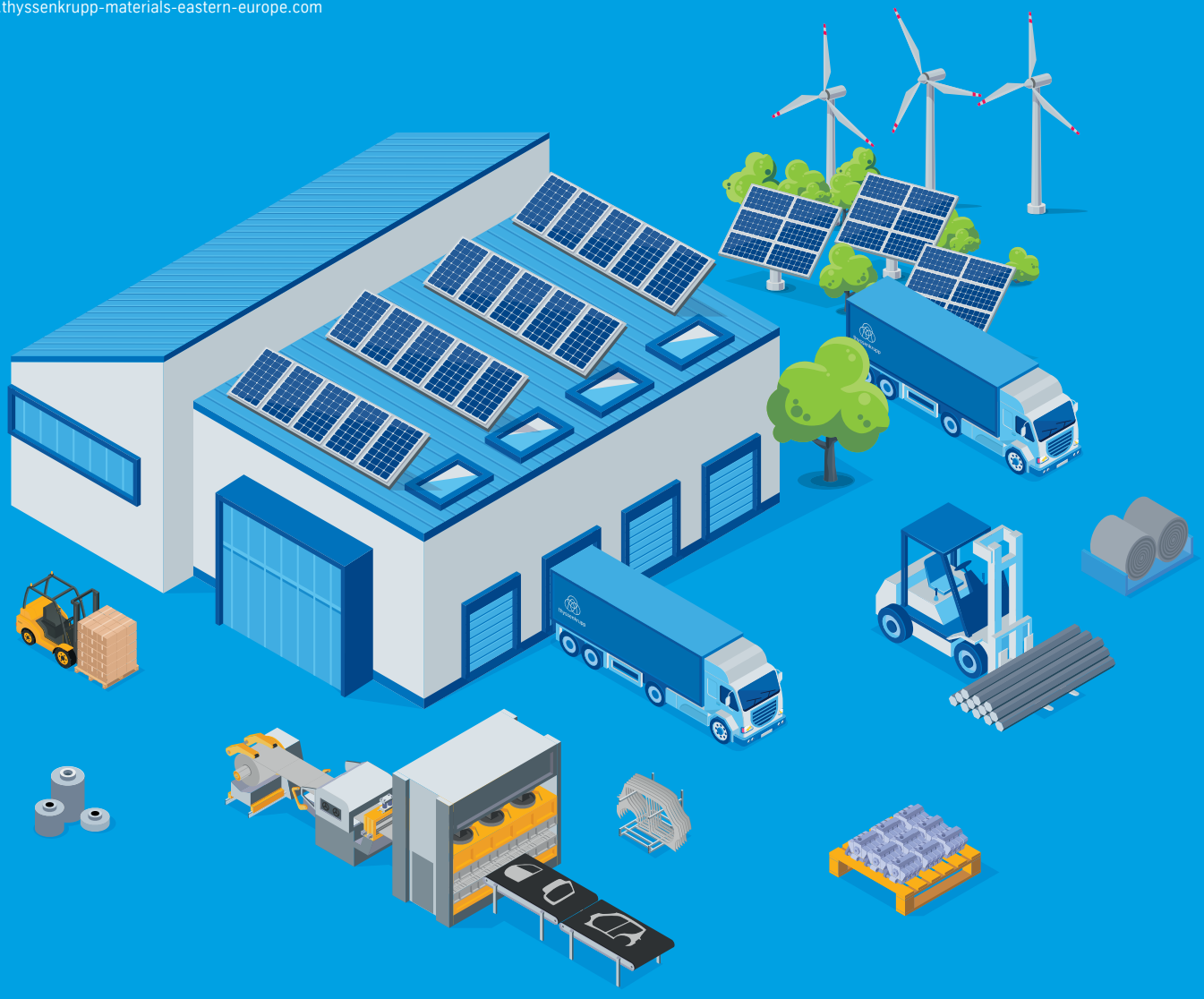

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