

STAR COOPERATION®

Your Partners in Excellence

SHAPING THE FUTURE.

Annual report 2018

PREFACE

Striking out on new paths,
thinking beyond trends,
achieving innovation.

Success through pooled expertise

We design, think and pull together: today, we STARS work on the projects that will be on everyone's lips tomorrow. We are shaping the future with artificial intelligence, supply chain visibility, virtual reality and big data.

How? By pooling the expertise from our six STAR departments: MEDIA, LOGISTICS, CONSULTING, IT, ENGINEERING AND ELECTRONICS.

Our unparalleled team spirit and synergies pay off – both for us and our clients.

The future of STAR COOPERATION lies with our employees: every day, they mas-

WE ARE SHAPING THE FUTURE!

ter exciting challenges in global projects, passionately and enthusiastically. Together, they take products and services to a whole new level. They work in teams that let each member explore their own ideas and skills. They can achieve any goal within this tight-knit expert network.

Our annual report recounts the greatest success stories our various STAR departments wrote in the past year. They include interactive product apps, intelligent aftermarket services and tools in the field of autonomous driving. Together, we think outside the box to innovate the future. We are proud of our work and our creations. Last year was the most successful year in the history

of STAR. We owe this to our clients, who are always by our side as we strike out on new paths. We are strong, reliable partners in a world that is in constant flux, changing every single day. On behalf of everyone involved, we want to thank you and all our STARS for your confidence in us. We are glad to have you on board as we think outside the box, tackle milestones and head towards the future at full throttle.

We hope you enjoy reading our report and wish you all the best,

**Prof. Dr. Alfred Neher
and Sofia Neher**

Review of STAR COOPERATION

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We serve you all over the world

LOCATIONS

On site wherever
you need us

Munich

Digital expertise meets creative and technical skills: in the south of Germany, our experienced MEDIA, ENGINEERING and IT STARS help you to successfully launch your projects.

international, unified, strong

Vance

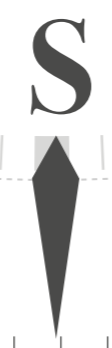
High performance in Vance: our warehouse in Vance spans 11,185 square meters. That's as much as 1.6 soccer pitches. 30 STARS work on site, walking a combined total of around 514,290 steps every day to get your goods to the right place at the right time.

Mexico

¡Hola! Our plant in Mexico supplies our client Daimler's factory in Aguascalientes with user manuals, just-in-sequence (JIS) – so the schedules, quantities and sequences are always flawless.

- Germany**
- Berlin
- Böblingen
- Frankfurt
- Göppinagen
- Heimsheim
- Karlsruhe
- Kornwestheim
- Ludwigsburg
- Magdeburg
- Munich
- Neckarsulm
- Obertürkheim
- Sindelfingen

- USA**
- Atlanta
- Vance
- Mexico**
- Aguascalientes
- Spain**
- Barcelona
- Madrid
- South Africa**
- Johannesburg
- China**
- Beijing
- Shanghai
- Switzerland**
- Zug



360°



THE FUTURE STARTS WITH STAR

Efficient project planning, design and implementation:

» It takes a cross-industry approach. A holistic way of dealing with challenges. That is why our STARS pool their expertise in DIGITAL TRANSFORMATION, AFTERMARKET SERVICES and VEHICLE ELECTRONICS. For interdisciplinary solutions from a single source, customized to meet your needs. **This is how the future starts.**

Put your business on track for the future

EXPERTS IN

DIGITAL TRANSFORMATION

Interlinked technologies keep you close to your customers throughout the entire service life of your product. And your customers have long gotten used to digital services: they expect the whole package from you. Around the clock. That's exactly where the STAR experts start your digital transformation: we help you sell your products and services online with a wide range of efficient tools. From sophisticated online stores and effective marketing campaigns to professional test

management and flawless operations. Throughout the entire service life of your product or service. Across all digital channels. We dare to think outside the box and strike out on new paths. We show you how to profit from digital technologies. With the right sales and marketing strategies and the tools to match, we take you across the finish line.

So you keep ahead of the competition now and forever. Make a lasting difference in your digital future.

EXPERTS IN

AFTERMARKET SERVICES

A worthwhile endeavor: intelligent aftermarket services generate lasting customer loyalty and profitable extra business. Are you keeping up with these new trends? The STARS will get you fit for Business 4.0 – across all industries. We show you how to shape your aftermarket business and turn your cus-

tomers service into a unique experience. From successful point-of-sale concepts to individual logistics solutions. The advantage: you get to expand your aftermarket services and secure lucrative business with a sophisticated strategy. We give you all the resources you need. Take advantage of our smart concepts for successful aftermarket services.

Establish a competitive aftermarket business in the long term.

EXPERTS IN

VEHICLE ELECTRONICS

Our STARS get you fit for the **future of mobility**. Autonomous driving, intelligent driver assistance systems, efficient car charging stations: our STARS offer suitable tools, innovative tech and sophisticated services for E/E vehicle systems. Including workshop services. Precisely tailored to your needs.

As a development service provider, we look after you from start to finish. We work with you on a holistic basis to turn your concepts into successful projects. In an era of increasingly complex electronics, you get to keep an eye on what really matters. And you achieve your goals.

With the right tools and services, you'll be at the forefront of the mobility race.

Digitalization

Thinking beyond innovation: the

"internet of things" will shape our future.

Aftermarket services

Solid business models: every new day brings new technologies to make your aftermarket services more straightforward, successful and efficient.

Vehicle electronics

Go safe, go green, get connected: rethink mobility with STAR! Our experts know and understand the challenges of tomorrow's automotive market.

LOOK TO THE FUTURE WITH OUR **SERVICE EXCELLENCE CONCEPT**

Talking about the future of
aftermarket services
Otto Boucky & Brett Bielawski.

An interview with Otto Boucky, Head of Industrial Measurement, and Brett Bielawski, Director Service Operations, JENOPTIK Industrial Metrology Germany GmbH, about the future of aftermarket services.

A word with **Jenoptik**

How did the aftermarket project "PlusServe" come about?

Otto Boucky: Our service organization used to be based on a reactive model. It was completely dependent on our sales. As our company and our portfolio grew, we struggled to provide our customers with the fast, professional and seamless aftermarket services to which they had become accustomed. We soon realized that our services need organizational independence. So we decided to set up our services and aftermarket services as a separate business. We asked ourselves: what

can we restructure to offer our customers better services and generate more sales at the same time? Our new focus is "service excellence", a profitable combination of products and services. Tailored to our customers' expectations. That's how the "PlusServe" project was born.

Why do you want to transform your business from a product supplier to a service provider?

Otto Boucky: Because that will give us a lasting competitive edge. We can offer good availability, plenty of professionals and an excellent supply of spare parts.

Brett Bielawski: We have agreed on three important factors for the success of our new "service excellence" concept: our service quality, product portfolio and service logistics. The first sub-project, service quality, is already close to completion. Our new benchmarks are speed,



communication, transparency. Of course, we need to provide our services economically. But our customers' demands always come first.

Otto Boucky: Reasonable, autonomous service structures allow us to improve customer satisfaction and boost our earnings. This gives us a certain level of independence from the economy. If our new-units business were to collapse, we would still be able to generate sales with extra services and spare parts.

What made you work with STAR?

Otto Boucky: I think that the holistic approach of STAR is extremely refreshing and exciting. All their experts work very proactively and professionally.

Brett Bielawski: The densely pooled expertise is an important factor. Specialists from various STAR departments attend our workshops. They focus on the needs of their clients, consolidate their various fields of expertise (which meets our own needs well!), ask the right questions and immediately recognize our pain points.

The STARS get our processes moving in the right direction, and they do it quickly. We leave every meeting full of motivation and fresh ideas. I have no doubt that our future projects with STAR will benefit from the same spirit.

What achievement do you find especially pleasing?

Brett Bielawski: We have been able to look at ourselves from a whole new point of view. Innovative ideas and unconventional perspectives are what makes STAR such an important source of inspiration.

Otto Boucky: During our pilot project, the STAR team always communicated transparently and contributed specialist expertise. This allowed us to convince our management and implement the main project quickly.

Think about the future: how can companies gain a competitive advantage with their logistics services?

Otto Boucky: The future will be won by businesses that can respond to the demands of customers all over the world in a single day.

What does the future hold for Jenoptik and "PlusServe"?

Otto Boucky: We are managing our stock in a way that allows us to react immediately to our customers' needs. Country-specific import regulations can be a hurdle. In countries where we cannot take care of the logistics ourselves, we work with external partners. We are also optimizing services at our customers' sites. Together with STAR, we are introducing new, flexible concepts to our product portfolio in order to inspire confidence and loyalty in our customers.

Brett Bielawski: To that end, we will be launching our next sub-projects – product portfolio and service logistics – as soon as possible. And we will be integrating our service team into "PlusServe" more intensively. Our "service excellence" concept is gaining traction.

CREATIVE IDEAS

FOR DIGITAL COMMUNICATION

» The MEDIA department designs media products for specific target groups. It utilizes all channels. Our STARS plan, design, develop, produce, manage and deliver print and digital media for your company. We are here to guide you and equip you with the right communication and the best tools to excite your customers and smash your goals.

MEDIA

LOGISTICS

CONSULTING

IT

ENGINEERING

ELECTRONICS

**Printed.
Filmed.
By app.**

Speak your customers' language: woo them with the right strategy and solid media concepts. Leave it to us: your fair, professional, reliable partner. For successful communication across all channels, from print to online.

The STAR COOPERATION experts transform your company and your communication into an unforgettable experience – across all relevant channels, tailored specifically to your target group. From strategic consultancy to event management, from video and film production to social media, print and online formats: you have a reliable, knowledgeable partner in us! We develop your design concepts and content for a wide range of channels. Our environment is creative, digital, networked.

Work with our MEDIA experts to create new sales channels with 3D videos and interactive apps that will leave your customers speechless. We help you succeed – every day.

Reach out to your target groups with traditional and digital touchpoints

EXCITE YOUR CUSTOMERS TO WIN THEIR LOYALTY

» **Imagine you are organizing an event, but hardly anyone shows up. What happens? Correct: you fail to connect with important decision-makers. That is precisely the challenge our client from the medical devices industry found themselves facing. With fewer people visiting medical conferences, they had a hard time getting new customers on board.**

The solution: A sophisticated digital campaign, developed under extreme pressure by our amazing subsidiary sense&image. Thanks to their expert work, our client can reach their target group using online channels. This excellent addition to the classic touchpoints allows them to expand their reach permanently, presenting the very information and services that interested physicians need to make a decision.

The nuts and bolts: A uniform website forms the heart of our elaborate strategy. It consolidates a range of sub-pages, materials and databases. This approach positions the company as the first point of contact for all studies, live streams and interviews from the conferences. Medical professionals get to access up-to-date information and reports without needing to show up at the conference in person.

The advantage? Any physicians who are interested in our client's offer benefit from a unique user experience. They en-

joy a solid service culture. Our client generates leads and uses the collected data to market their company successfully. Their options include:

- » Lead nurturing: Give interested parties the right information to have a positive influence on their purchase decision.
- » Upgrading leads: Present convincing new products and boost your conversion rate.
- » Remarketing: Effectively address specific customers and generate long-term loyalty.

» **Expand your reach, make the most of your data and win over new customers – with digital strategies by STAR! «**

MEDIA: the colorful world of mobile apps

THE FUTURE OF ORTHODONTICS

Dental retainer configuration tool for Dentaaurum

» Imagine planning a retainer with an app that lets you see the result on a screen in real time. How neat is that? STAR has made it happen: for our client Dentaaurum, a manufacturer of medical devices, we have developed a dental retainer configuration tool for orthodontists. It involves the patients in the planning process to make their order easier. Three birds, one app.

The starting point: It's a common problem. The kids need retainers, and the options seem endless. You have to sift through an overwhelming wealth of designs while making sure that the final choice is comfortable as well as effective. Wouldn't it be easier to have an interactive tool? That was the challenge brought to us by Dentaaurum.

The goal: Developing something brand-new: an app with a wide range of nifty features for dental retainers.

The dental retainer configuration tool, brought

to you by STAR: In collaboration with the experts of sense&image, our MEDIA STARS developed the dental retainer configuration tool. The app allows patients to put together their favorite retainer using a tablet or smartphone. It is realistic and features a live preview function.

After the planning stage, the treating orthodontists can order the required components directly from Dentaaurum. Automatically generated parts lists make it an especially simple process. And our client gets to boost their sales. That's the future of orthodontics.

» **Turning medical devices into an experience – with the application software by STAR. «**

A word with Eckart Blau

#GDPR

How does marketing automation work within the scope of the GDPR? We asked Eckart Blau, Senior Consultant at sense & image

MARKETING AUTOMATION: CONVINCING STRATEGIES



Why is marketing automation the future?

Technically speaking, it is a software-based method that allows companies to optimize their marketing processes. In practice, this means that the companies accompany their customers on their user journey until they buy a product or service. They can utilize marketing automation and the information they have collected about the interests of their potential customers to present exactly what their target group needs and wants. The result: relevant information and offers at each step of the process.

What companies can benefit from marketing automation?

All companies. It doesn't matter whether they're B2C or B2B, whether they're selling a niche product or a lifestyle accessory. The principle is always the same: you excite your customers, look after them with intelligent aftermarket services and boost your own sales. If you have the right answers for them, you'll come out the winner.

Collecting data for targeted marketing – not the easiest task in the age of the GDPR, is it?

There are certainly plenty of legal stumbling blocks. The main thing to keep in mind: there can be no communication without consent. Companies must encourage their clients to let them store their

personal data. You cannot use anything without your clients' consent. If you do, you will soon be inundated with warning letters. On top of that, you need to keep in mind that other countries have different rules. But there's good news. If you use the right system in the background, the process can take care of itself automatically and in full compliance with all data protection laws.

The key word: compliance. STAR has successfully implemented a subscription center for a large software company in Germany. What's the story?

Customers of the company can now use an opt-in process to specify what content they find interesting. This system makes them less reluctant to sign up. The complex STAR system runs in the background, ensuring that all processes are legally watertight. It is fully automatic and global, no matter where the customer is based.

In the second step, the company uses the collected data to look after their customers and activate them throughout their entire user journey.

What was the main challenge of this project?

Automating processes that work with vast volumes of data is a complex task. The company used to work with a wide

range of extremely different systems, so we had to consolidate a lot. We simplified the data to make it compliant with current regulations and then applied the same rules to newly generated data. Our client is now perfectly prepared for automated marketing. Orderly communication requires tidy databases.

Which STAR departments contributed their expertise to the project?

We combined all sorts of skills in our think tank. Our STAR IT experts did the programming and the interfaces. The MEDIA department contributed its specialist expertise to develop the templates and design. Our CONSULTING team analyzed complex business processes with absolute precision. And then there's our direct link to the software manufacturer, which lets us respond and help out immediately when there's a practical issue.

Look into your crystal ball: what should companies prepare for?

The fact is that marketing automation is inevitable. If you want to succeed, you'll have to get to grips with it. Customers decide within mere seconds whether something is relevant to their interests or not. Those who can control this process will own the future.

Take your
marketing to
the next level –
with PIM by STAR

THE FUTURE OF MARKETING

Excited customers are loyal customers

» **Do you know why your customers abandon ship halfway through your ordering process?**

We do. It's not the better prices offered by your competitors. Your users are frustrated by incomplete, incorrect and inconsistent information. Bad translations. Unattractive photos. How do you get your product information on track? We've got the solution: **PIM – product information management.**

PIM Efficient marketing fueled by practical experience

**Centrally manage, control and maintain
your product information**

PIM lets you consolidate all your product data in a single system to simplify your processes. In real time. You get to save money, and your customers will love it. Achieve **efficient marketing communication and a sales boost** across all channels. In print as well as online. One of our clients, a developer and manufacturer of car equipment for the global market, is reaping the benefits of our system already.

The starting point: The company was using an outdated and hopelessly overburdened platform to present its product range. This was quite a challenge: the intelligent product information management system had to be set up anew during regular operation.

The goal: Central management, maintenance and control of product information to facilitate fast, agile and economical marketing.

PIM by STAR: Looking for a smart way to get large amounts of data under control? Look no further. Our experts have developed the PIM system, a solution that allows product managers to enter all relevant **information straight into the database.** Precisely configured. The new SAP interface ensures that all relevant parties have access to the most important information when they add new products – country-specific prices, for instance. The advantage: our client did not even need to get used to it. PIM has the same user interface as Excel, their previous tool.

It even makes the translation workflow much more efficient: new **information is automatically forwarded to the translation agency,** which sends the translated texts back. The sales branch verifies and approves the content before the translations are integrated back into the PIM system.

And guess what: our client automatically generates product catalogs with up to 300 pages in up to 15 languages. At the touch of a button.

What about your product information? B2C and B2B clients all agree: PIM is an efficient communication tool for any online business. Your benefits at a glance:

» **Uniform, up-to-date product data:**

When you edit your source data, the information in your output media and sales channels is automatically updated. Across all departmental and national borders.

» **Shorter time to market:** PIM allows you to prepare your media and market your products much faster, in print as well as online.

» **Save money:** PIM efficiently organizes your data and publishes it automatically.

» **Excited customers are loyal customers:** Users benefit from uniform, up-to-date product data, quality translations, well-written texts and attractive photographs. You present the right information to answer your customers' questions – and they choose your products. Simple.

Media products
custom-made for
your target group.

HOT IDEAS FOR THE INDUSTRY

Communication that excites.

» STAR implements media ideas for a major industrial corporation.

Sanitary and heating expertise meets concentrated marketing skills: the thermal-technology department of a major German industrial corporation will be working with the creative minds of our very own STARS in the future.

Our bid won us the project in 2018, and our new client won a new and skilled partner for all its media productions. We are very proud of our new partnership and look forward to **making new, creative ideas come true** from mid-2019 onwards. Put simply: our STAR experts will

help our new client address and excite their target audience in the field of thermal technology using **intelligent product communication**. They will inspire customer loyalty across all channels.

The trick: innovative **communication concepts** that have an effect on their audience's emotions. Our STARS will also develop **sophisticated documents to accompany our client's market launch** and stay on everyone's minds for a long time. How? By simplifying complex technology with easily comprehensible graphics. The industrial corporation will be **uniquely recognizable** at the point of sale and stand out from the competition.

Our STARS are also going to take care of the **production control processes**. They will make sure that our client's new media products reach their target group on time, in the right quantity and in the best quality. Flawlessly designed and implemented.

STAR media products: product communication that resonates with all audiences.

MARKETING AUTOMATION

**Tomorrow's sales:
that's what counts**

Better sales, fewer resources, happier customers.

The starting point: Addressing customers all over the world at the right time, through the right channel and with the right content: sounds like an impossible task, doesn't it? Privacy laws that vary from country to country, different time zones and the digital transformation are just a few of the things that make it difficult. Our insurance industry client found it very tricky indeed. Until they came to us.

The goal: Inspiring confidence and long-term loyalty in existing customers. Boosting sales and automating processes while reducing the use of resources. Specifically:

- » designing a global newsletter in compliance with country-specific data protection legislation.
- » automatically segmenting customer contacts by country.
- » taking into account such strategies as "mobile first" and responsive design for compatibility with all devices.

Marketing automation by STAR: Our experts created an individual strategy for successful communication, covering every single step from the initial plan to the final implementation. The insurance company contacts its customers all over the world to share interesting content. It automatically does this at the perfect time and in consideration of all country-specific regulations. A uniform template, optimized for our client's mobile-first strategy, ensures that everything looks just so. Our client manages their communication centrally. All they need to do is adapt the template whenever they need to launch another newsletter project. It's fast, it's simple and it's exactly what they were after.

The advantage: Marketing automation allows our client to gather important usage data, evaluate their campaigns at any time and optimize their content. The automated processes create more sales-ready leads at a lower total cost per lead and a higher sales quota for each sales employee. At the same time, the company has made its communication more uniform and strengthened its corporate identity.

Conclusion: Our client has boosted their sales success thanks to the amazing marketing automation strategy by STAR!

Smart marketing automation tools by STAR.

FULLY DIGITAL: CONTENT-BASED MEDIA PRODUCTION

Modern multi-project management by STAR

Location Munich

Handle 600 projects at once. In print, in an app and in several languages.

» In our Munich office, approximately 60 creative minds are shaping the future with ten STARS from the headquarters in Böblingen. What exactly are they doing? They are working on the **media products of the future** for our automotive client. International sales documents, fresh off the press – on paper and as an app. **And there's more:** all processes are **100% digital!** This is content-based media production in the twenty-first century: up to **600 sub-projects** handled at the same time and translated into **30 languages**. The **sophisticated adaptation management system by STAR** makes it happen.

The starting point: Our client produces catalogs for 30 series – in **multiple languages**. They adhere to a **content-first strategy**. This means that they use the same content **across media** in various media formats. They control the entire production process with a content management system (CMS). We thought: there's an easier way. And a perfect project for our IT STARS was born. Together with our **experts from MEDIA and LOGISTICS, they have taken our client's catalog production and distribution to the next level.**

The goal: Create, coordinate and translate international catalogs across various media. Make all processes transparent for all involved parties. 100% digital.

Our solution: Our IT experts used the STAR adaptation management system to bring the CMS into the twenty-first century. They host the tool and are constantly tweaking it. We also threw NAAB, a tool designed by STAR, into the mix: it produces catalogs as apps in an extremely efficient way.

How does it work? The content management system (CMS), which doubles as a communication tool, combines all types of content: text blocks, images and videos. Once our client approves the content, the CMS sends text segments to the **connected translation tool** – and back into the system. Perfect translations into **30 languages**. In the next step, our MEDIA experts populate the various formats with the newly created content and coordinate it with all participating markets. Finally, our LOGISTICS STARS send the finished catalogs to their destinations – **worldwide, fast and efficiently.**

The advantage: Our client only needs to approve the content once. Our STARS adapt it to various languages and send it into the world, either in print or as an app. Our client and all their partners and suppliers have a **clear overview** of all processes – because everything is digital. **Up to 200 people** can be working on a catalog **at the same time:** the creative agency, project manager, print specialist, LOGISTICS expert, you name it. And everyone can keep an eye on the project status at all times.

» **Take advantage of the clever adaptation management system by STAR!** «

**The future of media production:
our highly efficient multi-project management system**

» Consultancy and managed services, complete with 4PL and operative logistics: our LOGISTICS team has got you covered. With their expertise and the right digital tools, our experts revamp entire supply chains to get them moving faster and move efficiently. And they have satisfied clients across all industries to show for it.

MEDIA — LOGISTICS — CONSULTING — IT — ENGINEERING — ELECTRONICS

IN THE RIGHT
PLACE

AT THE RIGHT TIME

For everything that moves.

LOGISTICS by STAR – to get things moving: our STARS plan, optimize, coordinate and control the movement of goods. For efficient, digital supply chains – end to end.

The logistics industry is becoming ever more significant. Larger and larger volumes of goods are moving around more flexible networks all over the world. Complex products, individualization, lots of varieties, high availability at minimal delivery times and with minimal stock: those are the challenges modern logistics must meet.

As an example: just recently, customers were still happy to wait three days for their parcels. Today, they expect same-day delivery with a transparent track-and-trace service, which is a well-established option. It sets new standards in existing supply chains, for B2C as well as B2B. In inbound, outbound and aftermarket logistics alike.

The backbone of this structure is composed of centralized control intelligence and fully integrated data, risk management and planning systems. They allow logistics providers to keep an eye on their supply chain and pro-

actively prevent disruptions – in real time. This makes logistics an important driver of innovation in modern companies. Logistics successfully combines existing processes with modular, modern technologies such as autonomous vehicles, drones, augmented reality and artificial intelligence.

The LOGISTICS STARS look after clients on their way to the future. Our experts design and audit procedural landscapes on the basis of needs analyses. They plan and optimize holistic supply chain strategies and designs, help our clients in all areas relating to sequenced deliveries of site or factory supplies and manage complex outbound processes. They do this for all industries: from automotive and e-commerce to marketing and merchandising logistics. The STAR LOGISTICS experts help clients from a wide range of industries keep an eye on what matters.

A word with

Alstom

THE NEXT LEVEL
OF LOGISTICS

» In our interview, Sascha Hermsdorf, Manager Logistics Engineering, and Jochen Gedeik, Director Supply Chain at Alstom, tell us how STAR has helped them make their logistics more effective and economical.

In their words: What is Alstom's business? What makes you successful?

Sascha Hermsdorf: Alstom produces, services and modernizes rail vehicles for local transport networks. It is one of the leading German manufacturers of railway technology. This includes regional trains and trams for public and private operators. We specialize in complete packages, from train construction to maintenance.

Jochen Gedeik: Environmental technology is our flagship segment. Alstom is synonymous with innovation and sustainability. We are developing and building the world's first emission-free hydrail train, and it is already fit for serial pro-

duction. Our newly developed hybrid locomotive is revolutionizing freight transport and factory traffic. We are laying down the tracks for the future, so to speak.

What challenges prompted you to look for a partner?

Sascha Hermsdorf: We wanted to use the space at our site in Salzgitter more productively and economically. The logistics department was a prime candidate for restructuring: our new assembly lines should cater more precisely to our workers' needs.

How did the partnership with STAR COOPERATION come about?

Sascha Hermsdorf: One of our partners recommended STAR COOPERATION to us, having worked with them successfully in the past. STAR has all the skills we need in our niche, including material supplies and line-feeding. In any case, word of mouth is the best advertisement. So we got talking. And we were impressed from the start.

Lean, fast and economical: the future of logistics

What were your expectations in your joint project? And have they been met?

Sascha Hermsdorf: We had to overhaul our material supply system completely. Our infrastructure was outdated, plain and simple. So we needed an expert to keep an eye on everything, provide supportive coaching and put the project into practice with us. STAR is that partner. The collaboration between our employees and their new STAR colleagues is very close. We regularly meet to go over various milestones and decide on our next steps.

Jochen Gedeik: Thanks to the expert direction of STAR, we have been able to establish a very lean material supply process. Everything is a lot more orderly, all materials are exactly where they are needed, the whole system works a lot better. The manufacturing department, our internal client, is very happy with the new concept. STAR has more than met our expectations.

What was especially positive about your work with STAR?

Sascha Hermsdorf: We really only have good things to say about our collabora-

tion. The STARS were always pleasant to work with, professional, committed and flexible. Our communication works, so the result and quality of the project are great.

Jochen Gedeik: Friendly, fair and forward-looking. That's what sets our partnership apart from all others. Our STAR colleagues were happy to share their knowledge with us. They quickly taught us to do most of the work ourselves.

Sascha Hermsdorf: We were also impressed by the synergies and the expert knowledge that STAR brought to the table. Any experts we needed for various other issues were simply called in. The project went off without a hitch.

Were there any surprises?

Sascha Hermsdorf: Yes, there was a very positive surprise: we finished ahead of schedule.

Jochen Gedeik: I have one thing to add, too: the entire process was very stable from the start. We never needed to make any subsequent adjustments. The STAR experts got the project done together with us, there were no hiccups

or major discussions. With a project of that size, too! Everything was done excellently. We have nothing but praise for STAR COOPERATION.

What can STAR do better in future?

Sascha Hermsdorf: In terms of our joint project, we have no complaints whatsoever. Everything worked perfectly. The flexibility of our STAR colleagues and the work they did were first class.

What's next? Do you have any concrete plans for future collaborations with STAR?

Jochen Gedeik: Absolutely. We are currently preparing for our next project and have already got some helpful advice from STAR. And we are going to build on our past success together: we will make our processes leaner, leverage synergies, revamp our logistics and get every single location fit for the new process and the requirements of the future.



Sascha Hermsdorf



Jochen Gedeik

Paperless warehouse management

STAR builds a new logistics center for media products.

DIGITAL

Cutting-edge warehouse tech in Magdeburg

» **6,300 square meters and more than 50,000 items** – the **new media logistics warehouse for BMW, Daimler and MAN in Magdeburg** is a sight to behold. Our STARS are in charge of the advertisement logistics at the new, cutting-edge facility in Saxony-Anhalt. Fully digitized. Flexibly adapted to our clients' process requirements.

The starting point: Our client BMW supplies its dealers all over the world with sales and onboard literature. It sends these documents out all the time, in the right quantity and quality. Daimler and MAN, also our clients, offer high-quality advertising materials from merchandise to print products to their customers, too. What they needed: a state-of-the-art logistics center to help them create outstanding media products and send them from Magdeburg to the whole world.

The goal: No more outdated storage management. Away with paper documentation and manually populated Excel tables. Instead: automated processes, 100% digital. Fast, simple, transparent, perfectly controlled logistics.

Milestone Magdeburg: Building a brand-new logistics site from scratch and making it fit for the future – exactly what the LOGISTICS, IT and MEDIA STARS love doing. Thanks to the pooled expertise of all three departments, the logistics processes at the new site are fully digital. The STARS record and control all processes automatically on site, which saves a lot of time.

Planning, creation, production control and distribution management – all done by STAR. And our clients' logistics system works like a charm.

» **Milestone Magdeburg – the future of logistics!** «

Fully digitized warehouse processes: have a look at page 52 to find out how our IT STARS made it possible with their SAP warehouse management.

Successful spare-parts management all over Europe – with STAR.

Project Porsche Classic
In the right place at the right time

ORDER TODAY, RECEIVE TOMORROW

» 10 o'clock in the morning. The phone rings. Somewhere in Europe, a rare spare part for our client Porsche has shown up. Our LOGISTICS STARS waste no time to track down the original. They want to make sure that it can be transported rapidly and stored and managed whenever it is needed.

What's behind "Porsche Classic"? For this exclusive logistics project, our client Porsche is placing a great deal of trust in us. Our STARS are going to be in charge of their entire strongroom management. Here's how it works: All over Europe, Porsche searches for rare original and spare parts to buy for its classic models. Once a part has been located, the company must act quickly – these spares are sought after. This is where our LOGISTICS STARS enter the scene. They ensure that the valuable

goods are transported to the right place and in the right quantity and that they are stored in optimal conditions. Of course, everything must be of top quality and happen within just a few hours. No matter how far the parts are traveling within Europe. The maxim of this operation: order today, receive tomorrow. That's what rapid logistics is all about.

» **Your parts management in safe hands.** «

THE FUTURE OF LOGISTICS

How does modern logistics work?

A word with Dominik Alexander Günther.

Logistics Control Tower



Dominik Alexander Günther
General Manager STAR DISTRIBUTION

The Logistics Control Tower lets companies control, organize and coordinate flows of goods, stock, even partners. How does that work in detail?

What's special about the Logistics Control Tower is its modular structure. It is based on specially developed software that manages the digital data exchange between all involved parties. Upon request, we also integrate the organization of all transport, risk and data management, tenders, procurement and the settlement of freight services.

A BI dashboard gives companies full control over their order management, material stock, goods flows and their logistics partners worldwide. The control of their logistics and delivery processes becomes more transparent than ever along the entire value chain, from the supplier of raw materials down to the dealership.

At the same time, our STARS in the Control Tower keep a keen eye on the whole supply chain to ensure that everything works smoothly. They can respond quickly and proactively whenever there's a hitch in the transport chain: congested ports, unreliable suppliers or freight forwarders and so on. The STARS make sure that all products arrive in the right place at the right time and in the right quantity. And quality. Worldwide.

What companies can benefit from the Control Tower? How?

Any client who needs to maintain control over a major supply chain across multiple value creation levels. This includes production companies that want to manage their processes transparently and efficiently, for instance, including material suppliers, subcontractors and their own production facilities.

The STAR Control Tower is structured in a way that offers each client exactly what they need for their intelligent logistics system. At the same time, we develop modules that will be in demand in future. This allows us to expand our service for our clients in a scalable and forward-looking way.

The biggest advantage for them: they save a lot of money. If you know your supply chain down to the smallest detail and are aware of all risks along the way, you will be able to improve your flow of goods purposefully, sustainably and efficiently. Processes become faster and more transparent; you detect risks, reduce lead times and in-process inventories and make the entire network more cost-efficient.

The STAR project "Logistics Control Tower" was born from an order for an automotive client. What was the greatest challenge involved in the project, and how did you overcome it?

One of the greatest challenges was to juggle more than 400 suppliers and service providers all over the world in terms of the data exchange process. In the beginning, the various parties had very different approaches. There were no uniform interfaces or data formats. Some suppliers even completed delivery notes with pen and paper and faxed them. We put a lot of work into the project and visited many suppliers in person, all across Europe. This allowed us to standardize the digital data exchange process.

Our client placed a lot of trust in us. We did not let them down. We are very proud of what we have achieved.

Which STAR departments pooled their skills for the project?

The Control Tower is full to the brim with expertise from all STAR departments, including consultancy and operative implementation. Our logistics consultants, managed services employees and operations experts worked closely with our STAR IT team, which developed the software solutions.

From vision to reality: what will logistics be like in the future?

In logistics, all signs point towards digital transformation and automated processes. In terms of the Control Tower, supply chain visibility is an important buzzword. What this means is: all partners that are integrated into the supply chain get to benefit from complete data transparency, from the supplier of raw materials down to the consumer. They track and trade goods optimally, keep full control of all processes and allocate their resources sparingly. Of course, this reduces unwelcome surprises and improves customer satisfaction.

But we have a long way to go until it is all in place. Many logistics service providers and suppliers are lagging behind. But that's what we STARS are here for! We make sure our clients have a competitive advantage. And we continue working towards a future with digital, automated supply chains. We are already developing self-loading vehicles that deliver goods without a driver. They are fully autonomous and have automatic damage detectors. It is a fascinating vision, and we want to make it come true.

GROW. CHANGE. Reinvent yourself.

MEDIA LOGISTICS **CONSULTING** IT ENGINEERING ELECTRONICS

**Take advantage of the digital transformation.
Get your employees on board.
Excite your customers.**

Pooled expertise, specialist knowledge and a passion for your digital transformation: we help you gain an in-depth understanding of your customers' needs, get them on board and generate long-term loyalty. Our STARS offer advice and implementation support both at home and abroad.

The experts from our STAR CONSULTING department approach the increasingly complex world of sales systematically. They apply sophisticated processes, advanced methods and suitable tools to help you acquire new customers and meet your goals.

» **Inspire excitement and loyalty in your customers: our STARS will get you ready for the digital transformation of your sales and aftermarket services. Connect your products, create new business models and automate your company's processes. For long-term success.**

From focused customer strategy to new concepts, business intelligence and our effective pricing model, we pool our expertise and give you exactly the right tools to succeed. We help you design aftermarket services that excite your customers. So you can stand out from your competition and exploit market potential for the long term.

Aftermarket services are a thing of the past: why companies need to rethink their strategies.

CUSTOMER JOURNEY IN TRANSITION

Excited customers are loyal customers.

» Traditional aftermarket services will soon be a thing of the past. In previous times, aftermarket services only came into play once your product had hit the market and required repairs or maintenance. Today, network technologies ensure that manufacturers and companies stay close to their customers throughout the entire life cycle of their products.

This puts the focus on people – and on data about their usage habits. It gives you whole new opportunities to provide your customers with proactive support throughout the entire customer journey, using new and highly profitable business models.

» The transformation of traditional aftermarket services: spotlight on usage data

This transformation puts the spotlight on customers even after they buy your product. Your mission is to keep them happy throughout the entire life cycle of the products. Up-selling, cross-selling, customer satisfaction and recommendation rates help you advance your business. This new, networked world runs on a valuable raw material: data. Manufacturers can view in real time how a customer uses their product and what state it is in.

This gives your aftermarket services department a unique opportunity to depart from its reactive role and take proactive action. On the one hand, it can provide the customer with digital, data-based services relating to their everyday use of the product. On the other hand, it can forward the latest insights on the customers' usage habits to colleagues in development and production, helping them analyze market requirements and sales potentials.

Profitable extra business: digital services along the customer journey

The new world of aftermarket sales promises manufacturing companies profitable extra business and new sources of revenue. Technologies such as predictive maintenance and optimized price calculations using big data are the driving force behind the changes. The data they collect can be turned into hard cash: think pay-per-use models, dynamic pricing, decentrally produced 3D-printed parts and

digital services that support the users along their entire customer journey for a wide range of applications.

STAR turns reactive problem solvers into proactive drivers of change

The future of aftermarket services looks different across branches and companies. There is no uniform template. Of course, you cannot turn your business upside down in a day. But we recommend that you keep the transformation of aftermarket services on your radar – companies that snooze will lose. The STAR experts show you how to become a proactive partner for your customers and stay by their side throughout the entire service life of your product. With a bit of preparation, you can be way ahead of your competitors when the future of aftermarket services arrives. Cross-functional, customer-centric and agile.

The experts of STAR COOPERATION will be happy to help you – with industry expertise, specialist knowledge and **more than 20 years of experience in sales and aftermarket services.**

Have we roused your interest? To find out more about the intelligent services that will help you excite your customers along their entire customer journey, have a look at the skills and expertise STAR can contribute to your aftermarket services success:

after-sales.star-cooperation.com

White paper

“Don't call it aftermarket services”

download now:

veroeffentlichungen.star-cooperation.com

Future technologies

AFTER SALES 4.0

How current technology trends are changing tomorrow's aftermarket services.

Every day, new technologies emerge to help you make your aftermarket services more efficient, more profitable, more successful. Keeping up with this rapid development is difficult. Current business technology trends draw on a mix of strategic tricks – rarely is just one technology used. Successful aftermarket service organizations combine existing and emerging technologies to create lucrative business models and innovative use cases.

Act quickly: if you snooze, you lose. The STAR white paper explains the ten most important trends. They are key for aftermarket services that help you support your customers proactively in their everyday lives. You also get to profit from additional business opportunities:

10 trends

3D Printing
im Teilegeschäft

Customer Journeys
als Design- und Organisations-Prinzip

Die Trust Economy
eröffnet neue digitale Use Cases

Platforms und Chatbots
bringen Kunde und Marke zusammen

Augmented Reality
für Training und Reparatur

Smarte Geräte
neue Kundenbeziehungen

Die Nutzungsphase
als Datenquelle

Künstliche Intelligenz
ermöglicht digitale Services

Supply Chain Visibility
erhöht die Teileverfügbarkeit

Automatisierung
des Kerngeschäfts

3 challenges

There are three main challenges facing aftermarket services organizations.

» **Incremental business contribution**
How can we secure, expand and boost the profitable growth derived from our aftermarket services business for the long term?

» **Increase operational efficiency**
How can we achieve the envisaged growth more efficiently and save resources in the medium term?

» **Re-invent the future**
What new, digital and innovative business models can secure the profitability of our aftermarket services for the long term?

On top of these ten trends, you get a wealth of inspiration for your aftermarket services, such as how to generate **virtual touchpoints with customers**. Or how to develop **promising strategic approaches**.

Upgrade your knowledge with our white paper! Click here to download it for free:
white paper

“The transformation of traditional aftermarket services”

veroeffentlichungen.star-cooperation.com

FULLY DIGITAL MARKET LAUNCH

» From the idea to the project roll-out in twelve weeks.

How do you train 4,800 employees of car dealerships in more than 20 countries in just a few weeks – without organizing any sessions on site? **The answer:** With a worldwide e-learning project, STAR supported the market launch of new spare parts for trucks by ensuring that all local staff were perfectly trained. **The result:** A fully digitalized roll-out, taken from the initial idea to the start of sales in just twelve weeks. Truly a new milestone for Mercedes-Benz!

Global e-learning for Mercedes-Benz

The starting point: Our client Mercedes-Benz wanted to reach out to its target group with a brand-new product line for trucks. Doing this in 20 markets all over the world was nothing short of a challenge: the company only had three months to implement the full, international roll-out of its new product range. By then, around 4,800 employees at the service branches had to be trained and brought up to speed on all changes. Specifically: they needed to become thoroughly knowledgeable about 88 parts and 36 service packages in order to market the new Mercedes-Benz product range perfectly.

The goal: Implementing the project at the speed of light. We had twelve weeks until the market launch and the roll-out of the employee training program. After those twelve weeks, Mercedes-Benz was going to make history with its “TRUCK PARTS” project.

Fully digitized product roll-out and retail training by STAR:

The experts from the STAR CONSULTING and IT departments pooled their expertise and got to work. In collaboration with our MEDIA subsidiary sense & image, they developed a fully digital training concept for Mercedes-Benz. E-learning courses and webinars ensured that employees of car dealerships all over the world would be able to market the new spare parts successfully. Thanks to a train-the-trainer program based on the first e-learning module, local webinar speakers were excellently prepared to share their knowledge about the new product range. With help from STAR, Mercedes-Benz was able to launch its new product line globally without a hitch. And without time-consuming, expensive on-site training sessions.

Digital, global, successful:
make sure your market launch is a success – with e-learning courses by STAR.

And that wasn't all... **our retail consulting experts took the project to the next level** when they focused fully on sustainability. Regular meetings gradually established a stable long-term foundation for the project. All the parties involved continue to benefit from the best, most up-to-date knowledge about Mercedes-Benz spare parts for trucks.

Idea Concept Implementation Roll-out by STAR

- » New Mercedes-Benz product range: services and parts for selected truck models
- » 20 global markets
- » 4,800 dealership employees
- » 120 products (services and parts) or 88 parts and 36 service packages

TRUCKS

#Scrum: Agile project management

BOOST YOUR EFFICIENCY AND SUCCESS

Productive employees, quality results, happy clients.

» Simple structures, clearly defined roles, flexible processes: that's what Scrum is all about. It is one of the best-known agile methods of project and product management. STAR uses both classic and agile methods for its projects, and Scrum is one of them. We also intend to provide Scrum training to our clients and their employees and get them fit for the future. Our goal is to give them a competitive edge in an ever more dynamic market.

Scrum – an overview

Agile: "Able to move quickly and easily." Scrum projects are not planned down to the smallest detail. Instead, we maintain the flexibility to intervene: change direction, redistribute funds, optimize processes, you name it. We think in small intervals. Most of the time, they are four-week sprints. At the same time, we work in interdisciplinary teams, to achieve maximum synergies and to benefit from pooled expertise.

After each sprint, we pause to evaluate our interim results. This permits us to tweak the right parts, choose the best possible way and achieve optimal results, step by step. The benefits to our customers are twofold. Firstly, they are much more deeply

involved with the project, have a say in the product design, influence individual project stages and respond flexibly to changing conditions, internal and external. Secondly, the approach reduces planning error and keeps the project on track at all times.

STAR COOPERATION: a pioneer of agile project methods

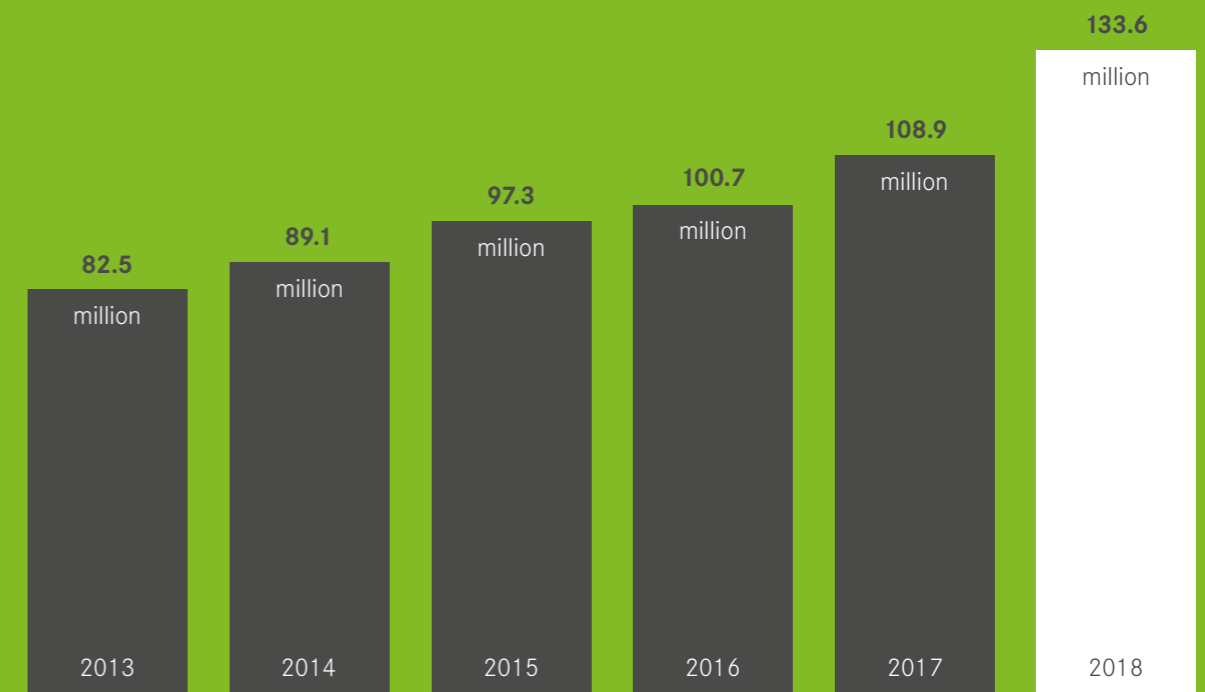
Project management is an essential pillar of the STAR concept. Experience has taught us: successful project management requires a well-balanced mixture of traditional and agile methods that is adapted to each client's individual requirements.

That's exactly what we do. A STAR project manager presents a toolkit of successful methods, combined to match the customer's situation optimally. Together, we decide which elements benefit from an agile approach and which are best served by traditional methods. The result: simple structures, clearly defined roles, flexible processes.

**» Think differently with STAR.
For efficiently managed projects! «**

STEADY PROGRESS. OUR SUCCESS.

Full speed ahead for innovation: the STARS are headed for success. Just look at our sales – on a constant upward trajectory.



133.6

EUR MILLION

Sales of the STAR COOPERATION Group
Total value = consolidated

	2017	2018	
STAR COOPERATION	24.1	35.1	Euro millionen
STAR SYSTEMS	6.1	6.6	Euro millionen
STAR ENGINEERING	14.2	14.2	Euro millionen
STAR ELECTRONICS	15.7	23.5	Euro millionen
STAR PUBLISHING	31.9	41.0	Euro millionen
STAR USA	13.6	14.2	Euro millionen
SENSE & IMAGE	1.6	2.2	Euro millionen
STAR DISTRIBUTION	21.9	24.2	Euro millionen
STAR CHINA	2.3	3.2	Euro millionen
A TEC INNOVATION	2.3	2.3	Euro millionen
OTHERS	6.1	6.6	Euro millionen

Please note: the figures for 2018 are quoted prior to the conclusion of the ongoing annual audit. The total value of the individual group companies was adjusted for intragroup sales to represent group sales (consolidation).

955

STARS

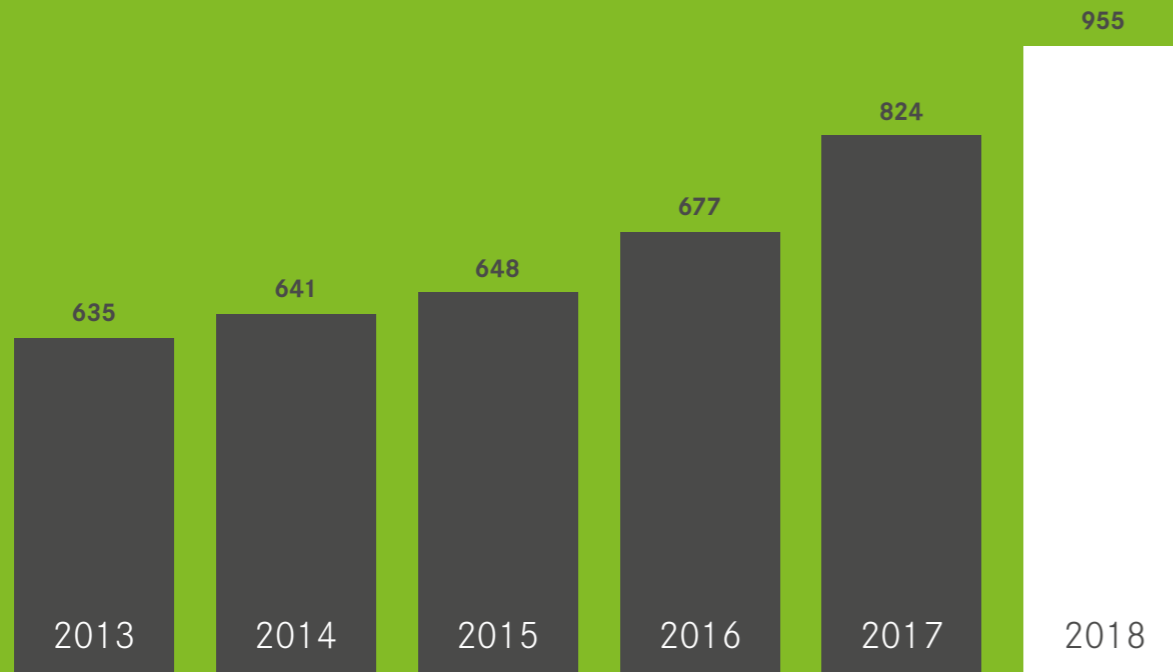
Total employees of the STAR COOPERATION Group

Employee figures exclude trainees, interns, working students, bachelor's students, postgraduate students, temporary workers and contractors. Figures: as at the end of the quoted year.

	2018	2017	
STAR COOPERATION	207	175	
STAR SYSTEMS	63	56	
STAR ENGINEERING	139	129	
STAR ELECTRONICS	136	103	
STAR PUBLISHING	182	162	
STAR USA	31	38	
SENSE & IMAGE	24	21	
STAR DISTRIBUTION	96	69	
STAR CHINA	49	45	
A TEC INNOVATION	24	23	
OTHER	4	3	

GROW. SHAPE THE FUTURE.

Our STARS combine their powers to work out the projects of the future. We stick together. Together, we are unique.



Teamwork makes the dream work

OUR GENETIC CODE

PROFESSIONAL | CONSIDERATE | COLLABORATIVE | INNOVATIVE

Those are the values that make up the STAR spirit. They are the glue that holds us together. Our genetic code, if you will. It helps us create innovative products and services on a whole new level. And shape the future.

Do you want to know what that means in specific terms? Let us show you:



MEDIA LOGISTICS CONSULTING **IT** ENGINEERING ELECTRONICS

SMART TECHNOLOGIES

FOR YOUR
SUCCESS

» **The STAR IT department reinvents artificial intelligence. Our STARS develop programs and realize complex IT projects. With plenty of expertise, sophisticated methods and ingenious products, they help you tap into new markets, improve your service processes and lower your costs permanently.**

Specialist skills, expertise and innovative technologies: take your digital business to the next level. Our IT experts have your back with their interdisciplinary knowledge, sophisticated methods and intelligent tools. For successful processes and projects.

From automotive to controlling and marketing, our IT STARS can show you how to optimize your systems and processes for maximum profits. They analyze im-

portant key indicators, use intelligent software to optimize business processes and help you stand out in the market.

Smart technologies, awareness of trends and innovative thinking helps our STARS excel. Perfectly connected and in tune with the right software and hardware. This is how we help your company succeed – today and forever.

**Take advantage
of technologies
of the future.**

THE FUTURE OF STOCKTAKING

MIS: mobile stocktaking for serial numbers

Record your stock digitally. Fast, easy, in real time.

» **It's the same old story, year after year: your serial-numbered warehouse is due for stocktaking. Especially in major logistics centers, this is a mammoth undertaking. Your employees laboriously enter each single serial number into the SAP Warehouse Management (SAP-WM).**

There must be a better way! Can't it be done... automatically? That's the challenge our client from the automotive industry presented us with. It was just the right project for our STAR experts. They combined their skills in intelligent warehousing and custom IT concepts to develop a software that supplements the SAP-WM and allows companies to **record serial numbers on mobile devices**. All they need to use this automatic, fast and user-friendly solution is a smartphone or a bar code. Stay on top of your stocktaking process.

The starting point

Our client uses serial numbers to track the entire life cycle of their products, from the production to the warehouse. They have entered each product ID into SAP-WM. This system allows all employees to identify individual products and locate them within the warehouse at any time. The structure works well – until it is time for stocktaking. Now, the employees have to enter even the smallest changes into SAP-WM manually. A laborious and expensive effort.

The goal

Scanning serial numbers to create an entry in the system automatically. Fast and efficiently.

MIS by STAR

STAR's new software MIS (Mobile Inventory) is a useful addition to SAP-WM. It allows companies to take stock of their serialized warehouses quickly and easily in a digital format. This is how it works: our

client connects the new software to their SAP-WM using the mobisys interface. Afterwards, their employees use bar code scanners or smartphones to record each serial number effortlessly.

The advantage

The software automatically detects the scanned serial number and compares the data with the SAP-WM in real time using the wireless internet connection. Whenever a product is removed or added, the system allocates a space for the new number. This eliminates the problem of typos and inaccurate entries.

The software can connect multiple warehouses, enabling all employees to keep an eye on the digital warehouse management data for all locations – even if multiple sites are taking stock at the same time.

» **Get your warehouse management fit for the future – with the MIS software by STAR.** «

Warehouse management

PREDICTIVE ANALYTICS

KNOW TODAY WHAT WILL HAPPEN TOMORROW

Business Intelligence by STAR

» **Intelligent management, progressive planning and proactive control of warehouse stock and the movement of goods** – along the entire supply chain. That's what STAR Business Intelligence is all about. It allows logistics service providers to prepare their data management system for the future, switching from inefficient, manual data recording practices to **predictive analytics**.

Supply chain monitoring with Data Analytics – a progressive approach to analyzing your warehouse stock and the movement of goods.

Our client, a logistics service provider, wanted to take advantage of this system. Their challenge: delivering the right amount of onboard literature to the right place and on time, working with different variations for multiple car manufacturers. Every day, their company commissions plans and dispatches a wide range of items. They have to keep a keen eye on all related data, from the warehouse stock to the movement of the products, to prevent bottlenecks.

Reporting and analyzing large volumes of data: just what our STARS like to do.

The starting point: Our client used a merchandise management system to record their movement of goods, warehouse stock and outstanding invoices. They evaluated the data with Excel. Employees entered missing details, such as prices, manually; the reporting system was limited to a small number of basic indicators.

The goal: A predictive analytics solution that takes all data within a model into consideration, capturing past and planned requirements alike. It allows our client to plan their warehouse stock ahead, manage it proactively and optimize their capital commitment.

Automotive Supply Chain Monitoring by STAR:

Using the business intelligence software Cubeware, our STARS have developed a solution that helps our client report past indicators and predict the future with integrated predictive analytics. It is miles ahead of the Excel-based reporting system our client used to run.

Predictive analytics by STAR – advantages for logistics service providers:

- » **Pooling large amounts of data:** a central database (data warehouse) reliably pools data from different sources and backs it up on a daily basis. Automatically.
- » **Monitoring** of orders in the purchasing department.
- » **Daily, detailed key indicator analyses:** our client can access all gathered data promptly and respond to changes quickly and flexibly.

» **Transparent warehouse stock**

predictive analytics highlights future changes in warehouse stock. The purchasing department can see at once whether they need to take action to prevent bottlenecks.

» **Reliable data:** a quality report documents all items that are yet to be evaluated. Another analysis highlights open invoice items. A monitoring system helps our client calculate prices by calculating the profitability of the individual products. Every day.

» **Control over** compliance with crucial service level agreements on the part of the logistics management and controlling service.

» **Warehouse stock evaluation** for the management and the controlling team, ensuring clearer structures in the warehouse, higher-quality stock and optimized storekeeping.

» **Profit from transparent processes –
with intelligent data analyses by STAR.** «

TEST AUTOMATION

Fewer errors – happier customers

» No matter your industry, stable software is the backbone of your business success. Our client knows this very well: they use a special software suite for their entire contract management. To prevent problems during audits, this software must be up to date at all times.

Software testing by STAR COOPERATION

Test software rapidly and automatically. For the best quality.

Our client carried out regular tests to verify the suitability of their software. They did this manually – a laborious process that kept special experts busy for weeks, even months. It took a lot of time and resources.

There had to be an easier, faster way that was less prone to error! Our STAR IT experts had a clear answer: test automation provides reliable results in no time flat. It is powered by a wealth of IT expertise. Especially in the highly sophisticated field

of GUI test automation, it is no mean feat. In-depth experience is indispensable. A close partnership with the developers also helps.

STAR test automation: faster testing

Our client benefits from a system that tests their software fast, economically and fully automatically. It was developed and implemented by our very own experts, all from a single source.

The advantage: Our client gets to work with a STAR solution that is 100% reliable. They detect errors faster and optimize their software accordingly, using the best possible program at all times. For the best possible quality.

Test automation by STAR:
Take advantage of
the very best results.

IT meets LOGISTICS

SAP WAREHOUSE MANAGEMENT BY STAR

Fast, flexible, transparent Magdeburg logistics center

» Our STARS have built a state-of-the-art logistics center for BMW, Daimler and MAN from scratch in Magdeburg. It spans 6,300 square meters and houses more than 50,000 media products. **The trick behind it:** all processes are 100% digital! Paper documentation is a thing of the past. This is an important step towards the future! **SAP Warehouse Management by STAR** has made it possible. The digitally organized, **SAP-based warehousing and logistics module** captures and automates all process steps. For efficient warehouse management that is transparent, economical and flexible.

The starting point: Our client supplies advertising materials to their partners all over the world. This requires top quality, fast deliveries and large product volumes. A unique IT solution was needed to help our client meet these high standards.

The goal: Our client needed to transition from an outdated, paper-based warehousing system with complicated Excel tables to fully digital logistics management. It was a major change request that needed to be implemented in a very short time. Perfect for the bright minds of our IT STARS.

The solution: SAP Warehouse Management by STAR. Using the sophisticated IT environment, the staff in Magdeburg can handle all logistics processes fully digitally. They control them from mobile devices to prevent errors and ensure timely completion. The SAP model is highly flexible and can be adapted to any new client and their individual challenges. This is what the future of successful logistics looks like.

Milestone Magdeburg: turn to page 27 to find out more about our fully digitalized STAR LOGISTICS site.

» Futuristic synergies:
fully digitized warehouse
processes with IT. «

PERFECTION FROM START TO SERIAL PRODUCTION

MEDIA LOGISTICS CONSULTING IT **ENGINEERING** ELECTRONICS

Advise. Develop. Test. Produce.

Our **ENGINEERING STARS** advise, develop, test and produce – along your entire value creation chain. They bring your complex projects to a successful conclusion. And we offer you our specialized services: intelligent and digital.

Our STARS efficiently implement your projects and improve your production processes. And we offer you our specialized engineering services, helping you save time and money without compromising on quality.

We want you to succeed. That's why we only provide you with products and services that work perfectly. Our experts from the STAR ENGINEERING department detect the latest trends so that you can keep ahead of your competition. They contribute their own advanced skills to your complex projects.

With a pool of expertise and a unique 360-degree perspective, we implement your technical innovations, from the initial idea to the final production.

And we always keep the full life cycle of your projects in mind – for tried-and-tested, marketable, profitable technologies. So you can boost your sales even further.

What happens when our STARS and their external partners merge their creativity and ingenuity? We keep turning the digital wheel and passing on unique and valuable knowledge. That is exactly what our EXPERT MEET-UP on aftermarket services was all about. In October 2018, our STARS from the ENGINEERING, CONSULTING and IT departments got together with guest speakers in Sindelfinden to present the latest aftermarket trends. Their brief specialist lectures provided plenty of exciting food for thought.

STAR AFTERMARKET SERVICES **EXPERT MEET-UP**

The EXPERT MEET-UP brings together unique expertise, curious listeners, innovative concepts and successful case studies to shape the future of aftermarket services.

360-DEGREE INSIGHTS: TALKS, NETWORKING AND FASCINATING CASE STUDIES

The speakers discussed ways for companies to stay present in their clients' lives to inspire enthusiasm and loyalty. They also presented pioneering digital solutions. Topics included:

- » How KI technology influences and optimizes the **pricing of spare parts** in the automotive industry.
- » How companies take daring measures to break out of the established service monotony to offer their customers new, lucrative **service concepts**.
- » How **virtual reality** influences actual reality – and how companies can use this for training purposes.
- » How **IT** can optimize products and processes in service departments by powering new services that focus on client benefits.
- » How **recommendation** approaches can work offline and how companies can create individualized services based on recommendations and intelligent algorithms.
- » How interesting services and additional expertise are helping an **online store** for **spare parts** in mechanical and plant engineering succeed.
- » How **AI and machine learning** bring in systematic, structured customer reviews and sustainably improve customer centricity.

MANUALS REINVENTED

The future of car repairs

The future of repair manuals

Our ENGINEERING stars have taken the topic of manuals and reinvented it completely with engaging, animated videos that guide users through highly complex car repair procedures.

The clever videos help dealership staff with complicated maintenance tasks. Live and easy to understand. The films simply run in the background while the mechanics go about their work. If they hit a wall, they can simply skip to the right part of the video without thumbing through pages and pages of convoluted documents.

The **animated videos for a major car manufacturer from southern Germany** are the brainchild of our brilliant ENGINEERING STARS and their technical expertise: they have analyzed and defined every single step of each repair procedure before creating the scripts and animations. **Everything from a single source.** This is how our STARS get to the heart of the most complex repair processes and turn customer service into a genuine experience. And there's more: our experts need nothing other than the manufacturer's vehicle construction details to render the cars perfectly in 3D.

The mechanics can even view the videos through VR goggles. This is the future of car repairs: simple, fast and progressive. **Welcome to the future!**

**Saving time
and money without
compromising
on quality:**

**STARENGINEERING
Services**

Modern end-to-end communication

TEST MANAGEMENT

Modern diagnostics with STAR COOPERATION

**Our STARS take care
of the future – today.**

The way things are today: The display on your car dashboard is telling you that something is wrong. All you can do is take your vehicle to the next auto repair shop, where the mechanics attach a diagnostic device and troubleshoot. They may need to update the software that operates the control units. Once the error is rectified, you can get back on the road safely.

In the future, that scenario will be a thing of the past: In the era of the internet of things, your car will be connected with the manufacturer through a network. If anything malfunctions, the software will simply update itself. Just like the apps on your smartphone do. And everything keeps running perfectly.

Sounds fantastic, doesn't it? But what about security? To keep your vehicle safe from third-party manipulation in the future, a whole new end-to-end IT infrastructure is needed. That's exactly where our STARS come in. **They develop concepts and test system chains.** Their work ensures the **safe, error-free communication between your vehicle and the backend systems.** With intelligent test management systems, our experts are already busy making sure that all data communication will go off without a hitch once the future comes knocking.

This is how the planning and testing phases work: First, our experts **test the various applications and scenarios.** They immediately report to our client if they encounter any errors, and also provide them with specialist, technical advice. Pooling their expertise, they ensure that the future over-the-air processes in the vehicle can complement and partially replace current repair shop processes.

STARENGINEERING:

Unparalleled expertise in the field of vehicular information security.

MEDIA LOGISTICS CONSULTING IT ENGINEERING **ELECTRONICS**

TOOLS AND SERVICES FOR E/E SYSTEMS

Cutting-edge tech for any application.

The future of mobility: the ELECTRONICS STARS develop, build and produce outstanding solutions for complex vehicle electronics. Our experts can assist you in a wide variety of different projects – from automotive E/E systems and bus systems to measurement technology and even vehicle modification, all tailored to your wishes. With sophisticated tools and services from a single source.

As specialists in automotive electronics, we offer expert consulting services for your concepts. We provide custom-fit hardware and software. We also offer you standard and custom tools for accurate measurement and simulation technology, sophisticated control technology, sustainable energy supply and efficient energy management.

Take advantage of our high-tech automotive workshops and mechatronic services at all stages of the process, including the production of prototypes. Always close by, always reliable and flexible.

**Rest-bus simulation and gateway configuration:
quickly, easily, automatically.**

THE FUTURE OF NETWORK TECHNOLOGY



FlexDevice-S

FlexDevice-S

Our multi-functional tool for beginners

The starting point

More and more vehicle components are being connected with each other to facilitate the exchange of valuable data. Manufacturers face the challenge of integrating innovative technologies, including autonomous driving systems, into their existing network technology for testing purposes. These enormously complex electronic devices require the right tools, which allow manufacturers to set up their gateway configurations and rest-bus simulations. Simply, quickly, automatically.

Challenge

That was the request brought to us by our client. Their company already uses the powerful STAR FlexDevice products and configures them using the FlexConfig RBS software. Now, they had their eye on our latest product, the FlexDevice-S.

STAR FlexDevice-S

The latest multi-functional bus control unit configures gateways and rest-bus simulations for the LIN, CAN-HS and CAN-F bus systems and for FlexRay and automotive Ethernet. It does this in the same way as the larger, more flexible devices: autonomously! Our client only needs to connect it to a power source and it is ready to go.

The client's advantage

The incredibly low-priced beginner's device also comes with optional integrated hardware (for FlexRay and Automotive Ethernet). Our client can simply upgrade it as required without replacing any of the hardware. The FlexDevice-S is even compatible with the FlexConfig RBS software, allowing our client to migrate projects from one device to the other. At the same time, the signals sent by the gateway or the rest-bus simulation are easily controlled through a manipulation editor.

**» Making automotive electronics fit for the future:
with FlexConfig RBS and FlexDevice-S. «**

AUTONOMOUS DRIVING

Working today on tomorrow's technologies.

What if... you never had to spend valuable time looking for parking, because your vehicle simply finds it for you? What if your rental car picked you up at your home? Now that micro-processor systems, sensors and actuators actively work together in vehicles, visions like these could soon be reality. Autonomous driving is the future. Our client approached us with the visionary project of making their electric car fit for autonomous driving. It was a perfect project for the tech enthusiasts in our ELECTRONICS department.

STAR ELECTRONICS: ahead of the curve in autonomous driving.

The challenge: Our client needs new control units for their existing automobile to make it capable of autonomous driving in the first place. That was a tricky task: the "old" communication systems were incompatible with the new ones. But our STAR experts knew just what to do. Our Göppingen site specializes in innovative technologies and individual tools to overcome challenges just like the one our client faced.

The solution: The physical interface in the STAR FlexDevice range. It was developed by the bright minds from the STAR ELECTRONICS department to meet our client's specific needs. The interface connects the various systems with each other and configures them.

The advantage: With the right STAR tools, our client can interconnect their complex vehicle technologies in the best possible way – a big step towards autonomous driving.

The FlexDevice family: the future of mobility.

Spotlight on autonomous driving

Autonomous driving will shape the future of mobility. It comes with many advantages – lower CO₂ emissions and fewer accidents among them.

Finding parking

is the car's job after the "driver" has got out. **You save time.**

Autonomous vehicles

can park outside of city centers, **freeing up parking space.**

Customers

order their vehicles to their preferred transfer location, **making car-sharing more effective.**

Technology never tires,

nor does it make mistakes: **driving becomes safer.**

Self-driving cars

navigate traffic more effectively and are better at steady, anticipatory driving than humans are: **they save energy and reduce CO₂ emissions.**

STAR has the expertise you need to ride the wave of autonomous driving in pole position.

The FlexDevice family: your path to the future of mobility

We're passionate about complex automotive electronics. Our STARS from the ELECTRONICS department develop custom-tailored tools and services for automotive E/E systems in any voltage and power range, for any bus system. Forward-thinking and efficient.

We think beyond technology. Our STAR FlexDevice product family, a well-established range in the automotive sector, proves it. Renowned vehicle manufacturers and automotive suppliers rely on our FlexConfig RBS software, the most powerful configuration tool on the market. Our toolchain (FlexConfig RBS and the FlexDevices) allows you to

create complex rest-bus simulations and gateways – quickly, easily and partially automated.

We offer high-end (FlexDevice-L and L²), mid-range (FlexDevice-M) and affordable beginner's devices (FlexDevice-S) for less complex bus systems such as LIN and CAN. The FlexDevice product family is made to meet the needs of our target groups. On top of our standardized devices, we offer individual, special tools for metrology, simulations, control technology, energy supply and energy management.

Take your mobility to the fast lane – with innovative ideas and advanced technologies by STAR.



ELECTRONICS: full speed ahead

THE FUTURE OF TECHNOLOGY

Innovative tools for all applications.

Consolidated expertise and a passion for modern technology: in our high-tech workshops, our ELECTRONICS STARS develop digital tools for complex vehicle electronics. They look back on an incredibly successful business year.

Continue reading to learn about our greatest success stories – for us and our customers.

Solid figures

Our ELECTRONICS experts are set for success. They are proud of the sales they generated in 2018: profits jumped by more than EUR 8 million to EUR 23 million. That really says it all.

Ambitious projects

Our ELECTRONICS department has tackled a lot of amazing projects. With great success:

- » The future of mobility: **prototype vehicles for autonomous driving** are being trialled all over the world.
- » Appreciated globally: the **FlexDevice range** with FlexConfig RBS has become **standard equipment** for test rigs.
- » **Growth in the FlexDevice range:** the new interface card boosts the performance of the devices for rest-bus simulations and gateways.
- » Sold out before series production even started: **our FlexDevice-S, the powerful and affordable starter device** for less complex bus systems.

Our goal: happy customers

Expand and modernize your products. Add high-quality units to your portfolio at incredibly affordable prices. The STAR ELECTRONICS department has your back.

PERFECTLY PRESENTED

Expertise to make your trade fair booth a hit:
we design, construct and produce your exhibits for you.

Trade fair exhibits by STAR

Our ELECTRONICS and MEDIA STARS and the brilliant team of our subsidiary atec innovation will set the stage for your perfect trade fair presentation. They **plan and design exhibits** that match your targets and wishes to a tee. Perfectly presented: all you need for a spectacular show.

Whether you need a simple stall or a complex construction: our specialists use **cutting-edge 3D CAD software** to construct your exhibit before they produce it, assemble it, switch everything on and put it through its paces. You get affordable exhibits within no time flat, and your target group gets to be stunned by your impressive presentation.

A new lease on life for an old truck engine

Do you want to leave your trade fair visitors speechless? So did our client **MS Motorservice International GmbH**. One of its business segments is the sale of spare parts for truck engine repairs.

Creativity meets technology – a perfect project for the experts of atec innovation. Just a little later, their exhibit attracted admiring looks at the trade fair: an original truck engine, one half of it old and rusty, the other half completely refurbished with brand-new parts. The inventive minds of atec innovation had milled the engine in half and expertly installed the new components. The result:

a perfectly presented product.

Innovative, precise, reliable and from one source: trade fair exhibits by STAR!

FAIR and SQUARE

Individual vehicle bodies –
developed and produced in the same house.

8,000 organic food products from more than 600 authentic producers, delivered to your doorstep fresh and fast: that's what modern shopping is all about. The fan base of our client Farmy.ch keeps expanding, and that's no surprise: who doesn't love the idea of an online farm store for regional, organic products? Our STARS

have contributed their brilliant minds and skillful hands to make sure the Farmy products reach their buyers in an environmentally friendly way. The sophisticated vehicle bodies of our subsidiary atec innovation ensure that the drivers load, transport and deliver the goods without a hitch. In the city as well as the countryside.

The starting point: Farmy.ch sends hand-picked products from its neighboring farmers to the doorstep of its enthusiastic customers. They do this as ecologically and sustainably as possible. Key word: green mobility. That's why Farmy.ch only uses electric delivery vehicles. The challenge: Farmy.ch started out with nothing but an electrically powered chassis. That was not enough to transport fresh food. They needed a solid body for their vehicle, and atec innovation was happy to help.

The goal: Developing, constructing and producing a practical vehicle body that could master urban and countryside driving alike.

Innovation workshops powered by atec innovation: The Farmy.ch delivery vans are already touring Switzerland with their practical and sophisticated new bodies. All components are developed and produced by the experts of atec innovation, from the initial idea to the final conversion. Everything from a single source. The printed vehicle bodies all boast the same attractive design and a whole lot of **handy functions**. The larger vans for rural areas have **extra storage space** for plenty of boxes filled with food. Loading them is simple thanks to two **folding doors** in the back of the lightweight van. A **sliding door on the outside of the van** helps the driver access the goods easily. And what about the city? The driver can use the **shutters on the side of the van** to get to the content from the outside. This function is especially handy in tight parking spaces.

Electric vans for Farmy.ch

Concept and implementation by atec innovation

Don't settle for anything less than vehicle bodies that match your own requirements perfectly.

To see what that looks like in practice, simply scan the QR code and watch the video!



Our client benefits from a lot of other clever details, too: each vehicle is equipped with a **sound module** to ensure that the Farmy.ch drivers can be heard as well as seen. When the van enters a street, the residents instantly hear its familiar tune. This boosts the **recall value** of our client's brand. And the van that our STARS have constructed and produced reflects the company's motto all over: **made with love and care.**

A word with Esslingen University of Applied Sciences

SCIENCE & ECONOMY

FUTURE

Together, we achieve more: that's why Esslingen University of Applied Sciences works with STAR.

A word with the deans: in our interview, Prof. Friedrich Gutfleisch from the Faculty of Mechatronics and Prof. Christian Cseh from the Faculty of Industrial Engineering at Esslingen University of Applied Sciences tell us about the future of teaching.

The guiding principle of your university is "For people and technology." You work closely with several regional companies. What does STAR COOPERATION contribute to your work?

Prof. Friedrich Gutfleisch: Industry 4.0 and the digital transformation come with immense challenges for universities and companies. We want to prepare our students for their practical work, so we are establishing an even

closer link between three disciplines: technology, economics and social studies. STAR COOPERATION contributes a wealth of practical knowledge about future projects, real case studies and the latest research to our teaching. This helps us give our students the best theoretical and practical foundation for their later life. They will be well prepared to enter the industry and economy.

Prof. Christian Cseh: STAR combines rare and exciting disciplines, such as electromobility, autonomous driving and artificial intelligence. Their specialisms match our degree courses perfectly: "Smart Factory", "E-Mobility Plus", "Energy Systems and Energy Management." Some of them are dual courses. STAR keeps us up to date and at the cutting edge of technology. They make our university fit for the future.



How has your partnership with STAR been so far?

Prof. Friedrich Gutfleisch: STAR experts come to our university to deliver guest talks in their disciplines to our young students. They also offer weekly lectures and block seminars. We don't have a lot of rules – all lecturers are free to make their own teaching decisions. They are responsible for their own examinations, too. This allows them to teach in very practical ways and work together.

How have the students responded to your partnership?

Prof. Friedrich Gutfleisch: The students are very happy with our partnership. The STAR experts share specialist knowledge, experiences and practical tips with them. This is an important part of our profile, which consists of research, teaching, professional development, networking and internationalization. We can't help but notice again and again: doing something is more interesting than learning about it in theory. Our students flourish when they get to do hands-on work.

Prof. Christian Cseh

“Working and learning at the same time: flexible course models are the future.”

Prof. Christian Cseh: Our students also greatly benefit from the opportunity to experience companies like STAR within a university context. They get to network and make important contacts for their later professional life. Some of them also write their dissertations or spend their practical semesters there. Flexible course models that allow students to study and work at the same time are the future. All involved parties benefit. After all, the STAR has an opportunity to present itself to our students and potential high-flyers as an attractive employer.

Attracting future talent is an important task. Do partnerships between universities and industry players hold recruiting opportunities?

Prof. Christian Cseh: Definitely. The fact is that traditional recruiting no longer works. Companies must start their scouting efforts early on to attract young professionals and keep them interested. If you start in the sixth semester, you are already too late. At that point, the best students will have found their future path already.

STAR COOPERATION has recognized that. Our successful partnership with Esslingen University of Applied Sciences helps us attract new, talented employees. We are shaping the future together.

THE POWER OF SYNERGY

MEDIA

Present your media products at their best, address your target group and excite your customers. Across all channels.

IT

Successfully realize your IT projects, reduce your expenses and tap into new markets – now and forever.

Our innovative mechatronics STARS help you develop your creative product ideas, from the first spark to series maturity.

INNOVATION WORKSHOP

ENGINEERING

Consult, develop, test, produce: realize complex technical projects rapidly and successfully.

LOGISTICS

Organize, coordinate and manage your processes with intelligent technologies. Along the entire supply chain.

Master the digital transformation of your company and optimize your sales and aftermarket business.

CONSULTING

We create unique system solutions.

Take advantage of the right tools for sophisticated vehicle electronics: from E/E systems and measuring technology to entire vehicle conversions.

ELECTRONICS

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