50 YEARS OF TRUMPF USA

Company Profile 2018/19
Our mission is to advance production technology, making it not only digitally connected, but also even more economical, precise and future-proof. We want to make manufacturing – including its upstream and downstream processes – more efficient. In doing so, we will help build the industrial world of tomorrow. We are the market and technology leader in machine tools and lasers for industrial manufacturing, and are shaping almost every sector with our innovations. Our software solutions are paving the way for the smart factory, and we are facilitating high-tech processes in industrial electronics.

**TRUMPF GROUP**

**KEY FIGURES**

<table>
<thead>
<tr>
<th></th>
<th>2017/18</th>
<th>2018/19</th>
<th>Change from 2017/18 in percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in € millions</td>
<td>3,565.6</td>
<td>3,784.0</td>
<td><strong>+6.1</strong></td>
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<tr>
<td><strong>Orders received</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>in € millions</td>
<td>3,799.9</td>
<td>3,680.8</td>
<td><strong>–3.1</strong></td>
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<tr>
<td><strong>EBIT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in € millions</td>
<td>534.7</td>
<td>349.3</td>
<td><strong>–34.7</strong></td>
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<tr>
<td><strong>EBIT margin</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in percent</td>
<td>15.0</td>
<td>9.2</td>
<td>–</td>
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<tr>
<td><strong>Expenditure on fixed assets</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>in € millions</td>
<td>216.4</td>
<td>288.0</td>
<td><strong>+33.3</strong></td>
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<tr>
<td><strong>Expenditure on research and development</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in € millions</td>
<td>343.1</td>
<td>395.8</td>
<td><strong>+15.4</strong></td>
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<tr>
<td><strong>Balance sheet total</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>in € millions</td>
<td>3,469.8</td>
<td>3,939.2</td>
<td><strong>+13.5</strong></td>
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<tr>
<td><strong>Equity</strong></td>
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<td></td>
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<tr>
<td>in € millions</td>
<td>1,876.5</td>
<td>2,023.1</td>
<td><strong>+7.8</strong></td>
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<tr>
<td><strong>Equity ratio</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>in percent</td>
<td>54.1</td>
<td>51.4</td>
<td>–</td>
</tr>
<tr>
<td><strong>Economic equity</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in € millions</td>
<td>2,167.7</td>
<td>2,210.6</td>
<td><strong>+2.0</strong></td>
</tr>
<tr>
<td><strong>Economic equity ratio</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in percent</td>
<td>62.5</td>
<td>56.1</td>
<td>–</td>
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<tr>
<td><strong>Employees on June 30</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>number</td>
<td>13,420</td>
<td>14,490</td>
<td><strong>+8.0</strong></td>
</tr>
</tbody>
</table>

* Equity capital plus long-term loans from partners
Our mission is to advance production technology, making it not only digitally connected, but also even more economical, precise and future-proof. We want to make manufacturing – including its upstream and downstream processes – more efficient. In doing so, we will help build the industrial world of tomorrow. We are the market and technology leader in machine tools and lasers for industrial manufacturing, and are shaping almost every sector with our innovations. Our software solutions are paving the way for the smart factory, and we are facilitating high-tech processes in industrial electronics.
1969 was the year Neil Armstrong first set foot on the moon. We all remember his famous phrase: “That’s one small step for a man, one giant leap for mankind.”

1969 was also the year of Woodstock, the most famous music festival in history. Bob Dylan’s song “The Times They Are a-Changin’” has come to symbolize that era of youth protest. “And you better start swimmin’, Or you’ll sink like a stone” – two lines that could just as well apply to industrial change in the era of digital business models, of trade disputes, or to industrial answers on the increasing demand for resources worldwide.

Lastly, 1969 was the year in which TRUMPF took the brave step of crossing the Atlantic and founding its first US subsidiary. Following the TRUMPF subsidiary in Switzerland, this was the second time that my father Berthold Leibinger, who passed away in October 2018, proved he possessed not only the courage but also the entrepreneurial foresight to internationalize our company.

In view of the values our two countries share and our close friendship – something we fought for back then and should continue to fight for today – this step turned out to be absolutely right.

Over the past 50 years, the US has not only been a permanent source of innovations for TRUMPF. With sales of 547 million euros in the past 2018/19 fiscal year, the US has again been the second-largest single market after Germany. And even more importantly, in view of the deteriorating economic situation that we’ve been acutely aware of ever since the fall of 2018, the US is one of the few markets to have largely bucked the current negative trend in business activity.

I wish you a lot of fun as you leaf through all the texts and photos we’ve collected to illustrate 50 years of TRUMPF history in the United States of America!
### Additive Manufacturing of Complex Parts

Additive manufacturing simplifies the task of producing complex parts. TruPrint systems from TRUMPF are used in many different sectors, including aircraft manufacturing, medical technology, and the tool and mold making industry. TRUMPF offers expertise in both the key metal printing techniques: laser metal fusion (LMF) and laser metal deposition (LMD). This flexibility allows TRUMPF to offer the best solution for each customer's needs.

### Business Fields

#### High-Power Laser Systems for EUV Lithography

Working in close collaboration with ASML – the world’s leading manufacturer of lithography systems – and optics specialist ZEISS, TRUMPF has developed a unique CO\textsubscript{2} laser system. High-power laser amplifiers from TRUMPF play a key role in the fabrication of ultra-powerful microchips. They help generate a bright plasma that supplies the extreme ultraviolet (EUV) radiation required for wafer exposure.

#### Additive Manufacturing

Additive manufacturing, or AM, comes in many forms. At TRUMPF, we offer the most flexible range of products and services in the market. We develop our own laser diodes for photonics and digital products. Our lasers are powerful, reliable, and efficient. We also offer sales financing from our own universal bank. TRUMPF Bank operates in nine European countries. In other core markets – such as the US and China – TRUMPF works together with cooperation partners.

### Photonic Components

#### Laser Diodes for Photonics and Digital Products

The laser diodes produced by TRUMPF's new business field, TRUMPF Photonic Components, are used in smartphones, in digital data transfer applications and in sensors for autonomous driving. Over half a billion cell phones worldwide are equipped with this laser diode technology.

#### Financial Services

When TRUMPF sends a machine quote to a customer, it also includes information on sales financing or leasing options. The company's custom financing and lending solutions are based on solid financial expertise and a thorough knowledge of the mechanical engineering sector. The TRUMPF Bank operates in nine European countries. In other core markets – such as the US and China – TRUMPF works together with cooperation partners.
MACHINE TOOLS

Making machine tools for the flexible processing of sheet metal and tubes is the biggest part of TRUMPF’s business. Our portfolio includes systems for bending, punching, and combined punch and laser processing as well as laser cutting and laser welding applications. We offer machines and automation solutions that are tailored to our customers’ needs, as well as consulting, finance and many other services that help them produce high-quality products reliably and economically. Our software solutions are designed to support every aspect of their sheet metal business – from design engineering to fully-fledged production control.

BUSINESS DIVISIONS

LASER TECHNOLOGY

From cutting and welding to marking and surface finishing, we have the right laser and the right technology for every industrial application. We can provide our customers with the tools they need to achieve innovative yet cost-efficient production processes. From macro to micro and nano scales, we approach our customers’ needs on an individual basis, addressing the challenges they face with system solutions, software tools, application expertise and consulting services.

Our range of electronics products includes process power supplies for high-tech applications. Our generators convert electricity into whatever form our customers require for induction heating, plasma applications, and laser excitation, ensuring the right frequency and output in each case.
TRUMPF IS A FAMILY-OWNED BUSINESS

We are a family-owned company and see this not only as a type of business, but also as a commitment to everyone who works for our company. Our strategic focus is long-term. Our business decisions are always guided by what impact they have on our employees and society.

Our corporate culture is characterized by respect, camaraderie, and openness with each other. Our creative drive shines through across the entire company with our innovative products and services, a working environment with a great deal of freedom and responsibility, and packages and benefits that are designed to offer our employees flexibility and openness.

Number of employees

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Germany</th>
<th>Abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLUS</strong></td>
<td><strong>8.0</strong></td>
<td><strong>9.6</strong></td>
<td><strong>6.3</strong></td>
</tr>
<tr>
<td>PERCENT</td>
<td>PERCENT</td>
<td>PERCENT</td>
<td>PERCENT</td>
</tr>
<tr>
<td><strong>14,490</strong></td>
<td><strong>7,427</strong></td>
<td><strong>7,063</strong></td>
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</table>
TRUMPF INVESTS IN INNOVATIONS

Our central Research and Development department takes a comprehensive, long-term approach to managing technology and innovation, one that goes beyond the mere implementation of specific innovation projects in the divisions’ R&D units. By forging close ties with technology centers around the world, we can gain timely insights into high-tech trends of relevance to us.

TRUMPF once again increased its investments in research and development (R&D) in fiscal 2018/19, with expenditure rising by 15.4 percent to €396 million (previous year €343 million). At 10.5 percent, the ratio of R&D expenditure to sales was again very high (previous year 9.6 percent). The number of employees working on new products for TRUMPF climbed by 5.7 percent to 2,206 (previous year 2,087).

Research and Development

Our ratio of R&D expenditure to sales is at a very high level of 10.5 percent.

Increase in R&D expenditure in fiscal year 2018/2019:

+15.4%
LOCATIONS

GERMANY 15

- Ditzingen [Headquarters]
- Gerlingen
- Hettingen
- Aachen
- Berlin
- Freiburg
- Herzogenrath
- Karlsruhe
- Neukirch
- Schramberg
- Stuttgart
- Tamm
- Teningen
- Ulm
- Unterföhring

EUROPE 29

- Sofia, Bulgaria
- Haguenau, France
- Le Bourget du Lac, France
- Paris, France
- Luton, Great Britain
- Rugby, Great Britain
- Southampton, Great Britain
- Milan, Italy
- Turin, Italy
- Vicenza, Italy
- Zagreb, Croatia
- Eindhoven, Netherlands
- Hengelo, Netherlands
- Spankeren, Netherlands
- Pasching, Austria
- Warsaw, Poland
- Zielonka, Poland
- Lisbon, Portugal
- Bucharest, Romania
- Moscow, Russia
- Alingsäs, Sweden
- Baar, Switzerland
- Grüschi, Switzerland
- Košice, Slovakia
- Madrid, Spain
- Liberec, Czech Republic
- Prague, Czech Republic
- Istanbul, Turkey
- Budapest, Hungary

(50 YEARS)
1969
2019

A story about technology, pioneering spirit – and being close to our customers in the land of unlimited opportunity.
Chicago, Illinois, 2017: A light and airy new building, with panoramic windows, high wooden walls, and a steel ceiling. Unmanned transportation vehicles automatically find their way from the high-bay storage and retrieval center to the laser cutting machines and on to the bending machines. Data is exchanged wirelessly, and the machines share information. The Control Center is manned by Megan Baumgartner, running the fully automated factory from her computer screen. Here we have Industry 4.0 at its best – embedded in inspiring architecture featuring steel beams and ‘flamed wood’, all of it designed by the German-American architectural firm of Barkow Leibinger.

More than 500 guests arrive for the opening ceremony: customers, employees, public officials and even journalists from Germany. Standing at the lectern, Nicola Leibinger-Kammüller, President and Chairwoman of the TRUMPF Group Management Board, emphasizes the great significance of the US market to TRUMPF – as well as the importance of free and fair world trade. Just before her speech, Peter Höcklin, head of TRUMPF’s US subsidiary, extols the benefits of end-to-end digitization. Other speakers this evening were the architect Frank Barkow and Professor David Miller from Princeton University.

Welcome to the new TRUMPF Smart Factory!

In the middle of the Rust Belt, at the heart of the American mechanical engineering

01  THE EVENT OF THE CENTURY  On July 21, 1969, Neil Armstrong and Buzz Aldrin become the first men to set foot on the moon. They stay there for a total of 21 hours and 36 minutes. Worldwide, more than 500 million people watch the moon landing on TV. 

02  ROAD TRIP  TRUMPF presents a selection of its electronic tools to potential US customers – inside a VW bus – at the ASTME trade show in Cleveland in 1965.
industry, a completely networked factory has been created that still seems totally futuristic for many manufacturing companies and machine builders. For TRUMPF it is a reality – and a flagship for the TRUMPF Group, which has more than 70 subsidiaries worldwide. A common question among the guests is why the company decided to locate its Smart Factory in this region around Chicago, of all places. Could the Rust Belt be a geographical symbol for the future of production technology? And why did Berthold Leibinger venture into a suburban area half a century ago when he was looking for a location to distribute his machine tools in the US? Back in 1969, why did he found his company’s second foreign subsidiary in the idyllic town of Farmington, Connecticut – rather than at the heart of the largest industrial region of the United States?

TIMES OF TURMOIL The answer to that question takes us back to the spring of 1968. One year before NASA and Neil Armstrong gave us the event of the century with the first manned moon landing, Berthold Leibinger traveled to the United States to find a suitable site for his US subsidiary. Until then, the COSA Corporation, located in the Chrysler Building in Manhattan, had been distributing TRUMPF machines in the US – with moderate success. Leibinger wanted to found a local subsidiary in the country itself, to better serve the market. This is because the US had always been a

03 _ AT WOODSTOCK WITH JIMI The hippie movement reaches its peak in the US in 1969: around 400,000 people celebrate with Jimi Hendrix and Janis Joplin at the music festival in Woodstock. Rock music evolves from sub culture into pop culture.

04 _ TRADE SHOWS, 70S-STYLE TRUMPF starts to exhibit its products at trade shows more frequently to increase recognition in the US market. At the SMC Show in San Mateo in 1973, the focus is on electronic tools once again.
place of longing for him – from a personal as well as an entrepreneurial perspective. In the late 1950s he had worked as a design engineer for the machine tool manufacturer Cincinnati Milling Machine Company, and the country and the people meant a lot to him. His first daughter Nicola Leibinger-Kammüller was born in Wilmington, Ohio in 1959. At that time the US machine tool industry ranked as the most innovative and advanced in the world. This is where entrepreneur Berthold Leibinger wanted to compete and successfully establish TRUMPF.

1968 was a year of tragedy and civil unrest in the US. After two assassinations, with Dr. Martin Luther King Jr. and Robert Kennedy, the situation in the big cities was volatile, with demonstrations, riots, and lootings. This left an impression on Leibinger, who was looking for an environment that was as tranquil as possible. From his time at Cincinnati Milling Machines, he still had contacts in New England – and it was there that he fell in love with the river valley town of Farmington. The restless environment of the

RUST BELT:
GEOGRAPHICAL SYMBOL FOR THE FUTURE OF PRODUCTION TECHNOLOGY?

05 _ THE FIRST PUNCHING MACHINE In the early 1970s, TRUMPF rolls out its fully automated punching machine TRUMATIC 20 on the US market. The advert above is highly effective, and the machine becomes a top seller. 06 _ WEARING FLARES AT THE TRADE SHOW At the same trade show in Chicago in 1974, a machine operator gives a live demonstration of how the TRUMATIC 202 works – and visitors can appreciate the quality of the punched holes.

( 50 YEARS )
large cities and the Rust Belt became secondary – they were still not too far away. Local conditions were also highly suitable: a small town situated in a beautiful landscape, with a lot of industry and thus potential workers, customers and partners all around. In 1969, TRUMPF moved into a rented building in Farmington’s industrial park – and TRUMPF’s first US subsidiary was born.

CONNECTICUT INGENUITY 50 years later, the TRUMPF US subsidiary covers an area of more than 2 million square feet. At the center is a small lake, with tall pine trees all around and broad green spaces. The landscape is peaceful. Comfortable seating areas for employees and other TRUMPF colleagues or customers can be found on terraces and in meadows. The Stars and Stripes flutters on a large flagpole. As soon as winter draws to an end, a bear occasionally visits the site – the employees have taken countless snapshots of it. At the summer barbecue, TRUMPF’s headquarters in Ditzingen treats its US colleagues to German beer.

RUMBLE IN THE JUNGLE: MUHAMMAD ALI KNOCKS OUT GEORGE FOREMAN

07 _ APPROVED FOR USE In 1977, the town of Farmington issues the certificate of occupancy for the new TRUMPF building in Farmington’s industrial park. 08 _ A POWERFUL TEAM The first ever punch laser machine, the TRUMATIC 180, is produced in Farmington in 1979. The team members responsible pose in front of it. 09 _ IS THERE ANYBODY OUT THERE? The Golden Records, carried on board the spacecraft Voyager launched into space in 1977, contain messages for extraterrestrials.
Today, TRUMPF has several sites in the US and in North America, but its center of operations is definitely Farmington. This is where everything comes together. The site has been growing continuously over the years, with numerous groundbreaking ceremonies for new buildings. Over 900 employees work in production halls, technical service, development laboratories, customer demonstration centers and administrative offices. The diode factory in Princeton has a workforce of almost 300, and a further 100 colleagues are employed at the production site for machine frames in Monterrey, Mexico.

The total number of employees for all the sites across North America is now over 1,500. They all design, develop and produce machines, lasers, tools and services to supply multiple American industries – including traditional agriculture and farming, the ever changing automobile and aerospace industries, and the innovative consumer electronics industry. Headed by Peter Höcklin, with Burke Doar responsible for sales, the TRUMPF Group in North America generates more than 664 million euros of revenue. That makes North America the second-largest market for the TRUMPF Group behind Germany. The path to today’s success was marked by bold and farsighted entrepreneurial decisions – plus, of course, that “bit of luck” that’s always needed as well.

10 _ NICOLA! During a stay in the US in 1981, today’s TRUMPF CEO Nicola Leibinger-Kammüller attends Middlebury College in Vermont. During this time, TRUMPF continues to expand its production capacity in the US. 11 _ FAMILY PICNIC In 1981, managing partner Berthold Leibinger (third from left) and his wife Doris join their American colleagues for a barbecue at Farmington. Music for the company celebration is provided by an employee band.
THE COUNTRY NEEDS MORE PUNCHING TOOLS! Let’s step back in time to the early days of the late 1960s. In those days, the TRUMPF subsidiary in Farmington was a pure sales location. The company looked for sales representatives across the country to bring its machines to the vast US market. The main reason why the site was starting to grow rapidly at this point was that the machines were selling well. The result of which was that more customers needed a larger selection of punching tools built to order at short notice. But the route from Europe across the Atlantic involved considerable delays.

TRUMPF needed tools on-site faster and wanted to find some way to avoid expensive imports. In 1974, the year in which Muhammad Ali knocked out George Foreman in Zaire in the eighth round in what is known as the rumble in the jungle, Farmington became the first foreign production site for TRUMPF – for punching tools. Shortly afterwards, the company’s US expansion began and has continued to this day. TRUMPF moved into its own building in Farmington’s industrial park and expanded its manufacturing activities: the production of punching machines for the US market began. Over 50 employees were working in Farmington at this stage, and production and sales of TRUMPF’s machine tools took off.

SALES, PRODUCTION, DEVELOPMENT – A TIME OF GROWTH IN FARMINGTON!
In the late 1970s, the laser caused a sensation in the US as a “miracle tool”. Unlike in the science fiction series Star Wars which started in 1977, the people in the laboratories didn’t use the lasers for swordfights but to cut metal sheets. TRUMPF recognized the advantages of the laser and incorporated it into its machine tools – and this was nothing short of a revolution in industrial sheet metal cutting. In 1979, TRUMPF manufactured the first ever combination punch-laser machine in Germany; only one year later, TRUMPF USA was producing the model as well. During this time, Farmington was becoming increasingly important as a development site. An innovative punching tool, the Multitool, marked a milestone for the US subsidiary and gave TRUMPF a technological advantage over its competitors. And in 1984, when Bruce Springsteen’s “Born in the USA” reached 15 million records sold, Lami, one of the most important US trade journals, featured Berthold Leibinger on its front page as Machine Tool Man of the Year.

**BRUCE SPRINGSTEEN GIVES HIS ALL ON STAGE: “BORN DOWN IN A DEAD MAN’S TOWN”**

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14 _ FASHION-CONSCIOUS_ TRUMPF employee Joe Pugliese – complete with a cowboy hat bearing the company logo – identifies totally with his employer at the Farmington annual picnic. 15 _ COVER MAN_ In 1984, Lami, one of the most important US trade journals in mechanical engineering, names Berthold Leibinger “World Machine Tool Man of the Year”. 16 _ BIRD’S-EYE VIEW_ A view of the TRUMPF campus in Farmington in 1985.

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( 50 YEARS )
TRUMPF continuously extended its production capacity in the US. By the mid-1980s, the number of employees in Farmington had risen to 160. The mechanical engineering company’s growth in the US was also aided by President Ronald Reagan’s pro-growth policies. And it worked: TRUMPF was successfully developing and producing machine tools and laser machines in the US and had become a truly American enterprise. In 1992, the one thousandth machine produced in Farmington left the production line and was shipped to a customer in Ohio.

VENTURING INTO THE RUST BELT
TRUMPF was only moderately impressed by the performance of the lasers it had started to purchase in 1979. Determined to do a better job, the company decided to set up its own in-house laser development department, thereby becoming a mechanical engineering company that was also a laser manufacturer. TRUMPF’s first own laser came onto the market in 1985, and three years later the company also started


17 _ “PHONE HOME” In 1982, Steven Spielberg directs one of the most successful movies of all time: E.T. – the Extra Terrestrial. It wins four Oscars, and box-office receipts total almost 800 million US dollars. 18 _ FACTORY WORKER TRUMPF employee Dorothy Anderson working in the Farmington assembly department in 1985, when the site had around 160 employees. Today, over 900 people work at the site.

( 50 YEARS )
to manufacture them in Farmington. This entry into the laser business marked the beginning of a new era for TRUMPF that continues to shape it today.

In the late 1980s, when Marty McFly and Doc Brown were traveling through time in a converted DeLorean DMC and the blockbuster movie trilogy Back to the Future was released, TRUMPF acquired the US laser manufacturer Combustion Engineering based in Somerville, Massachusetts, securing further laser expertise and expanding its laser production in the US. In 1989, with the fall of the Berlin Wall and the disappearance of the “Iron Curtain” that had separated the market-oriented states of the West and the planned-economy states of the East, TRUMPF expanded its presence in the US to the Rust Belt. In Plymouth, Michigan, the heart of the industrial region, a handful of employees rented an office with the goal of selling lasers to the large automotive companies that all had their technology centers in the surrounding area. The breakthrough came with a major order from Canada – fifty lasers for the mass production of a pick-up truck. TRUMPF had now made a name for itself as a laser manufacturer in the US. By the mid-1990s, the workforce in Farmington had expanded to almost 300 employees.

**WOW – ALL THAT HIGH-TECH FOR SHEET METAL FABRICATION?** A few years later,
THE DIODE FACTORY IN PRINCETON PRODUCES HIGH-TECH COMPONENTS FOR LASERS

TRUMPF secured a strategically important core competency. In 1999, Peter Leibinger became the new managing director in Farmington. He wanted to minimize the company’s dependency on suppliers of the diodes that were so important for TRUMPF laser production, and decided that the company should start producing its own diodes. Initially, TRUMPF worked with the diode manufacturer Princeton Lightwave, a spin-off from the David Sarnoff Research Center. The manufacturer focused on the emerging telecommunications industry, and producing semiconductors and optical components for rapid data transmission. When the dotcom bubble burst in March 2000, TRUMPF acquired the production facilities, patent portfolio and employees of the ailing Princeton Lightwave, establishing its second US production site in Cranbury, New Jersey, not far from Princeton. Men and women sit in their cleanrooms, wearing protective hoods and clothing, pursuing the goal of generating as much light as possible. Their material: semiconductors. This is where

NEW LASER APPLICATIONS By 1990, the laser has become an integral part of TRUMPF’s portfolio. New applications result from this – and they can also be performed by industrial robots, as seen here. TOP DOG TRUMPF keeps rolling out more machines, including in the US, and is already one of the largest exhibitors at the IMTS 1990 trade show in Chicago.
TRUMPF develops and produces the high-tech components for its lasers. Princeton is synonymous with diode lasers. The products manufactured here are a key component for the industrial lasers that the company either installs in its own machine tools or sells directly to its customers. Anyone who takes a look behind the scenes here will realize why the innovation promise is so important for TRUMPF. After guided tours of the factory, it is not uncommon for customers to remark: “Wow, there’s so much high-tech in the machines I use to cut metal!”

With the diode factory, TRUMPF was now able to develop and produce the key component for its lasers on its own. At this point around 500 employees were working for TRUMPF in the US. It was the era when Apple revolutionized the music industry by introducing the iPod portable music player and historic events like 9/11 and Lehman changed the world.

**CALIFORNIA DREAMING** Alongside TRUMPF, the entire industry is currently undergoing a similar long-term transformation, namely digitization. So that made what happened next seem quite logical. This summer marked the official opening of TRUMPF’s new, fully interconnected Technology Center in North America – to the south of Los Angeles, in Costa Mesa, California. The hall still smells of fresh paint. Machines cut and bend sheet metal, production data is displayed on monitors;
snacks and drinks are available in the bright meeting rooms. Customers, visitors and employees check components, discuss requirements and sketch out solutions. Whenever necessary, they make virtual visits to the Smart Factory near Chicago or to the company’s US headquarters in Farmington, to take part in product demonstrations or training courses. This all happens live, with no need to board a plane. That’s customer proximity and Industry 4.0 at their best, yet again – and throughout the entire country!

In recent years, digitization and interconnectivity have been the big topics for TRUMPF, for industry and for the world economy. TRUMPF is a leading provider and user in this regard, and a pioneer where Industry 4.0 is concerned. The company is now taking connected production to the next level by incorporating Artificial Intelligence. It’s all about getting machines and lasers to learn from their mistakes and to experience things autonomously, about making them understand what they are doing and, even more importantly, understand how to do it even better – with the

ARTIFICIAL INTELLIGENCE IS THE NEXT LEVEL OF DIGITIZATION

25 SYMBOLIC SHOVEL The date of the groundbreaking ceremony for the so-called LITE building – built in Farmington in 2006 – is immortalized on this shovel. The acronym stands for Laser Innovation and Technical Excellence. 26 PEAK PERFORMANCE A 40m-high stainless-steel construction is located atop the One World Trade Center in New York City. The company Kammetal from Brooklyn manufactured it in 2013 using a TRUMPF machine.
simple goal of making industrial production even better, and even more efficient. TRUMPF is already setting new standards here: for example, the company developed a machine that is able to insert, cut and eject metal sheets automatically. The highlight here is that the machine itself learns independently how to remove parts from the sheet skeleton in the best and fastest way – and also transmits this knowledge to other machines of the same type. Artificial Intelligence on an industrial scale is no longer a vision of the future – it’s become a reality.

**SOURCE OF INSPIRATION** The US has always been of fundamental importance for the development, the success and the future of TRUMPF. The company has been inspired by innovations from the US – whether it was during the early years of numerical controls for punching machines, during the late 1970s when it integrated lasers into machine tools, or at around the turn of the millennium when the company began diode production near Princeton and penetrated an entirely new business area with lasting success. Today’s EUV lithography, a fast-growing business unit of TRUMPF, also started with connections in and from the US. With its lasers, specially developed over many years, TRUMPF today supplies the key components for a system enabling microchip manufacturers to produce state-of-the-art computer chips for the megatrends of the next few years. Those
include autonomous driving, smart cities and increasingly powerful smartphones. The innovation promise offered by TRUMPF worldwide will – we are certain – also be rooted in many sources of inspiration from the USA in the future.

There have, of course, been many product highlights manufactured in the US using TRUMPF machines and lasers, but maybe the most iconic is the 40-foot-tall stainless steel spire at the top of One World Trade Center in New York City. The successor of the Twin Towers destroyed on September 11, 2001, was manufactured in 2013 by the company Kammetal, a TRUMPF customer from Brooklyn, New York, using a laser cutting machine.

**GETTING CLOSER TO THE CUSTOMER**

For TRUMPF’s US subsidiary run by Peter Höcklin and Burke Doar, the proximity to the customer is the North Star. This explains our opening question as to why TRUMPF expanded its presence in the Rust Belt in 2017. The answer: to remain as close as possible to its customers and better understand their needs. Technology centers and subsidiaries have been founded near Detroit, Chicago, Seattle, Dallas and in Silicon Valley – all locations where the pulse of the market can really be felt.

On this fall evening in Chicago, the opening ceremony at the Smart Factory is drawing to an end. Here and there, a few guests are still discussing topics such as
the fully automated factory and also the architecture of Barkow Leibinger, which creates the feeling of a large art gallery. The Neue Zürcher Zeitung will later write that this new building tells us more about the society of tomorrow than the entire Architecture Biennale that opened in Chicago at the same time.

Peter Höcklin, Nicola Leibinger-Kammüller and her husband Mathias Kammüller are closing out the evening when a customer takes hold of Mr. Höcklin’s arm and says: “Peter! This is a great event and a sensational factory – I’m impressed!” That is exactly what TRUMPF wants to stand for in the coming 50 years: new technologies and marketable solutions that secure our customers’ continued success in their day-to-day manufacturing operations. But also evenings like this one, which reflect the close bond between all of us as human beings – and also the close bond between the US and Germany.

THE USA IS A CONSTANT SOURCE OF INSPIRATION FOR TRUMPF

31 _ FULLY EQUIPPED In 2018, the showroom in Farmington is equipped with all the very latest punching, bending and cutting machines that TRUMPF markets in the US. 32 _ HAPPY ANNIVERSARY In 2019, at the “50 years of TRUMPF USA” celebrations in Farmington, TRUMPF CEO Nicola Leibinger-Kammüller (left) welcomes Emily Haber, German Ambassador to the US.
GROUP MANAGEMENT BOARD

Dr.-Ing. Heinz-Jürgen Prokop
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Dr. phil. Nicola Leibinger-Kammüller
Dr.-Ing. Mathias Kammüller

( 50 YEARS )
CORPORATE SOCIAL RESPONSIBILITY AT TRUMPF

Fifty years of TRUMPF USA – five decades of our company’s social responsibility through changing times. TRUMPF has always upheld the dialog with civil society and political leaders that represents the basis of active entrepreneurship.

We are convinced that companies have to give something back to any society in which they can grow and can find beneficial operating conditions, ranging from a sound legal system all the way to effective training of their employees. Just like individual states, they cannot be mere islands that simply choose to shut themselves off from the outside world.

Assuming corporate social responsibility above and beyond day-to-day business, and being open to the challenges of our time – that comes quite naturally to TRUMPF. It inspired our actions long ago when expressions such as CSR or sustainability were far less widespread in industry than they are today. And in fiscal 2018/19, when, for the first time in its 95 years of existence, TRUMPF published a comprehensive corporate history, it still holds true. Active press and social media work during the year under review has also contributed here.
Today’s global challenges can be likened to the steam generators in economic history, when their manufacturers had to take responsibility for damage-free operation. Today, in view of a world population of far more than 7 billion people and the growing need for energy, mobility and nutrition, resources have become a key political issue. Whether social, ecological or technological, these challenges form the basis of TRUMPF’s commitment to responsibly shaping our era within the scope of the possibilities open to us. And the future of employees and customers always has to be borne in mind.
Our commitment to social projects is geared toward the differing social requirements in the regions where TRUMPF is active. We expressly encourage our employees to engage in service to society and provide the framework for personal commitment.

Another focus of our corporate social responsibility is on the education of future generations, as well as commitment in the cultural sphere. This is expressed through our promotion of various cultural institutions. At the same time, the number of TRUMPF’s school partnerships and educational multipliers was increased.

Political dialogue with national and international stakeholders is an important building block of TRUMPF’s corporate social responsibility. As illustrated, for instance, by the visit of German Chancellor Merkel and Saxony’s premier Kretschmer to the Neukirch facility, by German Federal Minister of Labor, Heil, and a Chinese delegation led by Beijing’s Lord Mayor Jining Chen to the company’s headquarters in Ditzingen, Germany.

We regard it as part of our corporate social responsibility to make a contribution to the reduction of greenhouse gases: being careful with resources has always been a part of our “engineering-oriented” attitude. Among other things, we have been operating an ISO-certified energy management system at all German and European production sites since 2015.
Network event Bildung²: panel discussion on changes in learning through digitalization

German Chancellor Angela Merkel and Saxony’s premier Michael Kretschmer visiting the TRUMPF subsidiary in Neukirch

Joblinge at TRUMPF in Ditzingen

The new multifunctional building from TRUMPF Taicang in China, which was completed in March 2019
What motivates our engineers even more than the efficiency of our own processes is of course the challenge of creating innovative solutions for our customers. This includes designing products in a way that conserves more energy and resources, or developing innovative applications that offer benefits in terms of resource efficiency. This is because we’re convinced that industrial sustainability will become a matter of course if it is product-based and therefore market-based!

We have improved the energy efficiency of our 2D laser cutting machines by almost 70 percent over the past 10 years. With TruTops Boost, a special machine software, sheet metal to be cut can be optimally utilized. This reduces unnecessary material consumption.

In the past fiscal year, TRUMPF first launched a high-performance green wavelength laser on the market. Among other things, it is used to efficiently weld copper – the parts can be made thinner and smaller. Electric vehicles have a large number of copper connections whose special requirements are fulfilled by welding with the green laser.