

# DESOUTTER 4.0

Accelerate your transformation



DESOUTTER



4.0







# INTRODUCTION

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The increasing digitalization of the manufacturing sector means the era of the smart factory is now upon us. The fitting of myriad equipment with sensors, and the ability to collect, transmit and interpret data in real-time, is leading to previously unattainable levels of traceability and control. That is enabling tools, machines and people to communicate like never before. This trend, commonly referred to as Industry 4.0, is giving companies far better visibility of their industrial processes, ensuring that potential problems can be identified before they occur.

Here at Desoutter, we are committed to turning Industry 4.0 into products and services that deliver maximum benefit to our customers and partners. From reduced downtimes, to more flexible production processes with lower costs, Industry 4.0 has the potential to transform the ways organizations perform.

This dedicated book acts as a gateway to that transformative journey, explaining the origins of Industry 4.0 in a global context, and highlighting its impact on production environments. Ultimately, it's a story of how Desoutter and its partners can work together to create the smarter factories of the future.

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TRACKING  
RETINA PATH

# DEFINITION

DEFINITION

DÉFINITION

DEFINICIÓN

定义

정의

定義



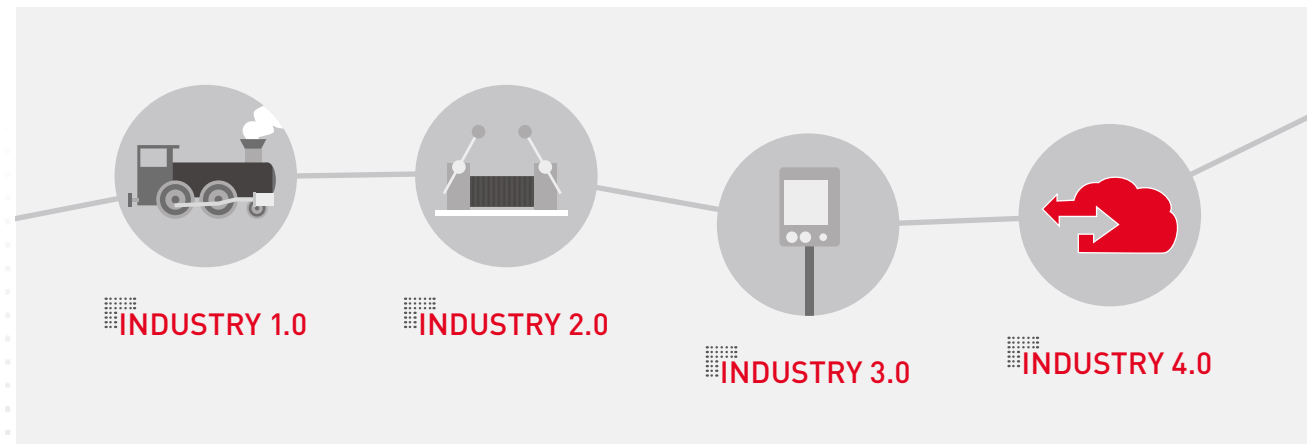
# Industry 4.0 Concept

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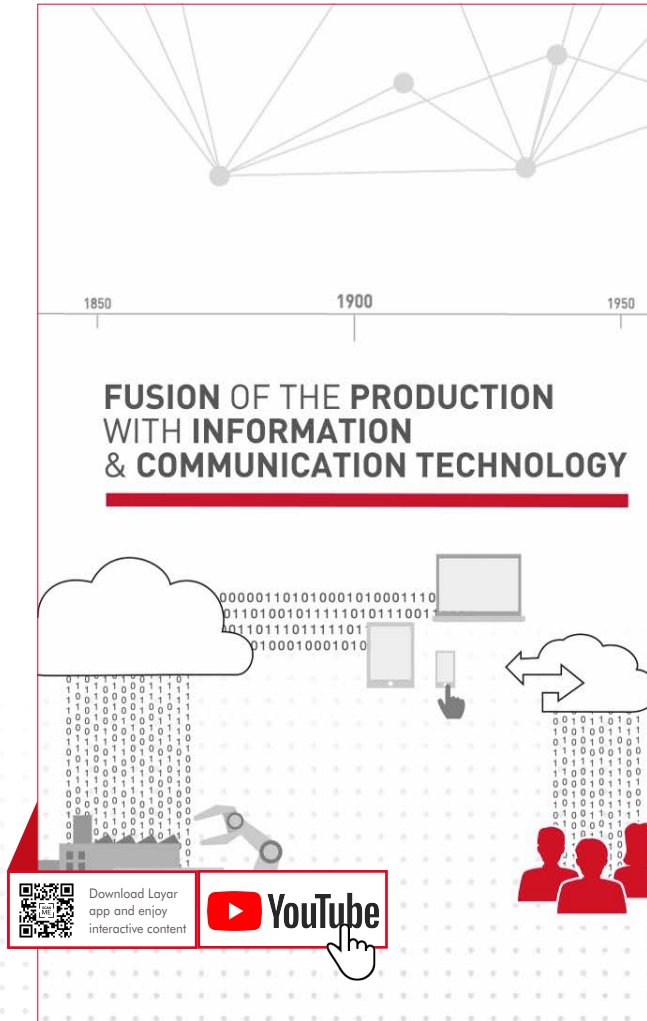
In terms of global meaning, the Industry 4.0 concept is widely accepted as representing the digitalization of manufacturing. The '4.0' provides a historical context, positioning this new phase as the fourth transformation in production. The first industrial revolution was depicted by mechanization through water and steam power; the second saw the concept of mass production through electric power; and the third resulted in the rise of the computer and automation. Now we have the fourth breakup in manufacturing – the creation of truly smart factories with cyber-physical systems and communication across the Internet of Things.

According to global management consultancy McKinsey, Industry 4.0 is driven by four identifiable technology trends:

- 1 The astonishing rise in data volumes, computational power, and connectivity, especially new low-power wide-area networks;
- 2 The emergence of analytics and business-intelligence capabilities;
- 3 New forms of human-machine interaction such as touch interfaces, augmented-reality systems and wearables;
- 4 Improvements in transferring digital instructions to the physical world, such as advanced robotics and 3-D printing machines.



## ...Industry 4.0 Concept




**W**hen these enablers come together, Industry 4.0 has the potential to deliver some incredible advances in factory environments. Examples include machines which can predict failures and trigger maintenance processes autonomously or self-organized logistics which react to unexpected changes in production.


Industry 4.0 has the power to change the way that people work. This can pull individuals into smarter networks, with the potential of more efficient working. The digitalization of the manufacturing environment allows for more flexible methods of getting the right information to the right person at the right time. The increasing use of digital devices inside factories and out in the field means maintenance professionals can be provided with equipment documentation and service history in a timelier manner, and at the point of use. Maintenance professionals want to be solving problems, not wasting time trying to source the technical information that they need.

This cycle is geared towards increasingly individualized customer requirements and extends from the idea, the development and manufacturing, the delivery of a product to the end customer right up to the recycling, including the aftersales services. The basis is the availability of all relevant information in real time through the networking of all entities involved in the value creation as well as the ability to derive the optimal value flow at any time through the data. By connecting people, objects and systems, dynamic, real-time

and self-organizing, cross-company value-added networks emerge, which can be optimized according to different criteria such as cost, availability and resource consumption.

In short, Industry 4.0 is a game-changer, across industrial settings. The digitalization and interconnection of manufacturing will change the way that goods are made and distributed, and how products are serviced and refined. On that basis, it can truly lay claim to represent the beginning of the fourth industrial revolution.

On average,  
**2,9**   
built / sec

**+1,5 million**   
industrial robot  
worldwide

# Industry 4.0 benefits

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## PRODUCTIVITY

One objective of Industry 4.0 is the implementation of “mass customization”, i.e., in an ideal case, the “mass production” of a batch size of one without any tooling time losses. This would be made possible by additive manufacturing and the ability to adapt machines to customers’ specifications on a “real-time” basis. These two factors together will allow the production of batches as small as a single unit using all the automated industrial possibilities that make mass production so efficient.

At the same time, the analyses provided by predictive maintenance programs will help avoid machine errors and downtimes. This way, downtimes can be reduced by an estimated 50 percent at the same time as boosting production by around 20 percent. In addition, some companies will be in a position to establish “lights-out” factories where automated processes and robots continue production following the end of a shift without any need for lighting or heating.

## INFORMATION & CURVE ANALYSIS

Quality improvement and cost reduction call for comprehensive control of the entire process and each individual operation within the process. Nowadays, companies using process control systems, intelligent tools and other IT systems can ensure that each individual work step, such as the tightening of a bolt, is completed correctly with the desired result.

In addition, these systems ensure that each operation is carried out in the correct sequence - using the machines, tools, programs and specifications defined by the design, assembly planning and scheduling departments in order to ensure optimum product quality. Quality improvement reduces the share of unproductive activities within the company, and therefore also costs.

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# ...Industry 4.0 benefits



## DATA MANAGEMENT

One of the top priorities of Industry 4.0 is intelligent data management to reduce costs. Data generated by sensors can be used for monitoring each individual workpiece in the production process, allowing any errors to be detected and eliminated at an early stage. This means that random checks of finished workpieces, which call for expensive reworking if a defect is detected, are no longer required. In addition, self-correcting technologies allow real-time adaptation of the production process. The data can be collected, documented and analysed to identify and eliminate minor recurrent problems at an early stage and immediately optimize the process. The resulting quality improvement boosts customer satisfaction, reducing the number of complaints and unproductive reworking. This plays a key role in reducing operating expenses and improving competitiveness.



## PREDICTIVE MAINTENANCE

Predictive maintenance is based on sensors embedded in machines and components. These sensors mean that equipment users can plan maintenance at the ideal times and avoid costly non-planned maintenance or downtimes. For example, sensors can provide information on vibrations, lubrication, bearing temperatures, noise and a variety of other variables.

This information can then be transmitted to the machine manufacturer and evaluated by the manufacturer's experts. This way, components that are not functioning in the optimum way and therefore ought to be replaced or repaired can be identified. Sudden disturbances are also detected immediately and can be rapidly remedied.



## FLEXIBILITY

Intelligent, versatile tools and systems make production processes more flexible. Prototypes and new products can be produced within a very short space of time without complex retooling or the installation of new production lines. This boosts the innovation power of the company at the same time as the speed with which a new product can be developed and brought to market.

Digital designs and virtual modeling of the production process reduce the time from product design to market availability or the delivery of a specific product. Furthermore, data-driven delivery chains accelerate the production process. A further aspect is the spatial flexibility of the worker, which can be ensured or improved using smart cordless tools.

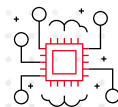




## POSITIONING & LOCALIZATION

"In-house GPS" on the production line boosts productivity. Thanks to networking and precise localization, products, machines, tools and operators can interact more efficiently. At all times, each active element is aware of the position of the other elements and what element reasonably should be integrated in the production process at the present (or a given) time. One example knows of this type of interaction is the use of sensor-controlled cobots which work hand-in-hand with human production operatives.

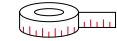
The vision of Industry 4.0 goes one step further. Fixed links with a workstation and a control system are eliminated. The workpiece knows what it needs and informs the environment of its requirements. The environment receives these requirements and identifies suitable operators to complete the work step. There are various communication systems which can be used for the localization of linked objects such as WiFi, LiFi, UWB or ultrasound.



## AUTOMATION

The automation of the production process, the seamless transmission of data during the journey of a workpiece through the production chain and the use of configurable robots mean that a variety of different products can be manufactured using the same production plant. In the final resort, a product manufactured in a batch size of one will cost no more than a product manufactured in batches of thousands or millions of units.

Intelligent software can control assembly processes in such a way that all employees can work efficiently without errors even if they are using a work station for the first time or are unfamiliar with the latest product variant. Collaborative robots (cobots) equipped with sensors pave the way for an entirely new form of automation. They are relatively inexpensive and can be used for any application where they are to support, but not to replace a human production operative. Cobots programmed for hand-in-hand cooperation with people can deviate from their program at any time whenever the situation requires. The results are always better quality, lower reject rates and higher productivity.





# Birth of Industry 4.0

Germany is widely credited as being the founding nation of the Industry 4.0 concept, with the name emerging from a national strategic initiative to establish the country as a lead provider of advanced manufacturing systems. The country has one of the most competitive manufacturing industries in the world, and it is supported by a network of state-of-the-art research and development facilities.

Germany's strong machinery and plant manufacturing industry, its globally significant level of IT competences and its know-how in embedded systems and automation engineering mean that it is extremely well placed to strengthen its position as one of the world's leading developers of Industry 4.0 technologies.

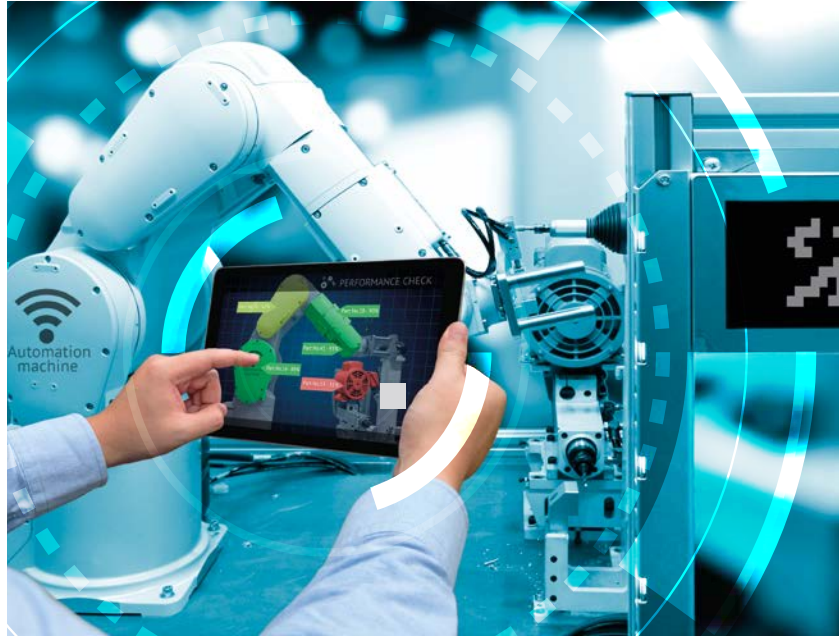


# GERMAN



**T**hese days, it's a concept that has gained high levels of recognition within both industrial and political environments. Much of the vision for Industry 4.0 has been provided by ACATECH – the German Academy of Science and Engineering – which views the concept as being of vital importance for securing the long-term future of the country's manufacturing base.

Significant funding and support activities have been made available through national programs designed to establish Germany as the primary market for cyber-physical systems and smart services by 2020.



**A**ccording to national development agency Germany Trade and Invest (GTAI), Industry 4.0 will lead to the emergence of what it describes as 'smart industry' where people, devices, objects, and systems combine to form dynamic, self-organizing networks of production. This represents a paradigm shift from 'centralized' to 'decentralized' production - made possible by technological advances which constitute a reversal of conventional production process logic.

Simply put, this means that industrial production machinery no longer simply 'processes' the product, but that the product communicates with the machinery to self-determine the most efficient means of operation. Highly individualized, low-volume, real-time production becomes the norm in what GTAI predicts will be a rapidly changing industrial landscape.

In Germany Industry 4.0 is the route by which the country plans to remain at the forefront of manufacturing.

**+788 €**  
Productivity increase  
by 2025

**+1,7 %**  
Gross Value  
Added/Year

# USA & Smart Factories

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If Germany has set the pace in terms of adoption of Industry 4.0 and the emergence of smart factories, it is sure to face a stiff challenge to its position of leadership from the US, which over the next five years is expected to invest more capital into the digitalization of manufacturing than any other nation or region. In the US, the Industry 4.0 better known as Industrial Internet of Things (IIoT). With this rapid advancement of technologies in the manufacturing environment, many US organizations are busy preparing themselves for the massive change that lies ahead.

According to Harvard Business Review's From Data to Action report, the most difficult aspect for organizations to change on the route to smarter factories is their internal culture. For Industry 4.0 to reach its full potential, businesses need to establish one undisputed source of performance data, and give all decision makers the ability to receive data in real time. The philosophy of making fact-based decisions using quantitative manufacturing data will need to be coached into all levels of management.



# USA

**D**uring this transition, manufacturers will need to rely on their trusted partners to provide expertise and direction to reach their Industry 4.0 goals. As more and more technology gets introduced to the manufacturing environment, the companies with solutions in place for controlling smart devices and collecting big data will seamlessly advance production. Those organizations without a clear direction for smart manufacturing will struggle to keep up with technology and manage the ever-increasing volume of data being produced.

In the US, the potential of Industry 4.0 is huge. The challenge now is to define strategy and to implement change.

In the year 2011 President Barack Obama launched the Advanced Manufacturing Partnership (AMP). AMP is a partnership between top universities, big companies and the US government to develop advanced manufacturing technologies.

The government wants through supporting of IIoT protect jobs of offshoring to low cost countries and increase them in the US. One other target is to increase the innovation strength of the US economy and decrease the international trade deficit. Everything should collaborate together to improve the industrialization in the US and increase the economy.



**26%**  
use advanced  
robotics

**20%**  
are seeing increase  
in profitability

**59%**  
use process  
technologies

**47%**  
middle market  
companies use advanced  
manufacturing  
technology

# China Manufacturing 2025

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While China remains the largest manufacturer in the world, when it comes to the adoption of Industry 4.0, the Asian powerhouse is playing catch-up with many of its economic rivals in Europe and North America. That's largely due to historical factors: while Germany, for instance, has traditionally focused on advanced production systems, China's strengths have always been at the lower-value end of the global manufacturing sector, where price is key. This has led to some stark imbalances: at present, there are only approximately 14 industrial robots per 10,000 factory workers in China, as opposed to 282 in Germany.

But times are changing, and fast. Labour and raw material costs are increasing in China due to environmental concerns and resource limitations, and other low-cost rivals have emerged. China's position as the 'world's factory' is under threat. As a result, the Chinese government is now keen to forge ahead with an alternative development path, replacing outdated production facilities and investing in modern technologies based on the Industrial Internet of Things.



# CHINA




This is reflected in Made in China 2025, a government plan to transform the country into an advanced production nation by the middle of the century. The initiative will see heavy investment in internet architecture, big data and cloud computing, leading to more intelligent factories. Ultimately, China wants its manufacturers to embrace modern technology and to start making higher-value products and parts.

Some are calling this the Chinese version of Industry 4.0. But that's not so. While China Manufacturing 2025 represents a radical change in the direction of manufacturing capability, the pace of change is incomparable with other developed nations. In truth, many of its manufacturers are still operating the age of Industry 2.0. China is therefore looking to take a careful, methodical approach to the digitalization of manufacturing, seeking partnerships with more experienced nations along the way.



**+59 B €** spent  
in robotics  
by 2020

**+15**   
innovation  
center by 2020

**+40**   
by 2025

**+30%**  
Productivity level

**-60%**  
Unforeseen  
production  
losses cost



# INDUSTRY 4.0 BY SEGMENT

INDUSTRIE 4.0 NACH BRANCHE

L'INDUSTRIE 4.0 PAR SEGMENT

INDUSTRIA 4.0 POR SEGMENTO



行业工业4.0

각 부문마다의 INDUSTRY 4.0

インダストリー4.0の分類





# Motor Vehicle Industry

FINAL ASSEMBLY

The automotive industry currently signals growing demand for process control to further improve the quality of production processes at the same time as reducing operating expenses. This industry is welcoming the age of Industry 4.0 euphorically. As an innovation driver, the industry is already implementing changes in the fields of automation, data interchange and production technologies with a view to benefiting from the resulting opportunities.

Safety-critical tightening is already monitored and analysed; the data recorded is used for process optimization. Sensors record process data, with real-time transmission to higher-level databases.



in **2020**

number of connected cars will increase from **23 million today** to **152 million**

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**1.8 billion M2M**

internet connections in the automotive area by 2022.

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in **2030**

in China, **40 %** vehicles will be **electrical vehicles**

**A**ny production deviations are signaled to tightening experts who can act to faulty components or assembly processes in a proactive way, minimizing complaints and reworking expenses.

In the automotive industry, digitalization plays a key role in the documentation of tightening processes, allowing experts to optimize production processes and provide information on all the individual components of the vehicle at any time – right down to the last bolt or gasket, with precise information on installation times and tools. Sensor-controlled cobots provide assembly workers with support in terms of precision and ergonomics. These collaborative robots work hand-in-hand with people, making their work easier, improving assembly results and boosting productivity.

027  
RMT



# Motor Vehicle Industry

AUTOMOTIVE  
TIERS ASSEMBLY

Powered by the Internet of things, Industry 4.0 promises automobile component suppliers significant effects at low cost. Steadily progressing digitization offers this sector a tool for better reactions to growing market pressures. Key factors are reductions in system downtimes, improved productivity through automation and resource optimization and reduced maintenance expenses. Industry 4.0 allows agile processes, improves competitiveness and promises new sales opportunities.

At component production plants, Industry 4.0 implementation offers considerable potential, especially in predictive maintenance. Continuous recording and analysis of process data allows plant and system failures to be predicted, inefficient developments to be corrected and productivity to be improved.

by **2025**

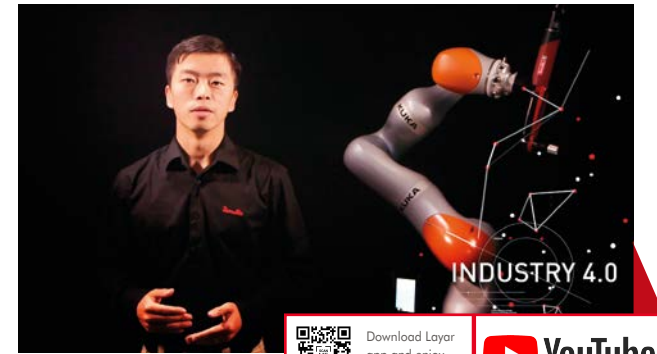
global cobot market will be **multiplied by 4**, to reach 250 000

by **2030**

battery demand for **Electric Vehicle** increased by 10

**Q**uality and logistics also benefit from digitization. Automated component tracking simplifies logistics and improves real-time quality management.

The use of collaborative robots (cobots) for unergonomic, complex or repetitive tasks means that manual and automated processes within production can interact with each other in the ideal way. Last but not least, real-time production monitoring on the screen renders many manual interventions unnecessary, releasing personnel for greater value addition and more profitable work.



Download Layer app and enjoy interactive content



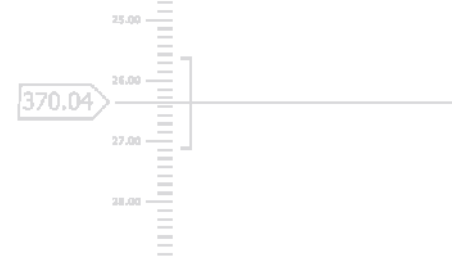


## Aerospace Industry

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**A**erospace is a fantastic and extremely demanding industry, often synonymous with highly skilled personal and cutting-edge technologies. But with a production characterized by relatively small volumes, long cycle times, large components and high variability in the production processes, this industry offers specific challenges when it comes to the dissemination of smart tools and solutions.

As volumes continue to grow with people travelling more & more, all major OEMs need to increase the overall process efficiency, limit quality costs and cycle times, and exclude human factors as a source of error. With intelligent software and digital networking, assembly tools can now make a key contribution. They offer far greater flexibility and can be fully linked both to each other and to manufacturers' production and quality systems.



**5%** of annual revenue  
invested in digital  
operations solutions  
over the next five years

**82%** of Aerospace  
decision  
makers consider  
data analytics vital  
for their companies,  
by 2022

Air travel market  
will double in size  
by 2036

A few examples of how the industry can already benefit from digital progress in the context of Industry 4.0:

▪ Digitalization of work instructions increase flexibility and control over the process. Linked with a process control software, it ensures error-free processes.

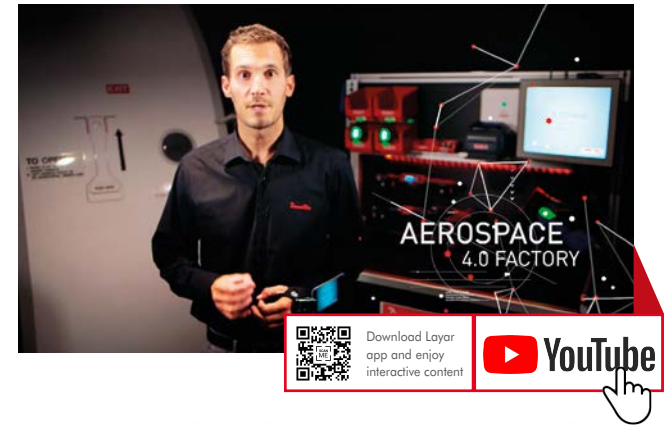
▪ User guidance and geo-positioning solutions make the assembly information available at the right place and time, allowing people to work more efficiently and reducing the probability of errors, hence increasing your up-time.

▪ Communication between smart tools, manufacturers' production and quality systems ensures traceability and quality of the entire process and product.

▪ Use of light automation to support the operator in specific tasks and to boost flexibility.

▪ Processes can be further optimized through efficient analysis of the data generated.

Production processes in the aerospace industry are especially complex. Industry 4.0 implementation is therefore a demanding process but it guarantees a high ROI and a technological edge for early adopters.







# General Industry

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Customers within the General Industry sector want innovative, unique, high quality and cost effective products. There is strong competition within the General Industry market that offer similar products with shorter product life cycles due to new technical advances. Therefore, there are high demands on the General Industry sector for rapid production of new innovative products for the market. We achieve this by completely digitalizing the product development life cycle. This in turn allows us to provide customers accurate traceability, quality control, and cost effective new products.

When digitalizing the product life cycle, a complete digital data model is required. To meet these requirements industrial companies rely on intelligent and adaptable manufacturing. The vast range of products are embedded with systems, sensors, and actuators that are all linked to one another via the internet.

During the development phase of a new product we can assure you that the product company has the latest machinery on site. As technology becomes more advanced we make certain that we adapt and make modifications to the machinery design as needed.



The manufacturing process system will control each element between the system and data exchange. The component will be a smart solution which provides embedded systems such as “smart tags”. Tool specific information will be relayed to the production system through these smart tags. Information such as, configured torque, complete assembly process, and order of assembly will provide the customer more accuracy and efficiency on site. These tools run side by side controllers that speak with different systems such as ERP, MES, or Shopfloor.

This smart factory solution gives an actual overview of all production processes inside the factory. Due to the tools being linked via the internet, tool specific values give the plant a more decentralized approach. For example; tools can alarm when the next maintenance is required, controllers can be remotely configured saving the data assemble process, and use data mining for optimizing the production of new business models like pay per tightening. Smart Factory, a solution that will digitally advance all assembly lines all over the world.









# DESOUTTER 4.0, ACCELERATE YOUR TRANSFORMATION

DESOUTTER 4.0, FORTSCHRITT DURCH TRANSFORMATION

DESOUTTER 4.0, ACCÉLÉREZ VOTRE TRANSFORMATION

DESOUTTER 4.0 ACELERA SU TRANSFORMACIÓN

DESOUTTER 4.0 · 加速您的转型升级

데소터 4.0은 여러분의 변화에 가속을 넣어줄 것입니다

デソーターが、あなたの4.0の変換を加速する



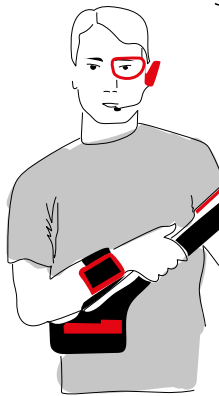








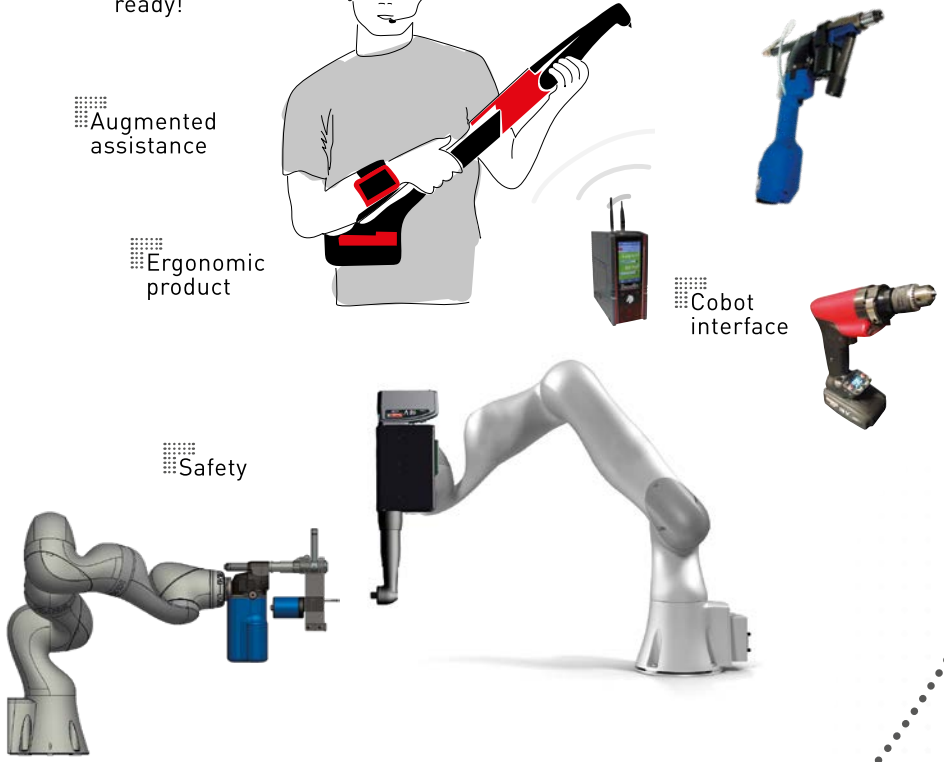
DESOUTTER 4.0



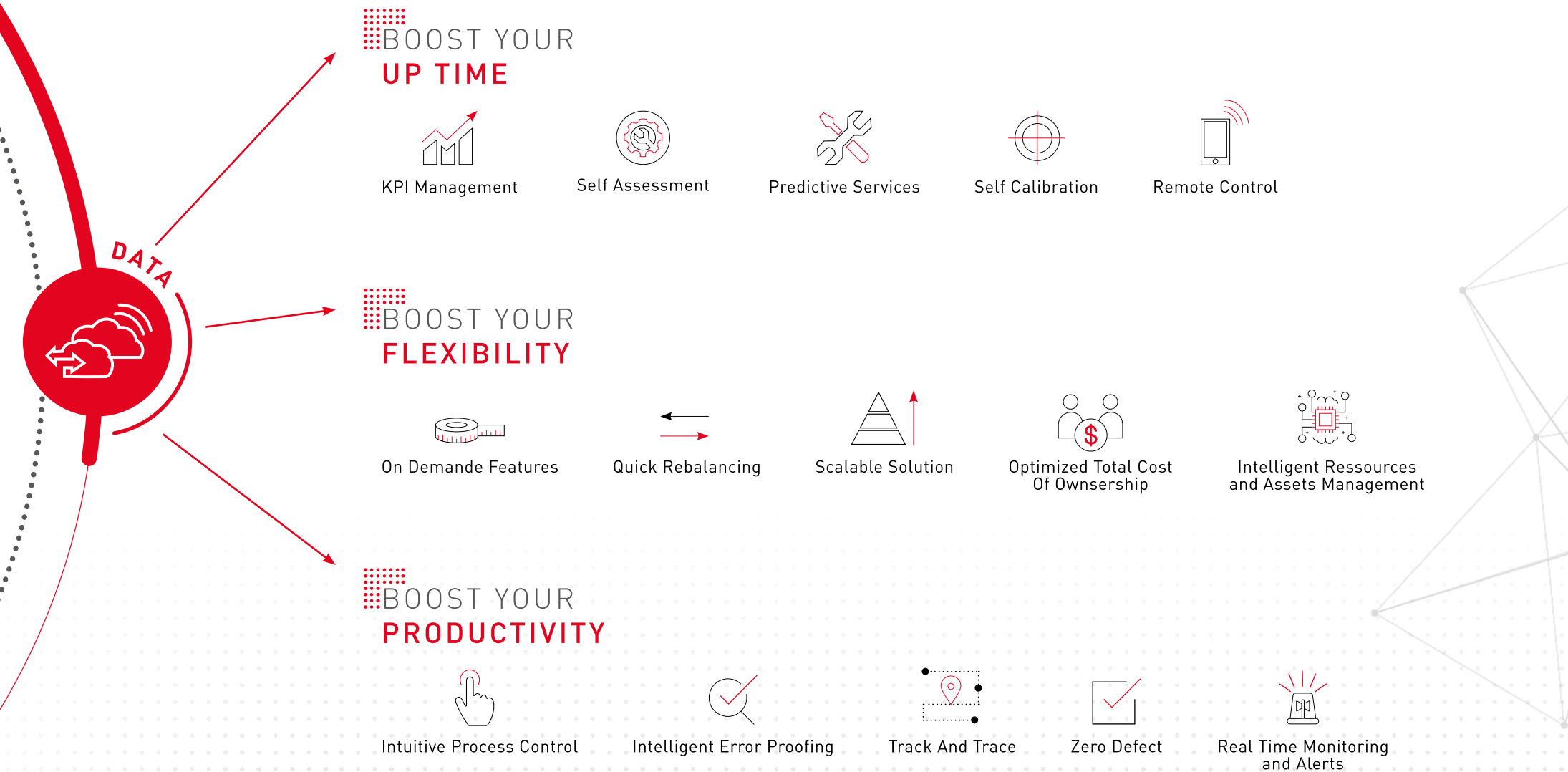
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# Intelligent assembly solutions

- 
 Paperless solution
- 
 Work instructions guidance
- 
 Production ready!
- 
 Augmented assistance
- 
 Ergonomic product
- 
 Cobot interface
- 
 Safety



# So you can concentrate on your core your assembly expert is here !







# CUSTOMERS INTERVIEWS



KUNDENINTERVIEW

INTERVIEWS DE CLIENTS

ENTREVISTAS CON CLIENTES

お客様インタビュー

고객 인터뷰

お客様の声



PRODUCTION LINE

# TOYOTA (THAILAND)

“ I have worked with Desoutter since 2012, when we first started using the E-LIT series battery assembly tools on the Toyota Prius production line.

I think that implementing Industry 4.0 in our factory will improve communication between different solutions. We look to achieve a good production environment that is easy to manage, has great quality control and simple reporting procedures. I believe that Desoutter's Industry 4.0 solutions help facilitate communication between different tools, as well as external solutions, to improve the production process.

At the moment, we are using Desoutter's E-Pulse tools on our assembly line, as their high speed and low torque reaction meet our needs. In the future, we plan to use wireless tools in as many applications as possible. In the ideal scenario, we will have all battery tools communicating with each other as well as with the plant ERP.











TRACKE MENTED SCHWEN





# JAGUAR LAND ROVER

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(CHINA)

“ We use Desoutter’s tools and fastening solutions in our trim and final assembly workshops at our Changshu plant.

At the moment, we are installing Desoutter’s PivotWare process control system solutions in strategic areas. They help solve various complex manufacturing requirements, which enables our operators to focus on getting difficult processes right every time, improving quality.

For us, industry 4.0, or China 2025, is the next step in improving connectivity. We want to connect our equipment seamlessly to create more efficient manufacturing systems that help us create better products and meet customer requests more quickly.

We plan to make our second trim and final assembly facility an intelligent workshop. Desoutter are helping us create a fully connected tooling network, where we can instantly access the performance data of our tools and fastenings to identify and resolve potential problems in advance.

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PRODUCTION LINE

# HELLA

(CZECH REPUBLIC)

“ At Hella Autotechnik, we design new processes and make them a reality, as well as improving existing processes. We started working with Desoutter back in 2007, when we were looking for advanced technologies to improve our production processes. Desoutter proposed tailored and innovative solutions to help us achieve our objectives.

We believe that Industry 4.0 is an excellent opportunity for us to reinforce our manufacturing competencies and leverage the benefits of these technologies, helping us to develop and manufacture products faster, cheaper and with greater accuracy.

We are preparing to introduce Desoutter's PivotWare process control software, which we believe will help us to accelerate our team's understanding of our production processes and encourage adherence to work instructions. We trust Desoutter's Industry 4.0 solutions to provide us with intelligent devices to enable greater connectivity, integration and collaboration.







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PRODUCTION LINE

## SKODA (INDIA)

“ We have used Desoutter’s premium industrial tools for a long time, because their high quality, innovative design and connectivity set them apart from the competition.

I have specific responsibility for tooling, including purchasing new equipment and related service and maintenance. For me, Industry 4.0 means new technologies to facilitate automation, robotics and geolocation. We have not started implementing Industry 4.0 in our factory yet, but are looking into it. We already use Desoutter’s Smart Start service offer, turnkey installation tool, which is very useful, as well as battery tools for improved flexibility and mobility.



PRODUCTION LINE

## HONDA (THAILAND)

“ I am in charge of tools maintenance at Honda’s manufacturing plant in Bangkok. We have worked with Desoutter since 2010, when we first started using Desoutter’s oil pulse tools on the assembly line. At the moment, we are using Desoutter’s CVI3 controllers together with battery tools to optimize the flexibility of the assembly process.

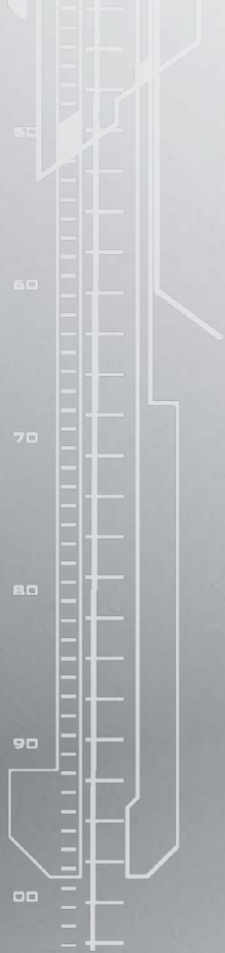
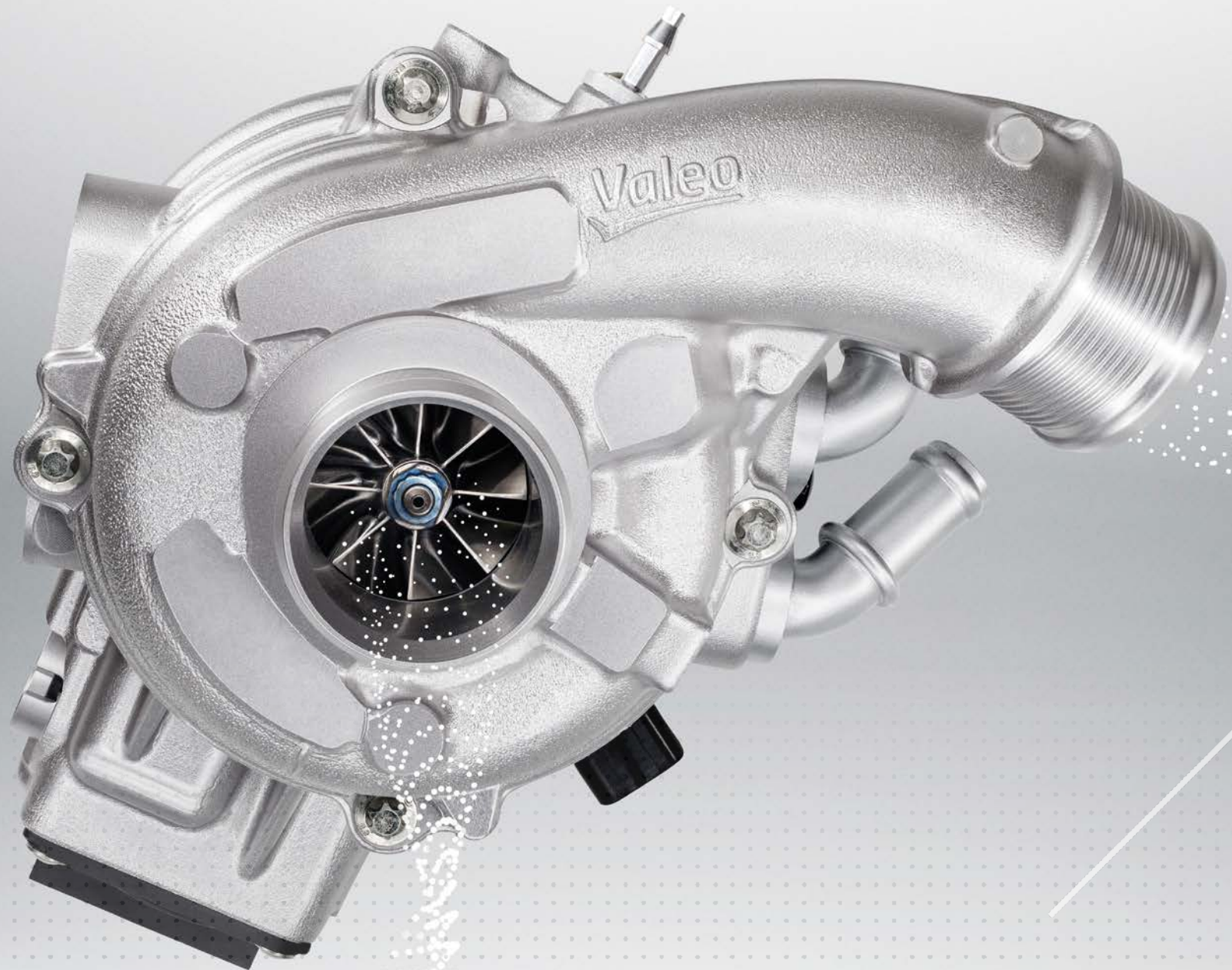
We are focused on reducing time to market and plan to increase the use of automation on our assembly lines and improve the operator interface in the near future. I believe that Industry 4.0 will make us an attractive partner to work with, making us more efficient and responsive to customization demands. I see Desoutter as an innovative company taking an active role in the implementation of Industry 4.0 in Thailand.











PRODUCTION LINE

## VALEO (THAILAND)

“ I started working with Desoutter over seven years ago when we purchased Desoutter’s solutions controllers to use when tightening the expansion valves and pipes on the evaporator assembly line.

At the Valeo plant in Thailand, we are already implementing Industry 4.0. We have an internal program which monitors the production site. When an alarm is raised, we are alerted immediately and can check the source using a computer or a mobile phone, without the need to visit the site.

In the future, we hope to implement Industry 4.0 technologies throughout the factory, as this will improve profitability. We are especially interested in the wireless tools and new innovative assembly solutions Desoutter is developing. We expect Desoutter’s solutions to be user friendly, easy to access and enable data collection whenever the user wants it.



TARGET

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RMT

PRODUCTION LINE

# SAAB

(SWEDEN)

“ With its reliable tools and innovative assembly solutions that help us improve productivity, I believe Desoutter is one step ahead in the assembly market.

We've used Desoutter's small manual drilling machines for over a decade and for the past three years we have used the Seti-Tec range of electric drilling tools, particularly the Automatic Drilling Units. We have now reached the validation phase, testing Desoutter's Industry 4.0 solutions including geopositioning, QR code readers, PivotWare process control systems and new software. The objective is to get the operators, the HMI and the tools communicating together.







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PRODUCTION LINE

## FORD (TURKEY)

“ Ford has used Desoutter’s products at its plant in Đnonu, Turkey, for a very long time and I have been working with these tools since I joined the company seven years ago. ”

We manufacture motors for trucks and commercial vehicles and embracing Industry 4.0 is very important for us, as it enables us to optimize the efficiency of our production lines and secure the production processes.

We are currently using Desoutter’s barcode control with advanced control program and all our tool units are connected to CVI NET WEB controllers for traceability. Although Industry 4.0 implementation will take some time, we are moving towards it gradually. In this regard, we think that Desoutter’s PivotWare process control solution has great potential.





PRODUCTION LINE

# GEELY

(CHINA)

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“ We have worked with Desoutter since 2010 and are currently using their CVI NET WEB solutions to provide real-time data traceability in many of our plants across China. Desoutter’s smart tools and database prompt us to carry out proactive maintenance regularly, to optimise plant availability.

A digital factory is a necessary precondition for achieving a smart factory. As part of our Industry 4.0 strategy, we are collecting A class data in our final assembly plants in order to optimise the assembly process. The next step is to invest in machine automation and cobot technology.

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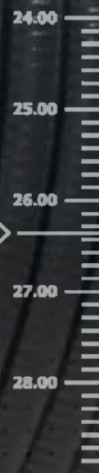
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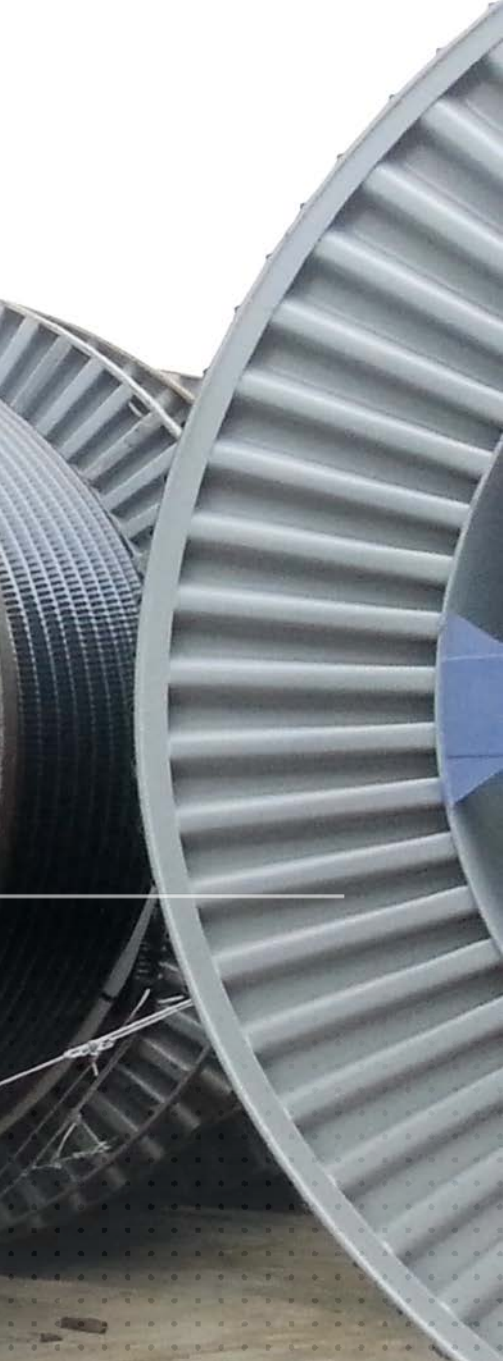


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PRODUCTION LINE

## LS CABLE & SYSTEM (KOREA)

“ I am responsible for implementing our company’s manufacturing and engineering plan, a key driver of which is improving productivity. We are currently using Desoutter’s solutions, together with a process control program we have developed in-house, to provide traceability in our critical operations.

I think that SMART factory and industry 4.0 are the way forward for sharing data, improving connectivity and making it easier to monitor and control different applications. We don’t yet have a plan for company-wide Industry 4.0 adoption, but we’re working on it! We are aware of Desoutter Industry 4.0 solutions, having worked with the Korean Desoutter team for several years.



PRODUCTION LINE

# DESOUTTER TOOLS

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(FRANCE)

“ The company was already using Desoutter’s tightening solutions successfully when I arrived. We have continued the implementation of assembly solutions and are currently rolling out the operator guidance system PivotWare developed by Desoutter.

I see Industry 4.0 among other aspects as the ability to control the entire production process through integrated communication between tools, machines and operators, using digitalization to enhance the exchange of data. The implementation in our assembly lines of Desoutter tightening systems allowed us to control and trace key process steps. However, the integration of PivotWare is a major steps towards Industry 4.0. It gives the operator immediate access to all necessary technical information to fulfill its production order and guaranty the correct execution of all process steps. We now consider this as the basis to maintain the trust of our customers.

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INTELLIGENCE

SPA

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UNE MARQUE QUI INNOVE  
UNA MARCA INNOVADORA

创新性品牌

혁신적인 브랜드

革新的なブランド






**S**ince our creation in Europe in 1914, innovation has been part of Desoutter's DNA. From being a small manufacturer of artificial limbs made from duralumin, through to today's position as a major solutions supplier of industrial products worldwide, it's been a journey built on ingenuity, creativity and innovation.

That innovative spirit, along with specialized expertise, has enabled Desoutter to work with customers to create co-developed tools across markets as diverse as automotive, aerospace and general manufacturing. The creation with Toyota of the E-Pulse, the first fully electric pulse tool on the market that offers a complete transformation from pneumatic to electric reaction-free assembling tooling, is evidence of that collaborative nature in action.

Now, with the emergence of Industry 4.0, a new era of partnership beckons. Desoutter is embracing the fourth industrial revolution, developing products and systems with intelligence and connectivity built in. These innovations have the potential to boost productivity right across your production lines.

So, now is the time to join us on that voyage of discovery. Please contact our local teams to find out how our Desoutter Industry 4.0 solutions can transform your processes.

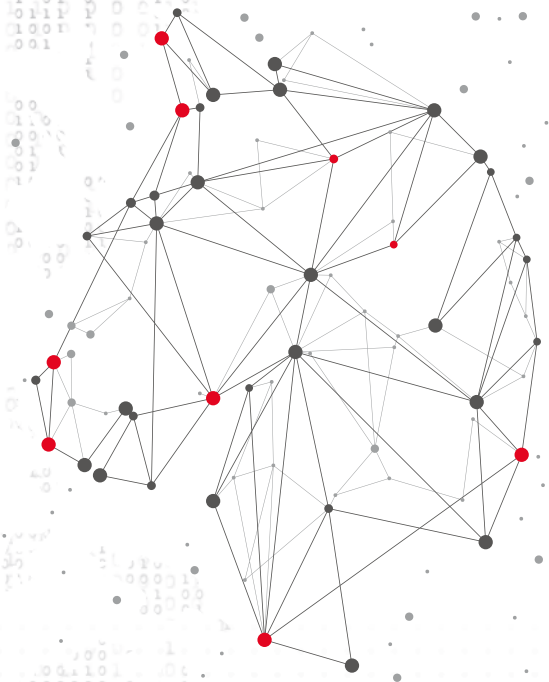






Contact us now  
to request a demo

DESOUTTER 4.0



# More Than Productivity

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