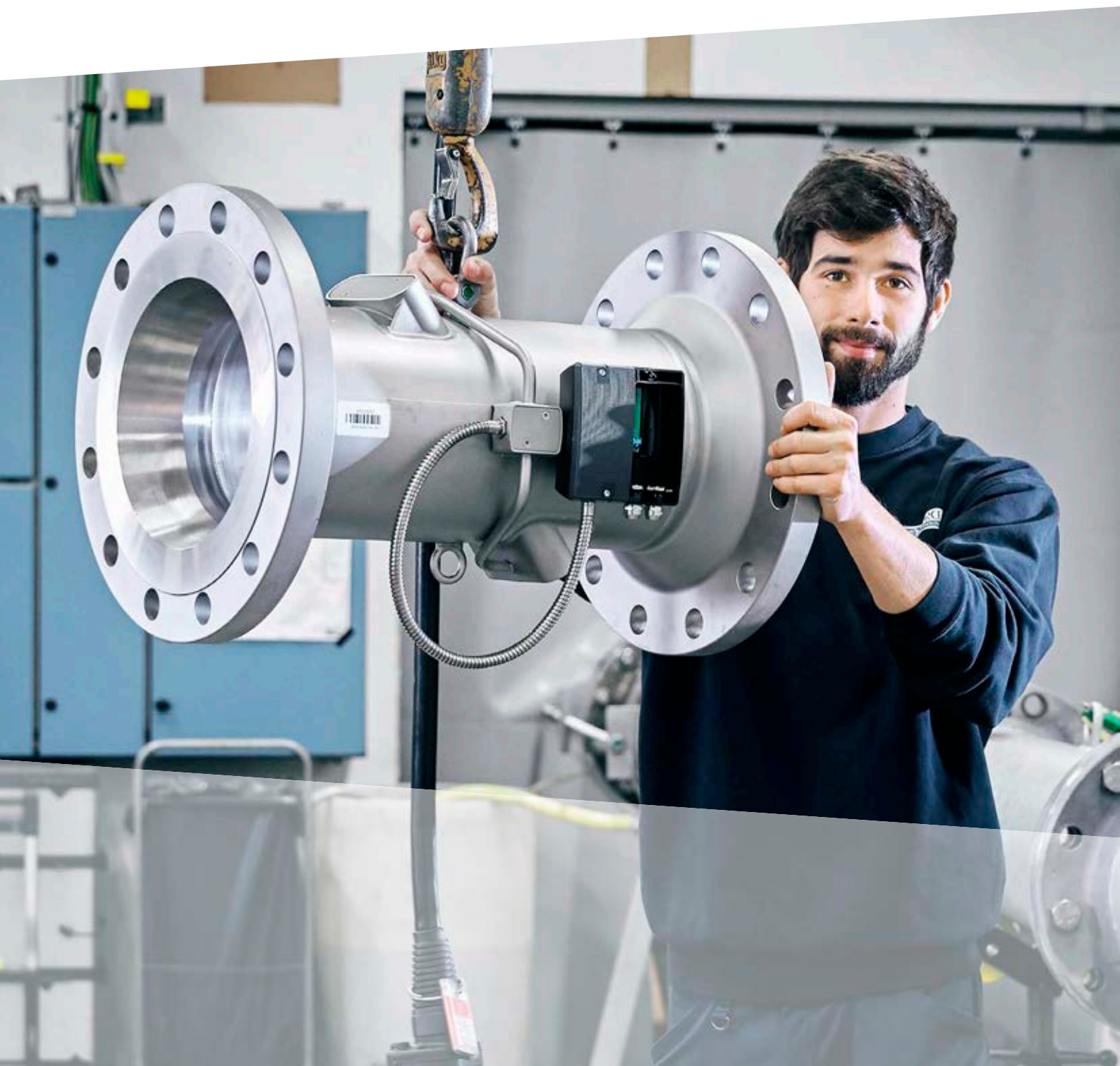


# Annual Report 2019





*Large investments in offshore wind farms will provide renewable energy in the green transformation.*

# Contents

04	Management review
08	Building nations with technology
14	People making a difference
16	At our clients' service
20	FORCE Technology at a glance
22	Key figures
26	Extract of the consolidated Annual Report 2019
28	Management
30	Addresses



# Management review

With the start of 2020, FORCE Technology is a robust, profitable and focused Research and Technology Organisation (RTO) with unique and professional diversity. Through a number of significant changes, we have succeeded in creating a new and better foundation for continued development.

## Stable earnings and increased robustness

After an unsatisfactory 2018, FORCE Technology in 2019 re-established stable operating earnings and a solid foundation, both in business terms and financially. The Group's earnings before interest and tax was MDKK 6 compared to last year's loss of MDKK 51.

The unsatisfactory result in 2018 was mainly due to the unprofitable inspection activities of the Swedish subsidiary. At the same time, FORCE Technology's project-based activities also yielded unsatisfactory revenue and earnings.

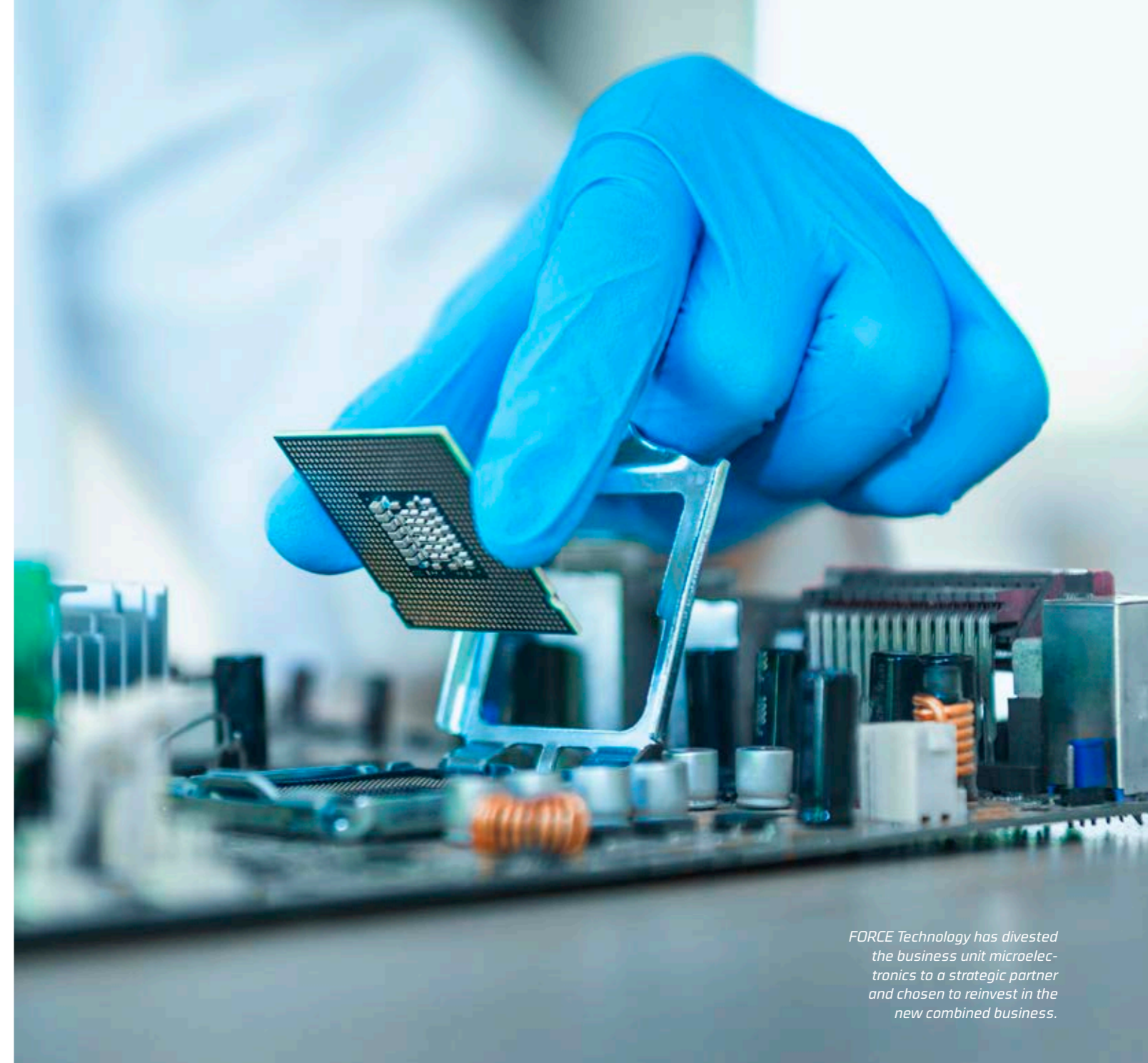
Therefore, it was encouraging that in mid-2019 FORCE Technology succeeded in divesting its inspection activities in Sweden, which at the same time no longer had synergy with the rest of the business. The remaining parts of FORCE Technology's operations in Sweden in the companies FORCE Technology Environment AB and DELTA Development Technology AB continue to deliver positive results and are part of the Group's core business. Earnings before interest and tax during the period leading up to the divestment amounted to MDKK -6 for the inspection activities in Sweden.

In contrast to 2018, the project-based business has contributed positively to the operating earnings in 2019. These

business areas are characterised by large single orders and are particularly sensitive to changing market conditions. It has been a focus area in 2019 to strengthen FORCE Technology's robustness with regard to large fluctuations in earnings.

One of the project-based businesses is Microelectronics, which is a major and internationally recognised activity. It has reached a commercial maturity and weight that will require large investments and market access on a different scale than before. At the beginning of 2020, we succeeded in finding a better owner for Microelectronics, which with strategic market focus, competences and capital, can boost the further growth and development of the area.

During the period of ownership, unique competencies within Microelectronics have been developed, which is important going forward on FORCE Technology's journey to digitalise. As a result, FORCE Technology has chosen to reinvest as a minority owner in the new combined business. Microelectronics will thus become a significant Danish spin-off - still at the same address and continue in close cooperation with FORCE Technology. Microelectronics also achieved a satisfactory positive result in 2019, which is a good starting point for further growth.



*FORCE Technology has divested the business unit microelectronics to a strategic partner and chosen to reinvest in the new combined business.*

One of the other project-based businesses is Digital Asset Integrity Solutions, which develops and sells advanced ultrasound-based scanner solutions for industrial purposes. One of the main products is P-scan, which during 2019 has gained a market breakthrough in the wind turbine industry. Thus, the area is moving from the development phase into the sales and production phases, resulting in a notably improved earnings performance from here on out.

The project-based activity Advanced Inspection was challenged in 2018

at a major project in the Middle East. Supported by a stronger collaboration between our Danish and Norwegian colleagues, the business achieved a huge increase in earnings in 2019.

Throughout 2018 and again in 2019, the other core business of FORCE Technology has developed steadily and yielded positive results. With the results from a positive core business, from the focusing and from increased robustness in the project-based business, FORCE Technology is stable both structurally and financially with positive earnings and proceeds from divestments.

## Ready for development and growth

In recent years, FORCE Technology has been focused on restoring earnings and focusing the business. All other things being equal, the focus has been more short term in strategic and business terms than before. The core business has developed positively throughout the period. It is time to focus on and invest resources in development and growth.





FORCE Technology has inaugurated the largest 3D printer in the Nordic region for printing metal components to the benefit of the industry's green transformation.

There is ample opportunity for growth in the individual business areas and especially in the combination of FORCE Technology's many competencies.

Today, we annually service many thousands of customers with the vast majority in a few areas. There is great potential in harnessing our unique combination of world-class competencies and facilities to challenge our customers with new technological, innovative and interdisciplinary opportunities that can add value to their business.

With a strengthened economy and cohesive business, FORCE Technology will again return to a high level of investment in facilities, technologies and competencies needed in assuming technological leadership. At the same time, our employees are the focal point for new technologies to be used in industry and to create an innovative culture that attracts the best talent.

This means that we will invest in a continued professionalisation of FORCE Technology's profile, employee development, professional standards and organisation, which will be able to create added value for the benefit of business life and society.

Society and businesses are facing a massive transformation brought about by increased digitalisation as well as a green transition. With an 80-year history as a technological pathfinder, FORCE Technology has helped society and business life through similar transformations. We see it as our aim to support, both those who are already in the process and those who remain uncertain before major changes.

**New technology may be the answer**

Most people trust that new technology is the answer to the climate challenges. Some known offers of solutions are: Larger and more efficient wind turbines, conversion to new fuels in the maritime sector or technologies that can extract CO2 out of the air. At the same time, it is

digital technologies that are either transforming or streamlining entire sectors, providing new opportunities, insights and challenges. Both for industry and society.

For new green and digital technologies to go from research to application, it is a prerequisite that there is an innovative ecosystem of interdisciplinary collaboration that brings new ideas into value-adding results. As a Research and Technology Organisation, FORCE Technology's foremost task is to take responsibility for the presence of a well-functioning ecosystem that balances societal needs with industrial solutions.

A green transition requires cross-disciplinary competencies. Successful digitalisation and implementation of IoT solutions also requires cross-disciplinary competencies. FORCE Technology has precisely these cross-disciplinary competencies with its broad and deep know-how within materials, chemistry, corrosion, sensors, electronics, wireless technology, environmental conditions and energy under

one roof. Our own cross-disciplinary competences combined with extensive cooperation with other knowledge institutions at home and abroad constitute the necessary ecosystem. That's why FORCE Technology has brought together its digital competencies in a new area: Innovation through the use of IoT, Data and Services.

In addition, FORCE Technology has an infrastructure of equipment, laboratories and facilities that is essential for implementing the green and digital transformation through accredited and standardised test, samples, analyses and pilot experiments. Recently, we have opened the Nordic region's largest 3D printer for metal components in meter size and have entered into several collaborations with universities around facilities for, for instance, the wind turbine and process industries.

As a Research and Technology Organisation, everything in FORCE Technology rests on an impartial basis, which in the

navigation between many technological opportunities and obstacles is necessary for both industry and society in order to make objective and sustainable choices.

**Technological leadership**

Denmark has a historical advantage with decades of experience within green technologies, green regulation, research and transition, as well as having one of the most digitalised infrastructures and IT-prepared populations in the world.

Neither climate change nor digital data know geographical boundaries. In addition to being challenges that transcend national boundaries, the green and digital transformations are also races in terms of know-how as to who comes up with the best solutions and technologies. It requires a technological leadership.

Therefore, FORCE Technology is further committed not only to taking responsibility for the innovative ecosystem but also to taking leadership within technology

by strengthening the commitment to national and international research and development collaborations.

In 2020, FORCE Technology will define its technological core programs, which will be the backbone of the coming years to realise national and international strategies, as expressed in the government's growth panels and climate partnerships, through Innovation Fund Denmark and the EU's upcoming Horizon Europe.

The world is changing. The situation is comparable to the time when it was a mission to put a man on the moon. Back then, we did not know which technologies were needed, but the mission brought together skills from across disciplines. We are now facing an immense mission that FORCE Technology is ready to embark on.



Juan Farré  
CTO

Frederik Smidth  
Chairman of the Board

Øjvind Andersen Clement  
CEO

Jesper Haugaard  
Vice-chairman



# Building nations with technology

Climate change is no longer a distant threat. Changes are happening with visible consequences for our modern society, rural areas, cities, and infrastructure. Once more, we trust that new knowledge and technology will be our response to the challenges of the future.

## Climate change knows no bounds

We no longer doubt that climate change will have a major impact on our future. The questions are where, how, and when? Unlike many other challenges that we can solve with local measures, climate change knows no bounds.

With the Paris Agreement, nearly five years ago, the world's leaders set a goal of limiting temperature increases to less than +2 degrees, preferably no more than 1.5 degrees. For this to succeed, a significant reduction of CO<sub>2</sub> emissions is necessary.

UN's climate change panel, the IPCC, estimates that global CO<sub>2</sub> emissions must be halved by 2030 and reduced to zero by 2050. The Danish government has set an even more ambitious goal to reduce greenhouse gas emissions by 70% within 10 years.

Ambitious goals are crucial for actions to be taken. Industry has already realised this, increasingly taking responsibility for these challenges and searching for new solutions to reverse or combat them. Maersk seeks to achieve its goal of becoming carbon-neutral in 2050 by identifying three alternative fuels to replace bunker oil, among other measures. Many other industrial businesses have set the same high levels of ambition, driving technological developments.

## A technological race

Beyond being a transcendent challenge, the green transformation is also a race for knowledge and technology, with competitors striving to come up with the best solutions and technologies first.

The phasing out of fossil fuels in favour of more carbon-neutral energy sources, increased energy efficiency, and even the capture and storage of atmospheric CO<sub>2</sub> are just some of the major efforts that have begun. However, they are not alone: the transformation depends on a waterfall of other technologies and initiatives, ranging from resource optimisation and sustainable production to lifetime extension and a circular economy.

Changes to our ecosystem are like communicating vessels; changes one place have consequences elsewhere. Therefore, actions require a comprehensive effort from interdisciplinary initiatives and technologies at all levels. For 80 years, FORCE Technology has been at the centre of countless transformations – technological, industrial, and societal.

Beyond its broad, deep technical capabilities, previous transformations have given FORCE Technology the ability to impartially evaluate and mature technological alternatives while also facilitating collaboration and transformation. This is

particularly important given that not all technologies or industries can be made equally climate-neutral, but they can at least be made as climate-friendly as possible.

## A trailblazer with classic virtues

FORCE Technology has supported the energy sector for decades. From the time when oil was a new adventure to explore, exploit, refine, and transport, and when it was time for plants to be decommissioned; to now, when we must make use of oil in the most environmentally friendly ways possible, or replace it with other forms of energy.

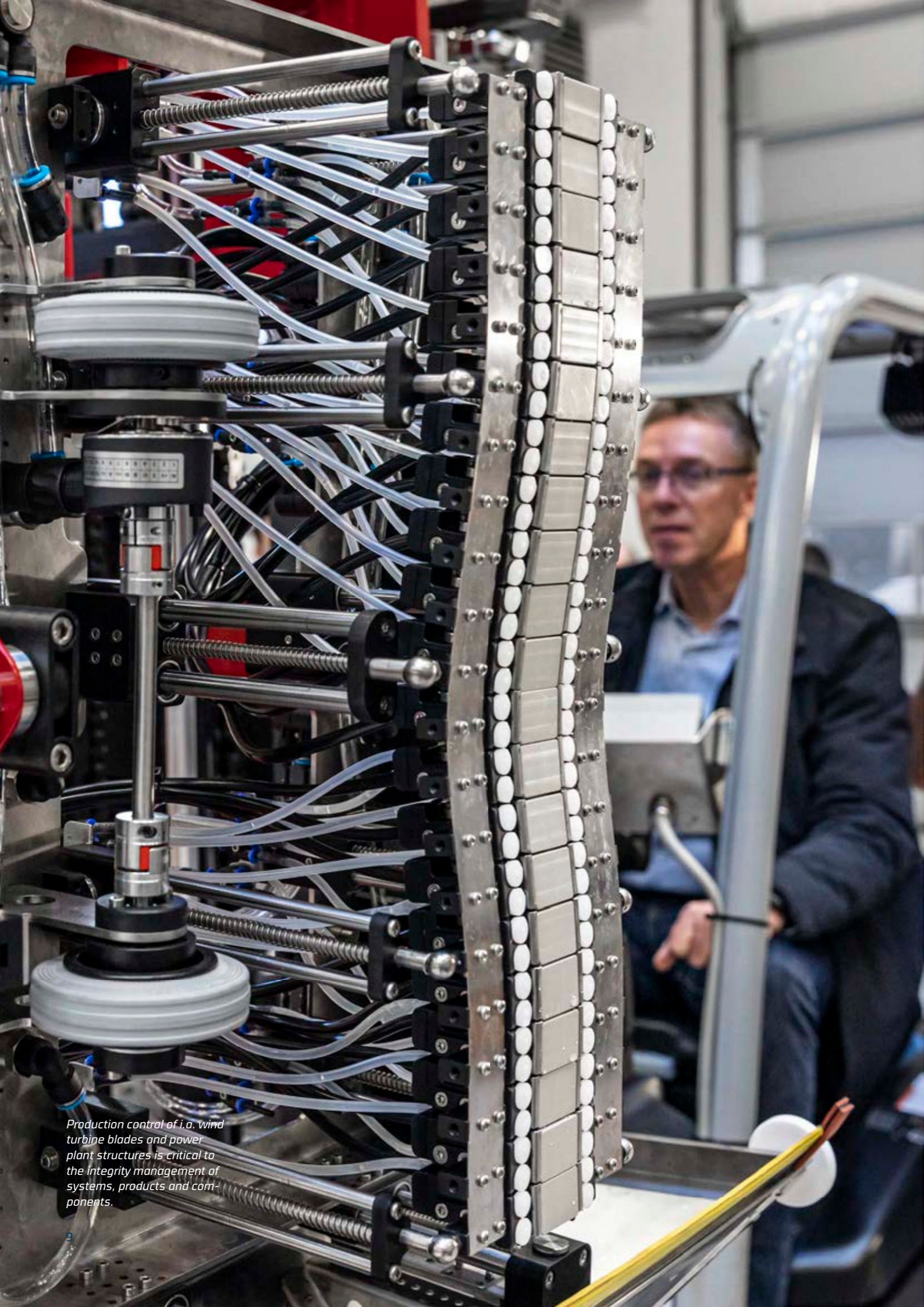
The same goes for natural gas, accounted for with precise meters, or heat and power plants, which must operate as efficiently and safely as possible while minimising emissions released into their surroundings.

When the first wind turbines were produced, installed, and measured, we were there. Today, we provide support for the installation of the latest megawatt offshore turbines. The support we provide includes turbine shipping simulations, blade production supervision, structural monitoring for undersea foundations, and aerodynamic analyses.



*The shipping industry and the maritime sector are undergoing a historic green transformation with ambitious targets to reduce CO<sub>2</sub> in the near future.*





Production control of i.a. wind turbine blades and power plant structures is critical to the integrity management of systems, products and components.

FORCE Technology has intensive knowledge of the energy technologies, energy supply systems, and energy structures that have been built, expanded, and maintained for decades.

This is the same infrastructure that must now serve as the backbone of a transformation to new forms of energy. A successful green transformation depends not only on innovative ideas, but also deep insight and experience. There is still uncertainty as to which technologies, and which combinations of technologies, will form the basis of the energy system of the future.

If electricity and hydrogen become some of the key forms of energy in our future energy supply, this will not only create brand-new technical challenges for our existing infrastructure, but it will also require things like new meters, new charging stations, new billing methods, and new controls. New technologies like geothermal energy and biofuels require outlining not only their advantages, but also their challenges.

The transformation from fossil energy to green energy presents new challenges in choosing materials and equipment, leading FORCE Technology to develop facilities and methods for risk mitigation of new energy plants. Simultaneously, new forms of energy will lead to new kinds of processing facilities in the supply chain, as well as industrial production for (e.g.) the manufacture and use of e-fuels and biogases. These forms of energy are particularly harsh on materials, tanks, pipes, control units, and valves. They carry increased risks of corrosion and damage, or present new emissions situations.

With its cross-disciplinary nature and its historic insight into energy supply, FORCE Technology is in a unique position to support industry and the society in reaping the benefits of Power-to-X technologies for energy storage, balancing of the electrical grid, and industrial processes. With its wide-ranging efforts in this sector, FORCE Technology will be able to support the entire value chain as new forms of energy must be brought into use in ships, motors, and more.

#### **A sustainable value chain**

It is going to take more than an energy transformation. The green transformation requires far wider efforts. FORCE Technology also supports the industry to a more resource-efficient production, optimising and documenting both the choice and use of materials.

Therefore, we unveiled the largest 3D metal printer in the Nordic region, which will help the industry with large-scale additive manufacturing. This facility will ensure that the technology can be used to move from existing centimetre-scale metal printing to metre-scale components and structures. This offers a unique opportunity for remanufacturing and thereby replacing worn-out parts in facilities like energy plants, without the need to produce brand-new components. This results in reduced material consumption and waste.

Similarly, FORCE Technology is invested in the development of new methods and test types for lifetime extension of (e.g.) materials and electronic products, as well as mature energy harvesters that can replace batteries, thereby avoiding the risk that growth in digitalisation and IoT devices puts increased pressure on resources and the climate.

#### **The keys to the future are digital**

Apart from a green transformation, the world is in the midst of a digital transformation. Combining these two offers advantages, since the green transformation will often need support from digital technologies and digitalisation must take place in an environmentally friendly way.

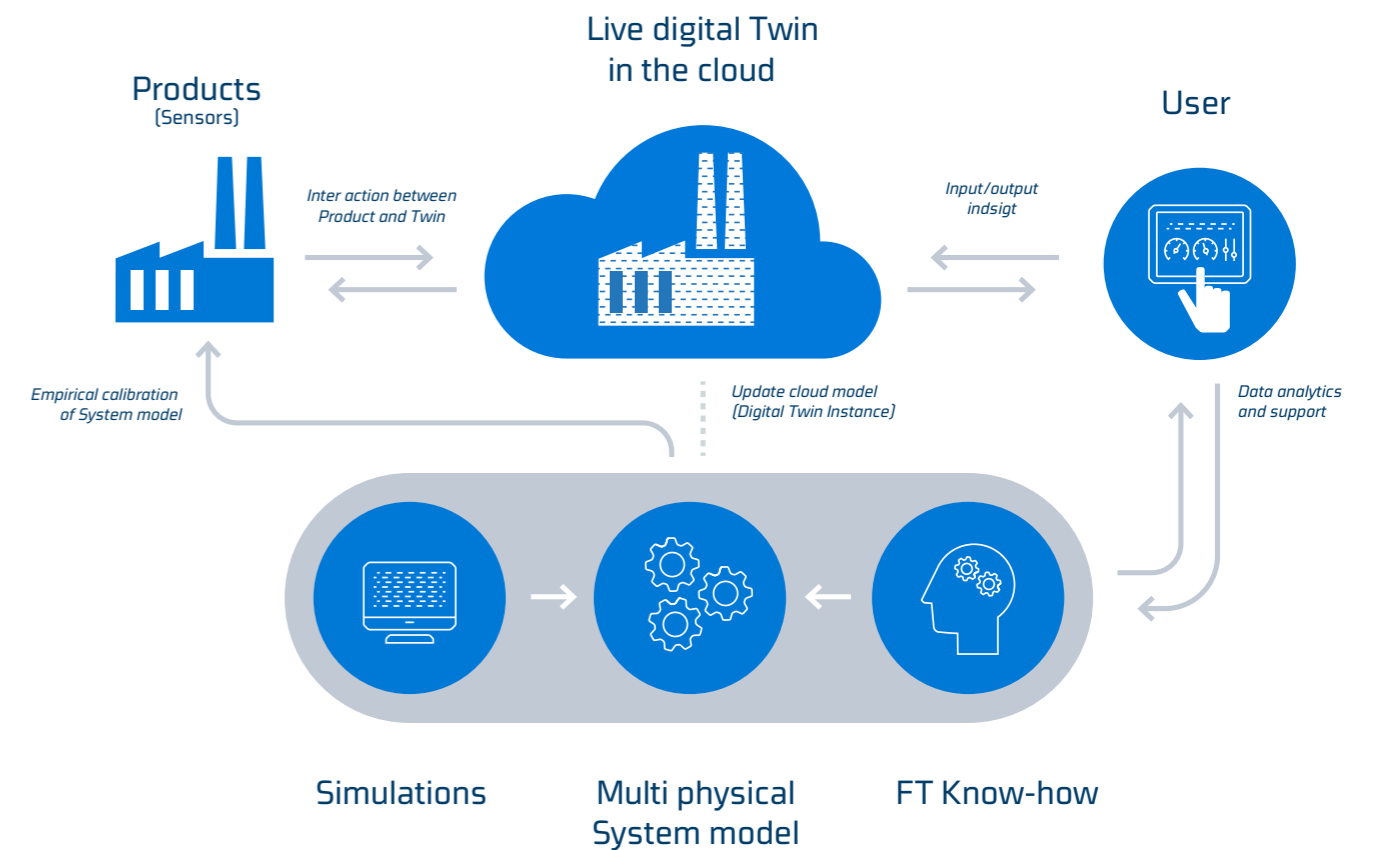
FORCE Technology has collected its consultancy capabilities in the field of smart technologies under a new unit for IoT, Data & Services Innovation. This unit will support the industry in a successful digital transformation of products, services, and business models alike. Apart from its own expertise in IoT, wireless technology, design, and business development, this unit stands on the shoulders of FORCE Technology's cross-disciplinary integration of fields like materials, electronics, measurement technology, compliance, AI, and machine learning.

In the same framework, FORCE Technology is operating the Nordic IoT Centre in collaboration with the Alexandra Institute, offering an ecosystem for the successful implementation of IoT solutions based on such Scandinavian values as design and quality.

This ecosystem comprises developers, knowledge institutions, interest groups, and users of IoT solutions, providing opportunities to meet and exchange experience while also bringing together just the right set of interdisciplinary capabilities that will be needed to make practical IoT solutions a reality.







Digital twins provide a unique opportunity to combine both physical and simulated data to gain real-time insights to the operation of products and plants.

At the same time, FORCE Technology is working together with the Danish Technological Institute and the Copenhagen Business School to support the industry's digital transformation from a business perspective, through servitisation. In this way, we support small and medium-sized businesses, as they shift from merely supplying products towards selling more product-related services.

#### Meet your digital twin

The digital transformation will not take place by simply giving products and materials new properties and features. FORCE Technology is developing and maturing advanced technologies that can be part of the solutions of the future – but it is also testing those future solutions.

FORCE Technology has a comprehensive infrastructure of physical testing facilities. It is typically tied to a specific geography and geometry. With digital technologies, this infrastructure can be made virtual in the future. Virtual tests, simulations, modelling, and digital copies.

Using technologies like artificial intelligence, it is possible to create a digital copy of a system, process, or product. The digital twin is such a precise model that it behaves identically to its physical twin in operation or in use. This makes it possible to test, experiment, and possibly even predict the life cycle of a physical product or system.

FORCE Technology has begun developing different types of data structures for

use in digital twins, as well as simulation efforts directed towards creating virtual test services. With services like these, FORCE Technology will be able to deliver unique, real-time insight into critical components and systems in relation to characteristics like performance, errors, service requirements, and so on. Digital twins also make it possible to collect and combine physical and simulated data.

For decades, FORCE Technology has been measuring products, materials, and structures. Sound pressure level measurements, hardness measurements, and measurements of pressure, airtightness, corrosion, and flow. With its unique, historic data sets, foundational knowledge of and experience in measurement technology, and new digital technologies, FORCE Technology

is facing a historic opportunity to be a technological pathfinder for the industry and the society.

Together with the industry, we can find the right path to sustainable, competitive green and digital technological choices, using patterns of data from the physical and virtual worlds.

#### Abilities come with duties

It takes professionalism and expert skills for us to implement new technologies that solve challenges and turn possibilities into reality. However, to create a better world to live in, technological development must be done by humans, for humans, and in coexistence with humans. FORCE Technology has the technological abilities to create transformations. These abilities come with

duties, which is why we emphasise the need for those transformations to occur with a focus on the good life.

Therefore, we're developing technologies and methods to identify and impede viruses that are harmful to our health. By identifying illnesses early on in livestock populations using air samples, we not only avoid subjecting our agricultural production to disease, but we also introduce gentler, less invasive testing methods that avoid the need to take blood samples directly from individual animals, for example.

When the industry develops the technologies of the future, we use humans as our measurement instruments in testing panels. In this way, we ensure that products are aligned with consumers' tastes

while also accounting for the context in which the products will be used.

On behalf of industry and the society, FORCE Technology works to develop methods, technologies, and rule sets that both reduce emissions for better air quality and reduce noise annoyances in urban environments, in traffic, from wind turbines, and at home. Overall, this contributes to reducing annoyances and the effects of stress, which can be harmful to our health.

As technology pathfinders, it is our job to ensure that the green and digital transformations solve the challenges of the future without creating new ones.



# People making a difference

Regardless of what has caused the present global challenges, people will be the ones driving development towards a more sustainable future. People are also the ones responsible for identifying where and how digital technologies can make a difference in our society and in industrial solutions of the future.

## In service of technology

When Denmark began to import large, foreign-made boilers in the 30s and 40s, there was a need to verify that they met quality and safety requirements. In 1940, the need for welding inspections became the foundation of the Welding Centre (Svejsecentralen), which used X-ray imaging and was responsible for the quality control. And thus, the seed of FORCE Technology had been planted.

A decade later, in the 1950s, the public auditory care was established in Denmark, and with it, the Technical Audiological Laboratory. This laboratory was responsible for providing technical support and quality control to clinics. Requirements were also set for publicly purchased hearing aids. Today, Denmark is a global leader in hearing aids, thanks to these developments.

The same story exists for many Danish positions of strengths, such as the audio industry's need to qualify sound quality; the inspection needs of the oil, natural gas, and offshore industries; the shipping industry's need for towing tanks and manoeuvring models; and the wind turbine industry's need for quality control and noise measurements. Societal challenges are solved using industrial solutions supported by the expert employees that have contributed to the formation of FORCE Technology and Denmark's technological development over the last 80 years.

## Technology pathfinders

For nearly 80 years now, FORCE Technology has been a technological pathfinder,

helping industry and the society through generations of technologies and transformations. Technological expertise and leadership are the very fabric of who we are, encapsulated in capable people and implemented in unique facilities, products, and services.

Auditors, engineers, captains, chemists, laboratory technicians, constructors, and welders. Technology pathfinders shaping FORCE Technology's breadth of expertise, while its depth offers lifelong professional opportunities to each individual.

Their many educational backgrounds simultaneously serve to create a unique day-to-day environment and culture of interdisciplinarity, challenging career paths, and opportunities to apply the latest knowledge to the real world. The multifaceted nature of this environment is a product of FORCE Technology's employees working closely with the industry, whether out in the field on oil rigs, at large facilities, and in laboratories; at our testing facility; or as instructors and consultants.

## Talent translates knowledge into value

Our everyday work demands that we constantly search for new talent, both at home and abroad. This is why we host practical projects, internships, and student jobs. The opportunity to work with the latest products and solutions in the industry attracts new colleagues to us from all kinds of educational programmes.

FORCE Technology offers a rare chance for students to experience working with many technologies under one roof, from 3D printing in metal, analysing chemicals in toys, and building ship models to measuring and analysing audio files or developing wireless technology.

Accordingly, at FORCE Technology, learning doesn't stop when someone graduates and begins working. Every day, we work with educational institutions, schools, and universities on development projects. We translate new research into new methods, we make technologies more mature, and we develop equipment to tackle some of society's greatest challenges.

We ensure that new technologies are not noisy and do not pollute, harming humans and nature. We ensure that products meet safety requirements and standards. We investigate accidents and faults in structures and materials to avoid similar incidents in the future. We inspect the facilities and pipes that efficiently provide utilities to society, and we calibrate meters to ensure that water, heat, and other kinds of energy are properly accounted for.

This way, we make a difference for our clients, for society, and for each other.



*Experienced and highly specialised colleagues provide opportunity for new talents to unfold in FORCE Technology.*



## 200+

Specialists from FORCE Technology give hundreds of presentations at international conferences every year.



## 150+

FORCE Technology is active with participants in more than 150 standardization groups, committees, councils and bodies.



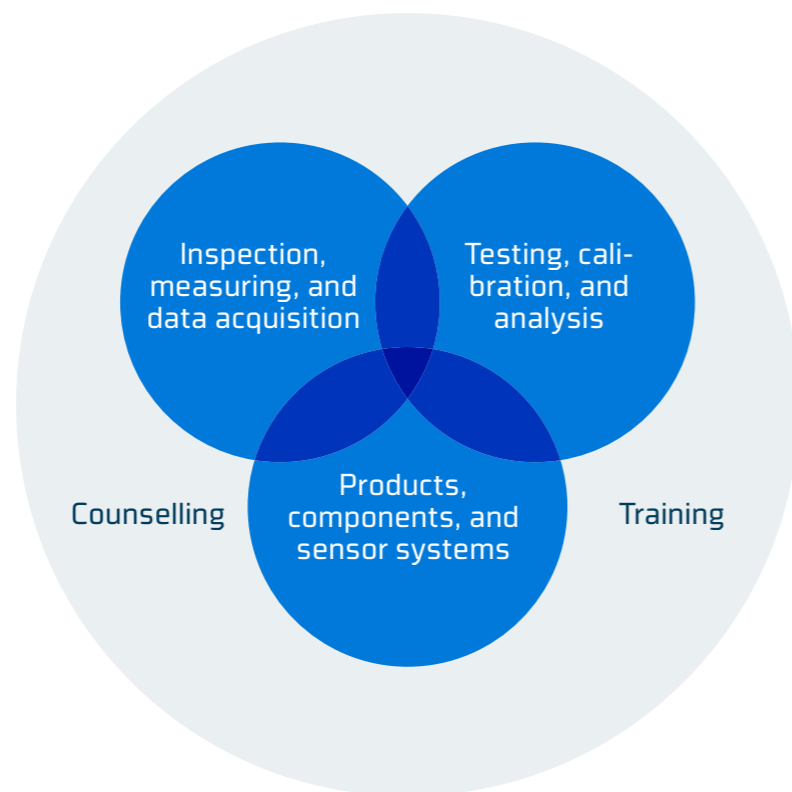
## 250+

FORCE Technology has more than 250 collaborative agreements with Danish and international research institutions.



# At our clients' service

The modern society is based on security. Warm water comes out of the tap. The streets are lit. Food arrives fresh. Based on the public's needs, and on national and international standards, the business world develops innovative solutions and technologies that create the conditions for a modern society.



**Peace of mind and value creation**  
Social and business development rely on innovation combined with security and peace of mind. Every year, more than 10,000 businesses trust FORCE Technology with their products, materials or structures. Their latest ideas or greatest challenges, each requiring in-depth expertise, technologies, and unique facilities. FORCE Technology's professional contributions to business communities and the society rest upon four pillars.

**Inspection, measuring, and data acquisition**  
We meet our clients at their sites for advanced on-site inspection, measurement, and data collection for bridges, oil rigs, wind turbines, construction sites, and more. Our clients choose FORCE Technology for competent, quick, and

flexible support. For some, this reduces risks and production halts; for others, it ensures consumer protection and conformance with applicable regulations.

**Testing, calibration, and analysis**  
We meet our clients in our comprehensive, unique infrastructure of facilities and laboratories for testing, calibration, and analysis. Our clients choose us for impartial and accredited support. For some, this provides validation and market access; for others, it provides quality assurance and design optimisation.

**Products, components, and sensor systems**  
We meet our clients with new technology, products, components, and sensor systems. In combination with FORCE Technology's knowledge, they provide our clients decision support, integrity

management, and extended structure lifetimes or they add new, value creating features and intelligence to our clients' own products.

**Counselling and training**  
We meet our clients in all areas with specialised consultancy and training services that give clients value by combining cross-disciplinary and experience-based capabilities with the latest knowledge from research and development activities.

Overall, FORCE Technology creates peace of mind, security, and value for businesses and society, based on impartiality, public good, and current knowledge.





**An approved Research and Technology Organisation**

For nearly 80 years, FORCE Technology has served as a technology pathfinder, leading society and business communities safely through technological uncertainties, transformations, and opportunities. This is our central purpose as a government-approved Research and Technology Organisation (RTO).

As a Research and Technology Organisation approved by the Danish government, FORCE Technology is put into the world to accelerate innovation in society and bolster the competitiveness of industry using new technology.

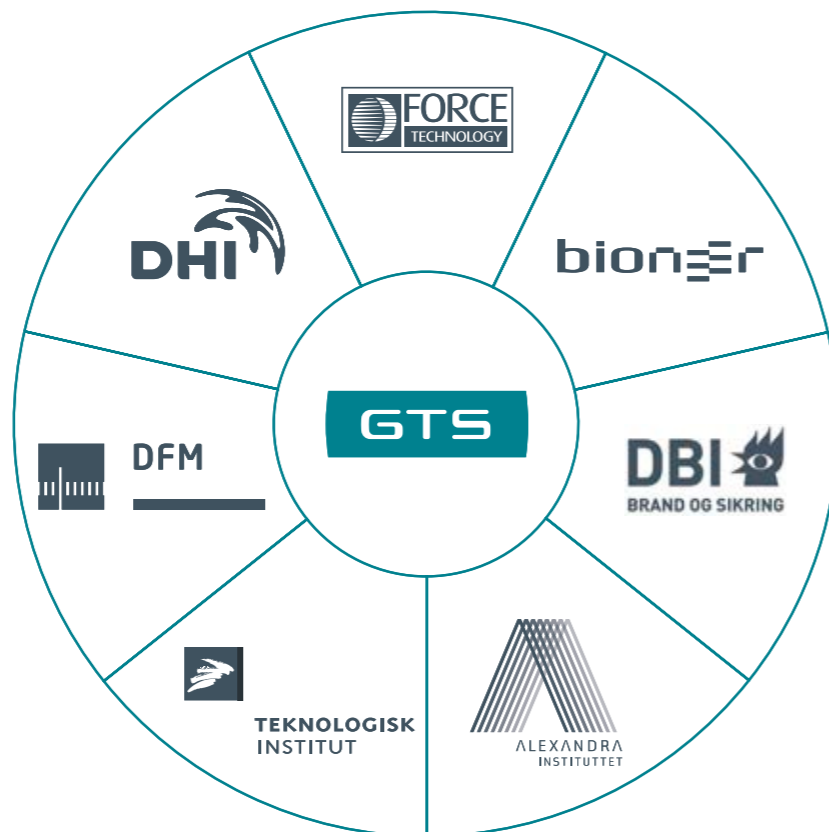
Working in fields like the green and digital transformations requires an interdisciplinary approach. Therefore, FORCE

Technology combines its own interdisciplinary approach with those of other knowledge partners. FORCE Technology collaborates with all six of the other Danish RTOs, every Danish university, and more than 40 international institutes of knowledge. Our international collaboration helps us bring the latest knowledge from around the world back home, making it more relevant and accessible to Danish industry. It also helps us keep our own level of knowledge competitive and on par with international levels.

We participate in 12 of Denmark's 17 innovation networks as a knowledge partner, as well as in several other groups, helping to build bridges of knowledge between research and the current needs of business communities.

Additionally, FORCE Technology runs seven of its own professional networks and clubs where more than 700 businesses and 2,000 professionals meet throughout the year to exchange knowledge and continue their education; and more than 3,000 professionals take part in our courses and events.

With this comprehensive network and collaboration, FORCE Technology is responsible for ensuring that businesses receive rapid, independent access to unique, state-of-the-art development facilities, technologies, knowledge, and specialist capabilities. In this way, we're pushing the limits of what businesses can do on their own. From good ideas to market-ready solutions.



*Advanced sensor systems combined with machine learning and AI bring digital life to FORCE Technology's many years of experience with materials and quality control.*



# FORCE Technology at a glance

FORCE Technology is an international technology consultancy and service company. Based in Scandinavia, FORCE Technology makes a global footprint. With a strong infrastructure of facilities and skill sets, we advise and service our clients globally in the energy and environment industries, the electronics industry, the lifescience industry, the food industry, the oil and gas industry, and in the maritime industry, among others.

We have branches in Denmark, Norway, Sweden, Singapore, China, and the United Arab Emirates.



## 70+

### COUNTRIES

FORCE Technology provides services to clients from more than 70 different countries throughout the world.



## 5,000+

### COURSE PARTICIPANTS

We share our knowledge through more than 400 courses and events each year, as well as with over 700 businesses in our network and professional clubs.



## 450+

### UNIQUE FACILITIES

FORCE Technology possesses one of Scandinavia's largest collections of unique facilities and laboratories that ensures e.g. testing, demonstration, and documentation of new technologies and products.



## 9,000+

### CLIENTS

FORCE Technology provides services to thousands of Danish and international clients, both private and public, every year.



## 1,100

### EMPLOYEES

- Dr. and PhD - 4%
- Postgraduate degrees - 24%
- Other technical staff - 51%
- Other non-technical staff - 21%



## 150+

### COLLABORATION PROJECTS

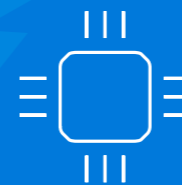
FORCE Technology is partnered with all the Danish universities, as well as many international universities, to secure our clients' access to future technology and knowledge, keeping us at the forefront of the technological development.



## 50%+

### INTERNATIONAL TURNOVER

More than half of FORCE Technology's turnover comes from international clients, through exports and activities in other countries.



## 35+

### NEW R&D PROJECTS

Every year we launch more than 35 new research and development projects in such fields as IoT, materials technology, bioenergy, electronics, and sensor technologies.



## 50+

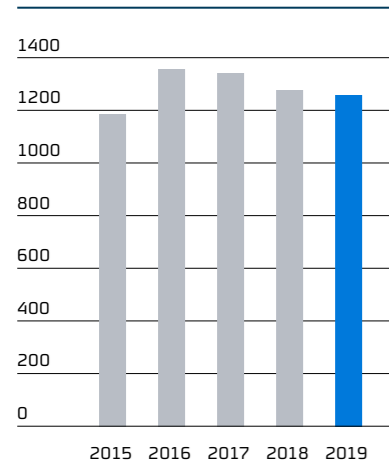
### DISCIPLINES

FORCE Technology comprises numerous highly specialised business areas, offering services to clients from their first idea, through development and testing, up to certification and inspection.

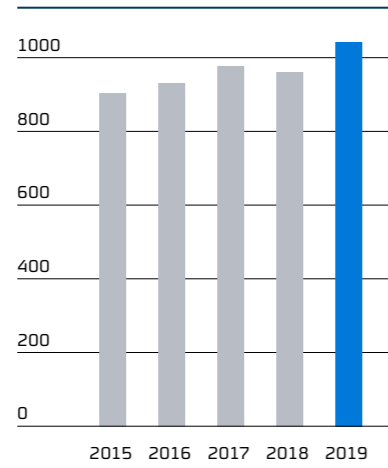


# Key figures

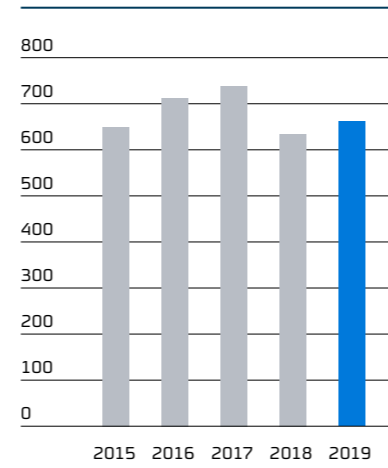
**TURNOVER**  
MDKK



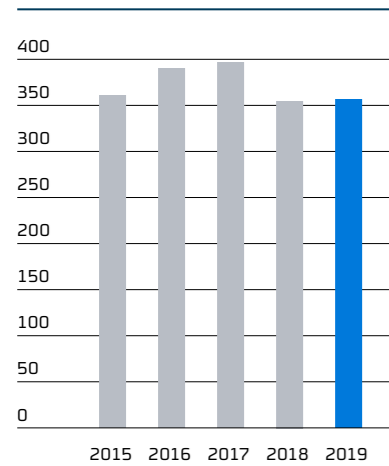
**TURNOVER PER EMPLOYEE**  
TDKK



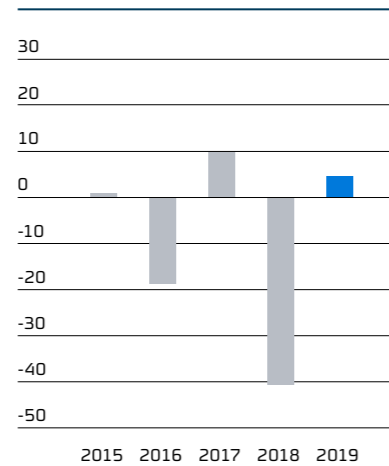
**TURNOVER, ABROAD**  
MDKK



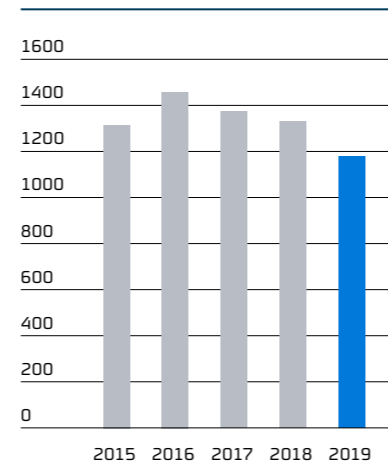
**CAPITAL AND RESERVES**  
MDKK



**PROFIT FOR THE YEAR**  
MDKK



**NUMBER OF EMPLOYEES**  
AVERAGE PER YEAR



*New forms of energy and fuels challenge materials but laboratory analysis can reveal hidden weaknesses or potential corrosion.*





Product lifetime can be tested and simulated through a variety of test methods to reveal early product design weaknesses or provide input to its carbon footprint.

# Extract of the consolidated Annual Report 2019

## Profit and loss account 1 January - 31 December

	Consolidated company	
	2019 DKK 1,000	2018 DKK 1,000
<b>Consolidated turnover</b>	<b>1,268,366</b>	<b>1,278,725</b>
Other operating income	3,356	3,447
Expenses directly related to projects, outlays	242,601	248,432
Other external expenses	142,631	151,760
Personnel expenses	812,314	858,140
Depreciation and write-downs	68,633	74,776
<b>Operating profit</b>	<b>5,543</b>	<b>-50,936</b>
Share of profit or loss	5,784	1,099
<b>Profit before interest, etc.</b>	<b>11,327</b>	<b>-49,837</b>
Financial income and expenses, net	-5,595	8,939
<b>Profit before tax</b>	<b>5,732</b>	<b>-40,898</b>
Tax	1,137	-733
<b>Profit before minority interests</b>	<b>4,595</b>	<b>-40,165</b>
Minority interests	2	32
<b>Profit for the year</b>	<b>4,597</b>	<b>-40,133</b>



# Extract of the consolidated Annual Report 2019

## Balance as of 31 December Assets

	Consolidated company	
	2019 DKK 1,000	2018 DKK 1,000
<b>Fixed assets</b>		
Goodwill	4,411	6,387
Other intangible assets	10,297	7,994
Development projects under construction	36,153	22,297
<b>Total intangible fixed assets</b>	<b>50,861</b>	<b>36,678</b>
Land and buildings	139,771	140,526
Equipment under construction	0	6,781
Furniture and equipment	202,075	228,398
<b>Total tangible fixed assets</b>	<b>341,846</b>	<b>375,705</b>
Participating interests	30,474	35,066
Other financial assets	0	936
<b>Other financial fixed assets</b>	<b>30,474</b>	<b>36,002</b>
<b>Total fixed assets</b>	<b>423,181</b>	<b>448,385</b>
<b>Current assets</b>		
Contract work in progress	108,509	112,106
Debtors, work in progress and completed work	224,799	248,593
Other debtors	65,244	51,769
Securities	3,800	4,428
Cash and bank balances	29,766	16,316
<b>Total current assets</b>	<b>432,118</b>	<b>433,212</b>
<b>Total assets</b>	<b>855,299</b>	<b>881,597</b>

## Liabilities

	Consolidated company	
	2019 DKK 1,000	2018 DKK 1,000
<b>Capital and reserves</b>	<b>358,214</b>	<b>355,812</b>
<b>Minority interests</b>	<b>95</b>	<b>97</b>
Deferred taxes	0	1,797
Other provisions	11,617	1,127
<b>Total provisions</b>	<b>11,617</b>	<b>2,924</b>
Prepayments	4,238	4,850
Mortgage debt	127,340	132,198
<b>Total long-term debt</b>	<b>131,578</b>	<b>137,048</b>
Short term part of long term debt	4,852	4,844
Bank debt	59,760	88,656
Creditors and accrued costs	72,113	65,408
Advance payments and invoicing	35,894	32,136
Other creditors	181,176	194,672
<b>Total short-term debt</b>	<b>353,795</b>	<b>385,716</b>
<b>Total debt</b>	<b>485,373</b>	<b>522,764</b>
<b>Total liabilities</b>	<b>855,299</b>	<b>881,597</b>



# Management

## Board of Directors

**Frederik Smidth**  
Chairman of the Board  
Sr. Vice President, CTO, Maersk Drilling

**Jesper Haugaard**  
Vice-chairman  
Director, Con-Wise

**Tove Feld**  
CEO  
Visionary Growth

**Per Michael Johansen**  
Rector  
Aalborg University

**Jesper Thomassen**  
President  
Nordic Sugar A/S

**Kim Junge Andersen**  
CFO  
Rockwool

**Søren Jensen**  
NDT inspector  
Employee Representative

**Anders Struwe Mynster**  
Senior Consultant  
Employee Representative

**Kirsten Grønning Sørensen**  
Specialist  
Employee Representative

## Management

**Øjvind Andersen Clement**  
Chief Executive Officer

**Juan Farré**  
Chief Technology Officer

## Directors

**Jens Roedsted**  
Chief Operating Officer

**Bo Christensen**  
Director  
Finance & Administration

**Lars Hedemann Hilligsøe**  
Chief Operating Officer

**Henriette Halvorsen**  
Director  
HR

**Nils Linde Olsen**  
Chief Operating Officer

**Lars Vesth**  
Director  
Digital Innovation & IT

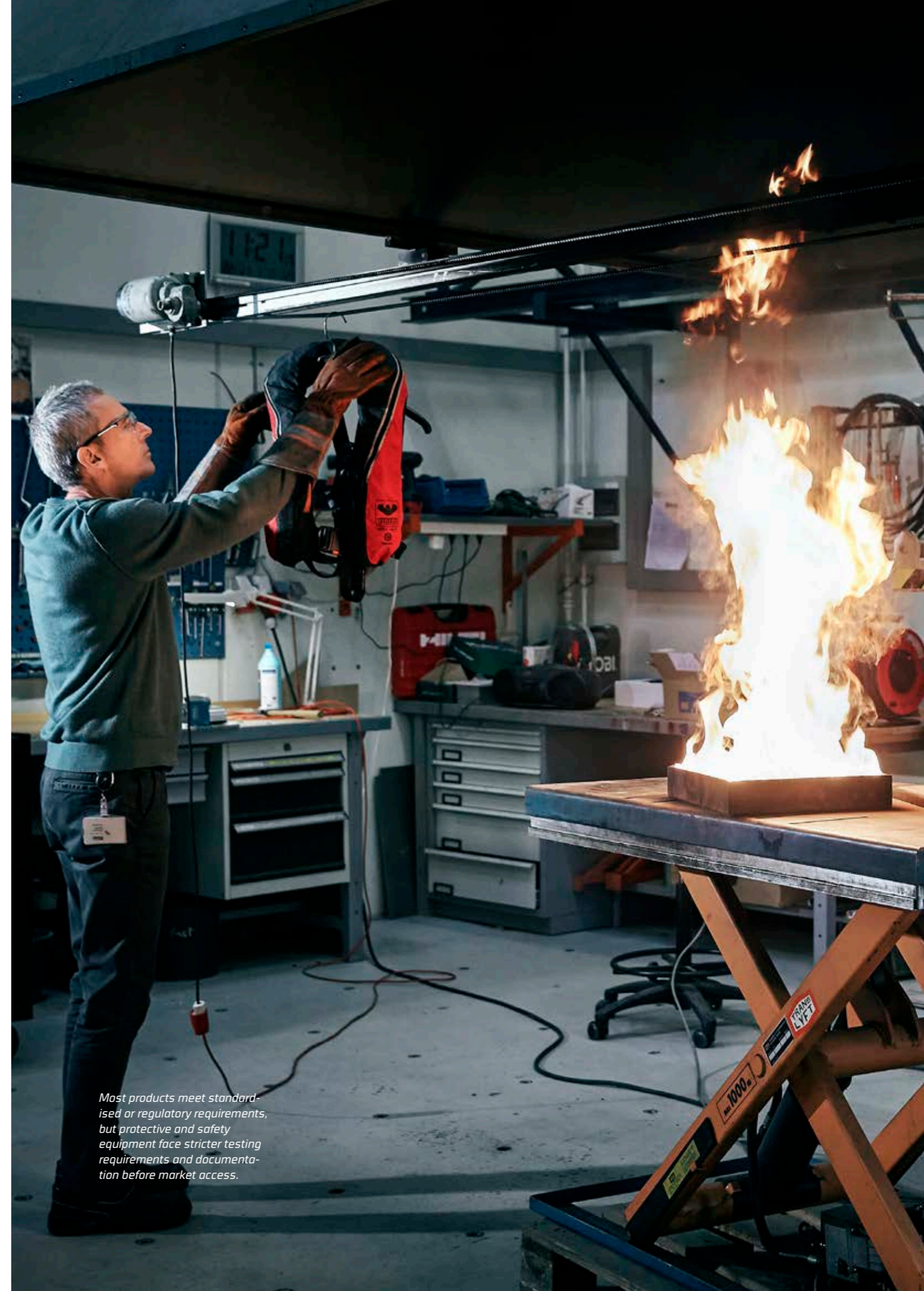
## Operational Subsidiaries

FORCE Technology Environment AB  
**Bo Christensen**  
Managing Director

DELTA Development Technology AB  
**Bo Christensen**  
Managing Director

FORCE Technology Norway AS  
**Leiv Låte**  
Managing Director

FORCE Certification A/S  
**Niels Ovesen**  
Managing Director



*Most products meet standardised or regulatory requirements, but protective and safety equipment face stricter testing requirements and documentation before market access.*



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*FORCE Technology's Annual Report 2019  
has been published in Danish and English*

*Cover:  
The energy meters of the future are intelli-  
gent, which sets new demands to how  
and when calibration is needed.*

*Cover, page 15, 22 and 29:  
Photographer, Jan Norddahl*





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