

Annual report 2019

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About SINTEF

SINTEF is one of Europe's largest independent research organisations. Every year we carry out several thousand projects for customers large and small.

We deliver innovation by developing knowledge and technologies that are brought into practical use.

SINTEF is a broad, multidisciplinary research organisation with international top-level expertise in the fields of technology, the natural sciences, medicine and the social sciences. We conduct contract R&D as a partner for the private and public sectors, and we are one of the largest contract research institutions in Europe.

Our vision is Technology for a better society.

Science and innovation for clients all over the world



Over seven out of ten co-workers are scientists



- 75% scientists
- 11% management and administration
- 8% engineers
- 5% technical personell



59% of our scientists have a doctorate degree

2019 was a good year, but 2020 will be uncertain for us all



Photo: Geir Mogen

2019 was a good year for the SINTEF Group. We achieved a net operating margin of 5.4 per cent, which is in line with our stated ongoing minimum target of 5 per cent. We experienced healthy growth in terms of sales, and at the start of 2020 our order books were healthy, with positive trends in most of SINTEF's market segments.

All of which promises well for our future prospects. However, the times we live in are no longer normal, and the global crisis triggered by the coronavirus has created a virtual state of emergency across large parts of the world. As yet, we do not know what the consequences of this will be, and we may be facing very difficult months ahead. However, one thing is certain. Research and innovation will be even more crucial to the development and adaptivity of the business community and wider society when normality is eventually restored. This work cannot be brought to a halt by a crisis. SINTEF's ambition is that our expertise and research shall make an active contribution during this difficult situation. However, now in April, it is very uncertain how the coronavirus crisis will impact on SINTEF's activities and results for 2020 as a whole.

In March 2019, the SINTEF Board approved a new corporate strategy. The UN's 17 sustainability goals now formally constitute the foundation of our work, and we are actively seeking growth opportunities that support these goals. I am pleased to be able

to say that in 2019 our net sales linked to research and innovation activities grew by as much as 5.6 per cent, with the highest levels of growth in eco-friendly, digital research projects. SINTEF's ambition is to be a world-leading research institute, operating with an independent and market-oriented focus, offering research conducted to the highest scientific standards and helping to promote commercial competitiveness among our clients and beneficial solutions for society as a whole.

In order to boost our opportunities to meet the aims of this strategy, we have implemented a number of measures that promote SINTEF's multidisciplinary by invoking collaboration between various research groups across the entire organisation. Multidisciplinary is prerequisite for the creation of effective solutions to complex problems. With international specialist expertise in many fields of scientific research, SINTEF has great opportunities to participate in the development of the solutions of the future.

Alexandra Bech GjØrv
CEO

Highlights from the SINTEF-year 2019

HIGH OUTPUT FROM SOLAR CELLS:

Building-integrated PV cells that supply both heat and electricity have been developed at SINTEF's solar cell lab in Trondheim. The project has 17 other partners in ten countries [Read more](#)

GREEN HYDROGEN FOR SMALL ISLANDS:

A solar and wind-based hydrogen plant will make the "whisky island" Myken off the coast of Mid-Norway self-sufficient in electricity. This project may become a model for many other small island communities worldwide. [Read more](#)

SMART PLANNING BRINGS IN BILLIONS:

What is the best timing for the various hydroelectric plants to produce power? NTNU and SINTEF have developed an efficient and profitable simulation tool to make the most of hydropower generation. [Read more](#)

BETTER FISH WELFARE:

The electronic "sensor" fish measures the physical factors that affect farmed fish during delousing. The results may lead to welfare improvements in salmon farm cages. [Read more](#)

GREENER SHIPPING:

We need to cut both global and local emissions from shipping. The picture is complex, but research is showing that there are many ways to meet this goal. [Read more](#)

SNAKE ROBOT IS HEADING OFFSHORE:

A snake robot will soon be relieving divers and mini-subbs in the North Sea. But first researchers have to test its mettle in the Trondheim Fjord. [Read more](#)

DIGITAL SUPPORT SERVICES FOR HARD-HIT PATIENTS:

A recently developed app with an in-built "enzyme calculator" reduces stomach pains and intestinal problems among patients with cystic fibrosis – a disease of the lungs and intestinal tract. [Read more](#)

DIGITALISED TEACHING:

In the classroom, non-educational distractions are only a click or two away. However, a recent SINTEF report demonstrates that these thieves of school pupils' attention are already being severely weakened. [Read more](#)

WHAT YOUNG PEOPLE ASK ABOUT:

An analysis of almost 300,000 unsolicited questions written by young Norwegians on the website ung.no, has provided major insights into what they're really interested in today. [Read more](#)

SAVING LIVES IN ROAD TUNNELS:

Researchers have been investigating how 80 research subjects wearing VR glasses reacted in a virtual tunnel fire. Their conclusion is that basic measures can save lives. [Read more](#)



Report of the Board of Directors

2019 was a good year for the SINTEF Group.
We experienced an increase in demand and achieved excellent financial results in line with our objectives. Our employees report high levels of motivation, team spirit and belief in the future, and our projects are receiving excellent feedback from our clients.

SINTEF is an independent and non-profit research foundation offering multidisciplinary specialist expertise across a wide range of research fields from “ocean space to outer space”. We base our activities on the development of knowledge that generates value for society, in close collaboration with industry, the public sector and other research centres. The UN’s sustainability goals constitute the foundation of our research activities. At SINTEF, we seek always to integrate sustainability in the ways we conduct our work and manage our activities, thus enabling us continually to consolidate our contribution to wider society.

SINTEF operates with the vibrant and ambitious vision of “technology for a better society”.

SINTEF is organised as a foundation with subsidiary companies. The organisation’s headquarters, and the majority of its employees, are located in Trondheim, but we also have significant activity in Oslo and Raufoss. We also have operations in Mo i Rana, Tromsø, Narvik, Bergen, Ålesund, Grenland, Verdal and Hirtshals in Denmark, as well as an office in Brussels.

SINTEF collaborates with clients throughout Norway and in the international market. We have established a partnership and a close strategic and collaborative relationship with the Norwegian University of Science and Technology (NTNU). SINTEF also has a close working relationship with the University of Oslo and a

number of other Norwegian and international research institutes. These collaborations promote high levels of technical quality and are essential if Norway is to succeed in important research fields and as an innovative and adaptable industrial nation.

In recent years, we have carried out a significant restructuring of the organisation and have succeeded in generating new growth in areas that are key to sustainable development. The Board is pleased that in 2019, SINTEF has achieved financial revenues, surpluses and returns in line with its objectives. This ensures us the ability and freedom to make essential investments in laboratories, scientific equipment and knowledge development.

Strategy and role in society

Major upheavals are taking place in the global community and in the Norwegian economy, causing much higher levels of uncertainty about future developments than we experienced only a few years ago. To a much greater extent, our clients are seeking strategic dialogue with SINTEF at management level, and are asking us to address complex issues that require both our specialist and wider multidisciplinary expertise across a broad range of technologies and the social sciences.

In March 2019, the Board approved a new corporate strategy for the SINTEF Group. It has decided to establish the UN’s

sustainability goals the foundation of SINTEF's work, and thus to seek growth potential in activities that support these goals. SINTEF's ambition here is to be a world-leading research institute, operating with an independent and market-oriented focus, offering research conducted to the highest scientific standards and helping to promote commercial competitiveness and beneficial solutions for society as a whole. It is also SINTEF's intention, to a greater extent than in the past, to assume the role of a key developmental partner with our clients by making use of our multidisciplinary expertise and our ability to promote industrial and political dialogue.

In order to boost SINTEF's opportunities to achieve the objectives set out in this strategy, we are implementing a number of measures to enhance our multidisciplinaryity. We are doing this in part to delineate more clearly and promote our various institutes' fields of research and also, by means of investment across a broad front, to address the complex challenges faced by our clients and society through targeted and multidisciplinary collaboration. Basic grant funding from the Research Council of Norway continues to be of crucial importance to SINTEF's ability to deliver on its strategy.

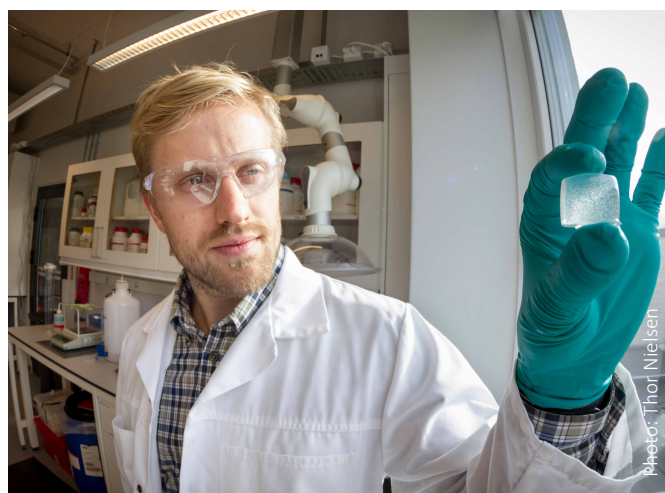
Property assets strategy

The SINTEF Foundation owns substantial property assets that are placed at the disposal of the Group's operational divisions. Developed and undeveloped leasehold sites in the vicinities of the universities of Trondheim and Oslo represent a major portion of the assets entered in SINTEF's balance sheet. The amalgamation of technical groups from SINTEF and the universities is an important factor in the success of our mutual research collaboration, and SINTEF thus also leases considerable space in properties at NTNU in Trondheim.

NTNU's Campus project and the ambitions linked to Oslo Science City, both of which prioritise innovation, start-up activities and collaboration with industry, represent unique opportunities for the advancement of our strategic position and development of our real estate assets. For this reason, and in order to ensure continued co-location and further collaboration with the universities, industry and start-up communities, the Board is prioritising work focusing on a forward-looking development of SINTEF's property portfolio. This is taking place in close collaboration with the universities and other organisations involved in the campus projects. A more active involvement in property-related activities will support SINTEF's objectives and be achieved by efficient asset and risk management.

Commercialisation of SINTEF's research results

The seed fund SINTEF Venture V is investing in and developing new companies that base their businesses on technology originally developed by research groups at SINTEF and NTNU.



SINTEF researcher and biotechnologist Øystein Arlov presents an alginate jelly that literally forms the breeding ground for artificial cartilage cells.

The fund's investment capital is NOK 500 million, of which SINTEF's share is NOK 110 million. The European Investment Fund (EIF) is contributing NOK 155 million, and a number of private Norwegian investors, as well as SINTEF, are participating in the fund.

At the end of 2019, SINTEF had 17 start-up companies in its portfolio, which during the year have received a total of NOK 46 million from SINTEF Venture funding. If we take other investors and the public sector funding agencies into account, these companies have received a total of NOK 232 million during 2019.

HSE

Health, safety and environmental issues have the highest priority at SINTEF and systematic work is being carried out to safeguard our employees' safety and working environment. In 2019, SINTEF's HSE campaign (*HMS-løftet*) was expanded to encompass four areas of focus. The institutes have been working effectively to monitor progress, and this has resulted in a major effort to achieve a more regulated approach, better control of equipment maintenance, and increased awareness among managers.

All notified HSE incidents are reported weekly to Group Management. Unfortunately, 2019 saw an increase in the number of personal injuries compared with the previous year,

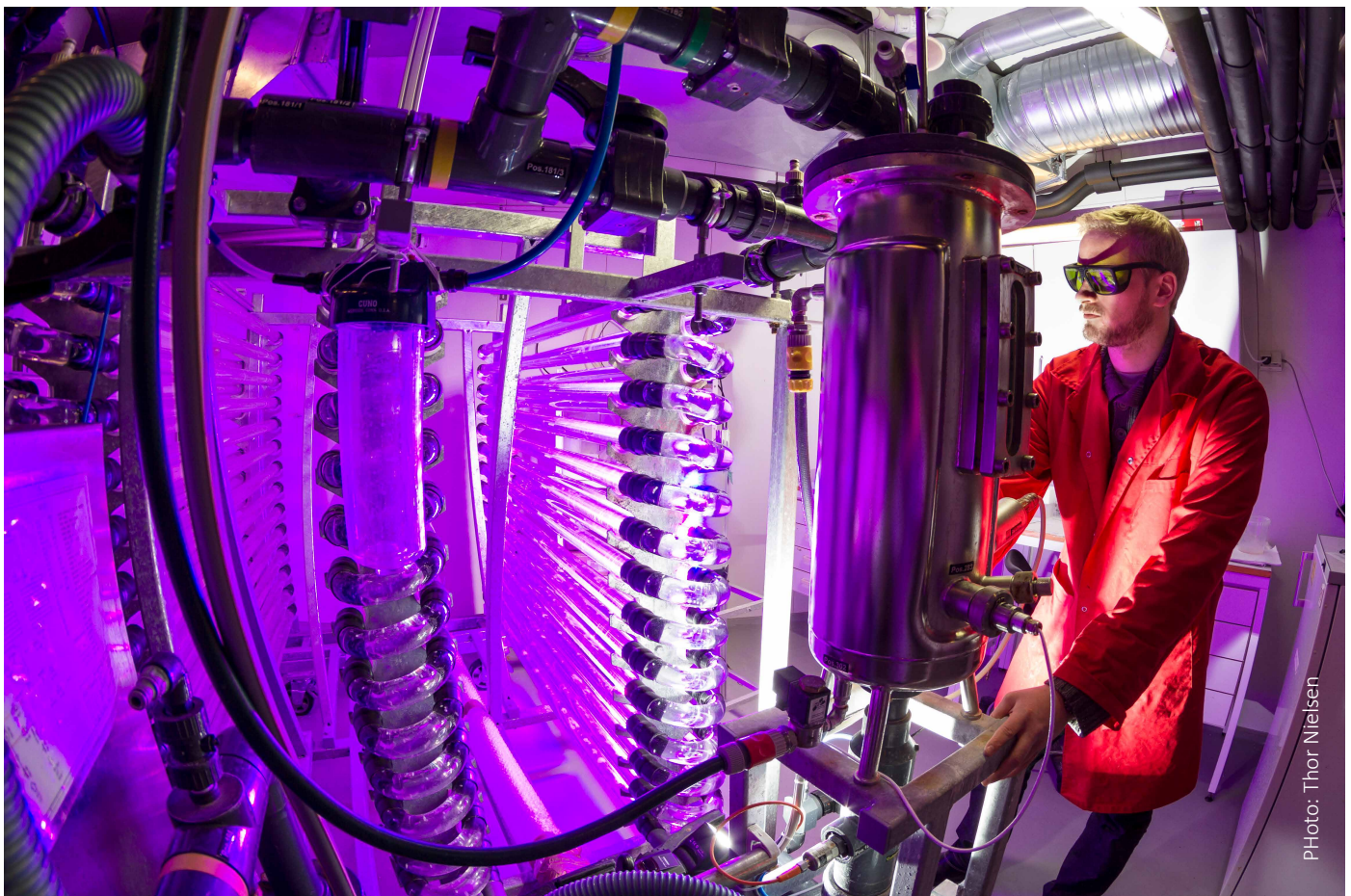


Photo: Thor Nielsen

Microalgae are exposed to different types of light to determine what gives the best growth. Here, researcher Andreas Hagemann demonstrates violet lighting in this photo-bioreactor.

although none of these were serious. A total of 35 personal injuries were recorded, of which 12 required medical treatment. Five of these resulted in sickness absence. We also recorded an increase in accidents and near misses compared with 2018, but there was a small decrease in the number of hazardous situations. In total, we recorded 50 accidents, 58 near misses and 495 hazardous situations. We recognise a continuing need to increase the number of notifications as a means of preventing future hazardous situations and accidents. The indices H1 (*injuries resulting in sick leave*) and H2 (*personal injury frequency*) were 1.7 and 4.2 respectively.

Incidents involving chemicals constituted the largest group, and in 2019 we conducted an internal survey among approximately 500 employees whose work is linked to chemical life cycles. The target group included employees who have responsibility for or who work on projects involving chemicals. A monitoring process was initiated in 2020.

It was also decided to transition to adherence to the occupational health and safety management systems standard ISO 45001. The transition was part of the re-certification carried out in October 2019, and the new certificate was finally approved in February 2020.

In 2019, we introduced two new training programmes for managers (*Lederplattformen*) and, in particular, Project Managers (*Prosjektlederopplæringen*). Both have involved considerable work to clarify and revise their HSE content.

The Norwegian Police Security Service (*PST*), military intelligence and the Norwegian National Security Authority are clear in their view that the intelligence threat to technology enterprises such as SINTEF remains high. As a result, a number of measures have been put in place to address this issue during the year. SINTEF is developing enhanced procedures to ensure compliance with export control regulations.

In 2019, SINTEF invested NOK 132.5 million in laboratories, scientific equipment and other business assets.

Financial independence

In 2019 SINTEF reported an operating profit of NOK 153 million, compared with NOK 185 million in 2018. The operating profit from underlying operations was NOK 173 million, which was somewhat better than in 2018 (*NOK 162 mill.*). Profit before tax was NOK 195 million, compared with NOK 201 million in 2018.

Net operating revenues are 3.3 per cent up on 2018. After correction for the effect of a change in ownership of SINTEF Molab in 2019, we see an increase in net operating revenues from ordinary operations of 5.6 per cent compared with 2018.

All the institutes have generally healthy order books at the start of 2020. This is the result of proactive sales efforts combined with a number of significant cost-cutting measures and resource adaptations carried out in recent years. As we enter 2020, we are seeing positive developments in most of our market segments, not least as a result of major efforts to generate client projects that involve multidisciplinary contributions from more than one institute.

At the close of 2019, SINTEF's overall liquidity situation can be described as satisfactory. SINTEF has established a joint Group arrangement for the investment of its liquidity reserves. In 2019 an average of NOK 352 million has been available for administration,

compared with NOK 337 million in 2018. Our low-risk profile contributed to a positive yield of 6.5 per cent in 2019, compared with -0.3 and 4.8 per cent in 2018 and 2017, respectively. SINTEF entered into an agreement with the company Tryg for the administration of our financial portfolio during the first six months of 2019. Every year, the Board approves the foundation's financial management guidelines (*Regler for finansforvaltning i SINTEF*).

SINTEF is exposed to currency exchange fluctuations as a result of some of its project revenues being in foreign currencies, although project costs are entirely or largely in Norwegian kroner. Futures contracts are employed to reduce this risk. SINTEF has specifically evaluated its risk exposure and freedom of action in the event of a serious collapse of the Euro.

SINTEF's financial surplus is being invested in new research and skills development. In 2019, SINTEF invested NOK 132.5 million in laboratories, scientific equipment and other business assets. The corresponding amount in 2018 was NOK 73 million.

SINTEF currently enjoys a robust financial position. As of 31 December 2019, SINTEF holds an equity of NOK 2.667 million (*2.514 million in 2018*), which represents 58 per cent (*59*) of its total equity. The corresponding figures for the SINTEF Foundation

In 2019, SINTEF completed 4,581 projects on behalf of a total of 3,597 large and small clients in both the private and public sectors.



are NOK 2.369 million (NOK 2.229 million in 2018), which constitutes 98 per cent (95) of our total assets.

The annual profit for the SINTEF Foundation in 2019 was NOK 140 million. The corresponding amount in 2018 was NOK 122 million.

Our equity and operational status, combined with cost-saving initiatives and a satisfactory order book, provide us with a good basis for declaring the organisation a going concern. The Boards of the subsidiary companies have made similar assessments, and all have concluded that we have the basis of a going concern. The Board is not aware of any circumstances that have arisen since the close of the accounting year which affect its opinion regarding the financial position of either the Foundation or the Group. On this basis the Annual Accounts have been prepared under the going concern assumption.

Clients

SINTEF generates growth and development opportunities for private and public sector enterprises, contributing to their wealth creation and the positive development of wider society.

In 2019, SINTEF completed 4,581 projects on behalf of a total of 3,597 large and small clients in both the private and public sectors.

Each year, SINTEF conducts ongoing client satisfaction surveys linked to about 500 of its projects. The 2019 surveys resulted in an average score of 4.49, measured on a scale from 1 to 5. This score has increased since 2017, and the 2019 average is the highest since the scoring system was introduced in 2013. Projects that generate low scores (1 or 2) will be followed up in dialogue with the clients in question.

SINTEF implements a large number of projects in collaboration with clients linked to the Research Council of Norway's industry-oriented programmes. In 2019, SINTEF participated in 194 applications for funding. An analysis was carried out in February 2020, when approximately 90 per cent of the applications had been processed, showing that 43 per cent of them were approved. The Board considers this to be a satisfactory result. SINTEF's budget for approved projects was about NOK 563 million.

Our participation, following competitive tender, in the major, long-term and partly state-funded, research centres involves significant interaction with Norwegian and overseas clients. SINTEF is currently participating in nine Centres for Research-Based Innovation (CRIs) and eight Centres for Environment-Friendly Energy Research (CEERs) established in 2016 and 2017, and which extend over periods of 5+3 years. In 2019, the "Research Centre for a low-emission petroleum industry on the Norwegian continental shelf" was opened. Taken together, these activities

involve the participation of just over 200 industrial enterprises. Participation in these centres provides these companies with long-term knowledge development at the forefront of international research, and contributes towards the promotion of important networks and enhanced competitiveness. In 2019, the Research Council of Norway carried out an application round for new CRIs. The final decisions on these will be made in June 2020. SINTEF is a participant in applications for 33 new CRIs. The work to assemble consortia and prepare applications has required major resource investment in 2019.

Research

In order to maintain its capacity for innovation and influence, it is essential for SINTEF to achieve an appropriate balance between scientific publication and contract-based research. The most important form of advertising of our research results occurs when new technology and systems are made use of by our clients and by society. However, scientific publication is also of considerable value. The Board wishes to emphasise the significant way in which publication contributes to skills development and the generation of new knowledge. It is also important as an indicator of the quality that makes SINTEF attractive to its clients and research partners.

Publication contributes towards creating both awareness and reinforcement of the quality of our research, which is essential to our success in the market and to recruiting the best research talent. Our aim is to publish at least one peer-reviewed scientific publication per research scientist per year. In 2019 the figure was 0.85 publications per research scientist per year, compared with 0.8 and 0.95 in 2018 and 2017, respectively.

SINTEF's standing in the global research community is key to the effective exploitation of research funding in Norway. This is clearly illustrated by the EU's research programmes, where SINTEF is by far the largest Norwegian player. Participation in the EU's Framework Programmes is key to enhancing the quality of SINTEF's scientific output, enabling it to remain in the forefront of international research.

Investment in laboratory facilities is crucial if Norway is to continue to develop as a knowledge-generating nation, boost its global competitiveness and attract the best students and research scientists. In the last ten years, SINTEF has invested NOK 1.2 billion in laboratories, scientific equipment and buildings. In 2019, together with its partners, SINTEF has been highly successful in obtaining key funding as part of the Research Council of Norway's INFRASTRUKTUR initiative. This will contribute towards triggering future investment in the domestic research infrastructures where SINTEF is a partner or participant.

Funds were granted in the 2020 national budget for pilot projects linked to the Ocean Space Centre following completion of the

The results of our working environment surveys are evidence that SINTEF is a good place to work.

start-up pilot (*OPF*) in June 2019. This is an important step on the road towards the establishment of the centre, and work on the pilot has been assigned very high priority for 2020 and 2021. Although this is a state-funded project, it is expected that SINTEF Ocean AS will be investing a significant amount of its own funds in the infrastructure of the Ocean Space Centre in order, among other things, to safeguard compliance with the provisions of Chapter 2 of the EEA's legislation governing state support.

SINTEF's strategic collaboration with NTNU, the University of Oslo and other universities is of considerable importance. Third party analyses demonstrate that the 70-year collaboration between SINTEF and NTNU has been highly significant for Norwegian research and innovation. Both the Board and management teams at SINTEF and NTNU are working actively to maintain this valuable collaboration in the future.

SINTEF is an active participant in international research projects. Together with NTNU, we are engaged in a strategic collaboration with leading research centres in Japan and the USA in the fields of energy and materials science. Considerable importance is attached to our collaboration within the European Energy Research Alliance (*EERA*) and the European Association of Research and Technology Organisations (*EARTO*), both of which have important strategic roles in European research.

People

SINTEF's aim is to be an attractive workplace offering unique development opportunities. The results of our working environment surveys are evidence that SINTEF is a good place to work. People enjoy working at SINTEF and are proud of their employer. The working environment survey conducted in January 2020 attracted an excellent response rate (*94%*). Highly satisfactory results emerged in terms of progress in key areas such as motivation, job satisfaction, belief in the future and team spirit. SINTEF scores higher in these aspects than other research institutes that employ the same survey. Many employees appreciate the efforts of their immediate supervisors, and the CEO achieved an excellent score that was higher than in the previous survey. Management at SINTEF also obtained a higher score.

However, some areas for improvement also emerged from the working environment survey. Many research groups that had identified challenges during the previous survey have recorded improvements, showing that efforts to enhance their working environments have been rewarded. Not everyone at SINTEF is equally pleased, but less variation was recorded than in the previous survey. This is a consequence of the hard work that has been carried out to develop the working environment at SINTEF gradually over time. Factors that are identified as the most challenging, and which must be assigned priority in the future, are

Fig. 01 - Gender distribution at SINTEF



workload and stress. However, it is important to note that SINTEF scores significantly better than the majority of other research institutes on these issues.

The results of this annual survey are disseminated to the organisation very rapidly and are used as a basis for discussion and the subsequent implementation of binding action plans for further improvements to the working environment.

SINTEF is working systematically to develop its management resources, with a focus on individual managers and team spirit. Greater emphasis is being placed on consolidating effective interaction across scientific and organisational boundaries as part of the “One SINTEF” concept. A new mandatory basic training programme for all managers was launched in 2019.

SINTEF continues to be successful in competition for the recruitment of skilled employees. We place great emphasis on taking care of and fostering the development of our current staff, while at the same time working to ensure future recruitment by means of promotional activities in domestic and global recruitment markets. Across the board, SINTEF achieves a high approval rating in surveys in which students rank the attractiveness of workplaces.

As of 31 December 2019, SINTEF had a total of 2003 employees, an increase of 59 since 2018. SINTEF experienced an overall employee turnover of 8.7 per cent (8.4 for scientific personnel). Employees leaving SINTEF represent an important contribution to skills development in industry and the public sector.

Fifty-nine per cent of research scientists at SINTEF have a doctoral degree. 26 per cent of our employees in 2019 originated from a total of 74 countries outside Norway. This shows that SINTEF is attractive to international research scientists and that we are successful in bringing highly qualified researchers to Norway. SINTEF’s foreign employees provide a valuable source of scientific and cultural expertise. The majority of employees from outside Norway are from Germany and France.

Sickness absence during 2019 was recorded at 3.3 per cent. Occupational sickness absence was recorded at 0.3 per cent. Sickness absence is monitored systematically by all institutes at SINTEF.

Equal opportunity and family policy

The Board and Group Management are fully committed to promoting equal opportunity at SINTEF. One of SINTEF’s objectives is to increase the proportion of women among both its research scientists and managers. SINTEF’s CEO is female and, at the time of writing, the proportion of women in Group management positions has increased to 45 per cent. When vacancies arise, SINTEF aims actively both to recruit women and to develop female managers from its own ranks. Structural imbalances in recruitment practices applied in the educational establishments are nevertheless reflected in SINTEF’s employee gender balance.

Gender distribution (%) at SINTEF as of 31 December 2019 is shown in the figure above (Fig. 01).

SINTEF is a party to the following collective salary agreements between professional associations and unions: NHO/Tekna, NHO/NITO, NHO/Forskerforbundet, NHO-Abelia/LO-NTL and NHO-Abelia/Parat. Salaries and conditions of employment are determined by negotiation and discussion with employee representatives in the respective employee organisations. We carry out systematic monitoring to ensure that undesirable salary differentials do not arise between men and women.

82 per cent of our workforce are full-time employees. 21 per cent of our female employees and 16 per cent of males work part-time. One reason for part-time employment is that employees can take advantage of the opportunity to reduce their working hours while receiving an early-negotiated pension. SINTEF makes little use of temporary employment contracts. At year end, 2.5 per cent of employees were in temporary positions, 19 of whom were women and 30 men.

SINTEF's working environment survey reveals no significant gender differences among employees in terms of how they perceive their work situation. We will continue to develop focused initiatives to ensure that SINTEF remains an attractive workplace for both sexes.

To ensure that foreign employees are well taken care of, SINTEF has established an integration programme for employees from other nations and their families. The programme offers expat services, free tuition in Norwegian and teaching in English at the SINTEF School. Diversity management is one of the themes of the SINTEF School's manager development programme. Findings from the working environment survey indicate that overseas employees enjoy working at SINTEF.

SINTEF makes every effort to organise adapted workplaces for those of our employees who are disabled, or who develop a disability. As part of our recruitment policy, we focus on skills and expertise and do not discriminate on grounds of disability.

Internationalisation

SINTEF's ambition is to be a world-leading research institute. Internationalisation is an integral part of SINTEF's business operations. We have had considerable success in our internationalisation strategy in the following areas: the consolidation of our academic network, participation in the EU's research programmes, international sales of R&D services and international

recruitment. However, we must acknowledge that we have yet to find workable solutions to the problem of establishing a profitable presence outside Norway.

SINTEF's international sales in 2019 amounted to NOK 479 million, compared with NOK 407 million in 2018. This corresponds to 14 per cent (13 per cent in 2018) of SINTEF's total sales. We have completed projects for clients in 56 countries and EU projects represent 50 per cent of our international activity.

SINTEF is by far the largest Norwegian participant in the EU's Framework Programmes for research and development. We are very active participants in Horizon 2020 (*the 8th Framework Programme*), which commenced in 2014. As of October 2019, SINTEF has been granted participation in 194 projects in this programme, including the role of coordinator in 46. The EU has awarded SINTEF a total of EUR 134 million in project funding.

In order for us to fulfil our role in society, it is essential for us to be able to develop international networks and globally competitive concepts that bring state-of-the-art know-how to our clients. In many cases, Norwegian companies obtain funding and opportunities to collaborate with their clients on innovation initiatives by way of EU projects in which SINTEF is a partner.

SINTEF has an office in Brussels in the same premises as NTNU, the University of Bergen and the Norwegian research centre NORCE. The aim of our presence here is to consolidate our



Photo: Thor Nielsen

Scientist Jacqueline Floch working with getting more of us interested in our cultural heritage. Smartphones, tablets and PC's can be good channels for great experiences, thinks these children.

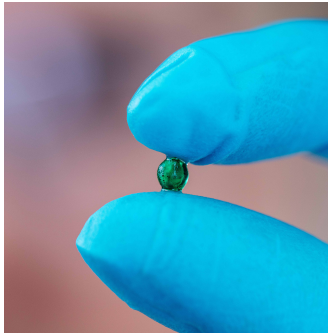


Photo: Geir Mogen



Photo: Geir Mogen

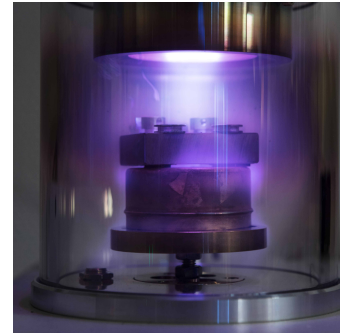


Photo: Werner Juvik

networks and boost participation in EU research collaboration. Experience from five years of operation has shown that our presence is important. In September 2019, for the third time, SINTEF and NTNU arranged a strategic seminar in Brussels that included key meetings with the European Commission, Norwegian authorities and industry representatives.

We are also working actively on our strategic positioning and preparations for Horizon Europe, the EU's next framework programme for research and innovation, due to commence in 2021. In 2019, SINTEF prepared a new Europe strategy, in which one of the objectives is to increase its EU research activities by two-fold before the Horizon Europe programme is concluded in 2027. However, the success of such a strategy is entirely dependent on a favourable domestic regulatory framework. The Norwegian incentive scheme STIM-EU is key in this regard. In April 2019 the funding rate in the STIM-EU scheme for institutes with low levels of basic funding was increased as part of a trial arrangement, with a duration running parallel with the current Horizon 2020 framework programme. It is crucial that this level of funding is maintained when the Horizon Europe programme commences. This will enable SINTEF and other research institutes to cover the costs they incur when participating in EU projects.

External environment

SINTEF has a high level of commitment towards protection of the external environment. Many institutes have established internal working groups, called "green teams", which aim to promote sustainability and a focus on the environment.

In 2019, SINTEF launched an initiative to improve our air travel statistics. This resulted in an enhanced basis for discussion, awareness, and the prioritisation of travel needs within the various divisions. There is also work ongoing to install high-quality videoconferencing equipment and promote the use of Skype in an effort to reduce travel in connection with meetings.

A number of waste management initiatives have been implemented and SINTEF has decided to phase out single-use plastic products in its canteens. Measures have also been put in place to encourage more of our employees to cycle to work.

SINTEF is certified under the environmental management standard ISO 14001. Re-certification was carried out in October 2019 and revealed no non-conformances. The institutes have been working to evaluate their activities and prepare action plans in connection with issues related to the external environment.

In 2019, we experienced no reportable incidents that impacted on the external environment.

Ethics

Ethics, values and leadership are key aspects of SINTEF's strategy and day-to-day operations.

Ethical issues are an area of focus for both management teams and individual divisions. For many years it has been our practice that HSE and ethical issues top the agenda in internal meetings. Group Management regularly discusses ethical topics in its meetings, which are attended by SINTEF's Ethics Representative. The Ethics Representative has stated that interest in ethical issues at SINTEF is on the rise.

SINTEF's research ethics are based on the guidelines set out by the domestic Norwegian research ethics committees, the European Code of Conduct for Research Integrity (*ALLEA, 2017*), the principles promoted by the European Group on Ethics in Science and New Technologies, as well as on international protocols such as the Vancouver Convention and Norwegian law. In 2017, a new Norwegian Act relating to the organisation of research ethics was passed. This obliges SINTEF to ensure that training is carried out on issues related to research ethics. SINTEF adheres to the EU Charter and Code, which entails an obligation, but also acts as an aid to creating an attractive European research environment. Relational ethics is concerned with adhering to guidelines for appropriate conduct at work and in interactions with others.

SINTEF's Ethical Compass provides ethical guidelines in the fields of business, research and relational issues, and is made available to all employees, as well as our clients and research partners.

SINTEF expects and requires its suppliers and business partners to be familiar with and accept our ethical values. Suppliers and



Photo: Geir Mogen

business partners involved in our activities are obliged to submit written acceptance of our code of ethics.

In 2019 SINTEF prepared a new whistleblower policy (*Rutine for intern varsling i SINTEF*) in compliance with amendments made to the Norwegian Working Environment Act that come into force from 2020. SINTEF has also assigned priority to training in the field of ethics in the form of four distinct training courses offered by the SINTEF School: research methodologies and social responsibility, a Project Manager course, a general course for all managers (*Lederplattformen*) and a course in effective management. An e-learning module in ethics for all employees will be prepared during 2020.

SINTEF employs its own Ethics Representative who acts as an adviser and consultant for the entire organisation, and participates in relevant external events. The Ethics Representative also serves as a key whistleblowing channel within the organisation.

SINTEF's role in society

SINTEF's role in society is a key component of our strategy and day-to-day operations. Our strategy specifies that SINTEF shall be an attractive research partner that exploits its multidisciplinary capability and ability to enhance industrial and political dialogue in order to generate competitiveness and address the challenges facing wider society.

The major societal challenges of our time are described in the UN's 17 Sustainability Goals, and we have opted to use these goals as the foundation for SINTEF's work towards achieving its vision. All of SINTEF's research projects are linked to the sustainability goals, which constitute benchmarks against which we can measure the sustainability of our activities. The Board holds regular discussions with SINTEF's administration on sustainability, and the organisation is working systematically to enhance

and integrate sustainability in the ways we work and manage the organisation.

Activities related to research and innovation represent SINTEF's most important contribution to society, but our social responsibility also entails our approach to the management of our business activities. In 2019, work was carried out with the aim of more clearly incorporating broader societal concerns and sustainability into the administration of the organisation.

Our social responsibility is also linked to issues such as human rights, employee rights and social conditions, the external environment and the battle against corruption. SINTEF has developed policies and guidelines linked to all these fields, which have been incorporated into our management system and code of ethics. Employee rights are also safeguarded by means of SINTEF's collective salary agreements and the monitoring of our formal responsibilities as a so-called inclusive workplace (*IA-bedrift*).

SINTEF is a member of the UN Global Compact, and actively applies its ten principles on human rights, work standards, the environment and anti-corruption. SINTEF annually reports on its status (*Communication on Progress*) in relation to these principles in accordance with the requirements set out in the Compact. We are publishing an expanded report on sustainability for 2019 that will include parameters linked to our own operations and the societal impact of our research.

SINTEF is a member of Transparency International, an organisation dedicated to the elimination of national and international corruption, and adheres to the guidelines and advice issued by this organisation.

An active dialogue with wider society is a key aspect of SINTEF's role. This includes not only our role as a supplier of terms of reference and research-based facts as a basis for public debate

An active dialogue with wider society is a key aspect of SINTEF's role.

and the shaping of policies, but also our work to consolidate regulatory frameworks in the interests of research and SINTEF itself. In 2019 we boosted our efforts relating to contact with the public authorities and society as a whole.

Corporate governance at SINTEF, including risk management and internal control

The Foundation is the figurehead and parent enterprise within the SINTEF Group, and the organisation is legally well-equipped to support its various tasks such as research activities, the commercialisation of research results, property management and financial management.

SINTEF's central administrative bodies are the Board of Directors and the Council. The Board is the Foundation's principal administrative body, for which the Council acts in an advisory function, with authority as stipulated by the Act relating to Foundations and SINTEF's Articles of Association.

SINTEF's Council acts in a supervisory role to ensure that the Foundation's objectives are adhered to in accordance with the Articles of Association. It also appoints the Board, determines the remuneration of Board members and appoints an auditor. The Council has 28 members and is headed by the Rector of NTNU. Twenty-five of the council members are elected by the NTNU Board, of which 11 are appointed by NTNU, five by the SINTEF Board, and nine on the basis of nominations submitted

by the University of Oslo, the Norwegian Confederation of Trade Unions (*LO*), the Confederation of Norwegian Enterprise (*NHO*) and the Norwegian Society of Graduate Technical and Scientific Professionals (*Tekna*). Three council members are elected from among SINTEF's employees. The Council appoints an election committee which proposes external Board members who are selected by SINTEF's Council.

The Board of the SINTEF Foundation also acts as Board of the SINTEF Group and the Board of SINTEF AS. The business activities of the three limited liability research companies within the Group: *SINTEF Ocean AS*, *SINTEF Energy Research* and *SINTEF Manufacturing AS*, are governed by their individual articles of association, shareholder agreements, corporate agreements and instructions issued to their respective Boards. Principles for the Group's administration and coordination with related activities are established in accordance with SINTEF's overall goals and strategy.

The Board is made up of nine persons. Two have full-time posts at NTNU, four are from industry or public sector administration and three are permanent employees at SINTEF. The Board has responsibility and authority in all matters that are not assigned to the Council. The Board acts in accordance with SINTEF's Articles of Association and pursuant to the Norwegian Acts relating to Foundations and Limited Liability Companies. The Board appoints the CEO and determines his or her salary and other employment terms, as well as determining the framework and principles for remuneration of Group management members.

Our scientific competence puts the organisation in an excellent position to address many of the challenges faced by the world today.



The Board held eight meetings in 2019, one of them by means of telephone conferencing.

SINTEF's Group management is responsible for the management of the entire scope of SINTEF's business activities. The CEO is responsible for day-to-day operations in accordance with the Articles of Association of the Foundation and corporate agreements, and in all other respects pursuant to the Acts relating to Foundations and Limited Liability Companies. The CEO has authority to act on behalf of the Foundation and SINTEF AS, except in connection with the purchase, sale and mortgaging of property and the purchase and sale of companies.

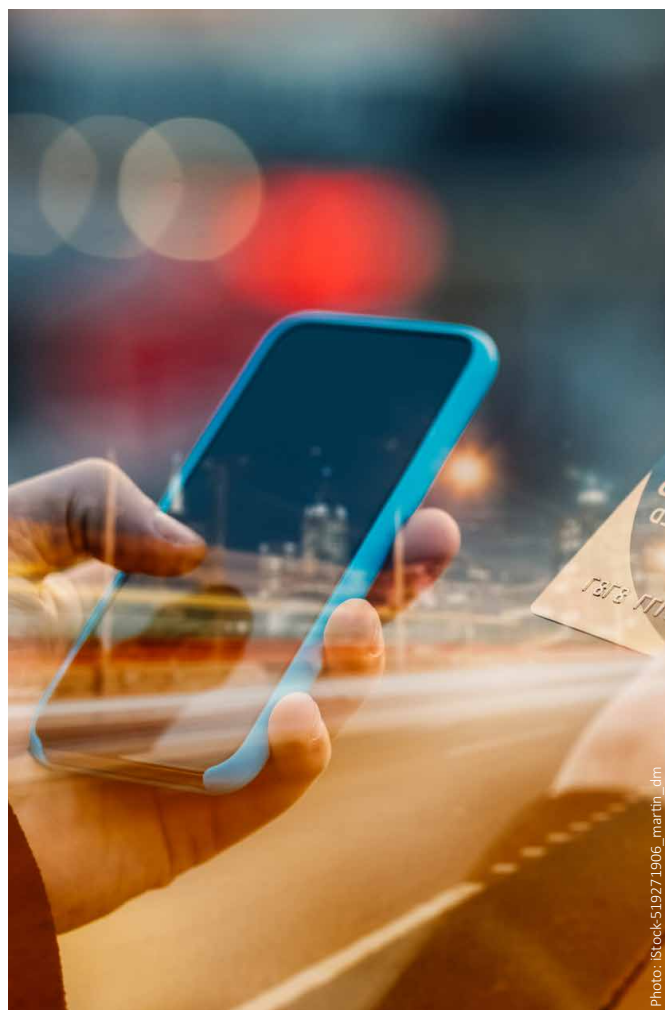
In 2017, SINTEF was certified according to the ISO 9001, ISO 14001 and OHAS 18001 standards following a certification process carried out by DNV GL. In November 2019 SINTEF was awarded re-certification for a further three years.

SINTEF has established a system of tertial financial risk reporting. The organisation's risk environment is discussed by the management and Board of each of the research institutes, as well as at Group management and Board levels. Risk mitigation measures are identified and implemented on a continuous basis. Key topics that are the subject of ongoing activity include regulations governing state support, the General Data Protection Regulation (*GDPR*), money laundering regulations, the Norwegian Export Regulation Act, information security and SINTEF's exposure to technology espionage, hacking and suchlike. These issues have placed increasing demands on the organisation in recent years, and SINTEF is working systematically to address them.

Deloitte acts as SINTEF's internal auditor and conducted four internal audits during 2019, focusing on the General Data Protection Regulation (*GDPR*), project-related risk, ethics in relation to EU projects and IT security. An annual internal audit report is being prepared for Group management and the Board.

In 2018 and 2019, SINTEF revised and developed its systems ensuring compliance with the new Norwegian Act relating to the Protection of Personal Data. A joint overview has been prepared for the legal entities that make up SINTEF, showing how all administrative processing of personal data is carried out pursuant to the new regulations. A personal privacy declaration has also been prepared for employees, as well as a declaration for users, clients and others. A system has also been prepared for the risk assessment of personal data in connection with research projects, together with a separate system for the risk assessment of the processing of personal data by the management system. Moreover, a system has been prepared for non-conformance handling using the Synergi system, with descriptive guidelines for the reporting of non-conformances to the Norwegian Data Protection Authority. SINTEF has decided to enter into an agreement with the Norwegian Centre for Research Data (*NSD*) to act in the role of a personal data protection ombudsman, and has also appointed its own Personal Data Protection Coordinator.

SINTEF's management system incorporates a shared system (*Synergi*) for the administration of accident reports, unwanted incidents, other non-conformances and suggestions for improvement. SINTEF is registered in the Achilles Joint Qualification System for suppliers to the oil and gas industry.



In order to reinforce its corporate governance procedures, the Board of SINTEF resolved in 2016 that an annual Report on Corporate Governance should be prepared, in accordance with the Norwegian recommendation for corporate governance and company management (*the NUES Standard*). The report is based on the fifteen articles of the NUES recommendations and describes how the Foundation meets those recommendations. The report is published concurrently with SINTEF's Annual Report.

Future prospects and challenges

SINTEF's order books are healthy and we are recording high levels of client satisfaction. We are successfully recruiting highly-skilled employees and overall, our operations are running efficiently in the majority of our departments. Our scientific competence puts the organisation in an excellent position to address many of the challenges faced by the world today.

However, it is in the nature of commercially-oriented research that we are also reliant to a large extent on the risk relief provided by public sector funding. For this reason, SINTEF's activities remain vulnerable to changes in regulatory frameworks. The current government-initiated review focusing on the public sector financing agencies is thus of crucial significance to SINTEF. In December 2019, we submitted a consultation response



Photo: Geir Mogen

containing our assessments and we will continue to work actively on this issue during 2020.

During 2019 we have observed a significant increase in awareness of the need for a radical restructuring of global energy supply systems and patterns of consumption in order to mitigate the impact of global climate change. This provides major opportunities for SINTEF to contribute to green growth initiatives being implemented by our clients.

SINTEF is actively involved in the further development of a number of types of renewable energy, as well as battery, electrolysis and hydrogen technologies. We are also working with carbon capture and storage (CCS) from processes in which the use of renewable energy is not an option, such as chemical process emissions and waste combustion. In parallel with our work in the field of renewables, we are also leading the way in the development of zero-emissions energy systems using natural gas combined with CCS processes, which may provide a competitive supplement to renewable energy sources.

SINTEF is working with technologies to replace fossil with renewable raw materials in materials development, with circular economy technologies, and with climate change mitigation and adaptation systems for the transport and construction sectors. Moreover, SINTEF is probably one of the best-positioned

research communities in the world to promote the advancement of efficient Bio-CCS technology initiatives and other carbon-negative solutions. By looking into opportunities linked to carbon binding by means of farming new marine species, we will be able to develop sustainable value chains for the low-emissions production of food, materials, medicines and energy, and perhaps also identify innovative and more cost-effective systems for carbon binding other than CCS.

The need for eco-friendly energy systems, combined with expectations of significantly lower future levels of activity in the oil and gas sector, is leading to a growing need for industrial restructuring, especially in the supplier sector. SINTEF's strategy to focus on contributions promoting competitiveness and solutions in nine specific areas of societal concern thus appears to be highly robust in this context. Green value chains are assigned a high priority in terms of SINTEF's spending of both its basic public sector funding, as well as in connection with both contract and collaborative research projects.

Digitalisation, automation, artificial intelligence, biotechnology, new materials and advanced robotic technology are driving enormous changes in all aspects of social and working life. SINTEF has considerable skills and expertise in these fields, and is uniquely qualified to make an active contribution to successful transition processes in both the private and public sectors. The

combination of cutting-edge skills in enabling technologies and domain know-how related to robust Norwegian industries and other areas of society is of key importance to most Norwegian businesses.

Digitalisation is also of crucial importance to SINTEF's work processes, communications, knowledge-sharing and research. SINTEF's Board and management continue to focus on the potential inherent in the organisation for working purposefully with these issues in the years ahead.

New technology is of crucial importance to the development of wealth creation and solutions linked to the key social challenges facing Norway today. SINTEF is helping to ensure that its clients are able to boost their profitability by means of efficient processes and new technologies that can create new products and growth in new markets. In the public sector, SINTEF contributes to innovation in fields such as health and welfare, mobility, the environment, public safety and the efficient management of services.

SINTEF assigns high priority to the effective servicing of start-up businesses and small and medium-sized enterprises (SMEs).

Closer collaboration with competent business owners' communities and industrial clusters is an important element in developing better R&D support in these fields.

The global crisis triggered by the coronavirus pandemic is having a major impact on society's ordinary activities, economies and security across the world. This disruption will also impact on SINTEF's day-to-day activities, our project acquisition and financial results for 2020. However, the crisis does not change the Board's view on the going concern assumption. From March 2020, the Board and the organisation's administrative bodies will be directing critical focus on addressing this crisis in order to ensure that SINTEF can continue to offer its services, resource capacity and expertise in ways that will help to mitigate the damage to society at large.

The Board would like to thank all of SINTEF's employees and research partners for their efforts and co-operation in 2019. We also wish to thank the co-owners of subsidiaries and representatives from the business community and community leaders who participate in SINTEF's many boards and councils.

Trondheim, 25 March 2020



Walter Qvam
Board Chair



Marit Reitan



Tor Grande



Hanne Refsholt



Grete Aspeland



Arne Birkeland



Ole Swang



John Erik Lein



Bård Myhre



Alexandra Bech Gjør
CEO

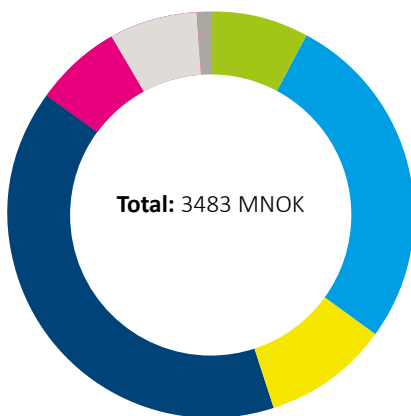


Results 2019

Key numbers 2019

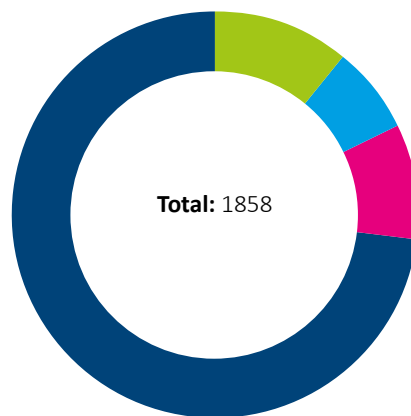
Funding sources

(% of net operational revenues)



● RCN Grant funding	8%
● RCN project funding	27%
● Public sector funding	10%
● Industrial and business sector	40%
● International projects	7%
● International EU-projects	7%
● Other revenues	1%

Employees



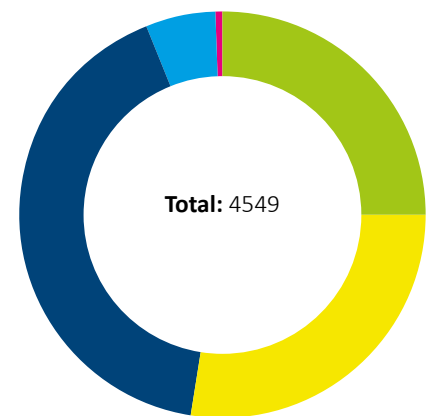
● Administrative	207
● Technical personell	94
● Engineers	152
● Research scientists	1 405 ²

¹ not incl. SINTEF holding

² 827 research scientists with a Ph.D.

Publications

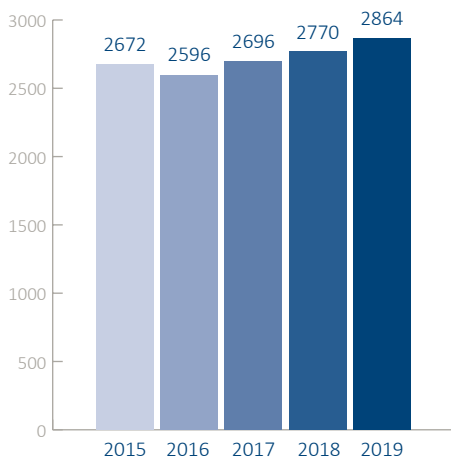
(incl. disseminations)



● Scientific articles in periodicals, series or anthologies	1140
● Scientific monographs	3
● Scientific presentations and posters	1 247
● Reports	1 885
● Popular scientific articles and presentations	260
● Technical manuals, text books, etc.	14

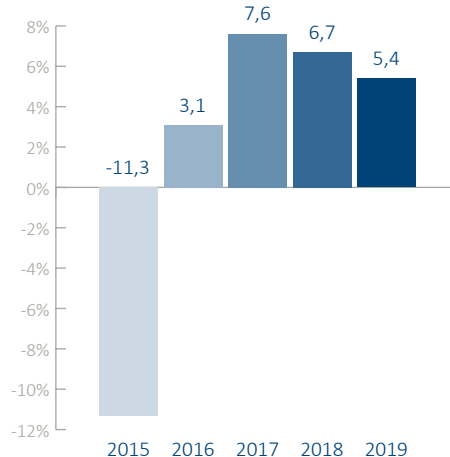
Net operating revenues

(MNOK)



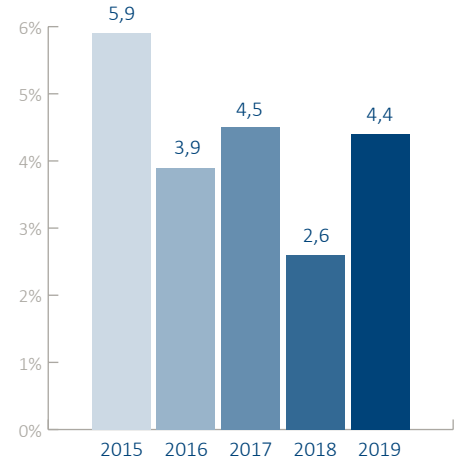
Net operating margin

(%)

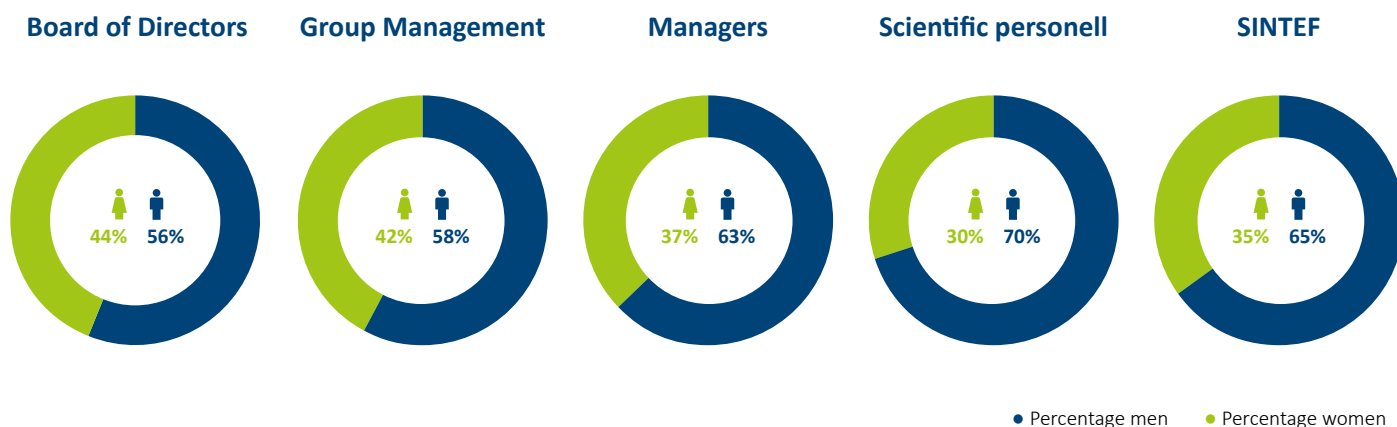


Investments

Scientific equipment and buildings
(% of net operational revenues)



Equal opportunity



Key financial figures

MNOK

RESULTAT	2015	2016	2017	2018	2019
Gross operating revenues	3 162	3 147	3 239	3 258	3 483
Net operating revenues	2 672	2 596	2 696	2 770	2 864
Operating profit	-301	80	206	185	153
Financial revenues	54	52	51	39	50
Financial expenditures	46	35	22	22	8
Profit/loss before tax and extraordinary items	-293	97	234	201	195
Annual profit/loss	-236	56	169	143	161
BALANCE SHEET					
Non-current assets	1 329	1 300	1 243	1 201	1 250
Current assets	2 360	2 322	2 897	3 052	3 358
Total assets	3 688	3 622	4 140	4 254	4 608
Equity	2 126	2 178	2 348	2 514	2 667
Long-term liabilities	48	52	52	47	44
Short-term liabilities	1 514	1 392	1 740	1 693	1 897
Liabilities	1 562	1 444	1 792	1 740	1 941
Total liabilities and shareholders' equity	3 688	3 622	4 140	4 254	4 608
PROFITABILITY					
Operating margin (%)	-11,3	3,1	7,6	6,7	5,4
Total return on investment (%)	-6,6	3,6	6,6	5,3	4,6
Return on equity (%)	-13,0	4,5	10,3	8,3	7,6
LIQUIDITY					
Net cash flows from operational activities (A)	431	193	549	356	466
Working capital ratio (1)	1,6	1,7	1,7	1,8	1,8
CAPITAL ADEQUACY					
Equity (%)	58	60	57	59	58
Operative working capital	845	929	1 157	1 359	1 461

Profit and loss statement 2019

Profit and Loss Account

All figures in TNOK

THE SINTEF FOUNDATION				SINTEF	
2018	2019	NOTE	OPERATING REVENUES AND EXPENDITURES	2019	2018
18 412	0		External project revenues	3 124 611	2 949 048
0	0		Funding from the Research Council of Norway	265 642	244 214
0	0		Gain sharing	0	0
262 644	298 355		Other operating revenues	93 066	64 898
281 057	298 355	2	Total gross operating revenues	3 483 319	3 258 160
5 065	0		Direct project costs	618 839	487 858
275 992	298 355		Total net operating revenues	2 864 480	2 770 301
87 760	91 789	3,11	Salary expenditures	2 010 914	1 910 977
27 398	28 828	4,5	Write-offs of fixed and intangible assets	118 254	120 931
0	0	4,5	Write-downs of fixed and intangible assets	0	4 460
148 484	169 477	3,5	Other operating expenditures	581 856	549 141
263 642	290 094		Total operating expenditures	2 711 024	2 585 510
12 349	8 261		Operating profit (loss)	153 455	184 793
FINANCIAL REVENUES AND EXPENDITURES					
109 502	115 186	6	Revenue from investments in subsidiaries and AC	-12 692	-4 277
2 465	7 220		Earnings on interest	33 023	23 435
8 816	4 164		Interest earnings from businesses in the same group	0	0
1 457	4 807		Other financial revenues	15 869	25 793
-463	5 223	8	Changes in value of financial instruments recognised at market value	14 240	-6 294
-770	-8		Interest costs	-1 204	-2 446
0	0		Interest costs to businesses in the same group	0	0
-1 510	-19		Other financial expenditures	-7 273	-19 763
119 497	136 573		Net financial revenues	41 963	16 450
131 847	144 834		Annual profit/loss before tax	195 419	201 243
9 681	4 826	14	Tax expenditures	33 938	58 346
122 166	140 008		ANNUAL PROFIT/LOSS	161 480	142 897
			Minority interests' share of annual profit/loss	21 023	21 028
			Majority interests' share of annual profit/loss	140 457	121 868
ALLOCATIONS					
90 765	115 186	10	Transferred to reserve for valuation variances		
31 399	24 822	10	Allocated to other equity		
122 165	140 008		Total allocations		

Balance sheet as of 31 December

All figures in TNOK

THE SINTEF FOUNDATION				SINTEF	
2018	2019	NOTE	ASSETS	2019	2018
NON-CURRENT ASSETS					
INTANGIBLE ASSETS					
-	-		Research and development	2 372	-
-	-	4	Concessions, patents, licences, trademarks, etc.	60 628	77 822
106 733	101 904	14	Deferred tax assets	242 634	238 423
-	-	4	Goodwill	-3 732	-
106 733	101 904		Total intangible assets	301 902	316 246
FIXED ASSETS					
346 385	342 966		Unserviced sites, buildings and other real property	535 453	543 511
9 717	32 304		Building(s) under construction	52 033	29 471
-	-		Scientific equipment	195 774	192 371
-	2 204		Tangible operating assets, inventories, tools, office equipment, etc.	27 698	20 843
356 100	377 474	5	Total fixed assets	810 959	786 197
NON-CURRENT FINANCIAL ASSETS					
972 988	1 098 574	6	Investments in subsidiary companies	0	-
189 078	204 589	9,13	Liabilities due to companies in the same Group	-	-
-	-	6	Equity in affiliated companies	85 400	52 571
-	-	13	Loans to affiliated companies	-	1 818
157	157	7	Investment in stocks and shares	6 405	5 985
-	-	11	Pension plan assets	3 207	3 516
31 470	37 258	9	Other long-term receivables	41 808	35 129
1 193 693	1 340 578		Total non-current financial assets	136 820	99 020
1 656 525	1 819 956		Total non-current assets	1 249 681	1 201 462
CURRENT ASSETS					
-	-		Inventory of finished goods	14 316	10 174
548	-	20	Work in progress	534 737	543 817
548	-		Total goods	549 052	553 991
RECEIVABLES					
4 487	3 192	16,18	Client receivables	486 469	484 542
159 996	60 154	13	Consolidated current receivables	-	-
1 001	2 929		Other current receivables	64 625	61 400
165 484	66 275		Total receivables	551 094	545 941
INVESTMENTS					
18 521	-	8	Market-based shares	-	44 693
121 001	145 917	8	Market based bonds and other securities	352 110	291 983
-	-	7	Shares in portfolio companies/other financial instruments	26 791	25 521
139 521	145 917		Total investments	378 901	362 197
372 856	400 170	18	Bank deposits, cash, etc.	1 879 299	1 590 182
678 408	612 362		Total current assets	3 358 346	3 052 312
2 334 934	2 432 318		TOTAL ASSETS	4 608 027	4 253 773

Balance sheet as of 31 December

All figures in TNOK

THE SINTEF FOUNDATION			SINTEF	
2018	2019	NOTE	2019	2018
EQUITY AND LIABILITIES				
EQUITY				
			Paid-in equity	
71 350	71 350		71 350	71 350
71 350	71 350		71 350	71 350
RETAINED EARNINGS				
814 372	929 558		Reserves	
1 343 333	1 368 155		2 297 712	2 157 673
2 157 705	2 297 713	10	2 297 712	2 157 673
			297 614	284 779
2 229 055	2 369 063		2 666 676	2 513 802
LIABILITIES				
PROVISIONS FOR LIABILITIES				
		11	30 984	32 680
		19	12 046	11 646
			43 030	44 326
Other long-term liabilities				
		13,16	1 170	2 336
		9,13		
			1 170	2 336
CURRENT LIABILITIES				
		16	4 734	
30 418	34 149		209 403	163 624
93	-14	14	40 726	18 285
22 683	11 015		187 886	182 993
802	-	20	718 219	745 111
51 126	6 062	13		
				931
757	12 044	15	736 185	582 367
105 879	63 255		1 897 152	1 693 310
105 879	63 255		1 941 351	1 739 972
2 334 934	2 432 318		4 608 027	4 253 773

Statement of Cash Flow

All figures in TNOK

THE SINTEF FOUNDATION			SINTEF	
2018	2019	NOTE	2019	2018
CASH FLOWS				
CASH FLOWS FROM OPERATIONAL ACTIVITIES:				
131 846	144 834	Annual profit/loss before tax	195 419	201 242
-109 502	-115 186	Share of profit/loss in subsidiaries and affiliated companies	8 720	4 277
-	-104	Tax paid during period	-15 937	-1 519
31 852	28 828	Write-offs and write-downs during period	118 254	125 391
50	-	Write-downs of non-current assets	596	478
8 354	-	Pension costs without cash effect	-1 387	-2 338
-	-	Losses/gains from fixed assets	-15	-
-	-	Losses/gains due to sale of non-current assets/shares	-15	-4 766
463	-5 223	Change in value of financial assets	-14 240	11 470
-	-	Changes in stock/inventories	-4 142	-464
-548	548	Changes in work in progress	5 569	58 754
-4 487	1 295	Changes in client receivables	-11 076	18 582
26 018	3 730	Changes in supplier accounts payable	47 402	-16 423
70 689	39 266	Changes in inter-Group transactions	-	-
14 885	-4 285	Changes in other current assets and liabilities	137 070	-38 960
169 621	93 703	Net cash flow from operational activities	466 218	355 724
CASH FLOW FROM INVESTMENTS:				
0	0	Revenues from sales of fixed assets	-1 205	0
-11 525	-50 201	Purchases of fixed assets	-131 108	-81 490
-225 675	-10 400	Revenues from sales of non-current financial assets	172	7 665
-	-	Purchases of non-current financial assets	-22 474	-21 477
-237 201	-60 601	Net cash flow from investment activities	-154 615	-95 301
CASH FLOW FROM FINANCING ACTIVITIES:				
-	-	Net receipts/payments on long-term liabilities to credit institutions	-1 166	-397
-	-	Net receipts/payments on other long-term liabilities	-	-7 191
-	-	Net change in overdraft facility	4 734	-193
1 457	-5 788	Net receipts/payments on long-term receivables	-4 860	-11 893
-	-	Dividend payments	-931	-
-	-	Change in minority interests	3 697	-
1 457	-5 788	Net cash flow from financing activities	1 474	-19 674
-66 123	27 314	Net change in bank deposits, cash, etc.	313 077	240 748
-344 788	-	Cash disbursed/received on purchase/sale of enterprise	-23 960	-
783 767	372 856	Bank deposits, cash and similar reserves as of 01.01.	1 590 182	1 349 434
372 856	400 170	Bank deposits, cash and similar reserves as of 31.12.	1 879 299	1 590 182

SINTEF Community

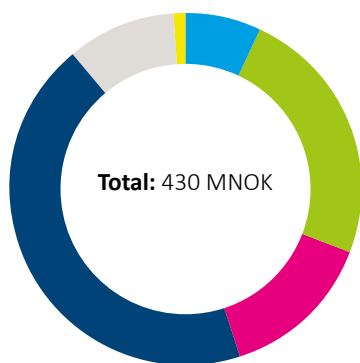


Photo: Shutterstock / M2020

SINTEF Community is a research institute for the sustainable development of buildings, infrastructure and mobility. We create value for our customers and society through research and development, research-based consultancy, certification and knowledge dissemination through, among others, the SINTEF Building Research Design Guides. We offer specialist expertise in areas such as architecture, building, water, transport, digital transport solutions and economics. We develop future solutions for the built society.

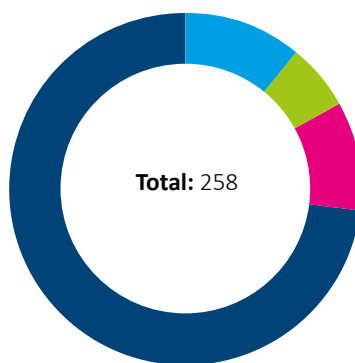
Funding sources

(% of net operational revenues)



- RCN Grant funding 7%
- RCN project funding 24%
- Public sector funding 14%
- Industrial and business sector 44%
- International projects 10%
- Other revenues 1%

Employees

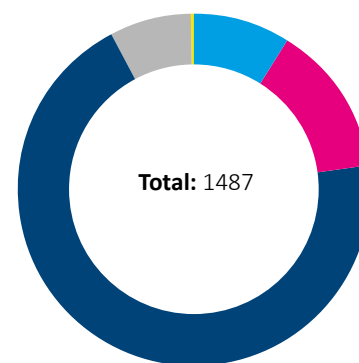


- Administrative 28
- Technical personell 15
- Engineers 27
- Research scientists 188¹

¹ 69 research scientists with a Ph.D.

Publications

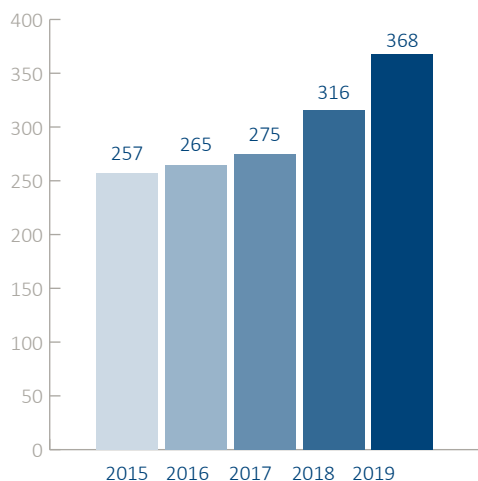
(incl. disseminations)



- Scientific articles in periodicals, series or anthologies 133
- Scientific monographs 1
- Scientific presentations and posters 207
- Reports 1031
- Popular scientific articles and presentations 111
- Technical manuals, text books, etc. 4

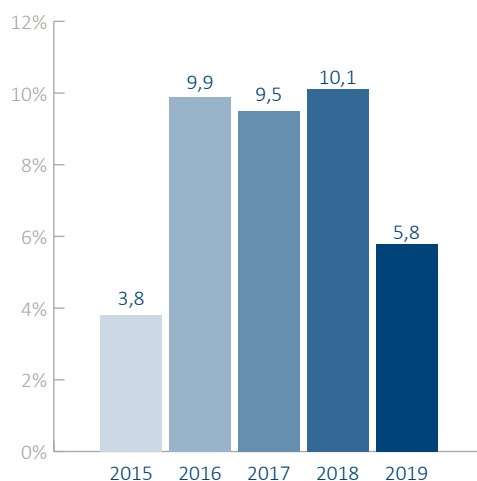
Net operating revenues

(MNOK)



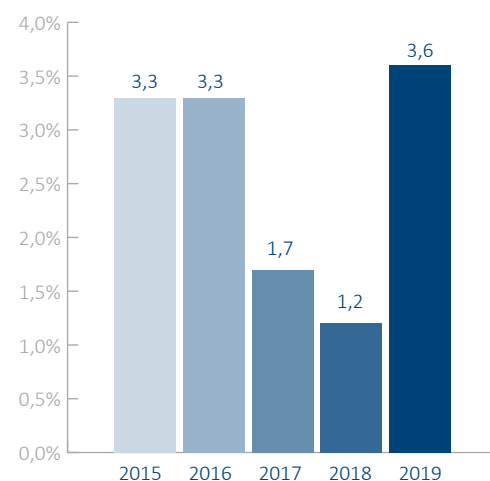
Net operating margin

(%)



Investments

Scientific equipment and buildings
(% av Net operating revenues)



SINTEF Industry

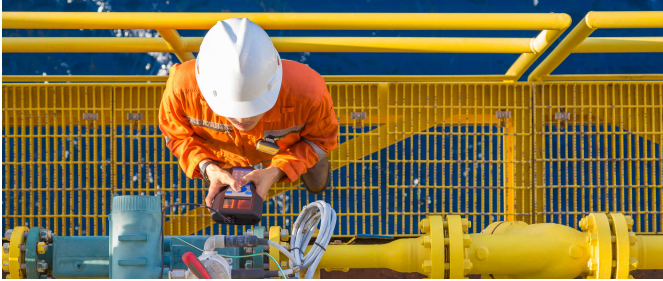
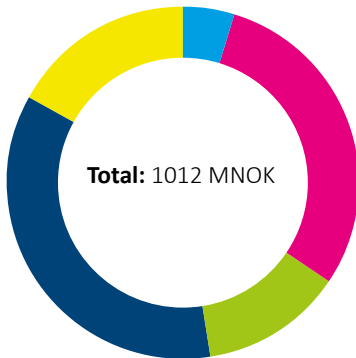


Photo: Shutterstock / Oil and Gas Photographer

SINTEF Industry carries out contract-based research offering high levels of expertise in the fields of materials and nanotechnology, biotechnology and nanomedicine, sustainable energy, process technology, metals production and processing, petroleum technology, applied chemistry and industrial economics. Sustainable development and wealth creation are fundamental to all our activities. Our multidisciplinary knowledge base acts as a foundation for the development of enabling technologies and crossdisciplinary solutions across a broad range of market sectors in close collaboration with our clients and research partners.

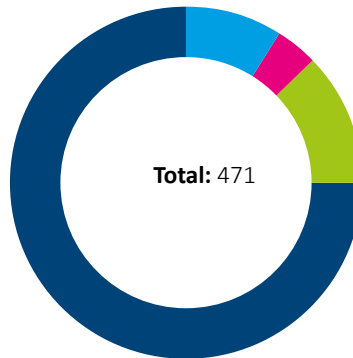
Funding sources

(% of net operational revenues)



RCN Grant funding	5%
RCN project funding	30%
Public sector funding	13%
Industrial and business sector	36%
International projects	17%
Other revenues	0%

Employees

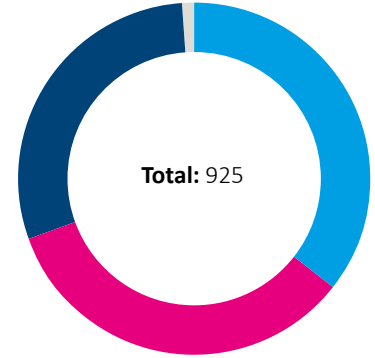


Administrative	42
Technical personell	19
Engineers	56
Research scientists	354 ¹

¹ 253 research scientists with a Ph.D.

Publications

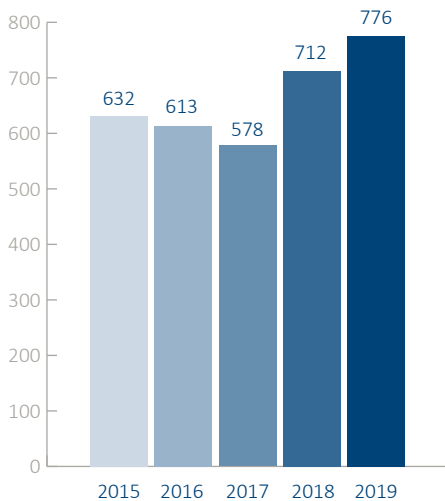
(incl. disseminations)



Scientific articles in periodicals, series or anthologies	329
Scientific monographs	0
Scientific presentations and posters	315
Reports	272
Popular scientific articles and presentations	9
Technical manuals, text books, etc.	0

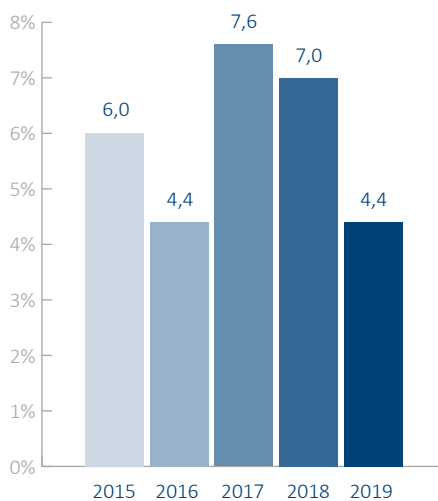
Net operating revenues

(MNOK)



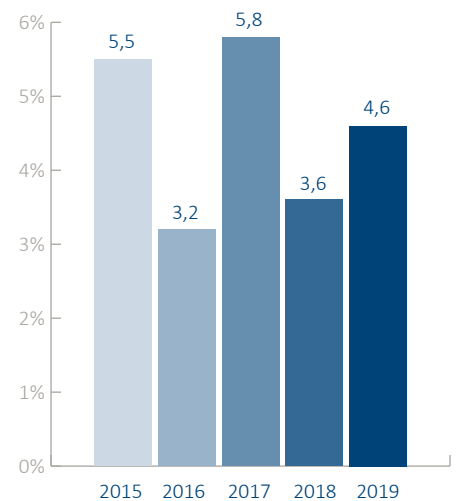
Net operating margin

(%)



Investments

Scientific equipment and buildings
(% av Net operating revenues)



SINTEF Digital

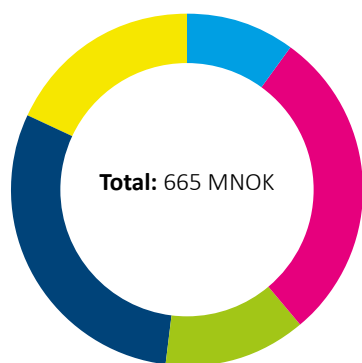


Photo: Shutterstock / IR Stone

SINTEF Digital carries out applied research and innovation in the fields of digital technologies, health and the social sciences. We are experiencing a major digital transformation in which automation, innovation, artificial intelligence, cyber security and advanced robot technology will change our working lives and social structures beyond recognition. Our multidisciplinary specialist expertise enables us to help our clients implement a successful transition while at the same time boosting profitability and growth in new markets.

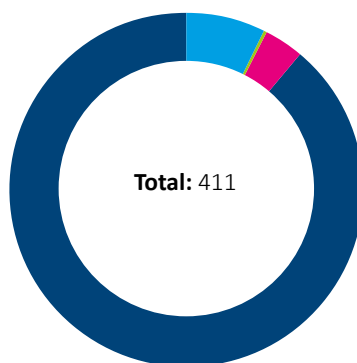
Funding sources

(% of net operational revenues)



RCN Grant funding	10%
RCN project funding	29%
Public sector funding	13%
Industrial and business sector	30%
International projects	18%
Other revenues	0%

Employees

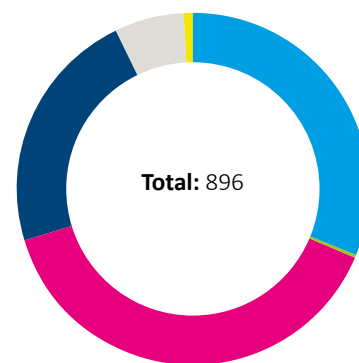


Administrative	30
Technical personell	1
Engineers	15
Research scientists	365 ¹

¹ 201 research scientists with a Ph.D.

Publications

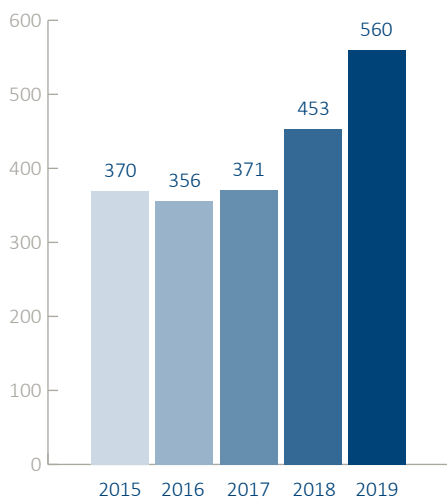
(incl. disseminations)



Scientific articles in periodicals, series or anthologies	280
Scientific monographs	2
Scientific presentations and posters	349
Reports	201
Popular scientific articles and presentations	58
Technical manuals, text books, etc.	6

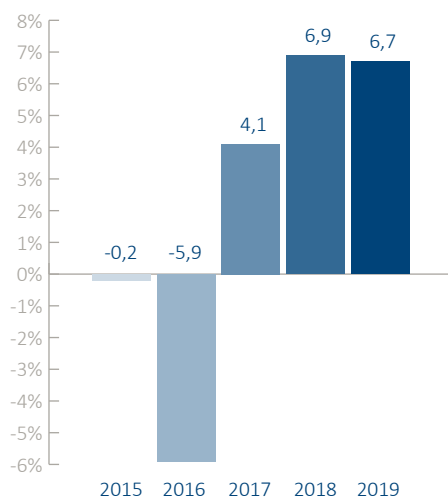
Net operating revenues

(MNOK)



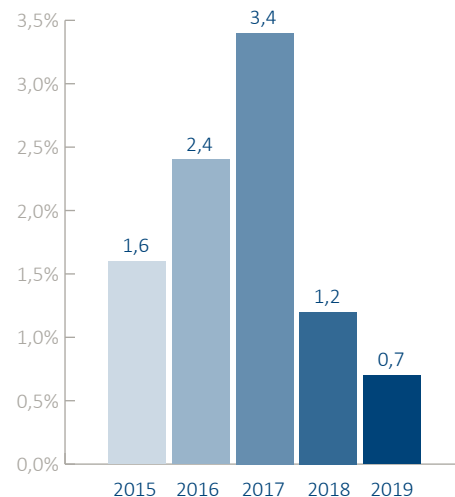
Net operating margin

(%)



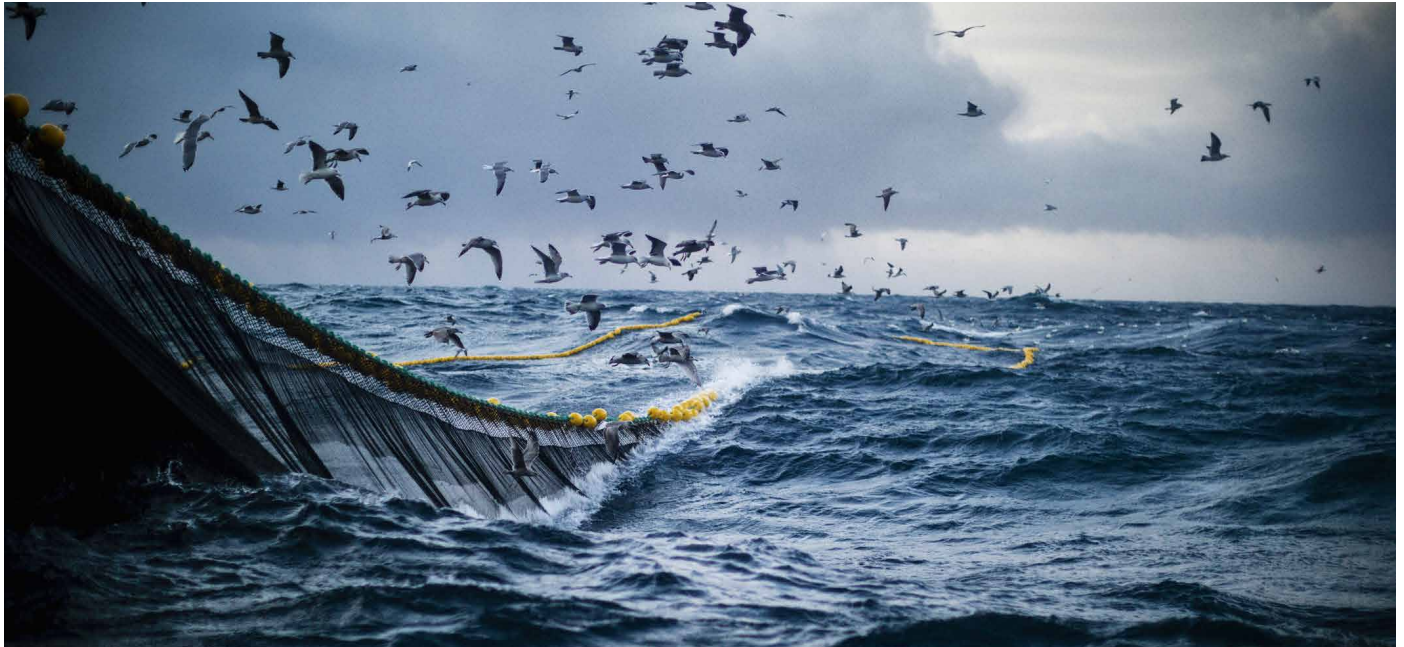
Investments

Scientific equipment and buildings
(% av Net operating revenues)



SINTEF Ocean AS

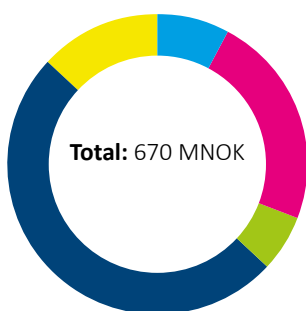
Photo: iStock-piolar666



SINTEF Ocean carries out research and innovation linked to the ocean space on behalf of national and international industrial clients in the maritime, offshore petroleum, fishing, and aquaculture markets. The Institute also has one of the world's leading research groups in the field of marine environmental technology.

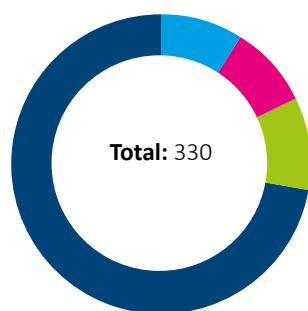
Our ambition is to maintain Norway's leading position in marine technology and biomarine research by combining outstanding professional research with our position at the global cutting edge in the fields of analysis and concept development.

Funding sources
(% of net operational revenues)



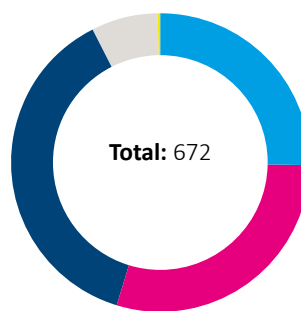
- RCN Grant funding 8%
- RCN project funding 23%
- Public sector funding 6%
- Industrial and business sector 50%
- International projects 13%
- Other revenues 0%

Employees



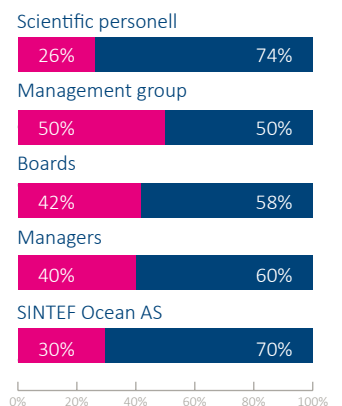
- Administrative 29
 - Technical personell 31
 - Engineers 33
 - Research scientists 237¹
- ¹ 134 research scientists with a Ph.D.

Publications
(incl. disseminations)



- Scientific articles in periodicals, series or anthologies 175
- Scientific monographs 0
- Scientific presentations and posters 203
- Reports 252
- Popular scientific articles and presentations 41
- Technical manuals, text books, etc. 1

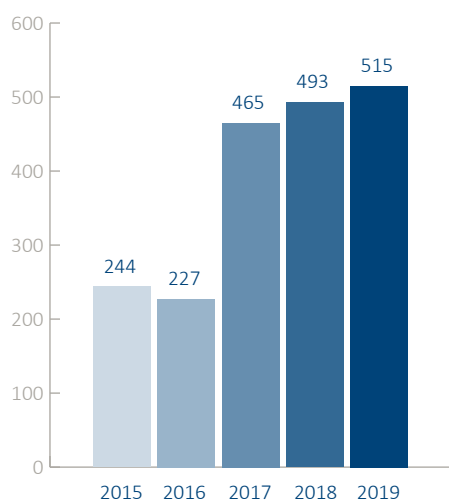
Equal opportunity



- Men
- Women

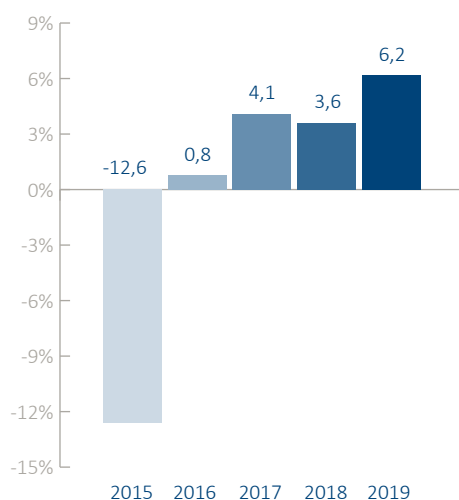
Net operating revenues

(MNOK)



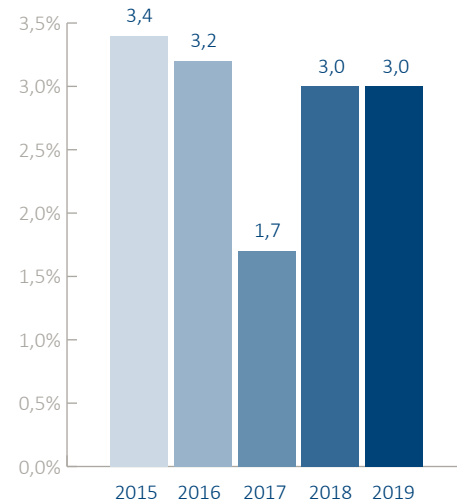
Net operating margin

(%)



Investments

Scientific equipment and buildings
(% av Net operating revenues)



Financial ratios

MNOK

FINANCIAL RESULT	2015	2016	2017	2018	2019
Gross operating revenues	303	279	602	629	670
Net operating revenues	244	227	465	493	515
Operating profit	-31	2	19	18	32
Annual profit/loss	-29	1	18	19	34
BALANCE					
Non-current assets	97	88	177	185	152
Current assets	272	262	581	629	709
Total assets	390	369	758	814	860
Equity	223	223	385	404	438
Liabilities	146	127	373	410	422
Total liabilities and shareholders' equity	390	369	758	814	860
PROFITABILITY					
Operating margin (%)	-12,6 %	0,8 %	4,1 %	3,6 %	6,2 %
Total return on investment (%)	-5,0 %	3,8 %	5,5 %	3,8 %	5,4 %
Return on equity (%)	-14,2 %	1,7 %	8,4 %	6,6 %	9,2 %
LIQUIDITY					
Net cash flow from operational activities	12	41	118	40	109
Working capital ratio (1)	1,9	2,2	1,6	1,6	1,7
CAPITAL ADEQUACY					
Equity (%)	57,1 %	60,6 %	50,8 %	49,6 %	50,9 %
Operative working capital	131	141	226	237	304

SINTEF Energy Research AS

Photo: iStock-1127463737_AppleZomZom

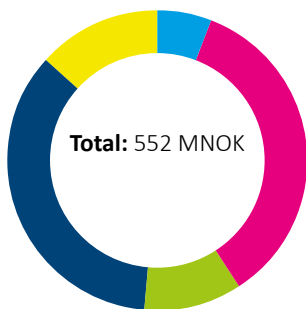


SINTEF Energy Research's mission is: We shape the future's energy solutions We work from three main perspectives:

- Norway: Continuity of supply and competitiveness
- Europe: Innovation to realize energy and climate targets
- Globally: Sustainable energy systems

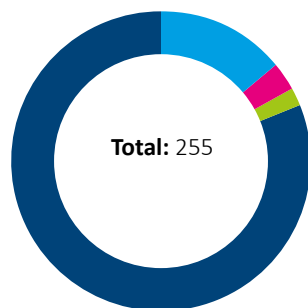
Our strategic focus is on transmission, smartgrids, hydrogen, off-shore energy systems, zero-emission transport, energy efficiency, CCS, hydropower, offshore wind, and bioenergy.

Funding sources
(% of net operational revenues)



● RCN Grant funding	6,0%
● RCN project funding	34,2%
● Public sector funding	10,4%
● Industrial and business sector	36,1%
● International projects	13,2%
● Other revenues	0%
● NFR strategiske program	0%

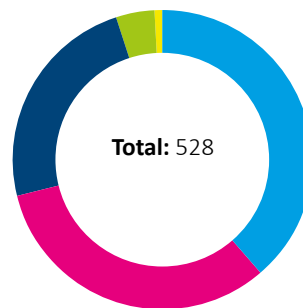
Employees



● Administrative	35
● Technical personell	8
● Engineers	6
● Research scientists	206 ¹

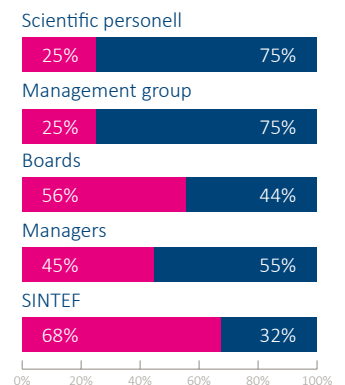
¹ 130 research scientists with a Ph.D.

Publications
(incl. disseminations)



● Scientific articles in periodicals, series or anthologies	206
● Scientific monographs	0
● Scientific presentations and posters	172
● Reports	124
● Popular scientific articles and presentations	23
● Technical manuals, text books, etc.	3

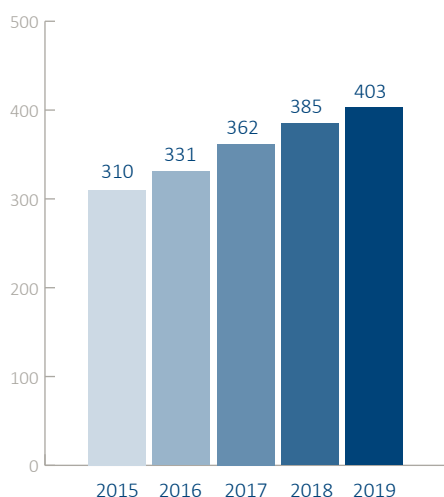
Equal opportunity



● Men
● Women

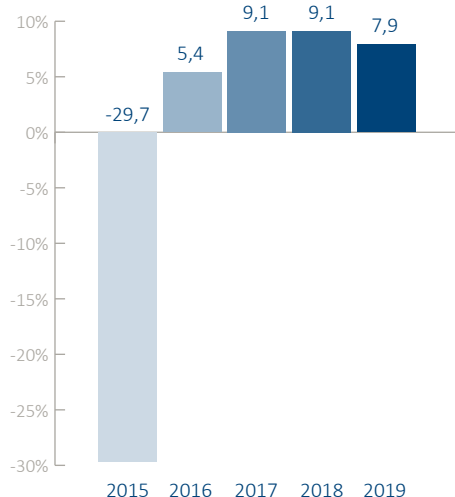
Net operating revenues

(MNOK)



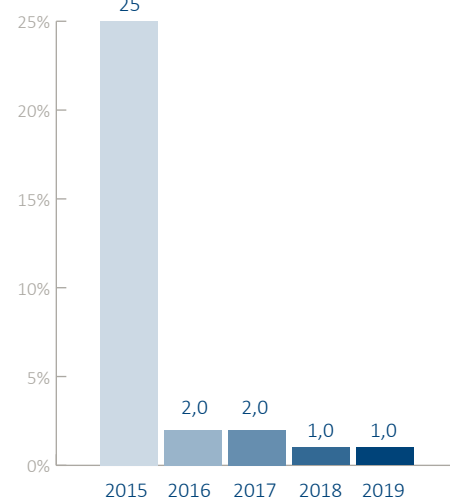
Net operating margin

(%)



Investments

Scientific equipment and buildings
(% av Net operating revenues)



Financial ratios

MNOK

FINANCIAL RESULT	2015	2016	2017	2018	2019
Gross operating revenues	397	439	438	494	552
Net operating revenues	310	331	362	385	403
Operating profit	(92)	18	33	35	32
Annual profit/loss	(63)	14	28	28	32
BALANCE					
Non-current assets	252	237	221	210	202
Current assets	292	288	384	408	470
Total assets	544	524	605	618	672
Equity	325	339	368	396	428
Liabilities	219	185	237	222	244
Total liabilities and shareholders' equity	544	524	605	618	672
PROFITABILITY					
Operating margin (%)	-29,7 %	5,4 %	9,1 %	9,1 %	7,9 %
Total return on investment (%)	-15,2 %	4,6 %	7,0 %	6,5 %	6,4 %
Return on equity (%)	-27,0 %	6,1 %	10,6 %	10,0 %	10,1 %
LIQUIDITY					
Net cash flow from operational activities	49	33	98	14	57
Working capital ratio (1)	1,3	1,6	1,6	1,8	1,9
CAPITAL ADEQUACY					
Equity (%)	59,7 %	64,7 %	60,8 %	64,1 %	63,7 %
Operative working capital	74	104	148	187	227

SINTEF Manufacturing AS

Photo: Shutterstock / PopTika

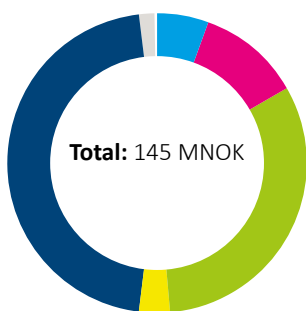


SINTEF Manufacturing is Norway's leading centre of expertise in manufacturing. Our ambition is to create sustainable and effective solutions which provide competitive advantages for the Norwegian manufacturing industry.

We provide expertise in automated production, product and production development, lean, value chain management and material technology, as well as laboratory and engineering services.

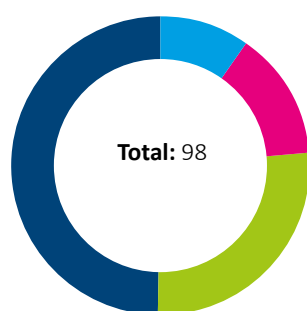
Funding sources

(% of net operational revenues)



● RCN Grant funding	5,7%
● NFR strategiske program	11,2%
● RCN project funding	31,9%
● Public sector funding	3,2%
● Industrial and business sector	46,2%
● International projects	1,9%
● Other revenues	0%

Employees

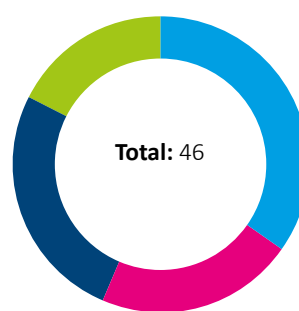


● Administrative	9,4
● Technical personell	13
● Engineers	25,6
● Research scientists	48 ¹

¹ 23 research scientists with a Ph.D.

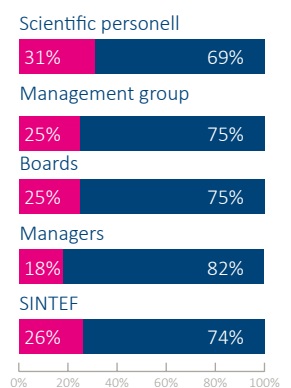
Publications

(incl. disseminations)



● Scientific articles in periodicals, series or anthologies	16
● Scientific monographs	0
● Scientific presentations and posters	10
● Reports	12
● Popular scientific articles and presentations	8
● Technical manuals, text books, etc.	0

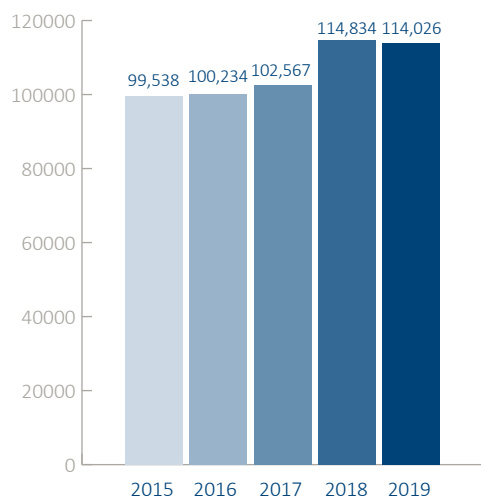
Equal opportunity



● Men
● Women

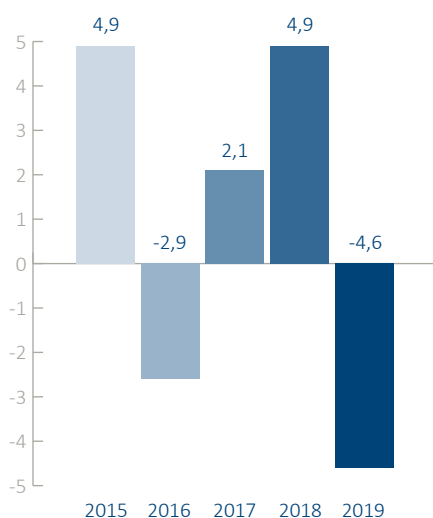
Net operating revenues

(MNOK)



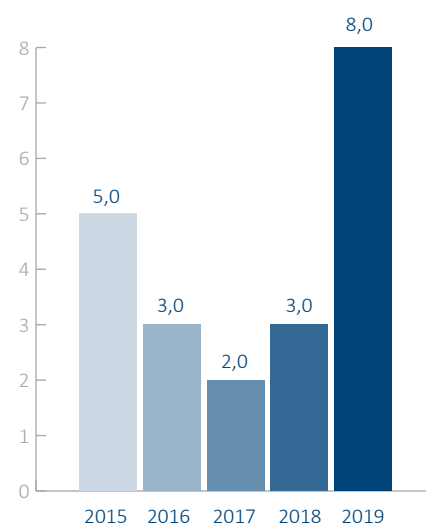
Net operating margin

(%)



Investments

Scientific equipment and buildings
(% av Net operating revenues)



Financial ratios

MNOK

FINANCIAL RESULT	2015	2016	2017	2018	2019
Gross operating revenues	124 787	127 816	131 826	146 274	144 921
Net operating revenues	99 538	100 234	102 567	114 834	114 026
Operating profit (loss)	4 920	(2 577)	2 133	5 676	(5 266)
Annual profit/loss	3 680	(2 116)	1 399	3 957	(5 238)
BALANCE					
Non-current assets	11 067	13 790	12 869	12 429	20 119
Current assets	46 597	46 689	52 835	72 519	52 620
Total assets	57 664	60 479	65 704	84 948	72 739
Equity	17 956	15 839	17 238	21 040	16 972
Liabilities	39 708	44 640	48 466	63 908	55 767
Total liabilities and shareholders' equity	57 664	60 479	65 704	84 948	72 739
PROFITABILITY					
Operating margin (%)	4,9 %	-2,6 %	2,1 %	4,9 %	-4,6 %
Total return on investment (%)	8,7 %	-4,2 %	3,4 %	7,6 %	-6,7 %
Return on equity (%)	8,0 %	-4,9 %	7,2 %	7,0 %	5,7 %
LIQUIDITY					
Net cash flow from operational activities	13	3	1	2	-14
Working capital ratio (1)	1,5	1,2	1,2	1,1	1,2
CAPITAL ADEQUACY					
Equity (%)	31,1 %	26,2 %	26,2 %	24,8 %	23,3 %
Operative working capital	15	9	10	9	0,4



Technology for a better society

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