



SINTEF

Annual report 2021

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About SINTEF

SINTEF is one of Europe's largest research institutes, with multidisciplinary specialist expertise in the fields of technology, the natural sciences and the social sciences.

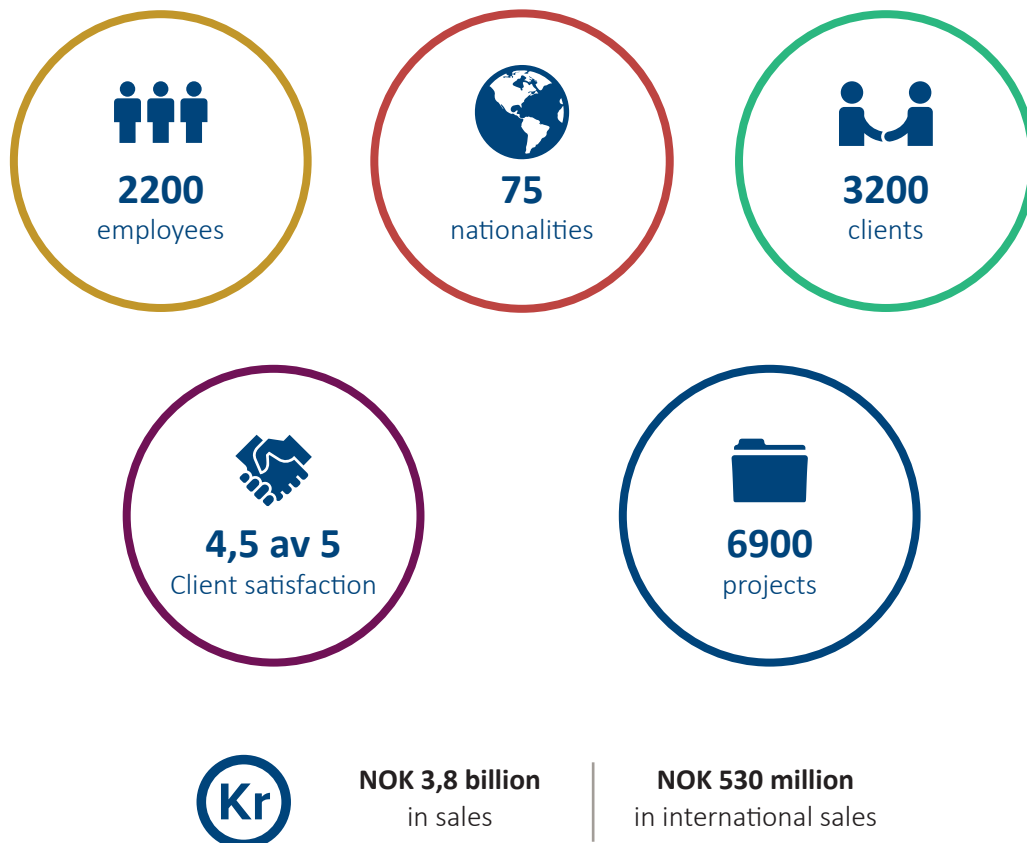
SINTEF is an independent foundation which since 1950 has been responsible for innovation by means of development and research projects for industrial and public sector clients in Norway and abroad.

Our vision is 'Technology for a better society'

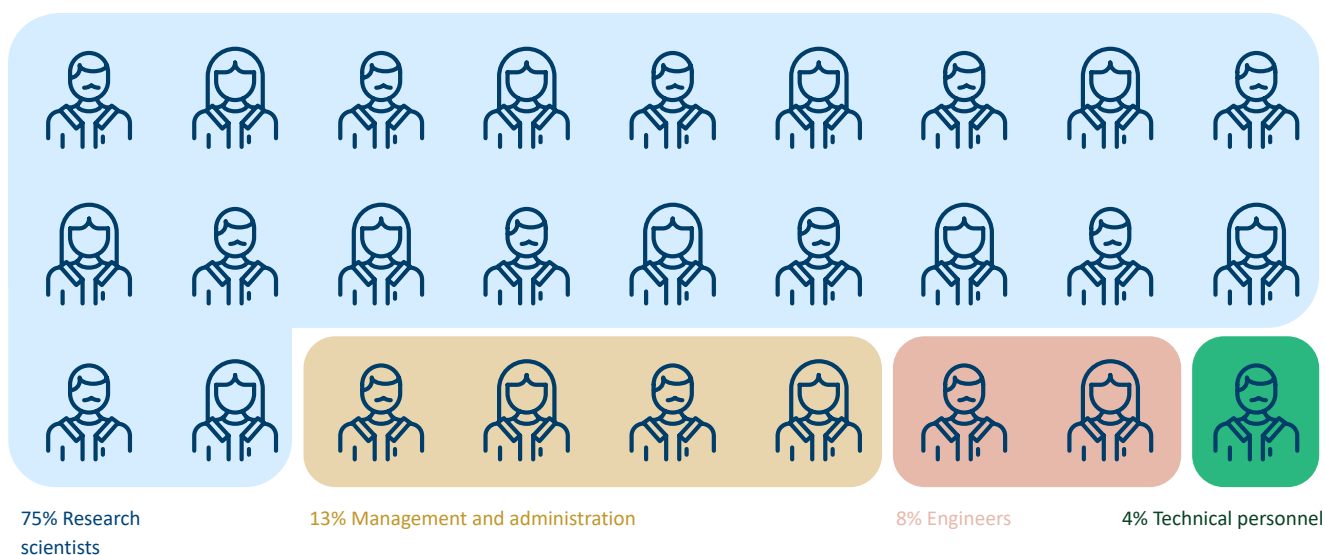


Photo: Smidesang & Lyng / SINTEF

Research and innovation for clients all over the world



Over seven out of ten employees are research scientists



The world has experienced great upheaval during the last couple of years.

The Covid crisis has affected our day-to-day lives and has had a major impact on health and economies around the world. And even as I write this report, the dramatic war in Ukraine is challenging every one of us. While Ukraine, its citizens and refugees are caught in a most difficult situation, the security of Europe as a whole is also in the balance. We are seeing serious ripple effects for supply security, not least in the energy, food and materials sectors.

Today, as the world changes around us, we at SINTEF are experiencing a massive demand for our research and innovation. Our vision, 'Technology for a better society', continues to be relevant to those of our clients and partners who are responding daily to challenges linked to health, energy and food security, as well as public safety. Moreover, in connection with the major underlying climate and biodiversity crises, we are seeing that our contributions are making a difference. One of our achievements in 2021 was to energetically mobilise the public and private sectors to join us and participate in the EU's 'Green Deal' and the Norwegian 'Green Platform'. We have also established a new group-wide biodiversity initiative that is working strategically to ensure that sufficient consideration is given to the natural world as industrial and technological development progresses.

SINTEF's more than 2,000 employees have made a great effort to deliver, and are pleased with the ways in which we have adapted to new ways of leadership and interaction, whether in our labs and workshops, in the office or at home. And in spite of the great uncertainties generated by the pandemic forced upon us in 2020, our results from 2021 bear witness to the strength of our efforts and creative will.

In partnership with our clients and the funding organisations, and aided by extraordinary basic grant funding made available to the technical-industrial institutes, ongoing innovation project (IPN) announcements, and the Green Platform, SINTEF has been able to continue to contribute to the green and digital transformation throughout the period of crisis. In 2021, our net revenues grew by 9.2 percent, and we delivered a robust operating profit of NOK 268 million (8.2 percent).

This encouraging result means that, as a foundation, SINTEF can continue to invest for the future. Activities in 2021 have included investment in laboratories for zero emission buildings and constructions in the maritime sector, a lab for Norway's growing battery industry, and the modernisation of SINTEF's main buildings in Forskningsveien in Oslo.

We are also investing in the development of the new Norwegian business sector, and many external investors are joining us. The



Photo: Terje Trobe / SINTEF

Covid crisis has seen an acceleration in the emergence of commercialisation concepts at SINTEF, and we decided before the end of the year to establish yet another venture capital fund, enabling SINTEF and our co-investors to invest in start-up companies offering new, research-based products and services.

We are also working to identify new opportunities to contribute towards meeting the challenges facing wider society, and towards achieving the UN's Sustainable Development Goals, which serve as the guiding principles for SINTEF's activities. I myself attended the Climate Change Summit in Glasgow in November, which I found very motivating. At the summit, we launched the SINTEF Global Climate Fund, into which SINTEF is investing its own funds with the aim of conducting research to produce the new climate-positive solutions on which all 1.5-degree global warming scenarios depend. Our Global Climate Fund is working specifically to attract new partners to the fund so that together, we can create a foundation for the new and large-scale ideas that a growing market needs in order to secure a climate-positive future.

Alexandra Bech Gjørv
CEO

The SINTEF year in brief – 2021

Heads towards green aviation in European cooperation

SINTEF is intensifying its efforts for emission-free air traffic, and becomes a member of two exclusive, European partnerships with ambitious plans for green aviation.

[Read more](#)

Norway has been given a floating ocean laboratory

The OceanLab will contribute to research on underwater robotics, aquaculture, autonomous shipping and environmental research.

[Read more](#)

Awarded for Best Outreach during EU Hydrogen Week

The REFYHNE project culminated in July 2021 with Europe's largest PEM electrolyser for hydrogen production being put in operation. During the EU Hydrogen Week, it was given the Best Outreach Award by Fuel Cells & Hydrogen Joint Undertaking (FCH JU).

[Read more](#)

How the North Sea can drive the green transition

At a time when the climate challenge is fast becoming a climate emergency, the North Sea is an ideal platform for developing the climate technologies of the future, according to several leading European research centres.

[Read more](#)

SINTEF-fund supports new family of climate change mitigation technologies

SINTEF launches global fund for the removal of previously emitted greenhouse gases.

[Read more](#)

New initiative focusing on biodiversity

SINTEF launches the group initiative Biodiversity and Area Usage, which will focus on the conservation of biological diversity, also in the midst of increasing technological development.

[Read more](#)

SINTEF to research ammonia as a green shipping fuel

SINTEF will work on solving research hurdles linked to the use of ammonia as a zero-emission fuel for the shipping sector.

[Read more](#)

Measuring brain pressure can become big business

A new invention may be on the verge of replacing a costly cranial surgical procedure currently being performed on some traffic accident victims and other patient groups.

[Read more](#)

Robots with visual and tactile sensing can prevent tons of food waste

Intelligent food handling by robots can boost productivity and reduce waste in the production chain. Meet the robot with visual and tactile sensing, capable of handling compliant food objects.

[Read more](#)

New laboratory will boost Norwegian competitiveness on batteries

There is a global knowledge race in all parts of the value chain related to the production, use and reuse of batteries. SINTEF is now investing NOK 45 million (4.5 million Euro) in a laboratory for the production and testing of battery cells.

[Read more](#)

Developing the world's 'hottest' heat pump ever

Researchers working with industrial partners have developed the world's first heat pump producing temperatures of up to 180 degrees Celsius. Such record high temperatures will enable one fifth of European industry to reduce its energy consumption by up to 70 percent and become entirely climate neutral.

[Read more](#)

Bacteria-based concrete offers climate benefits

Ten cubic kilometres of concrete, equivalent to the volume of Mount Everest, are used in construction projects every year, resulting in huge volumes of emissions. But a new eco-friendly cement may help to reduce our global climate footprint.

[Read more](#)

Board of Directors' Report for 2021



The year 2021

2021 was a very good year for SINTEF, with breakthroughs in important technological fields related to the restructuring of Norwegian society. SINTEF has been involved in major restructuring processes in important areas related to the conversion of the energy supply system to battery power, hydrogen generation and offshore wind generation. Important advances have also been made in the field of digitalisation to achieve a green transition in such industries as aquaculture, transport, building and construction and healthcare.

In the course of 2021 we have established new strategic alliances that we believe will be crucial in tackling the sustainability challenges in the healthcare sector. We have also demonstrated that SINTEF's research teams are competitive internationally. This manifests itself in record-breaking inroads into European competitive arenas, including projects connected with the EU's Green Deal.

In terms of net sales, SINTEF saw a nine per cent increase in research and development, compared with the previous year. The operating profit was also very strong. This reinforces our ability to contribute to the green and digital transformation of society. The Norwegian state's funding of the Ocean Space Centre is a historic milestone for our ability to carry out research that ensures continued Norwegian leadership in the ocean industries sector.

SINTEF is an independent and not-for-profit research foundation offering multidisciplinary specialist expertise across a wide range of research fields. In close collaboration with industry, public sector organisations and other research centres, we develop knowledge that generates societal benefits and competitiveness. The UN Sustainable Development Goals guide our operations and we endeavour to integrate sustainability into how we work,

manage and decide on our priorities. This enables us continually to consolidate our contribution to society.

SINTEF operates with the vibrant and ambitious vision of *"Technology for a better society"*

SINTEF's main mission is to contribute to linking the needs of clients to the international research front while continuously developing outstanding research teams, laboratories and other infrastructure that is available to cater to the needs of industry and the public sector for research, innovation and industrialisation nationwide.

Another important task is to make use of our research results to create new industries in connection with the digital and green transition. SINTEF TTO administers SINTEF's intellectual property rights and ownership interests in start-up companies that largely originate from SINTEF's research. To support this work, SINTEF administers three seed funds that invest in, and develop, new companies based on technologies developed by our research teams.

SINTEF is organised as a foundation with partly and wholly owned subsidiary companies. Since it is not possible to pay out dividends, all profit remains in the enterprise. Our head office

and the majority of our employees are located in Trondheim, but we also carry out a significant amount of activity in Oslo and Raufoss. SINTEF also has a presence in Tromsø, Narvik, Mo i Rana, Steinkjer, Verdal, Frøya, Ålesund, Molde, Bergen, Kongsberg, Horten, Grenland, Arendal and Hirtshals in Denmark, as well as an office in Brussels.

SINTEF has 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.

SINTEF has at its disposal substantial assets that are used to attain the company's objectives, partly through its own investments and partly by positioning itself to provide hosting functions for important publicly funded infrastructure. Developed and undeveloped leasehold sites in the vicinities of the universities of Trondheim and Oslo constitute a major portion of the assets entered in the Foundation's balance sheet, and the co-location of research teams from SINTEF and the universities represents a key success factor in terms of research collaboration. To further reinforce co-operation with the universities, industry and start-up enterprises, the Board prioritises work on developing SINTEF's Properties in a sustainable and future-oriented manner. SINTEF is also strongly involved in interaction around these locations by way of its involvement in NTNU's campus complex, Trondheim Tech Port and Oslo Science City.

Strategy and highlights of 2021

2021 was the second year to be severely affected by the COVID-19 pandemic. The Board can confirm that SINTEF's operations have coped well, largely as a result of enormous efforts on the part of its employees, but also thanks to important initiatives taken by the authorities.

The pandemic has prompted enormous restructuring efforts, with regard to not only medical response, but also the digital transformation of working life and global value chains. This provides important impetus to the work of resolving the major underlying requirements for societal change, linked to demographic change, climate change, loss of natural resources and heightened geopolitical tension. Digitalisation challenges important social values. However, it will be impossible to meet all the social challenges without digitalisation playing a major role.

By 2030, the UN Sustainable Development Goals shall be attained, emissions of greenhouse gases in Norway and Europe shall be reduced by at least 55 per cent, and the world shall be on its way to climate neutrality by 2050. The depletion of biodiversity must be slowed significantly and Norway must make considerable progress in the restructuring of its petroleum-based economy. In the opinion of the Board, SINTEF's research portfolio, expertise and infrastructure continue to make a highly relevant contribution towards meeting these challenges.

Authorities in all major geographical regions and countries are encouraging a green, digital transition as a key component of the



SINTEF yearly releases its own sustainability report.

Read more

reconstruction. Major funding schemes have been announced both in the EU and in Norway to support research and innovation, prompting enormous competition between projects and value chains. During 2021, SINTEF research scientists were highly successful in establishing competitive projects in collaboration with consortia of clients and partners. As a result of the EU's 1 billion euro "Green Deal" tender announcement, eight of the applications in which SINTEF was involved were financed to a value of 2.1 per cent of the overall funding awarded in the EU as a whole. Correspondingly, SINTEF is participating in ten of the twelve projects that were successful in the competition for NOK 1 billion in funding, announced in collaboration between Norwegian financial instrument operators as part of the new "Green Platform" programme.

An important milestone was reached in connection with the Norwegian government budget for 2022, when Parliament decided to establish the Ocean Space Centre (OSC), with a total budget of NOK 8.154 billion. This infrastructure, including the development of research facilities at Tyholt, near Ålesund, off the coast of Hitra and Frøya and in Trondheimsfjord, will become one of the world's most advanced centres for research, education and innovation in ocean space technology. It will contribute to the green and digital transition and guarantee Norway's position as a leading maritime nation. The Board is very pleased that OSC will now become a reality after 17 years of preparatory work. Construction is expected to commence in the autumn of 2022, with overall completion during 2029. The plan is that SINTEF Ocean will have an important role as user and operator of the infrastructure. To facilitate the decision to implement OSC, the SINTEF Foundation is investing around NOK 250 million in new premises and user adaptations to ensure the existence of future-oriented laboratory operations for the machinery and construction research groups at SINTEF Ocean at Torgard, Trondheim, even though the Government did not allow for this in the OSC project funding.

In 2021 it was also decided to invest NOK 45 million in a new battery cell laboratory to ensure available capacity to support the Norwegian battery industry, as an important supplement to the Government's investments in infrastructure.



Photoillustration: Geir Mogen / SINTEF

The Board is pleased that the proposals of SINTEF’s research teams were successful in ten of a total of 22 infrastructure projects that received funding from the Research Council of Norway in 2021.

In 2021 there has been positive development in SINTEF’s commercialisation activities. At the end of 2021, SINTEF had 18 start-up companies in its portfolio, two of which were added in the course of the year. In total, NOK 650 million has been injected into the companies by their investors in the course of the year, of which NOK 62 million has come from the SINTEF Venture funds. The investment period of the newest of these funds, SINTEF Venture V, expires in June 2023, and the Board has decided to commence work on establishing SINTEF Venture VI, in which SINTEF will invest NOK 100 million, with a view to attaining total funding capital of NOK 500 million, equivalent to SINTEF Venture V.

In spite of sizeable awards and grants, an extensive series of reports and analyses indicate that far greater investment is necessary in research, innovation and the industrialisation of research results if society, globally and nationally, is to succeed in meeting its sustainability challenges. SINTEF draws attention to this in a large number of different forums, as described in detail in the proposals submitted by SINTEF in the autumn of 2021 to the Government’s revised Long-term Plan for research and higher education, which will be released in the autumn of 2022.

Sustainability

The UN Sustainable Development Goals shall form the basis of SINTEF’s corporate strategy. The 17 SDGs specify the actions that the world as a whole must take, and succeed in, in order to create a better global community.

Our most significant contribution to sustainable development is through SINTEF’s research and innovation, and we are also working continuously to enhance the sustainable operation of our own activities. SINTEF publishes a sustainability report that documents the progress of its research, innovation and in-house sustainability efforts.

A study of our activities has demonstrated that SINTEF’s research projects are making specific contributions to many UN Sustainable Development Goals, with particular emphasis on the following: Industry, innovation and infrastructure; Affordable and clean energy; Climate action; Responsible consumption and production; Sustainable cities and communities; Good health and well-being; Life below water and Life on land. Assuming the success and commercial scaling of the start-up companies, they will be able to contribute to realising the goals for Decent work and economic growth; Industry, innovation and Infrastructure; Good health and well-being; Responsible consumption and production; Life below water; Affordable and clean energy and Zero hunger.

The Board has regular discussions with SINTEF’s management of issues related to sustainability. In 2021 particular effort was invested in the new SINTEF Global Climate Fund initiative, founded under a new subsidiary of the Foundation called the SINTEF Sustainability Accelerator Fund. The climate fund was launched in November 2021 during the UN’s Climate Summit in Glasgow, and is intended to ensure funding for climate-friendly concepts needed to attain the 1.5 degree goal. If it is to achieve the ambitions of the Paris Agreement, the world community must not only reduce emissions, it must also successfully remove greenhouse gases from the atmosphere. Some technology exists to do this, but not enough. The climate fund addresses the gap by ensuring early financing of new climate-friendly concepts that can potentially be scaled up to have an impact on the climate challenges. SINTEF has committed NOK 21 million

Despite the pandemic there has been a high level of activity on the training front. Many new colleagues have been employed and activity levels have been high.

over three years, to strengthen this research field. We see this as an element of SINTEF's work on climate neutrality in its own organisation: an alternative way of compensating for emissions resulting from SINTEF's operations. In 2022, the climate fund will be working to attract external contributors, in addition to the bank, SpareBank 1 SMN, which announced its involvement at the time of the launch in Glasgow.

SINTEF continues to work systematically with a range of other issues related to sustainability within the organisation. These include HSE, the external environment, equal opportunity, diversity, employee rights, HSE, ethics and supplier follow-up. These are described in more detail below.

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 2021 we experienced a total of ten personal injuries, three of which led to employee absence. In November there was an incident involving a gas leak at SINTEF Industry that exposed employees to phosphine gas. There was significant potential for personal injury. The incident has been investigated and several measures have been implemented. The Board considers it important that continuous work be done to avoid personal injury through preventive measures while also learning from incidents.

In 2020 we observed a reduction in total accidents, near-misses and hazardous situations. During 2021 the curves have flattened, with a slight increase in the last four months of the year, probably linked to the return of a number of employees to the workplace after a long period of working from home.

The in-house HSE campaign (HMS-løftet) constitutes a process of continuous improvement at SINTEF. 2020 saw chemicals handling included as an area of focus and this will continue in 2022. The "Chemicals Campaign" places special emphasis on acquiring appropriate expertise, combined with correct labelling and the effective registration of chemicals and incidents of exposure. One of the initiatives for improving expertise (known as "Au!-kampanjen", or the Owl Campaign), consisted of a number

of activities whose purpose was to create awareness linked to chemicals handling and employee training.

The HSE process in the management system is continuously updated in accordance with prevailing legislation, and is considered to be in compliance with official requirements. The management system became more process-oriented in connection with migration to a new platform in 2021. As a result of a periodic audit carried out in December 2021, the ISO 45001 certification of the working environment management system was renewed.

The COVID-19 pandemic also made its mark on our everyday lives in 2021. Throughout the pandemic, SINTEF has established and communicated clear guidelines, based on the initiatives and recommendations of the authorities. Through the year, many of SINTEF's employees have worked from home for short or long periods. At the same time, some employees have been at work throughout the pandemic in order to maintain operations in laboratories and workshops.

Despite the pandemic there has been a high level of activity on the training front. Many new colleagues have been employed and activity levels have been high. Most of the training activity has been digital.

The "Active at SINTEF" (Aktiv i SINTEF) campaign has been established to stimulate physical activity and more environmentally friendly travel to and from work. The campaign is only just getting under way and we are working to motivate more of our colleagues to participate.

External environment

SINTEF's sustainability report contains more detailed information about how we contribute to reducing climate and environmental impacts through research projects and technology development, as well as our efforts to reduce such impacts in our own operations.

SINTEF Property has adopted several environmental and energy-saving initiatives in our own business premises. The comprehensive renovation of SINTEF's large office building located in Forskningsveien in Oslo is a good example that has also attracted external attention.

At the start of 2022 all the institutes have generally healthy order books



Financial freedom of action

SINTEF's operating profit in 2021 was NOK 268 million, compared with NOK 158 million in 2020. The pre-tax profit was NOK 329 million, compared with NOK 174 million in 2020.

The substantial growth and healthy profit are the result of a positive market and growth in all the institutes, with healthy order books throughout the year and an increased level of invoicing. The combination of growth in the number of employees and increased level of invoicing results in more paid hours and accounts for the growth in net revenues and the healthy profit. In addition, the authorities awarded an extraordinary basic grant in view of the risk of income loss during the pandemic. This has been recorded as an income of NOK 105 million in 2021. This has been important in maintaining healthy order books and predictable earnings.

At the start of 2022 all the institutes have generally healthy order books. The Board is pleased to note the positive developments in most of SINTEF's market segments, not least as a result of efforts to generate client projects in collaboration between institutes.

At the close of 2021, SINTEF's liquidity is satisfactory. SINTEF has established a joint Group arrangement for the investment of its liquidity reserves. At the close of 2021 we have disposable reserves of NOK 434 million, compared with NOK 403 million in 2020. Our low-risk profile contributed to a positive yield of 8 per cent in 2021 (compared with 3.9 per cent in 2020 and 6.5 per cent in 2019). In 2021, SINTEF's financial portfolio was placed in a separate class in Norwegian currency. This has significantly reduced the need for currency hedging. 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. A special assessment has been made of financial risk and freedom of action involving a scenario in which the Norwegian krone is significantly weakened against the euro. Such a situation was experienced in March 2020, when the status of our future exchange contracts (in euros) challenged our credit facility. As a consequence, SINTEF extended its credit facility with the bank SpareBank 1 SMN with the aim of expanding its financial freedom of action in case of future instances of weakness in the Norwegian currency. Exchange rate development has been stable in 2021.

SINTEF's financial surplus is being invested in new research and skills development. In 2021, SINTEF invested NOK 408 million in laboratories, scientific equipment and other business assets. In 2020, the corresponding amount was NOK 106 million. The complete renovation of the office and laboratory complex at Forskningsveien 1 in Oslo and the purchase of Torgardsveien 12 explain much of the increase, but we are also seeing a general increase in investment.

SINTEF currently enjoys a robust financial position. As of 31 December 2021, SINTEF's equity amounts to NOK 3,074 million (compared with NOK 2,812 in 2020), which constitutes 55 per cent (unchanged) of its total capital. The corresponding figures

for the SINTEF Foundation are NOK 2,731 million (2,497), which constitutes 98 per cent (unchanged) of its total assets.

The annual profits of the SINTEF Foundation in 2021 were NOK 234 million. The corresponding figure for 2020 was NOK 128 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 according to the going concern principle.

Clients

In 2021, SINTEF completed 6,927 projects on behalf of a total of 3,220 large and small clients in both the private and the public sector.

SINTEF conducts ongoing client satisfaction surveys, to which about 500 clients respond. We are working on improvements in our client satisfaction survey system that will potentially increase the response rate. The average customer satisfaction score in 2021 was 4.53, measured on a scale from 1 to 5. This was at the same level as the previous year. Detailed results are made available to managers, are reported every four months throughout the SINTEF Group and are followed up as necessary.

SINTEF implements a large number of projects in collaboration with clients associated with the Research Council of Norway's industry-oriented programmes. Ever since the drop in the oil price in 2014, we have observed a trend towards businesses seeking higher levels of risk relief linked to their activities, supported by the public funding apparatus.

The Green Platform is a new restructuring initiative that was adopted by the Government in 2020 to accelerate the green transition in Norwegian industry. The scheme is a collaboration between the Research Council of Norway, Innovation Norway and the Industrial Development Corporation of Norway (SIVA), and attracted considerable interest in Norwegian industry and among public enterprises that are seeking research collaboration as a part of their own restructuring processes. Eleven projects were allocated in 2021 and SINTEF participates in nine of these in collaboration with partners from industry and the public sector.

Our participation, following competitive tendering, in the major, long-term and partly state-funded, research centres involves significant collaboration with Norwegian and overseas clients. SINTEF is currently participating in 15 Centres for Research-Based Innovation (CRIs) and eight Centres for Environment-Friendly Energy Research (CEERs). A new offshore wind power CEER, NorthWind, was opened in June 2021. The centre is coordinated by SINTEF, with five research partners and more than 40 commercial partners from Norway and abroad.

SINTEF has increased its focus on the digitalisation of its own research activities. Group management has been reinforced by a newly-created role of Chief Digital Officer, whose principal responsibility is to ensure that SINTEF can assume a leading position in the delivery of research into new digital concepts, platforms and business models.

In 2021, SINTEF intensified its efforts to engage in dialogue with top executives in major organisations. The aim here was to discuss strategic approaches at a time dominated by major transitions, and to discuss regulatory frameworks that would promote business-oriented research and research-based innovation.

In order for SINTEF to fulfil its 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 2021, SINTEF's international sales amounted to NOK 538 million, compared with NOK 472 million in 2020. This corresponds to 14 per cent (unchanged from 2020) of SINTEF's total sales. We have completed projects for clients in 60 countries, and EU projects represent 67 per cent of our international activity.

SINTEF is by far the largest Norwegian participant in the EU's Framework Programme for Research and Innovation. In connection with the Horizon 2020 programme, which ended in 2020, SINTEF received funding amounting to NOK 2.2 billion, shared among about 300 projects involving a high degree of collaboration with Norwegian industry or public agencies. In 2021, disbursements in the EU Green Deal (the final funding announcement in Horizon 2020) were particularly beneficial. Here, SINTEF participates in eight projects, with a volume amounting to 16.5 per cent of the available funding announced for the programme. SINTEF's share alone amounts to 2.1 per cent of this project funding. The Green Deal projects are of considerable importance for Norwegian competitiveness and the green transition, and will contribute to reducing emissions of greenhouse gases connected with food manufacture, developing marine digital twinning and demonstrating large-scale conversion of CO₂ emissions to value-added chemicals and materials.

SINTEF has put a significant amount of work into preparations for the current EU framework programme "*Horizon Europe*", launched at the beginning of 2021, and the return has to date been satisfactory. As at March 2022, SINTEF has already received approval for 29 projects representing revenues for SINTEF of NOK 281 million, with an overall project volume of more than NOK 2.3 billion.

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 networks and our participation in EU research collaboration projects. In November, for the fifth time, SINTEF and NTNU arranged a strategic seminar, the European Strategy Summit, with participants from the European Commission, the Norwegian authorities and industry representatives.

Research

In order to maintain its capacity for technical renewal and influence, it is essential for SINTEF to achieve an appropriate balance between scientific publication and contract-based research. The most important form of dissemination of our research results occurs when new technologies 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, research partners and the best research talent.

Our aim is to publish at least one peer-reviewed scientific publication per research scientist per year. In 2021 the rate is estimated at 0.88, compared with 0.82 in 2020 and 0.85 in 2019. The Board is satisfied with the trend, although restrictions resulting from the pandemic reduced our researchers' ability to attend conferences, with a consequent impact on publication activity. Several of the institutes have increased their management's focus on publication and developing a publication culture.

SINTEF's research scientists shall publish in recognised journals in line with expectations for open research. Through the integrity of its practice for handling research data, SINTEF contributes to societal benefits, innovation, knowledge-building and sustainability. In January 2021 work commenced to prepare a policy for handling research data that balances our clients' need for confidentiality, commercial interests and the finance providers' requirements for assessment of openness. In 2021, SINTEF entered into several agreements with publishers that include facilitation of open publishing and increased capacity for administrative support connected with publishing.

SINTEF's standing in the global research community is key to the effective exploitation of research funding in Norway. Participation in the EU's Framework Programmes is key to enhancing the quality of SINTEF's scientific output, providing access to an enormous knowledge base and enabling us to remain at 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 1.5 billion in laboratories, scientific equipment and buildings. In collaboration with its partners, SINTEF had considerable success in gaining important funding in the Research Council of Norway's INFRASTRUKTUR initiative, which was announced in December 2021. SINTEF is involved in ten of 22 infrastructure projects for which funding has been granted. In March 2021 the Minister of Research and Higher Education opened the new ZEB (Zero Emission Buildings) Laboratory in Trondheim. Here NTNU and SINTEF carry on research into new concepts for sustainable buildings, in a building that is itself a test facility. The total investment in the laboratory is NOK 125 million, of which NTNU and SINTEF have each contributed NOK 26 million.

SINTEF's strategic collaboration with NTNU, the University of Oslo and other universities is of considerable importance. The Board and management teams at SINTEF and NTNU are working actively to maintain this valuable collaboration in the years



Photo: Berre / SINTEF

ahead. In March 2021, NTNU and SINTEF entered into a new strategic joint agreement, replacing the previous agreement that had been in place since 2007.

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. The collaboration through Eurotech with our most important sister institutes in Europe is also of considerable value for SINTEF. The number of publications with international co-authors has risen to 47 per cent and continues to rise.

People

In spite of the pandemic, SINTEF has been successful during 2021 in recruiting about 270 new colleagues from 47 nations. As at 31 December 2021 SINTEF had a total of 2,146 permanent employees, an increase of 138 since a year ago. 61 per cent of the research scientists at SINTEF have a doctorate degree.

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 the Norwegian and global recruitment markets. SINTEF continues to be successful in the competition for skilled employees and to achieve high scores as an attractive potential workplace in surveys among students.

30 per cent of SINTEF's employees originate from a total of 80 countries outside Norway. The largest percentage of these come from Germany and France. This shows that SINTEF remains 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.

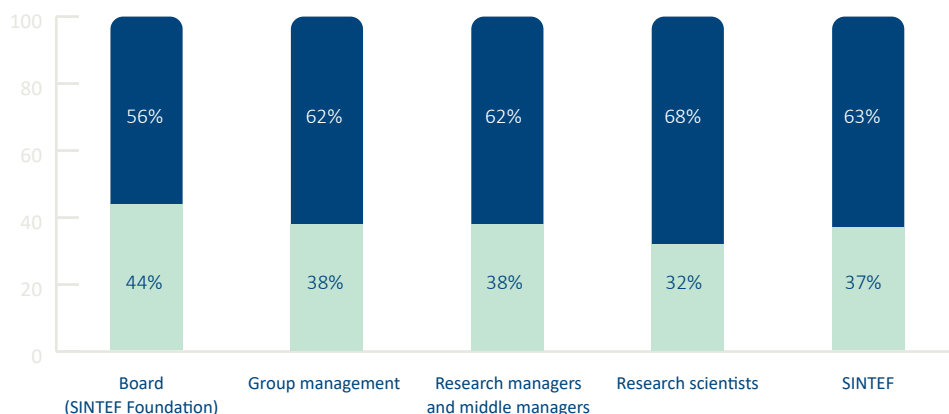
A working environment survey is carried out annually to assess our psychosocial working environment and ascertain whether employees feel that SINTEF fulfils its ambition of being an attractive, efficient and innovative organisation. Over the years, the working environment survey has demonstrated that SINTEF is a good workplace where people enjoy working and are proud of the work they do. A good deal of work has gone into identifying any challenges that need to be addressed and benefits that should be safeguarded. All parts of the organisation prepare binding action plans based on the results of the survey.

We are pleased to see that the survey carried out in January 2022 revealed stable results in spite of yet another demanding year of unusual working conditions resulting from the COVID-19 pandemic. The response rate was 93 per cent and the results show that the level of motivation and team spirit remains high. Several important issues display a positive trend, such as the perception that one's own work contributes to sustainable development and that the results of the working environment survey are followed up well.

We also observe a positive trend in our employees' assessment of their managers. This is true at all levels, although Research Managers in particular score very high here. This shows that SINTEF's managers have maintained high levels of dedication and

Gender equality

👩 % of women | 👨 % of men



effort during a very stressful period. SINTEF emerges as a robust organisation with employees who are able to adapt to change very effectively.

At the same time, the survey has demonstrated that pressure of work and stress continue to present challenges, and a negative trend has emerged during 2021. This will be a key area for improvement for SINTEF in the future.

Sickness absence in the whole of 2021 was 3.0 per cent. Work-related sickness absence was recorded at 0.2 per cent. Sickness absence is monitored systematically by all institutes at SINTEF.

In 2021, SINTEF experienced an overall employee turnover of 7.3 per cent. The figure for scientific personnel was 6.6 per cent. Employees with work experience at SINTEF represent an important contribution to skills development in both the private and public sectors.

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 research scientists and managers. SINTEF's CEO is female, and the proportion of women in Group management positions is 38 per cent. When vacancies arise, SINTEF aims actively both to recruit women and to develop female managers from its own ranks. However, during recruitment, structural imbalances within the educational establishments in various technical fields will tend to be reflected in SINTEF's own employee gender balance.

SINTEF has adopted a Plan for Gender Balance in accordance with the requirements of the EU and the Research Council of Norway. This plan will form the foundation of future development of gender balance and equal opportunity in the organisation.

The table above shows the percentage gender distribution at SINTEF as of 31 December 2021.

SINTEF subscribes to the following agreements: NHO/Tekna, NHO/NITO, NHO/Forskerforbundet, NHO-Abelia/LO-NTL, NHO-Abelia/Parat, NHO/FLT and NHO/Negotia. We are working

systematically to ensure that undesirable salary differentials do not arise between men and women.

85 per cent of our work force are full-time employees. 15 per cent work part-time, almost all at their own request. 15 per cent of women and 14 per cent of men are employed part-time. SINTEF makes very little use of temporary employment contracts. At year end, 2.6 per cent of employees were in temporary positions, 26 of whom were women and 26 men.

SINTEF's working environment survey reveals no significant differences between how men and women 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 Norwegian lessons 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 goes to great lengths to meet the needs of employees who have, or who develop, disabilities.

SINTEF's work connected with the activity and reporting obligation is described in detail at www.sintef.no/arp

Ethics

SINTEF operates with a clear ethical platform, set out in our "Ethical Compass" document. This describes the principal areas of our ethics work: research ethics, business ethics and relational ethics. SINTEF's research ethics are based on the guidelines set out by the Norwegian research ethics committees, on the principles promoted by the European Group on Ethics in Science and New Technologies, on international conventions and on Norwegian law. SINTEF's policy promotes openness in research and balances that openness against the clients' need to protect their own rights.

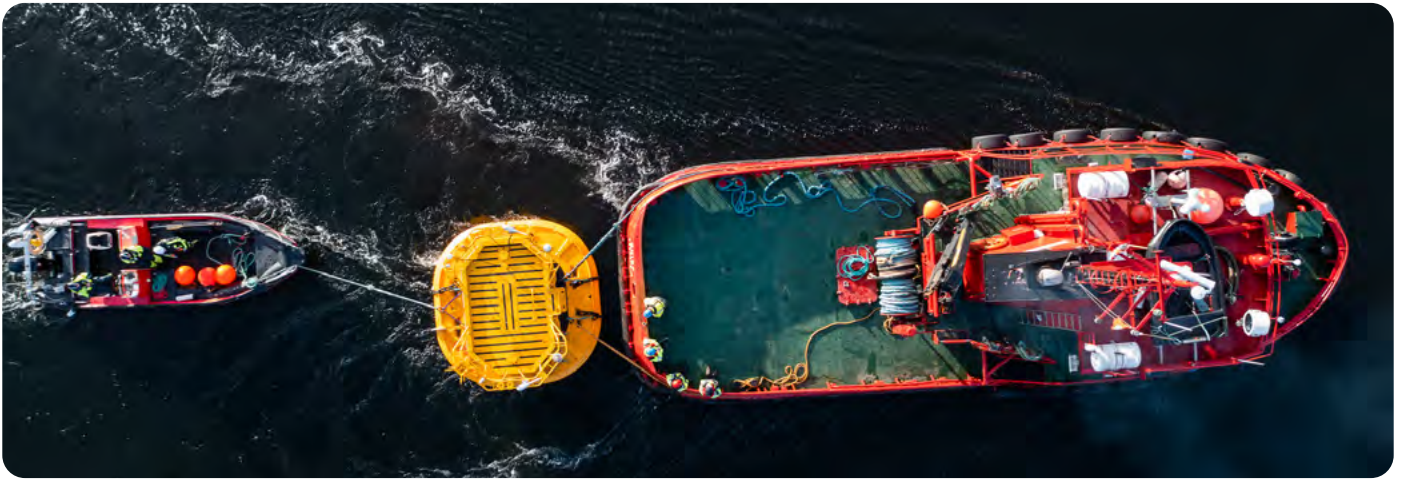


Photo: Øyvind Nordahl Næss

Suppliers and partners involved in our activities are obliged to submit written acceptance of our code of ethics. SINTEF is a member of Transparency International and the UN Global Compact and adheres to the guidelines and advice issued by these organisations to combat domestic and international corruption.

SINTEF employs its own Ethics Representative who acts as an adviser and consultant for the entire organisation. All employees receive information about, and training, in sound ethical assessment of potential projects. This continues during ongoing research work. The right of individual employees to opt out of certain activities is respected. SINTEF has its own integrity committee to handle cases of scientific misconduct or breaches of research ethics standards.

In November, SINTEF hosted the Norwegian National Committee for Research Ethics in Science and Technology. The theme of the meeting was *“Openness in Research and Innovation”*. This gave us an opportunity to review how SINTEF works with ethics, with particular attention to the theme of research ethics and project-based research.

Corporate governance, including risk management and internal control

The SINTEF Foundation is the parent company of the SINTEF Group. 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. The SINTEF Council acts in a supervisory role, ensuring that SINTEF’s objectives are upheld in accordance with the organisation’s Articles of Association. The Board of the SINTEF Foundation also acts as Board of the SINTEF Group and the Board of SINTEF AS. SINTEF’s activities are governed by its Articles of Association, shareholders’ agreements, corporate agreements and instructions issued by the respective Boards. Principles for the Group’s administration and co-ordination with related activities have been 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 organisations, and three are SINTEF employees, elected by their colleagues. The Board has responsibility and authority in all matters which

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. In 2021, the Board held a total of seven Board meetings. Only one of these, held in November, was a face-to-face meeting. In addition, a physical strategy meeting with Group Management was held in September.

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 Norwegian Acts relating to Foundations and Limited Liability Companies. The CEO has the 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. In November 2019, SINTEF was re-certified for a further three years. An ordinary annual audit was carried out in 2021 and a new recertification is due in 2022.

SINTEF has established a system of four-monthly financial risk reporting. The organisation’s risk environment is discussed by the management and Boards 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 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 currently acts as SINTEF’s internal auditor and in 2021 has conducted three internal audits focusing on contract and IP management, staff processes and cybersecurity. Every year, an internal audit report is prepared for Group management and the Board, setting out the status of implementation of previous recommendations.

In 2021, SINTEF has worked specifically to ensure that all parts of the company are operated in compliance with the 2018



Photo: Smidesang & Lyng / SINTEF

Personal Data Act and the EU's new General Data Protection Regulations (GDPR). Deloitte carried out an internal audit in 2019 and a follow-up audit in 2020 to assess the implementation of procedures and policy relating to personal data protection. Non-conformances revealed in these audits were closed in 2021. Annual personal data protection reports are created, providing action plans to Group Management and the Board.

As a follow-up of the internal audit of security and contingency strategies carried out in 2018, a high-level security risk analysis for SINTEF was carried out in 2020. The Board and Management have carried out work in this connection throughout 2021. Safetec, a leading company in the field of risk management, has provided assistance with both the internal audit and the security risk analysis processes. A high-level assessment of our values, threats and vulnerabilities has provided us with an overview of current status, as well as a basis for the establishment of overall terms of reference and goals in connection with appropriate and targeted measures.

In its evaluation of threats to the academic sector, the Norwegian Police Security Service (PST) has identified academia and research as increasingly attractive targets for foreign intelligence agencies. This means that SINTEF's assets such as information, knowledge, technology and laboratories will be increasingly attractive to those presenting potential threats. Intelligence activities such as digital espionage, recruitment and infiltration are considered in the analysis to represent the highest risk, and should they occur, have the ability to compromise SINTEF's integrity and reputation. According to Safetec's analysis, SINTEF operates with satisfactory levels of basic security, including effective barriers such as access control and administration, as well as running awareness campaigns among its employees. The Board carried out a major review of this topic in March 2021, and in May established an audit and security committee consisting of

three members of the Board. The first meeting of the committee was held in October and three meetings are scheduled each year to reinforce the Board's work, specifically on protective measures and information security.

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

The war in Ukraine is a humanitarian catastrophe and a geopolitical situation that has major consequences for the security, stability and economic development of Europe and the world. This gives grounds for serious concern and uncertainty that may impact future prospects in many ways. In consultation with the Norwegian authorities and the Research Council of Norway, SINTEF has reviewed its project portfolio and suspended active projects involving Russia. We also place considerable emphasis on taking care of the interests of any employees who may be affected by acts of war. The Board has decided to contribute funds to the Norwegian Refugee Council's efforts to provide humanitarian support to the most vulnerable victims of the conflict.

SINTEF's order books are healthy and we are recording high levels of client satisfaction.

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

In 2021, we have seen a considerable rise in interest in most sectors for innovation and new business models. Much is being made of the need to develop and exploit the opportunities offered by digital technology and to succeed in achieving a radical restructuring of global energy and food supply systems, logistics and patterns of consumption. Such restructuring is essential if we are to mitigate global climate change and reduce losses in biodiversity. Similarly, focus is being directed towards the concept of secure and sustainable communities in the context of demographic change, the circular economy, user-adapted services and sustainable solutions for health and mobility. This offers SINTEF and our clients significant opportunities to contribute with research and solutions that will promote sustainable, digital growth and transition.

The 2021 Norwegian government white paper on Future Perspectives highlights not only the need for eco-friendly energy systems, but also expectations of significantly lower levels of future activity in the oil and gas sector. This will demand a major restructuring of Norwegian business, and not least in the supply sector. At the same time, we also see demands for significant restructuring of the public sector and of working life in general, in order to address the increasing proportion of elderly people in the population. SINTEF's strategy of focusing on projects promoting competitiveness and community solutions in specific areas appears to be highly robust in this context.

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 expertise in these fields and is uniquely equipped to play an active role in a restructuring process.

Green value chains are assigned high priority in SINTEF's strategy and its use of basic grant funding. SINTEF is closely involved with the future development of a number of renewable energy sources, batteries, electrolysis and hydrogen, as well as the capture and storage of CO₂ (CCS) from processes in which power from renewable sources is not a realistic option. In 2022, the government launched work on an industrial green campaign aimed at establishing major projects in the fields of hydrogen technology, offshore wind generation, CO₂ handling, battery technology and

the forestry and lumber sectors. These are fields in which SINTEF possesses cutting-edge expertise and can contribute considerably to achieving Norway's ambitions.

SINTEF is working on technology for replacing fossil with renewable raw materials in materials development, in circular economy concepts, and in climate change concepts for the transport and construction sectors. At the same time we are well positioned to develop both effective BioCCS systems and other climate positive concepts, all of which can be enhanced through SINTEF's Global Climate Fund.

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. SINTEF is helping to ensure that its clients can boost their profitability by means of efficient processes and new technologies that can create new products and growth in new markets, as well as improve public services.

SINTEF assigns high priority to the servicing of start-up businesses and small and medium-sized enterprises (SMEs). In recent years, SINTEF has established a presence in many parts of Norway and has entered into closer working relations with a variety of competent industrial owners and clusters. This offers us new opportunities linked to regional R&D activities, and better knowledge sharing with businesses across the country. Our most recent regional venture is in Kongsberg and will contribute to enhancing collaboration with the Kongsberg Cluster.

Norwegian industry is greatly in need of restructuring, but private sector businesses in Norway invest less in research and innovation per GNP than such businesses do in many other OECD countries. This is why increasing investment in research, especially in trade and industry, is important for society. To increase industry's investment in R&D, our research institutes play a particularly important role as "*industry's research department*". Although the institutes play an important role in the Norwegian research and innovation system, the potential to contribute to developing future growth sectors and value chains is limited by the very low level of basic funding of Norwegian research institutes. This is also highlighted by a new OECD study released in 2022, which recommends that the basic funding of Norwegian research institutes be increased.

Participation in the EU's research arena is key to contributing to the green and digital transition. The RES EU funding scheme has contributed significantly to the impressive Norwegian performance in EU research in recent years and is crucial in enabling



Photo: Lars Andreas Berg / SINTEF

Norwegian research institutes to achieve their important function as the sector that most effectively stimulates trade and industry. The Board is concerned that funding for the scheme may be reduced in the 2023 national budget. If this happens, opportunities to participate in EU projects will be reduced and Norwegian competitiveness will be impaired. Considerable effort is therefore being directed toward ensuring acceptable framework conditions in the future.

Similarly, a good deal of work is being done to contribute to the work of the public authorities to ensure compliance with the export control regulations in such a way as to enable SINTEF, and Norway, as far as possible to continue to be an attractive place for skilled international employees to work.

In spite of the aforementioned risk factors, the opinion of the Board is that SINTEF has enhanced its outlook in the course of 2021 and that developments in society demonstrate that the SINTEF Foundation and the entire SINTEF organisation have an important part to play.

The Board would like to thank all of SINTEF's employees and research partners for their efforts and co-operation in 2021. We also wish to thank all the co-owners of our subsidiaries, as well as all 60 representatives of the business community and community leaders who participate in SINTEF's many Boards and councils.



From left: Siri Forsmo, Kristin Misund, Bård Myhre, Ole Swang, Øyvind Gregersen, Walter Qvam, Hanne Refsholt, Arne Birkeland, Maria Gellein. Photo: Ingrid Lundestad

Trondheim, 23 March 2022

Walter Qvam
Board chair

Siri Forsmo

Øyvind Gregersen

Hanne Refsholt

Maria Bratsberg Gellein

Arne Birkeland

Ole Swang

Kristin Misund

Bård Myhre

Alexandra Bech Gjør
CEO

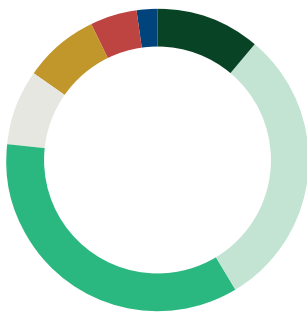
Financial results 2021



Key financial figures 2021

Revenue sources

(% of gross revenue)



● Basic grant	11%
● The Research Council of Norway	30%
● Norwegian business and industry	35%
● Norwegian public clients	8%
● EU	8%
● International clients	5%
● Other	2%

Employees

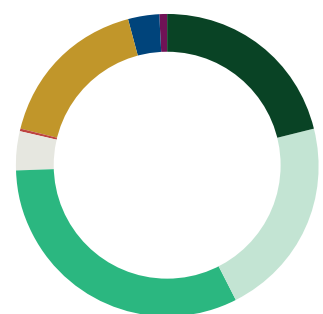


● Administrative	288
● Technical personnel	88
● Engineers	167
● Research scientists	1 623 ¹

¹ 944 of these hold doctoral degrees

Publications

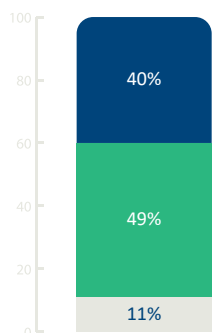
(incl. dissemination)



● Scientific articles in periodicals, series or anthologies	1290
● Scientific presentations/lectures and posters	1310
● Reports	1949
● Popular scientific articles and presentations	256
● Technical manuals, textbooks, etc.	27
● Media contributions (interviews, feature articles, presentations)	1033
● Blogs and information materials	193
● Multimedia products (podcasts/videos)	50

Distribution of revenues

Acc. to project portfolio (%)



● Basic grant	11%
● Collaborative research	49%
● Contract research	40%

Net operating income | Net operating margin

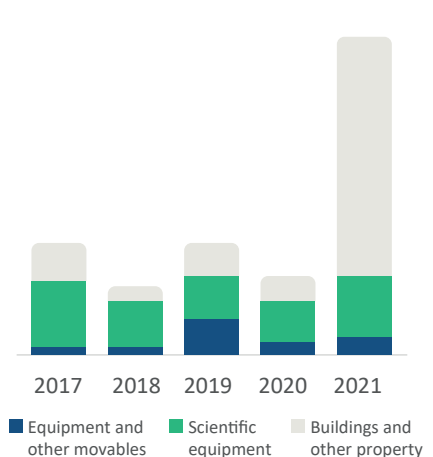
(MNOK) (%)



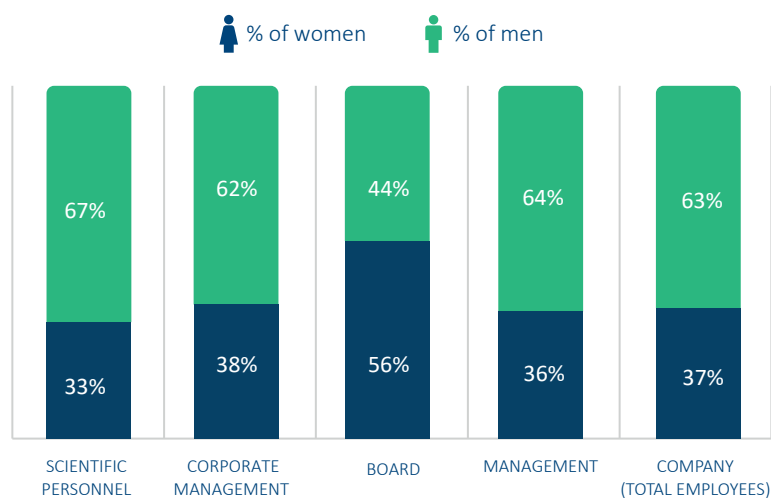
Investments

Scientific equipment and buildings
(% of net operating income)

4,5% 2,6% 4,4% 3,1% 12,6%



GENDER EQUALITY



Key financial figures MNOK

	2017	2018	2019	2020	2021
INCOME AND EXPENSES					
Gross revenues	3 239	3 258	3 483	3 399	3 744
Net operating income	2 696	2 770	2 864	2 974	3 248
Operating profit	206	185	153	158	268
Financial income	51	39	50	62	71
Financial expenses	22	22	8	46	11
Profit before taxes	234	201	195	174	329
Net income	169	143	161	145	262
BALANCE SHEET					
Non-current assets	1 243	1 201	1 250	1 215	1 457
Current assets	2 897	3 052	3 358	3 912	4 178
Total assets	4 140	4 254	4 608	5 127	5 635
Equity	2 348	2 514	2 667	2 812	3 074
Non-current liabilities	52	47	44	34	95
Current liabilities	1 740	1 693	1 897	2 282	2 466
Total equity and liabilities	4 140	4 254	4 608	5 127	5 635
PROFITABILITY					
Operating margin (%)	7,6 %	6,7 %	5,4 %	5,3 %	8,2 %
Return on assets (%)	6,6 %	5,3 %	4,6 %	4,5 %	6,3 %
Return on equity (%)	10,3 %	8,3 %	7,5 %	6,4 %	11,2 %
LIQUIDITY					
Net cash flow from operating activities	549	356	466	653	448
Current ratio	1,7	1,8	1,8	1,7	1,7
SOLVENCY					
Equity ratio (%)	57 %	59 %	58 %	55 %	55 %
Working capital	1 157	1 359	1 461	1 631	1 712

Financial statement 2021

Income statement

Amounts in NOK 1000

THE SINTEF FOUNDATION			SINTEF		
2020	2021	NOTE	OPERATING INCOME AND EXPENSES	2021	2020
0	0		Revenues from external projects	3 227 709	2 923 019
0	0		Basic grant funding from the Research Council of Norway	429 288	370 598
0	0		Profit allocation	0	5 746
305 073	313 370		Other operating income	86 849	99 597
305 073	313 370	1,2	Gross revenues	3 743 846	3 398 959
0	0		Direct project expenses	495 754	425 049
305 073	313 370		Net operating income	3 248 092	2 973 911
83 388	77 593	3	Employee benefit expenses	2 233 853	2 066 193
30 944	31 390	4,5	Depreciation and amortisation expenses	132 746	127 888
0	0	4,5	Impairment losses	0	4 375
179 475	182 827	2,3,5	Other operating expenses	613 654	617 655
293 807	291 810		Operating expenses	2 980 253	2 816 112
11 266	21 561		Operating profit	267 839	157 799
FINANCIAL INCOME AND EXPENSES					
99 882	194 980	7	Income from subsidiaries and associated companies	6 412	-14 570
2 963	10 420		Other interest income	25 307	21 253
7 744	6 968	2	Interest received from group companies	0	0
8 100	0		Other financial income	7 494	26 186
13 121	13 285	8	Changes in fair value of financial current assets	32 053	29 302
-42	-2 473		Other interest expenses	-3 381	-1 149
-12 758	-1 154		Other financial expenses	-7 223	-44 823
119 011	222 026		Net financial income	60 661	16 198
130 277	243 587		Profit before taxes	328 500	173 997
2 689	9 527	14	Income taxes	66 155	29 472
127 589	234 059		NET INCOME	262 345	144 526
			Attributable to minority interests	28 821	17 220
			Attributable to controlling interests	233 523	127 306
ALLOCATIONS					
106 856	190 102	11	Transferred to reserve for valuation variances		
20 733	43 957	11	Allocated to other equity		
127 589	234 059		Total allocations		

Balance sheet

Amounts in NOK 1000

THE SINTEF FOUNDATION				SINTEF	
2020	2021	NOTE	ASSETS	2021	2020
NON-CURRENT ASSETS					
INTANGIBLE ASSETS					
0	0		Development	2 550	1 681
0	0	4	Concessions, patents, licences, trademarks etc.	28 935	43 403
99 880	92 637	14	Deferred tax asset	206 179	245 902
0	0	4	Goodwill/(-badwill)	10 158	-9 972
99 880	92 637		Total intangible assets	247 822	281 015
TANGIBLE ASSETS					
333 186	307 650	15	Land, buildings and other property	648 575	514 843
1 105	95 723		Buildings under construction	174 482	58 111
0	0		Scientific equipment	190 289	187 925
2 798	2 180	15	Equipment and other movables	32 232	28 877
337 089	405 553	5	Total tangible assets	1 045 577	789 756
FINANCIAL ASSETS					
1 202 856	1 481 988	7	Investments in subsidiaries	0	0
204 722	234 671	2, 10	Loans to group companies	0	0
0	0	7	Investments in associated companies and joint ventures	110 555	95 453
0	0	10	Loans to associated companies and joint ventures	0	490
157	157	8	Investments in shares	12 491	6 394
0	0	13	Pension plan assets	3 415	3 536
35 824	34 144	10	Other receivables	36 882	38 621
1 443 558	1 750 960		Total financial assets	163 342	144 495
1 880 526	2 249 150		Total non-current assets	1 456 741	1 215 265
CURRENT ASSETS					
INVENTORIES					
0	0		Inventories of finished goods	15 040	14 551
0	0		Work in progress	537 926	498 205
0	0	6	Total inventories	552 966	512 756
RECEIVABLES					
3 342	3 084		Account receivables	548 639	477 648
78 942	32 990	2	Other receivables	0	0
10 316	15 717		Group companies receivables	76 181	68 894
92 601	51 791		Total receivables	624 821	546 543
INVESTMENTS					
167 037	179 886	8	Market-based bonds and other securities	434 077	403 072
0	0	8	Other financial instruments	18 683	16 184
167 037	179 886		Total investments	452 761	419 256
401 835	317 003	9,15	Cash and cash equivalents	2 547 480	2 433 676
661 472	548 680		Total current assets	4 178 027	3 912 230
2 541 998	2 797 830		TOTAL ASSETS	5 634 769	5 127 495

Balance sheet at 31.12

Amounts in NOK 1000

THE SINTEF FOUNDATION				SINTEF	
2020	2021	NOTE	EQUITY AND LIABILITIES	2021	2020
EQUITY					
PAID-IN EQUITY					
71 350	71 350		Foundation's equity	71 350	71 350
71 350	71 350		Total paid-in equity	71 350	71 350
RETAINED EARNINGS					
1 036 414	1 226 516		Reserves for valuation variances	0	0
1 388 888	1 432 846		Other equity	2 658 242	2 425 409
2 425 302	2 659 361		Total retained earnings	2 658 242	2 425 409
			Minority interests	344 384	314 873
2 496 652	2 730 711	11	Total equity	3 073 976	2 811 632
LIABILITIES					
PROVISIONS					
0	0	13,15	Pension liabilities	24 781	25 949
0	0		Other provisions	7 352	7 595
0	0		Total provisions	32 133	33 544
OTHER NON-CURRENT LIABILITIES					
0	0	10,15	Liabilities to financial institutions	62 833	792
0	0		Total other non-current liabilities	62 833	792
CURRENT LIABILITIES					
0	0	15	Liabilities to financial institutions	0	773
19 176	28 941		Account payables	224 499	195 997
350	2 290	14	Tax payable	50 885	32 162
4 692	4 106		Public duties payable	220 725	208 541
0	0		Advance payments from clients	1 032 331	970 944
2 784	13 588	2	Liabilities to Group companies	0	0
18 344	18 194	12	Other current liabilities	937 387	873 110
45 347	67 118		Total current liabilities	2 465 827	2 281 529
45 347	67 118		Total liabilities	2 560 793	2 315 864
2 541 998	2 797 830		TOTAL EQUITY AND LIABILITIES	5 634 769	5 127 495

Statement of cash flows

Amounts in NOK 1000

THE SINTEF FOUNDATION				SINTEF	
2020	2021	NOTE	CASH FLOW	2021	2020
CASH FLOW FROM OPERATING ACTIVITIES					
130 277	243 587		Profit before taxes	328 500	173 997
-99 882	-194 980	7	Net income from subsidiaries and associated companies	-6 412	14 570
-300	-345	14	Income taxes paid	-32 162	-41 040
30 944	31 390	4,5	Depreciation and amortisation expenses	132 746	127 890
0	0	5	Impairment losses	0	4 430
0	0	5	Reversal tangible assets	9 488	0
0	0	13	Pension expenses	-1 047	-5 364
-8 093	0		Net-gains/losses on sale of assets	82	-24 836
-12 612	-12 849	8	Net change in fair value of financial assets	-31 005	-32 574
0	0	6	Changes in inventories of finished goods	-489	-235
-1 067	1 067	6	Changes in work in progress	-39 721	36 532
-151	258		Changes in account receivables and advance payments from clients	-9 604	262 589
-14 972	9 764		Changes in account payables	28 502	-13 693
-3 277	56 756	2	Changes in receivables and payables to Group companies	0	0
-6 343	-7 204		Net changes in other accruals	68 930	150 715
14 524	127 443		Net cash flow from operating activities	447 808	652 981
CASH FLOW FROM INVESTING ACTIVITIES					
0	0		Proceeds from sale of tangible assets	3 059	5 701
-15 015	-99 854		Purchases of tangible assets	-363 419	-99 296
0	0		Purchases of intangible assets	-19 773	-505
5 536	10 050		Proceeds from loan to Group companies	0	0
0	-40 000		Payments on loans to Group companies	0	0
0	0		Proceeds from sale of financial assets	198	0
-4 814	-84 152		Purchases of financial assets	-17 566	-7 617
-14 293	-213 955		Net cash flow from investment activities	-397 501	-101 717
CASH FLOW FROM FINANCING ACTIVITIES					
0	0		Proceeds from long-term debt	62 450	0
0	0		Payments on long-term debt	-409	-378
0	0		Net change in overdraft facility	-773	-3 961
1 434	1 680		Proceeds from long-term receivables	2 229	2 697
1 434	1 680		Net cash flow from financing activities	63 497	-1 642
1 665	-84 833		Net change in cash and cash equivalents	113 804	549 622
0	0		Cashflow from purchase of enterprise	0	4 755
400 170	401 835		Cash and cash equivalents as of 1.1	2 433 676	1 879 299
401 835	317 003		Cash and cash equivalents as of 31.12	2 547 480	2 433 676

SINTEF Community

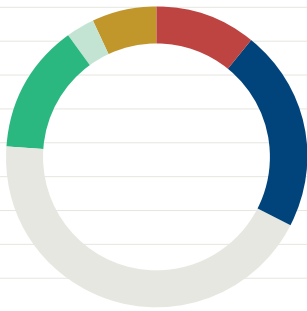


Photo: Berre / SINTEF

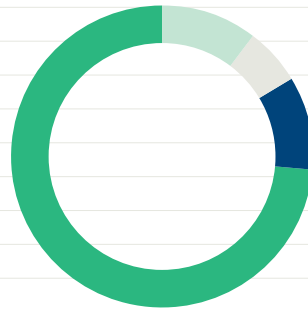
SINTEF Community is a research institute dedicated to the sustainable development of buildings, infrastructure and mobility. We generate value for both our clients and wider society by means of research and development, research-based expert

consultancy, certification and knowledge dissemination. We offer specialist expertise in the fields of architecture, building and construction, water, transport and social economics. We develop future solutions for a sustainable society.

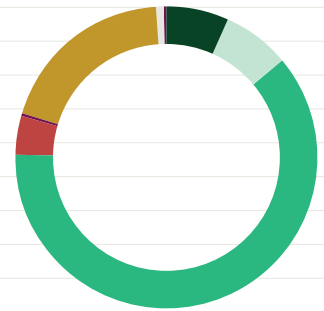
Revenue sources (% of gross revenue)



Employees



Publications (incl. dissemination)



- Basic grant 11 %
- The Research Council of Norway 22 %
- Norwegian business and industry 44 %
- Norwegian public clients 14 %
- EU 3 %
- International clients 7 %

- Administrative 29
- Technical personnel 17
- Engineers 28
- Scientists 206¹

¹ 88 of these hold doctoral degrees

- Scientific articles in periodicals, series or anthologies 131
- Scientific presentations/lectures and posters 145
- Reports 1203
- Popular scientific articles and presentations 80
- Technical manuals, textbooks, etc. 3
- Media contributions (interviews, feature articles, presentations) 378
- Blogs and information materials 16
- Multimedia products (podcasts/videos) 3

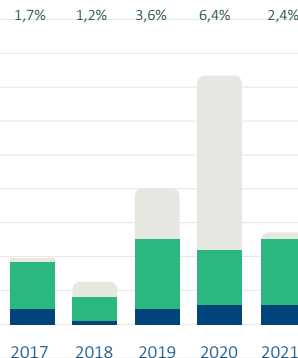
Net operating income (MNOK)

Operating margin (%)



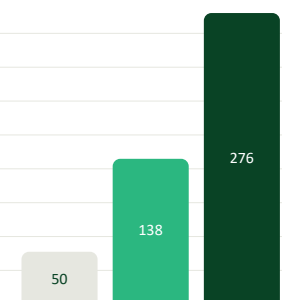
Investments

Scientific equipment and buildings (% of net operating income)



Distribution of revenues

(MNOK)



- Buildings and other property
- Scientific equipment
- Equipment and other movables

- Basic grant
- Collaborative research
- Contract research

SINTEF Industry

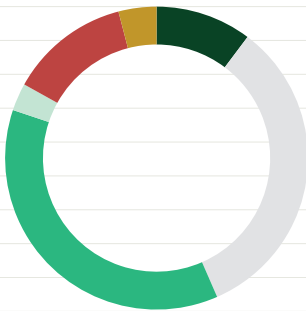


Photo: Smidesang & Lyng / SINTEF

SINTEF Industry is a contract-based research institute delivering research-based solutions and services that generate wealth for its clients both in Norway and overseas. Our multidisciplinary knowledge base and advanced laboratories enable us to

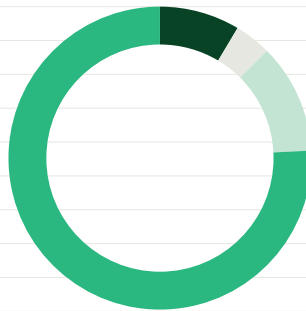
develop, in close collaboration with our clients and partners, technology and cross-disciplinary solutions within a wide range of technical and market segments

Revenue sources
(% of gross revenue)



● Basic grant	10 %
● The Research Council of Norway	33 %
● Norwegian business and industry	37 %
● Norwegian public clients	3 %
● EU	13 %
● International clients	4 %

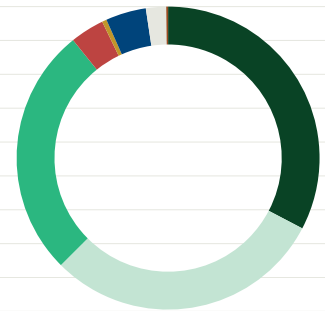
Employees



● Administrative	46
● Technical personnel	21
● Engineers	63
● Scientists	407 ¹

¹ 298 of these hold doctoral degrees

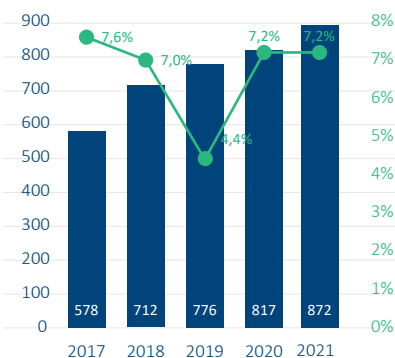
Publications
(incl. dissemination)



● Scientific articles in periodicals, series or anthologies	333
● Scientific presentations/lectures and posters	304
● Reports	272
● Popular scientific articles and presentations	37
● Technical manuals, textbooks, etc.	5
● Media contributions (interviews, feature articles, presentations)	44
● Blogs and information materials	22
● Multimedia products (podcasts/videos)	2

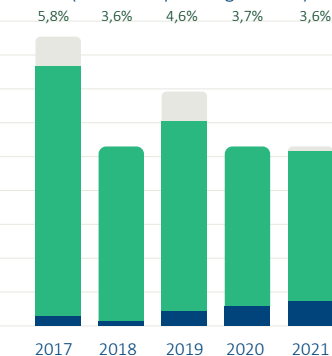
Net operating income (MNOK)

Netto driftsmargin (%)



Investments

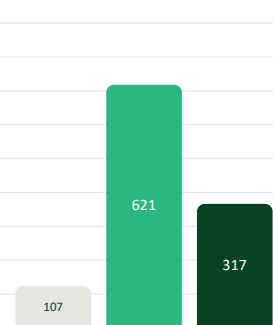
Scientific equipment and buildings
(% of net operating income)



● Buildings and other property
● Scientific equipment
● Equipment and other movables

Distribution of revenues

(MNOK)



● Basic grant
● Collaborative research
● Contract research

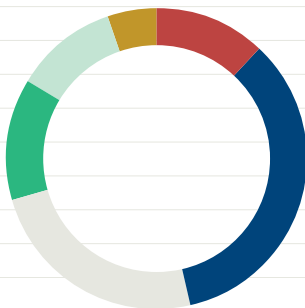
SINTEF Digital

Photo: Lars Andreas Berg / SINTEF

SINTEF Digital carries out research and innovation in the fields of digital technology and the technology-oriented social sciences. Our multidisciplinary expertise is applied across all sectors,

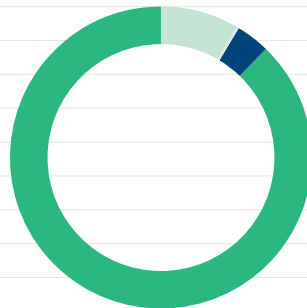
and helps our clients to address and exploit the opportunities inherent in digitalisation and the digital transformation.

Revenue sources (% of gross revenue)



Basic grant	12 %
The Research Council of Norway	34 %
Norwegian business and industry	24 %
Norwegian public clients	13 %
EU	11 %
International clients	5 %

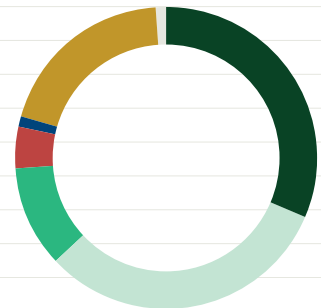
Employees



Administrative	39
Technical personnel	1
Engineers	17
Research scientists	402 ¹

¹ 237 of these hold doctoral degrees

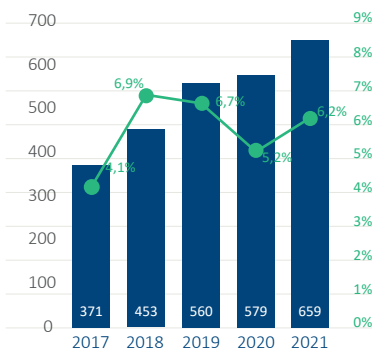
Publications (incl. dissemination)



Scientific articles in periodicals, series or anthologies	377
Vitenskapelig monografi	2
Scientific presentations/lectures and posters	379
Reports	130
Popular scientific articles and presentations	54
Technical manuals, textbooks, etc.	13
Media contributions (interviews, feature articles, presentations)	234
Blogs and information materials	12

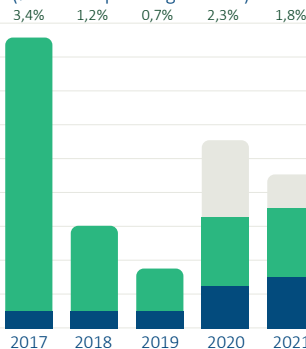
Net operating income (MNOK)

Operating margin (%)



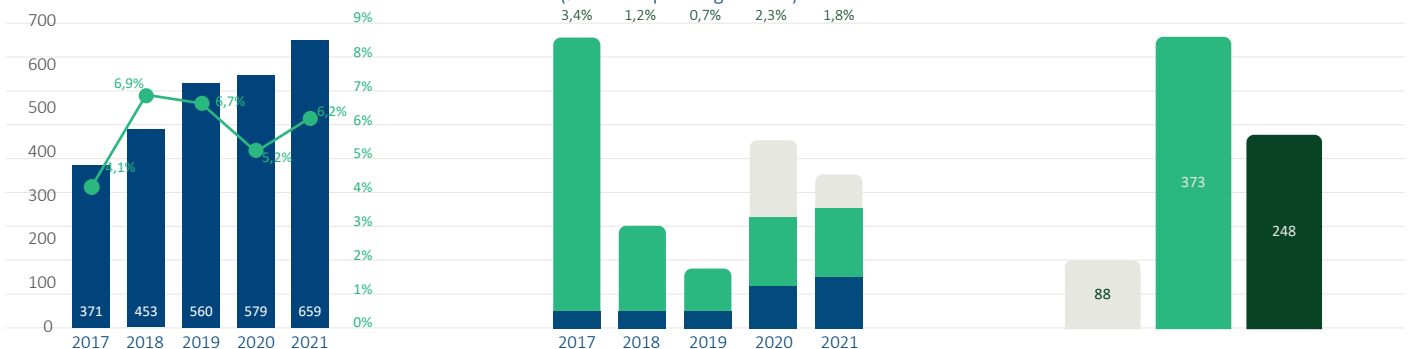
Investments

Scientific equipment and buildings (% of net operating income)



Distribution of revenues

(MNOK)



- Buildings and other property
- Scientific equipment
- Equipment and other movables
- Basic grant
- Collaborative research
- Contract research

SINTEF Ocean AS

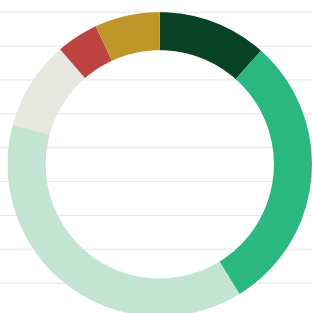


Photo: Øyvind Nordahl Naess

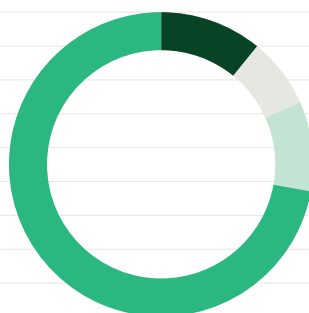
SINTEF Ocean carries on research and innovation linked to ocean space on behalf of Norwegian and international industrial clients in the maritime, offshore petroleum, fishing and aquaculture sectors. The institute also has one of the world's leading research groups in the field of marine environmental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

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

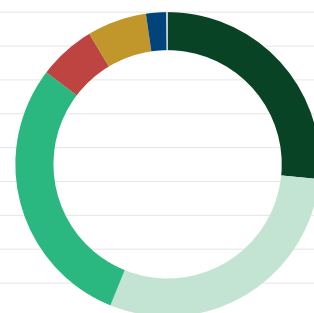
Revenue sources
(% of gross revenue)



Employees



Publications
(incl. dissemination)



● Basic grant	12 %
● The Research Council of Norway	30 %
● Norwegian business and industry	38 %
● Norwegian public clients	9 %
● EU	4 %
● International clients	7 %

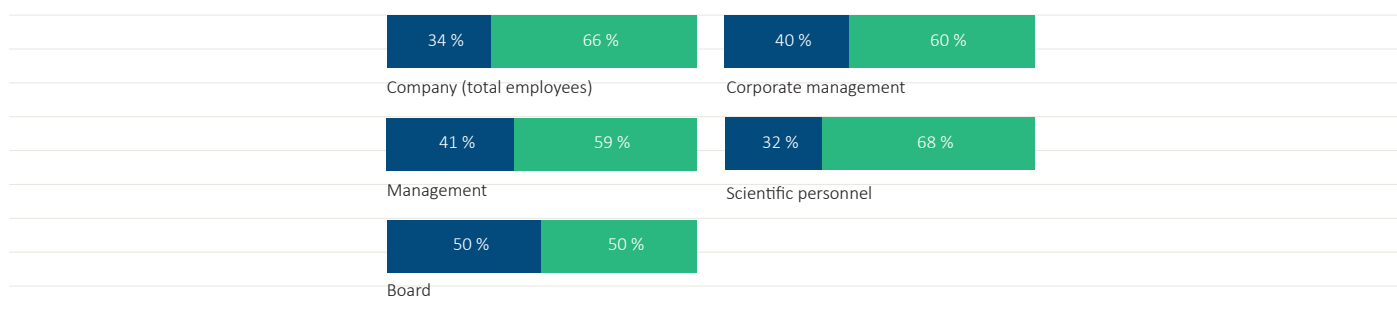
● Administrative	41
● Technical personnel	28
● Engineers	36
● Research scientists	272 ¹

¹ 151 of these hold doctoral degrees

● Scientific articles in periodicals, series or anthologies	210
● Scientific presentations/lectures and posters	234
● Reports	231
● Popular scientific articles and presentations	48
● Technical manuals, textbooks, etc.	0
● Media contributions (interviews, feature articles, presentations)	50
● Blogs and information materials	17
● Multimedia products (podcasts/videos)	1

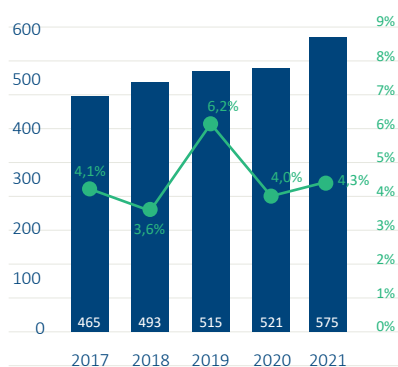
Gender equality

 %-of women |  %-of men



Net operating income (MNOK)

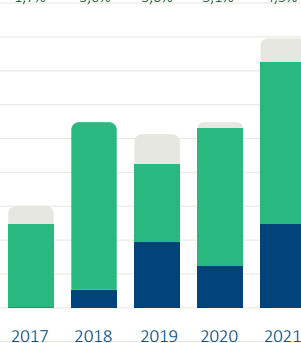
Operating margin (%)



Investments

Scientific equipment and buildings
(% of net operating income)

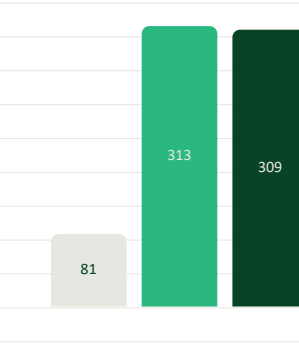
1,7% 3,0% 3,0% 3,1% 4,5%



- Buildings and other property
- Scientific equipment
- Equipment and other movables

Distribution of revenues

(MNOK)



- Basic grant
- Collaborative research
- Contract research

Key financial figures

MNOK

INCOME AND EXPENSES	2017	2018	2019	2020	2021
Gross revenues	602	629	670	633	704
Net operating income	465	493	515	521	575
Operating profit	19	18	32	21	25
Net income	18	19	34	29	30
BALANCE SHEET					
Non-current assets	177	185	152	152	161
Current assets	581	629	709	775	804
Total assets	758	814	860	927	966
Equity	385	404	438	467	497
Liabilities	373	410	422	460	469
Total equity and liabilities	758	814	860	927	966
PROFITABILITY					
Operating margin (%)	4,1 %	3,6 %	6,2 %	4,0 %	4,4 %
Return on assets (%)	5,5 %	3,8 %	5,4 %	9,8 %	4,3 %
Return on equity (%)	8,4 %	6,6 %	9,2 %	7,3 %	7,5 %
LIQUIDITY					
Net cash flow from operating activities	118	40	109	80	32
Current ratio	1,6	1,6	1,7	1,7	1,8
SOLVENCY					
Equity ratio (%)	51 %	50 %	51 %	50 %	51 %
Working capital	226	237	304	328	348

SINTEF Energy Research



Photo: Geir Mogen / SINTEF

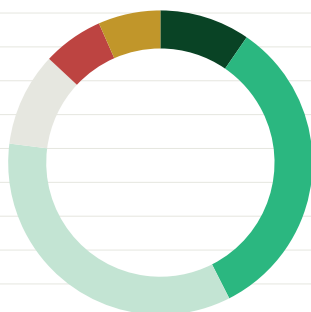
SINTEF Energy Research’s objective is to shape the energy systems of the future. This we do from three main perspectives:

- Norway: supply security and competitiveness
- Europe: innovation that contributes towards achieving energy and climate change targets
- Global: sustainable energy systems

SINTEF Energy Research’s strategic areas of focus include energy efficiency, CCS, hydropower, offshore wind power, bioenergy, transmission, smart grids, offshore energy systems, eco-friendly transport and hydrogen. Research in our areas of focus is currently contributing towards achieving tomorrow’s sustainable energy systems.

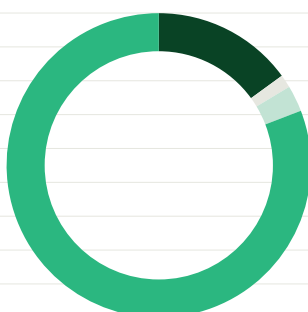
Revenue sources

(% of gross revenue)



● Basic grant	10 %
● The Research Council of Norway	33 %
● Norwegian business and industry	34 %
● Norwegian public clients	10 %
● EU	6 %
● International clients	7 %

Employees

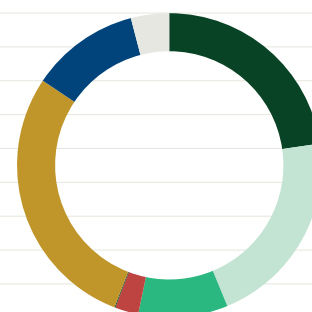


● Administrative	43
● Technical personnel	4
● Engineers	8
● Research scientists	232 ¹

¹ 166 of these hold doctoral degrees

Publications

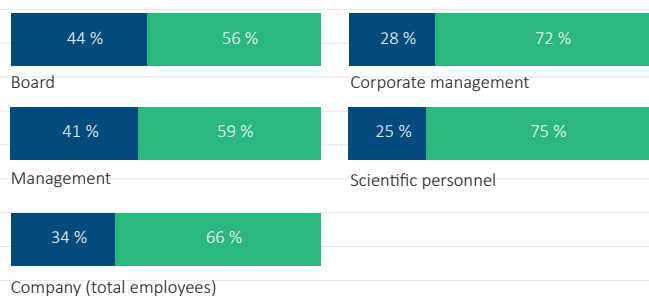
(incl. dissemination)



● Scientific articles in periodicals, series or anthologies	246
● Scientific presentations/lectures and posters	228
● Reports	103
● Popular scientific articles and presentations	27
● Technical manuals, textbooks, etc.	1
● Media contributions (interviews, feature articles, presentations)	309
● Blogs and information materials	125
● Multimedia products (podcasts/videos)	44

Gender equality

 %-of women |  %-of men



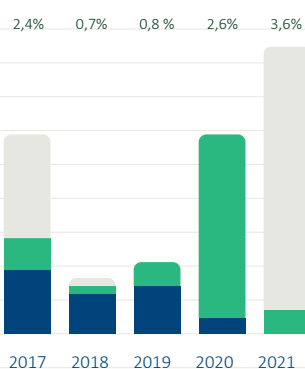
Net operating income (MNOK)

Operating margin (%)



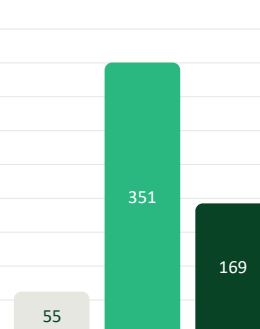
Investments

Scientific equipment and buildings
(% of net operating income)



Distribution of revenues (MNOK)

(MNOK)



Key financial figures

MNOK

● Buildings and other property
● Scientific equipment
● Equipment and other movables

● Basic grant
● Collaborative research
● Contract research

INCOME AND EXPENSES	2017	2018	2019	2020	2021
Gross revenues	438	494	552	512	574
Net operating income	362	385	403	419	464
Operating profit	33	35	32	21	47
Net income	28	28	32	23	45
BALANCE SHEET					
Non-current assets	221	210	202	200	201
Current assets	384	408	470	568	644
Total assets	605	618	672	768	845
Equity	368	396	428	451	496
Liabilities	237	222	244	317	349
Total equity and liabilities	605	618	672	768	845
PROFITABILITY					
Operating margin (%)	9,1 %	9,1 %	7,9 %	5,0 %	10,2 %
Return on assets (%)	7,0 %	6,5 %	6,4 %	3,8 %	7,0 %
Return on equity (%)	10,6 %	10,0 %	10,1 %	6,3 %	11,9 %
LIQUIDITY					
Net cash flow from operating activities	98	14	63	109	78
Current ratio	1,6	1,8	1,9	1,8	1,9
SOLVENCY					
Equity ratio (%)	61 %	64 %	64 %	59 %	59 %
Working capital	148	187	227	252	296

SINTEF Manufacturing AS

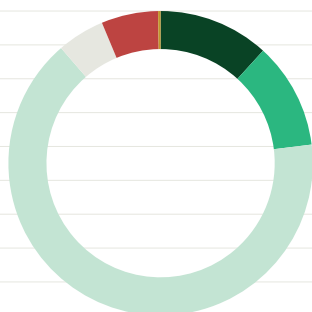


Photo: Lars A. Berg/ SINTEF

SINTEF Manufacturing is Norway's leading expert centre in research into manufacturing. Our ambition is to develop sustainable and effective solutions that provide competitive benefits for the Norwegian manufacturing sector. We deliver specialist

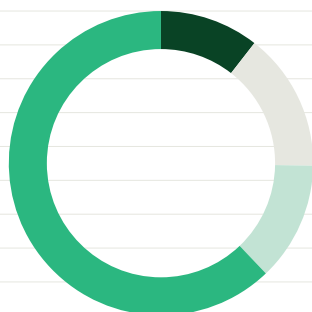
expertise in the fields of automated production, product and production development, 'lean' and value chain management, materials technology, and laboratory and workshop services.

Revenue sources
(% of gross revenue)



● Basic grant	12 %
● The Research Council of Norway	11 %
● Norwegian business and industry	66 %
● Norwegian public clients	5 %
● EU	6 %
● International clients	0 %

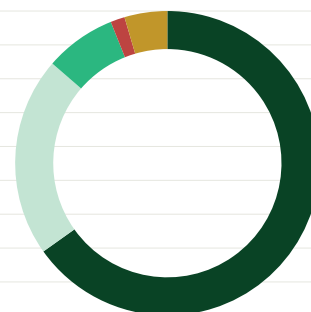
Employees



● Administrative	10
● Technical personnel	14
● Engineers	12
● Scientists	59 ¹

¹ 29 of these hold doctoral degrees

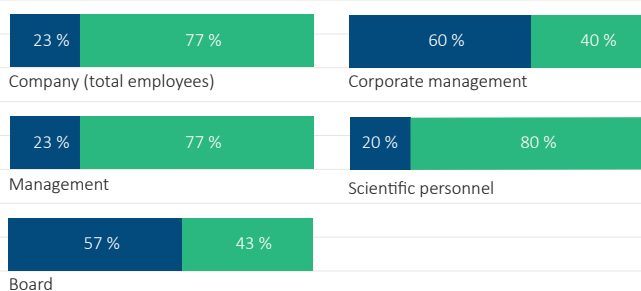
Publications
(incl. dissemination)



● Scientific articles in periodicals, series or anthologies	43
● Scientific presentations/lectures and posters	14
● Reports	5
● Technical manuals, textbooks, etc.	1
● Media contributions (interviews, feature articles, presentations)	3

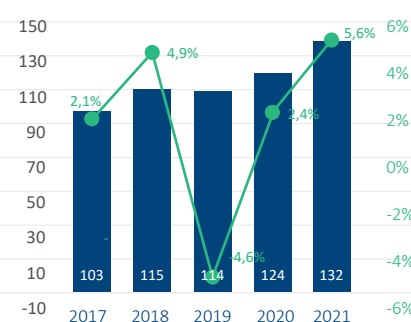
Gender equality

👤 %-of women | 👤 %-of men



Net operating income (MNOK)

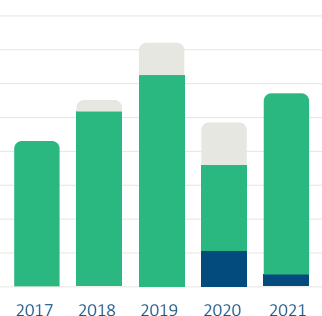
Operating margin (%)



Investments

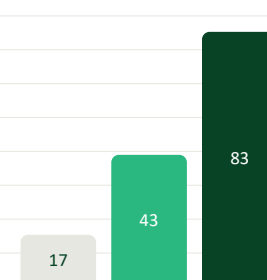
Scientific equipment and buildings
(% of net operating income)

2,0% 2,6% 3,4% 2,3% 2,7%



Distribution of revenues (MNOK)

(MNOK)



- Buildings and other property
- Scientific equipment
- Equipment and other movables

- Basic grant
- Collaborative research
- Contract research

Key financial figures

MNOK

INCOME AND EXPENSES	2017	2018	2019	2020	2021
Gross revenues	132	146	145	145	144
Net operating income	103	115	114	124	132
Operating profit	2	6	-5	3	7
Net income	1	4	-4	0	6
BALANCE SHEET					
Non-current assets	13	12	20	17	14
Current assets	53	73	53	89	71
Total assets	66	85	73	106	85
Equity	17	21	17	17	22
Liabilities	48	64	56	89	62
Total equity and liabilities	66	85	73	106	85
PROFITABILITY					
Operating margin (%)	2,1 %	4,9 %	-4,6 %	2,4 %	5,6 %
Return on assets (%)	3,4 %	7,6 %	-6,7 %	3,6 %	8,0 %
Return on equity (%)	7,2 %	7,0 %	-6,6 %	1,0 %	36,5 %
LIQUIDITY					
Net cash flow from operating activities	1	2	-14	49	-25
Current ratio	1,2	1,1	1,0	1,0	0,2
SOLVENCY					
Equity ratio (%)	26 %	25 %	23 %	16 %	26 %
Working capital	10	9	0	3	14

Technology for a
better society