

Report of the Board: 2014

SINTEF is a private, non-profit research group, which is organised in the form of a foundation with a number of subsidiary companies. Through its first-rate solution-oriented research and knowledge generation, SINTEF creates significant value for its Norwegian and international clients, the public sector and society as a whole.

The main activities of SINTEF are located in Trondheim and Oslo, and its headquarters are in Trondheim. SINTEF operates in several other locations in Norway and abroad through the SINTEF Foundation and its subsidiaries.

SINTEF partners and shares a strategy with NTNU in Trondheim, and collaborates closely with the University of Oslo and other national and international research institutions. These partnerships contribute to the high scientific quality of our work and to our strong international position.

From a financial point of view, 2014 was a demanding year for several of our departments. We are not satisfied with the overall financial result for either the SINTEF Foundation or SINTEF.

In previous years, good earnings have enabled SINTEF to invest in laboratories and scientific equipment, office facilities and self-financed research efforts within prioritised areas. We have experienced pressure on our profitability during the past few years. Over a period of time, it

is essential to secure acceptable financial results if we are to make the investments that we wish, and therefore in 2014 the Group introduced a series of measures to correct the current situation and ensure that our operating strategy is adequate.

New main strategy

In September 2014, the Board adopted a new main strategy for SINTEF to replace our previous strategy from 2007, and a comprehensive consultation process, involving management and staff throughout the organisation has been implemented. This has led to a feeling of ownership and anchorage of the new strategy.

The strategy lays a heavy emphasis on SINTEF's social responsibility, which is to develop society through research and innovation. Our main objective is that SINTEF should be a world-leading research institute that develops solutions to some of the most important social challenges of our times through its leading position in its particular areas of special effort. Five of these areas have been defined: renewable energy, climate and environmental technology, oil and gas, ocean space technology and health and welfare, in addition to a range of enabling technologies.

The strategy strongly emphasises the concept of 'One SINTEF', which involves employing the best expertise available within the organisation to meet its social obligations and the needs of its clients. Ethics, leader-

ship, HSE and good management have been adopted as new pillars of our strategy. We have maintained our vision, basic values and the existing pillars of clients, expertise and people.

Technology for a better society

Through its high level of scientific excellence and the good efforts of its staff, SINTEF produces results for its clients and for society, results that help to realise our vision of 'Technology for a better society'. Here are a few examples of our activities in 2014:

In 2014, the Concrete Innovation Centre – COIN – entered its final year as a Centre for Research-led Innovation (SFI) financed by the Research Council of Norway. The basis for the work of COIN has been the industrial and societal challenges faced by the building and construction sector that result from its use of concrete. These challenges were assigned to the three general areas of environmental friendliness, production and applications, and performance, durability and sustainability, and the efforts of COIN concentrated on these areas. The work of the Centre has been documented through more than 200 publications; COIN reports, international journal articles and conference proceedings, not to mention 16 doctoral theses. It has led to new products, patents, guidelines, modelling tools and test methods. In addition to technical innovations, the Centre has brought great benefits to the sector by encouraging a sharper focus on innovation among its partners, new networks and a shorter path from industrially relevant research to education and training. Research is continuing at SINTEF, and three COIN spin-off projects are currently under way. A highly positive signal is that our partners have decided to further develop and continue this arena of innovation after the conclusion of the Research Council's financial support phase.

The petroleum industry needs to transport oil and gas over long distances more cost-effectively than it does today. New infrastructure is the key to tackling this challenge. The Research Council of Norway allocated SINTEF and the Institute for Energy Technology (IFE) a total of NOK 40 million for the upgrading of their multiphase flow laboratories, marking the start of a new epoch in Norwegian multiphase flow research and the revitalisation of collaboration between SINTEF and IFE. For the first time, it will be possible to study the flow of gas, oil and water at SINTEF's large-scale flow-rig at Tiller with the aid of IFE's advanced instrumentation systems. The upgrading was needed in order to allow ever more sophisticated models and simulators of multiphase pipeline flow to be validated.

In summer 2014, tuna larvae fed on copepods (sand-hoppers) were produced by SINTEF Fisheries and Aquaculture. This was the first time that scientists had managed to get tuna larvae to survive to the fry phase in aquaculture. The project was carried out on behalf of the Norwegian aquaculture company Fortuna Mare. Now, SINTEF is helping the project sponsor to build up a unique fish-farm in Spain. Tuna feature on the IUCN Red List of Threatened Species, and in terms of price, they are the most expensive fish in the world that are commercially fished and cultivated. Norwegian waters are too cold for cultivation of this large species, which belongs to the mackerel family, but Spain and Japan have farmed tuna for many years by feeding up captured young wild fish. So far, intensive production has not been possible as no-one has managed to ensure a stable supply of tuna fry, because the available feeds have not been sufficiently good. Thanks to SINTEF's research on this subject, we may have found the solution to this problem.

The terror attacks on July 22, 2011 revealed an urgent need for better security throughout Norwegian society. SINTEF's researchers are playing a major role in the project entitled 'The Next Disaster', which is being financed by the Research Council of Norway. The project has three aims: to evaluate what improvements have been made in security in the aftermath of July 22; to generate knowledge of how learning processes take place after major catastrophes; and to study how organisational

complexity and different organisational structures affect our ability to build a safe society.

In classical chemotherapy of cancer patients, less than 0.1 per cent of the drug reaches the tumour, while the rest ends up in healthy cells. With the aid of nanocapsules containing an anti-cancer drug, we can attack tumours with surgical precision. SINTEF is behind the development of a type of nanocapsule that consists of tiny droplets of superglue. The capsules exploit the weak points of the tumour, which are poor-quality blood vessels. The method means that the capsules more easily penetrate the tumour, while healthy cells are less affected, so that a larger proportion of the medicine reaches the tumour itself, while the treatment also has fewer side-effects on the patient. The aim is to raise the proportion of the drug that reaches the tumour from 0.1 to 10 per cent.

The world is in need of an energy revolution. In order to stay within the UN's target of a two-degree maximum rise in temperature, it is essential to develop a 'green economy', with increased generation of energy from renewable sources. Our electricity supply system will be of critical importance in a sustainable future, and our ageing system must be redesigned to be capable of meeting changing needs. All renewable sources of energy will have to be connected to the grid, and the system must act as a catalyst for cuts in greenhouse gas emissions, in both production and consumption. 'Smart' electricity meters will be one of the elements of the electric power system of the future. By January 1, 2019, all Norwegian consumers of electricity will have smart meters installed. These will read power consumption, warn electricity companies of power cuts and provide users with a detailed overview of their electricity consumption. Consumers will also become power generators and sell electricity back to the grid. In preparation for this revolution, SINTEF and 33 partners have carried out several projects in which Norwegian homes and weekend cabins have acted as 'living laboratories' (the DeVID project). DeVID has carried out activities in the cities of Steinkjer and Hvaler, where new technology, new electricity prices and new solutions have been tested. Once everyone in Norway has installed a smart meter, the experience gained from the DeVID project will help to make the meters as smart as possible.

More than 220 000 people in Norway suffer from a neurological disease or damage that leaves them with problems of bladder control. About 3 000 of them have a damaged spinal cord, and do not realise when their bladder needs to be emptied. This can result in extremely high pressure in the bladder, which in turn may lead to life-threatening damage to the kidneys. For several years, SINTEF scientists have been developing miniaturised sensors that measure pressure within the body, most recently in collaboration with Sunaas Hospital, and these can be placed directly in the bladder. More reliable measurements can be made, and both patient discomfort and the danger of infections are reduced. The new technology was trialled in the first pilot group of patients in autumn 2014, with extremely promising results.

For almost ten years, research centres and industry have been collaborating with the authorities to develop a future knowledge centre for ocean space technology, the Ocean Space Centre. In 2014, the project passed yet another important milestone, when the government presented its Long-term Plan for Research and Higher Education for 2015 – 2024. The plan confirms that the Ocean Space Centre will be one of two R & D buildings that will be prioritised by the government in the immediate future. We regard this as a real political breakthrough for the project, for which MARINTEK, NTNU and a wide range of research groups in SINTEF have been working for a long time. In early 2015, the Storting unanimously voted in favour of this clear prioritisation. In recommendation of the Long-term Plan, a unanimous Church Affairs, Education and Research Committee wrote as follows: "The Committee supports the government's proposal to prioritise new buildings for the life sciences, pharmacy and chemistry at the University of Oslo, and the upgrading of the Marine Technology Centre (Ocean Space Centre) in Trondheim.

These infrastructure measures underline the importance of investment in research and development, and are in line with the government's areas of special effort in specific areas." In the course of 2014, several further steps were taken towards the realisation of the knowledge centre, including work on benefits realisation and EEZ clearance. The Ministry of Industry and Fisheries has appointed a project board and is working towards the establishment of a broadly-based reference group.

Health, Safety and Environment (HSE)

HSE is given the highest priority by SINTEF, and the safety of our staff is more important than any other consideration. Our responsibility for work-place health, work environment and safety is taken very seriously. Staff involvement and good leadership are of the greatest importance for the work environment.

HSE is further emphasised in SINTEF's new main strategy, which means that our ambitions have been raised even further.

SINTEF has set out the following four goals for its efforts in HSE:

- *SINTEF will have a good, healthy work environment*
- *SINTEF will have a zero rate of work-related sick-leave*
- *SINTEF aims to have zero injuries, accidents and losses*
- *SINTEF will be a company with a clearly defined environmental profile*

SINTEF's latest work environment survey was carried out in 2014, and achieved a response rate of 92.5 per cent. The high response rate indicates that both our staff and management wish to provide feedback and participate in the improvement of the work environment. Important work environment factors such as motivation and pleasure in work, team spirit and management obtained high scores. The study was succeeded by active follow-up efforts throughout the organisation.

A zero rate of injury-related sick-leave (H1) was a milestone for SINTEF in 2014. This was the first time since registration of injury-related sick-leave was introduced that we achieved a zero H1 score. In 2013, SINTEF experienced a number of serious incidents that led to an extra sharpening at the beginning of the new year. New routines were instituted with the aim of closely following trends in personal injuries and injuries requiring sick-leave. Particularly close attention on the part of management appears to have had its effect.

SINTEF's reporting and deviation system (Synergi) enables line managers and case officers to follow up reports of deviations. In order to strengthen safety culture, we are dependent on events being reported and followed up at local level within the work environment. Group management is monitoring this closely, and there is a positive trend in the way that cases are dealt with and closed. In 2014, SINTEF registered 488 HSE reports in Synergi. Of these, 417 were reports of hazardous conditions/observations, 39 were near-accidents and 32 were accidents. In 2014, the rates of injury-related sick-leave (H1) and personal injury frequency (H2) were 0 and 0.16 respectively. The corresponding figures for 2013 were 1.6 and 4.1. Even though 2014 showed distinct reductions in H1 and H2, active preventive efforts are needed to reduce the risk of accidents. It has been decided to implement measures and further efforts to improve the reporting of deviations in the field and during professional travel.

Given the background in the negative trend in personal injury and injury-related sick-leave in 2013, we began to plan a safety campaign for laboratories, workshops, field-work and travel. The aim of the campaign is to strengthen SINTEF's safety culture, and this will be a priority task for all employees in 2015.

Responsibility for staff HSE training lies with line management, supported by our HSE and personnel staff. 2014 saw the development

of a system for supporting management in their follow-up efforts. An e-learning tool that ensures that managers have adequate knowledge of HSE has been developed, and is in the course of being adopted. Classes are held jointly with NTNU and the Trondheim Students' Union.

Chemicals are widely used in SINTEF's research, and good procedures are essential. We therefore put continuous effort into risk evaluation, substitution and the implementation of good routines in handling chemicals.

In 2014, sick-leave was 3.9 per cent, as against 3.8 in 2013. Work-related sick-leave in 2014 was stable at 0.3 per cent, the same as in 2013. SINTEF is an IA company, and both work-related and other sick-leave are systematically followed up at institute level. Line managers, supported by HR staff, are responsible for following up sick-leave.

The SINTEF Foundation's work environment committee (AMU) resolved to set up sub-committees in the Foundation's four companies. The aim of this scheme is to ensure that the AMU's legally required efforts are performed locally, close to the personnel concerned.

The work safety meeting was held in October, and was well attended and offered a comprehensive programme. Safety representatives, group directors and HSE personnel attended the meeting.

SINTEF put systematic efforts into ensuring that contingency planning for its employees is adequate. One aspect of these efforts in 2014 was to revise plans for a centre for family members in the event of accidents, where particular emphasis has been laid on clarifying our relationships with local authorities in Trondheim and Oslo.

SINTEF publishes an HSE report with more detailed information about his area, as a separate part of this annual report.

Our clients

SINTEF creates opportunities for its public- and private-sector clients, thus contributing to their ability to create value and thus to the development of society in a positive direction. This is among our most important contributions to society. In 2014, SINTEF performed 5 266 projects for 3 580 clients, large and small.

A growing number of projects for external clients are performed by several SINTEF groups. A broadly-based approach involving several different groups means that we are uniquely positioned to develop good solutions. Interdisciplinarity is a prerequisite for the ability to deliver solutions to large, complex social challenges.

Our relationships with our clients and our understanding of their needs are of decisive importance in this respect. Customers and customer contact are leading items on the agenda of our management. This also includes closer dialogue and contact with the authorities, in the first instance in Norway, but also within the European Union and in other countries. SINTEF has organised a series of important high-level meetings with major international companies and institutions. These were held in order to strengthen our strategic dialogue and to develop concrete new projects. In meetings of this sort, SINTEF presents new technology and its assessments of important trends in development, based on its clients' needs and SINTEF's expertise. Good follow-up of these meetings is given high priority.

Good contact between researchers and clients is important for the performance and development of good projects. High-quality management, good performance and teamwork are central elements of project performance. We follow up our clients via systematic customer satisfaction surveys, the results of which are used to continuously improve our ability to perform our work in a satisfactory manner.

SINTEF has provided input to the government's Long-term Plan for Research and Higher Education, emphasising the importance of industry-oriented research and coordinated efforts based on clearly stated priorities. SINTEF is satisfied with the Long-term Plan presented by the government in October 2014. We are particularly pleased that the Ocean Space Centre has been so clearly anchored in the plan, and that its prioritisation received the unanimous support of the parliament.

It is a positive sign that national strategies are beginning to be put into effect in a number of industrial sectors. Joint research strategy platforms that encompass both industrial interests and those of the authorities are of great importance in terms of scientific quality and our ability to innovate. SINTEF has given high priority to these processes.

Our research

Our efforts to develop SINTEF's profile as a research organisation continued in 2014. We stress the importance of international publishing, and the Board emphasises the place of publications as our contribution to the international generation of new knowledge. Publishing helps to profile and strengthen scientific quality. It is essential for SINTEF to strike a good balance between academic publishing and contract research, and our aim is to publish at least one peer-reviewed article per year of researcher effort. In 2014, this figure was 0.73 articles per researcher-year, compared with 0.71 in 2013 and 0.80 in 2012.

According to the barometer of the Ministry of Education and Research, SINTEF is Norway's second largest research centre. Our participation in the European Union's Framework Programmes has been decisive in achieving this position. EU-financed research is also important as a means of building up and developing our expertise and networks in enabling technologies such as IT, biotechnology, nanotechnology and materials science. SINTEF's financial position is under great stress, due to the disadvantageous general conditions of the European Union's 7th Framework Programme. It is of the greatest importance for us that the STIM-European Union scheme was strengthened in line with the Research Council of Norway's proposals in the National Budget for 2015, and that the government has outlined a plan for growth that goes beyond that of the European Union's new Framework Programme, Horizon 2020.

Investment in laboratories is decisive for the ability of Norway to further develop as a knowledge nation and make its mark in the global knowledge arena. We also know that laboratories of high international standard play a decisive role in attracting the best students and researchers. SINTEF has been very successful in the Research Council of Norway's funding of laboratories and scientific equipment in previous years, and in 2014 we submitted a new prioritised list of central laboratories. We also invest our financial surplus in laboratories and scientific equipment that will better enable SINTEF to take on important tasks. In 2014, we invested NOK 160 million in SINTEF Energy Research, which was in the process of realising a third-generation energy laboratory that will open in autumn 2015. This is the largest investment by SINTEF since the establishment of MiNaLab in 2004. Good operating practices over a number of years has made this investment possible. Contact with the Norwegian electricity generation sector is good, and the new energy laboratory is being built in collaboration with Statnett.

Strategic cooperation with universities and research institutes is essential as a means of ensuring strong national knowledge nodes. The strategic cooperation of NTNU and SINTEF is of great importance in this respect. SINTEF's applied research is at the leading edge of international academic activity, and NTNU carries out a wide range of research that provides concrete solutions for industry and society in general. In 2014, we launched a joint project called 'Better together', which will end in a new common strategy for obtaining even more value from our collaboration.

SINTEF participates actively in international cooperative programmes. We have signed an agreement together with NTNU, the University of Oslo and the Institute of Energy Technology regarding cooperation with Brazil. We also stress the importance of cooperation within the European Energy Research Alliance (EERA), which plays an important strategic role in European energy research. Together with NTNU, we collaborate at strategic level with leading research groups in Japan and the USA in the fields of energy and materials science.

Fields of special effort for the Group are high-priority interdisciplinary efforts of importance for SINTEF as a concern. Financing is shared between SINTEF at group level and the institutes involved. The following areas were launched in 2013, and are still being pursued: Bio-based products from sustainable resources, Manage IT, SEATONOMY and Welfare Technology. SINTEF has invested a total of MNOK 173 in twelve such areas since 2006.

In December 2013, the Research Council of Norway announced the establishment of several new Centres for Research-led Innovation (SFIs). The SFI programme strengthens innovation through long-term research efforts in close collaborations between companies that are active in R & D and leading research institutes. SINTEF is involved in nine of the 17 new centres, and has been selected to host four of them.

In 2016, new research centres for environmentally-friendly energy (IMEs) will be selected, and SINTEF is already drawing up applications for this programme.

Our people

SINTEF aims to be an attractive work-place that offers unique prospects for personal development to people who both "can and will". Every second year, we check whether SINTEF is perceived as such via our work environment survey. This survey was performed most recently in the winter of 2014, and it documented SINTEF's good qualities as a work-place. The process of exploiting the survey to further develop SINTEF as an attractive work-place continued throughout 2014, as it will in 2015.

Management is important in this connection, and SINTEF makes systematic efforts to develop its individual and team management resources in line with its joint management principles. Improving the quality of the management team that operates in close contact with our staff is important. We are steadily putting more emphasis on improving the ability of our managerial staff to cope with large and complex projects, and to cooperate effectively across scientific and organisational boundaries. This process is essential if we are to be capable of addressing the major challenges of our time.

SINTEF is doing well in the struggle to recruit highly competent staff in a global market. We place a great deal of emphasis on looking after and developing the people we already have, while making efforts to ensure that recruitment will go well in the future by developing our 'brand', and through national and international profiling efforts. In 2013, we started a joint project aimed at developing SINTEF's recruitment and profiling strategy, and several measures were put into effect in 2014. The project involves the greater use of Internet-based communication, film and video, a new advertising and profiling concept, and prospects for summer jobs and quality assurance of our induction processes for new colleagues. SINTEF's ranking has risen in investigations of students' evaluations of the attractiveness of work-places.

In 2014, SINTEF focused on maintaining its activities at what has been a testing time, while continuing to exploit its expansion potential. Staffing levels were reduced in certain groups in order to adapt our capacity to lower levels of activity in some markets.

The total number of employees rose by 30, and was 2,082 on 31.12.2014. Of these, 1,205 were employed by the SINTEF Foundation. In the category of academic personnel, 113 new appointments (six per cent) were made in 2013, while 76 colleagues (4.1 per cent) resigned. Research staff who leave SINTEF make important contributions to competence development in industry and the public sector.

Fifty-three per cent of SINTEF's research staff hold doctorates, a rise from 44 per cent since 2009, while 398 (22 per cent) of our staff in 2014 came from a total of 73 countries other than Norway. This demonstrates both that SINTEF is attractive to international scientists and that we help to recruit highly qualified workers to this country. An international staff also gives SINTEF access to valuable scientific and cultural competence. The largest numbers of our non-Norwegian employees are from Germany and France.

Equal opportunities and family policy

SINTEF's Ethics Handbook states that:

"All people are equally valued by SINTEF. No form of discrimination is acceptable, whether on the grounds of race, gender, religion, sexual orientation or age. SINTEF will work to achieve a good work environment that is characterised by equality and opportunity."

Our equal opportunities efforts are primarily the responsibility of the Board and SINTEF Group management. One of the aims of SINTEF is to raise the proportion of female research staff and managers. The President of the SINTEF Group is a woman. SINTEF attempts to recruit women to new appointments and to promote female managers from its own ranks. Even so, structural inequalities in the recruitment base that emerges from our educational establishments are reflected in SINTEF's pattern of staffing.

The gender distribution within SINTEF is shown in the following table.

	Men	Women
Board	44	56
Group management	80	20
Chief scientists and managerial staff	66	34
Research staff	73	27
SINTEF	66	34

In 2013, SINTEF received funding from the Research Council of Norway to encourage the development of a better gender balance in top-level academic positions and research management (the Balance Project). This project was launched in 2014, and is expected to provide SINTEF and other Norwegian research institutions with useful knowledge, and to increase the proportion of female management staff in SINTEF.

SINTEF is a signatory to the following agreements: NHO/Tekna, NHO/NITO, NHO/Forskerforbundet, NHO-Abelia/LO-NL and NHO-Abelia/Parat. We hold annual salary negotiations with SINTEF employee representatives. Salaries and working conditions are set following discussions and negotiations with the staff representatives of individual trade unions. Women are evaluated on the same basis as men, and we are making systematic efforts to ensure that undesirable salary differentials do not emerge.

Eighty-four per cent of our work-force are in full-time positions. Twenty-one per cent of our female employees, and 14 per cent of male staff, work part-time. One reason for part-time employment is that our staff are taking advantage of the opportunity to reduce their working week via the negotiated pension agreement. SINTEF makes little use of temporary appointments. At the turn of the year, we had 37 temporary employees (2 per cent), of whom 12 were women and 25 were men.

SINTEF's 2014 work environment survey revealed no significant differ-

ences between how women and men experience their work situation. We will continue to develop goal-oriented measures in order to ensure that SINTEF is an attractive work-place for women.

SINTEF aims to compete successfully in the international recruitment arena. Many research positions are advertised in English, and vacancies in SINTEF are internationally accessible on the Internet.

In order to ensure that staff from other countries are well looked after, SINTEF has set up an integration programme for new appointees from other countries and their families. The programme offers expatriate services, free Norwegian classes and teaching in English in the SINTEF School. Diversity management is one of the topics of the School's management development programme. The Work Environment Survey has documented that our colleagues from other countries are very happy at SINTEF.

SINTEF makes serious efforts to meet the requirements of its employees who have special needs for work-place adaptations. Our Inclusive Working Life (IA) objectives include a commitment to adapt work-places for those of our staff who already have, or who develop, disabilities. We cooperate with the Norwegian Labour and Welfare Administration in these efforts, and we utilise available public-sector support schemes. Another explicit aim of our IA efforts is that we will continue our current practice by focusing on competence when recruiting new colleagues, rather than on their limitations due to disabilities.

SINTEF intends to be an organisation with room for well-rounded people who have a life that extends beyond their work. We therefore offer flexible solutions to meet individual needs for flexitime, and the possibility of shorter working hours for parents. SINTEF subsidises kindergartens in Trondheim and Oslo.

Internationalisation

SINTEF intends to be an internationally leading research institute (one of the goals of SINTEF's new main strategy). Internationalisation is an integral part of SINTEF's activities, and our strategy in the area comprises five main elements; reinforcing our academic networks, participating in the EU's research and development programmes, selling our research on the international market, international recruitment and establishing a presence in selected overseas markets.

SINTEF was by far the largest Norwegian participant in the EU's 7th Framework Programme, which came to an end in December 2013. The 7th Framework Programme enabled SINTEF to participate in 254 projects, for 55 of which we acted as coordinator. The European Union allocated a total of €149 million in financial support to these projects. The research involved in certain of these projects will continue until 2018. The fact that SINTEF is competitive in this market demonstrates that we have been able to develop internationally recognised expertise. This is essential for SINTEF's ability to play its role in society. The greatest challenge facing us is that the frame conditions for our participation are poor and to some extent unclear, and we need a national plan to deal with this issue. SINTEF is making continuous efforts to improve the frame conditions, vis-à-vis both the European Union and the Norwegian authorities. We are currently focussing on positioning ourselves vis-à-vis Horizon 2020, the next Framework Programme, which started in 2014. It is already clear that SINTEF will be given responsibility for coordinating several major projects with budgets of the order of NOK 40 – 50 million.

In April 2014, the Storting adopted a strategic plan for Norwegian cooperation with the European Union in research and innovation. SINTEF is pleased that the authorities have an ambitious research strategy vis-à-vis the European Union, and that this has been followed up with a significant reinforcement of the STIM-EU scheme through the national budget

for 2015 and the Long-term Plan for Research and Higher Education that has been approved by the Storting. This is essential if we are to realise our strategy and provide predictable frame conditions.

Our international turnover in 2013 came to MNOK 504, the same as in 2013; this is equivalent to 17 per cent of SINTEF's total turnover. We have performed projects for clients in 63 countries. EU projects make up around 50 per cent of our international contract research. Apart from the EU, the USA is our most important market for R&D cooperation. The establishment of the research foundation Instituto SINTEF do Brasil was regarded as a breakthrough in this direction, and in April 2012, we were the first international organisation to be granted ANP accreditation in Brazil. SINTEF recognises that satisfactory operation in this market was very challenging, even with ANP accreditation, and in 2013 we experienced changes in the frame conditions imposed by ANP that made it impossible for SINTEF to financially balance its activities in Brazil. Our attempts to modify the frame conditions were unsuccessful, and in 2014 we decided to close down our operations in Brazil. We have made significant provisions in our accounts for 2014, which will be sufficient to enable us to terminate our presence in Brazil in 2015. The Board regrets that we have not been able to create a sustainable level of activity in Brazil, and continues to regard Brazil as an important market. SINTEF will continue to actively follow up our clients and projects even though we no longer have a presence in the country.

The external environment

SINTEF takes the environment seriously, and given our vision of "Technology for a better society", we pay close attention to sustainable development in every aspect of our activities. The concept of sustainable development encompasses good corporate governance of our own organisation, social responsibility and respect for the environment. SINTEF's environmental policy is intended to ensure that both the research we do and the way in which we run our own organisation take environmental considerations into account. Our policy also aims to ensure that our own environmental performance undergoes continuous improvement.

(SINTEF's environmental policy)

SINTEF aims to meet the environmental management standard ISO 14001. Via systematic efforts to reduce stress on the environment, SINTEF accepts its environmental responsibilities and satisfies the expectations of its clients. Our efforts to meet the ISO standard also lead to greater environmental awareness among our staff. SINTEF has worked towards the establishment of a common environmental action plan, whose significant aspects include energy-efficient operation and the responsible treatment of waste. All of SINTEF's eight institutes have drawn up their own environment action plans, and several institutes are already certified in accordance with ISO 14001. In 2014, SINTEF Materials and Chemistry and SINTEF Building Research were certified.

In 2014, there were no reportable incidents that affected the physical environment.

Our most important contribution to the environment is our programme of internationally leading R & D in renewable energy, climate and environmentally friendly technology. These areas are being further developed as key areas of special effort in the new main strategy. Our efforts on behalf of the environment are actively communicated externally via dissemination of our research and expertise in the environmental field.

Ethics

SINTEF has a clearly expressed ethical platform. 'Ethics, values and leadership' is an important pillar of SINTEF's new main strategic plan.

Our efforts in this field have three dimensions: research ethics, busi-

ness ethics and the ethics of interpersonal relationships. Our research ethics policy is based on the regulations of national ethics committees, the principles of the European Group of Ethics in Science and New Technologies, and international conventions such as the Vancouver Convention.

SINTEF staff are members of three national research ethics committees; medicine and health science, social science and humanities, and natural science and technology.

SINTEF expects and requires our suppliers and partners to share our ethical foundations. Suppliers and partners who are involved in our activities must accept SINTEF's ethical guidelines in writing. The guidelines can be accessed by everyone on our web-site, and a printed edition of the new guidelines has been distributed to all our employees. Items that involve ethics have appeared on the agenda of management groups and departments, and we have a long-standing practice that HSE and ethics should be the first item on the agenda of all internal meetings.

Following up our ethical guidelines is a responsibility of line management. SINTEF also has an Ethics Council and an Ethics Representative to back up our efforts in this field. The Ethics Council has six members, all either SINTEF managerial staff or elected by our employees. The Ethics Council held four meetings in 2014. The Ethics Representative acts as an advisor and discussion partner for the entire organisation, and also participates in a number of external fora. The Ethics Representative system means that SINTEF satisfies the requirements of the Work Environment Act regarding the need for an internal alert channel.

Social responsibility

Social responsibility has been elevated to the leading position in SINTEF's new main strategy. This states that SINTEF helps to improve society through research and innovation, contributes to wealth creation and develop solutions to the social challenges of our time, and communicates our knowledge, solutions and recommendations actively and resolutely.

Much of SINTEF's research concerns the development of solutions to some of society's greatest challenges, such as energy, food, health, clean water and generating jobs for the future. Through such efforts, SINTEF attempts to help solve some of society's most important problems, and social responsibility will form part of our core activities. This is in accordance with our vision of "Technology for a better society".

Our social responsibility also concerns the way in which we perform our own activities, in terms of such aspects as human rights, employee rights and social conditions, the physical environment and fighting corruption. SINTEF has developed policies and guidelines within all of these areas, and these form part of our corporate governance system and our ethical guidelines. Employee rights are also guaranteed through salary negotiations and our follow-up of our responsibility as an Inclusive Working Life (IA) company.

SINTEF is a member of UN Global Compact, and we have adopted its principles regarding human rights, work-life standards, and combating corruption. As required by Global Compact, we submitted an annual "Communication on Progress" that covers these principles. The status report forms part of SINTEF's annual reporting system, and is published on our website.

SINTEF is also a member of Transparency International, which works to prevent corruption at national and international level, and we support its guidelines and counsels.

Following up our ethical guidelines is a responsibility of line man-



agement, and the organisation pays these a good deal of attention in order to ensure that our standards are observed.

Good operating practices – financial freedom of action

In 2014, SINTEF made an operating profit of NOK 105.7 million, as against MNOK 71.2 in 2013. The result before tax was MNOK 142.9, as against MNOK 102.6 in 2013. Regarding special circumstances, we made a provision of about MNOK 40 for European Union projects, concerning still unclarified conditions regarding the regulations concerning how costs will be covered in the 7th Framework Programme, and a provision of around MNOK 30 to meet the costs of winding down our activity in Brazil. One-off effects in pension schemes came to about MNOK 100.

Net revenues grew by 1.0 per cent in 2014. The market was very good throughout the year in many areas, but has become extremely challenging in others, particularly those that concern our oil and gas activities, due to cost reductions in the petroleum sector and what has become a significant fall in the price of oil. A consequence of this trend is that a number of projects have been postponed or cancelled. We are focussing on good operating practices, with the aim of ensuring good results in the markets in which we operate at any given time.

Our liquidity situation was acceptable at the end of 2014. As far as our four research companies are concerned it is very good, but the SINTEF Foundation does not have equivalent liquid reserves relative to its turnover. SINTEF has established a Group-wide scheme for placing its liquid reserves. The portfolio is placed in accordance with the “Regulations for financial management in SINTEF” of October 2014, and in 2014 our average level of deposits was MNOK 334, as against MNOK 315 in 2013. Our low-risk profile brought us a portfolio profit of 6.6 per cent in 2014 (as against 6.6 per cent in 2013 and 5.8 per cent in 2012).

SINTEF is exposed to exchange rate fluctuations, since our project revenue is in foreign currencies, while all or parts of our project costs are in Norwegian kroner. In order to limit the risks involved, we utilise futures contracts. We have specifically evaluated the risks involved and the freedom of action available to us in the event of a major failure of the Euro.

It is essential that SINTEF should be capable of making a financial profit that is invested in new research and competence development. In 2014, we invested MNOK 172.2 in laboratories and in scientific and other equipment, and MNOK 14.9 in self-financed research projects at Group level. The corresponding figures in 2013 were MNOK 131.2 and MNOK 16.4 respectively.

In December 2014, SINTEF came to an agreement with Hitec Visjon regarding the sale of SINTEF’s share in eDrilling Services (eDS), a spin-off from SINTEF Petroleum Research AS.

In 2014 we also liquidated our spin-off companies ECOWAT and LINKftr, which did not achieve a breakthrough into their respective markets and thus lacked long-term profitability.

Our equity capital and operating conditions, combined with growth in revenue, cost-saving measures and a satisfactory order reserve, provide a good basis for continued operation. The boards of our subsidiary companies have performed similar analyses, and all have concluded that continued operation is justified. As far as the Board is aware, since the closing of the annual accounts there have been no developments of significance for the evaluation of the financial position of the Foundation or the Group. The annual accounts are therefore submitted on the basis of continued operation.

On 31.12.2014, the equity capital of the SINTEF Group was MNOK 2,394, (as against MNOK 2,302 in 2013) which is equivalent to 62 per cent (62%) of our total capital. The corresponding figures for the SINTEF Foundation are an equity capital of MNOK 2,106 (MNOK 2,026), equivalent to 70 per cent (68%) of total capital.

The annual result for the SINTEF Foundation in 2014 was MNOK 78.4 (MNOK 39.0 in 2013), all of which has been transferred to Other Equity.

Corporate governance

SINTEF aims to be professional in its governance and management and to combine this with the ability to be creative and innovative and with an unbureaucratic decision-making structure.

SINTEF’s central management bodies are its Council and Board. The Board is the ultimate governance organ of the Foundation, while the Council provides advice to the Board on the basis of the authority set out in the Foundations Act and SINTEF’s statutes.

The Council ensures that the objectives of the Foundation are pursued in accordance with its statutes, elects the Board, sets the fees to be paid to the members of the board and appoints an auditor. The Council is chaired by the Rector of NTNU, and consists of 28 members, comprising representatives of NTNU, the University of Oslo, the Research Council of Norway, industry, employee and employer organisations, and members elected by and among SINTEF’s own staff.

The Board of the SINTEF Foundation is also the Board of the SINTEF Group. The activities of our four research companies are regulated by their statutes, shareholder agreements and group agreements. Our principles for group governance and for coordination with related organisations have been adopted in accordance with SINTEF’s overarching objectives and strategy.

The Board consists of nine persons, two of whom are primarily employed by NTNU, four are from industry or the public sector and three are tenured employees of the SINTEF Foundation. The Board has responsibility and authority in all matters that are not assigned to the Council. The Board acts in accordance with SINTEF’s statutes, the Foundations Act, and such provisions of the Limited Companies Act as apply to foundations. The Board appoints the President of SINTEF and sets her salary and other conditions of employment, as well as the framework and principles of remuneration of the Group’s management team. The Board held six meetings in 2014.

The SINTEF Group’s management team is responsible for strategic management of the business of the group. The President of SINTEF is responsible for the day-to-day running of the company in accordance with the statutes of the SINTEF Foundation, Group agreements and the Limited Companies Act. The President has the authority to act on behalf of the Foundation, with the exception of the purchase, sale and mortgaging of property and the purchase and sale of companies. Either the President or Vice-president of SINTEF chairs the boards of all of SINTEF’s research companies.

SINTEF operates a quarterly risk-reporting system. The risk situation for each of the Group’s divisions and companies is discussed by the company boards and management teams, as well as by Group management and the Board of the Group. Risk-reduction measures are defined and implemented on an on-going basis. We have developed a similar methodology, incorporating ‘potentiality forecasts’, at institute and Group level.

SINTEF’s governance system is certifiable according to ISO 9001:2000, which covers the implementation of a common system for dealing with

accident reports, undesirable incidents, other deviations and suggestions for improvements. SINTEF is also registered in Achilles, a joint qualification system for suppliers to the petroleum industry.

Prospects and challenges for the future

Our many groups of highly qualified researchers enable SINTEF to actively contribute to the efforts of the authorities to meet their goals in areas of importance to society.

Our many groups of highly qualified researchers enable SINTEF to actively contribute to the efforts of the authorities to meet their goals in areas of importance to society. One of our strengths is that we can offer multidisciplinary expertise and can cooperate across the disciplinary boundaries of individual research groups in SINTEF, enabling us to develop good solutions for our clients and for society.

Climate, energy and the environment are important topics at global level. SINTEF will continue to put serious efforts into the fields of climate technology, adaptation to climate change, renewable energy, energy efficiency and CO₂ capture and storage (CCS). SINTEF has built up significant research expertise in CO₂ treatment, renewable energy and energy efficiency, and will give high priority to continued research in these areas. Petroleum research also continues to be important, as oil will be an essential element of global energy supply and other industrial processes for many decades to come. Natural gas is another vital resource, as conversion from coal and oil to gas will result in much lower levels of CO₂ emissions. In the longer run, the use of natural gas will be contingent on the capture and storage of CO₂ (CCS). A better understanding of people and society is of decisive importance for the development of solutions that will lead to a better society. Our aim is to achieve a closer integration of research on technology and the natural and social sciences.

Industrial development in the Arctic has great potential. With its broad knowledge base, SINTEF can help to realise national ambitions for the Arctic, and balance the interests of industrial development, long-term resources management and the environment. SINTEF intends to prioritise this in the future, and in 2013 we launched a strategy for the far north that we are now making efforts to realise.

The European Research Arena (ERA) plays a central role in SINTEF's work. In ERA we are competing with research institutes that receive much higher basic funding from the public sector than SINTEF. We are pleased to observe signals of highly necessary improvements in the Norwegian frame conditions for participation in European Union research, and point out that it is of decisive importance to follow the planned upgrading plan from 2016 onwards. SINTEF has drawn up an EU strategy that identifies our ambitions and orientation from now until 2020.

It is extremely important that Norway should be capable of renewing its national laboratory and scientific equipment infrastructure in order to make Norwegian research competitive in the international arena. At the same time, the operation and development of major laboratories such as MiNaLab, the Multiphase Laboratory and the marine technology laboratories are highly demanding tasks. Since the start of the financial crisis in 2008, we have experienced a reduced level of activity in industrial research. We are very satisfied regarding the rise in the level of support for industrially oriented research in the National Budget for 2015; this gives us a belief in the future and a hope for further budgetary growth that will strengthen the competitiveness of Norwegian industry through research and innovation.

Good results are created by many people, both our own staff and our academic and industrial partners. The Board wishes to thank everyone involved for their efforts and collaboration in 2014.

Trondheim, April 20, 2015


May-Britt Hagg


R. Rasmus Sunde
Chairman


Ingrid Selseth


Stig A. Slørdahl



Mari Tjøme


Ole Swang


Grete Aspelund


Rune Garen


Kristin Tolstad Uggen


Unni M. Steinsmo
President – CEO