DNV·GL

ANNUAL REPORT 2016

SAFER, SMARTER, GREENER

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COMPANY

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organizations to advance the safety and sustainability of their business. Our origins stretch back to 1864, and our reach today is global. Operating in more than 100 countries, we are dedicated to helping our customers make the world safer, smarter and greener.

LEADING TOWARDS A DIGITAL FUTURE

2016 has been the toughest year for our company in 30 years because of the continued downturn in the maritime and upstream oil & gas markets. Despite the challenging conditions in many of our markets, our position as a company remains strong. I believe we are investing wisely and taking positions now that will allow us to make the best of the world when it is trending positive again.

I expect the challenging market situation for shipping and offshore oil & gas to continue during the period ahead, even allowing for a more optimistic outlook in selected sectors such as cruise. At the same time, I believe the renewable energy sector will grow significantly due to the drop in the cost of both renewable energy and energy storage, making this combination increasingly competitive.

Common for all the sectors we work in is an accelerated call for digital transformation. The potential for smarter use of data is enormous. The key to unlocking this potential is trust and the ability to operate across silos. This is where we in DNV GL see ourselves playing a critical role in the era of the internet of things. I see this as a natural extension of our role as a widely trusted, independent party with deep domain expertise and strong analytics capabilities.

To facilitate frictionless connections between different industry players, domain experts and data scientists, DNV GL is working with Microsoft Azure to launch a secure industry data analytics and data management platform.

We call this platform Veracity and it is designed to help companies leverage the ever-increasing amount of data amassing from their assets. We are not looking to own data, but to unlock, qualify, combine and prepare data for analytics and benchmarking.

DNV GL's Veracity data platform will bring industries together in digital eco-systems enabling them to enhance the exchange of data, build new services, create new insights and make better decisions.

Working to create our own industry data platform was not the only way in which we made progress towards our strategic goals in 2016. Another important step was the launch, through our Software house, of our first software-as-a-service solution. A really tangible feature for the digital era.

We are also delivering services more efficiently through digitalization. DNV GL is the first classification society to offer drone-based tank surveys, with numerous such surveys already completed. This saves cost, avoids coating damage typically caused by staging work, and reduces the health and safety exposure for the people involved. We have also successfully piloted digital certificates and are the first classification society ready to roll on that front.

Another example is related to our safety risk management services. By using MyQRA, we can deliver QRA studies much more efficiently, in addition to improving the impact of our deliverables.

We have also been hired to do a ground-breaking Real Time Networks project for one of the UK's key gas distribution operators. Here, we are combining our expertise in pipelines, sensors, software, data analytics and digital solutions to enhance system performance.

> "The excellent customer feedback we received throughout the year warms my heart. This referred not least to our round-the-clock technical centres for ship owners and managers that we have named DATE – Direct Access to Technical Experts.

In the Life Science area, we have secured the BIGMED project, where we are cooperating with leading universities and hospitals to establish DNV GL as an internationally recognized data custodian and enabler of precision medicine.

Collaborative innovation continues to be a cornerstone for our company. One out of many joint industry projects we launched in 2016 is on standard-setting for floating wind turbines. The project is run together with 14 companies from the wind, oil & gas and maritime sectors.

To further strengthen our energy services, we acquired power systems expert Gothia Power in Sweden and Green Power Monitor in Spain. This strengthened not only our energy position, but also our 'digital power' position. Green Power Monitor is a leading harvester of data from solar plants and uses this to provide insight and give advice to operators.

The excellent customer feedback we received throughout the year warms my heart. This referred not least to our round-the-clock technical centres for ship owners and managers that we have named DATE – Direct Access to Technical Experts. The service was used more than 20,000 times in 2016, and 97% of the requests were handled within the agreed time frame.

> "DNV GL's business model is based on trust at all levels and in all business environments. We strive to reflect the DNV GL values in everything we do, demonstrate ethical leadership and uphold our reputation for integrity.

We have also taken some key decisions to improve our cost position and internal efficiency. Most effects will be seen during 2017 and I expect to see the full effect in 2018. Sadly, we have had to take additional steps to adapt to the decline in the activity level in our core industries, including headcount reductions. We are now almost 2,500 fewer colleagues than we were just two years ago.

With this backdrop, I am however very pleased to see that our health and safety performance is stable and on benchmark with our industry peers, and that the enablement, empowerment, organization and collaboration of our staff continue to exceed the global norm. I have high expectations for our performance in this area and will ensure our continued focus on this topic going forward.

DNV GL's business model is based on trust at all levels and in all business environments. We strive to reflect the DNV GL values in everything we do, demonstrate ethical leadership and uphold our reputation for integrity.

During 2016, we took an important step towards our ambition of becoming carbon neutral in relation to our travel and office buildings by 2020. A pilot project was run in Norway and through various measures and offsets we managed to achieve carbon neutral operations. Our results have been verified by an independent third party.

We continue our support for the UN Global Compact principles and are working to deliver on the UN's 17 Sustainable Development Goals together with customers and partners. Our purpose of safeguarding life, property and environment is more valid than ever before, and I'm confident that DNV GL is well positioned to be at the forefront in all our industries.

In this world of flux and change, our customers are increasingly turning to us for advice about the long term. Our two foresight studies issued in 2016, *Technology Outlook 2025* and *Future of Spaceship Earth*, have been very well received in all markets across the world. It is a source of great pride to me that DNV GL is so well qualified to help manage the risks that truly matter and to turn risks into opportunities.

Remi Eriksen, Group President & CEO

HIGHLIGHTS

Challenging markets

In the maritime world, 2016 presented a set of particularly challenging market conditions for most shipping segments as well as the offshore segment. Rates remained under substantial pressure, asset values continued to deteriorate and 2016 was the third-highest year ever for scrapping.

In the oil and gas industry, all players have been forced to take painful cost-cutting measures by reducing their capital expenditure and headcount. Several companies throughout the value chain are making strategic shifts in their portfolio towards lower-cost projects, shorter investment cycles and higher levels of flexibility.

Going carbon neutral

During 2016, we took an important step towards our ambition of becoming carbon neutral in relation to our travel and office buildings by 2020. A pilot project was run in Norway and through various measures and offsets we managed to achieve carbon neutral operations. Our results have been verified by an independent third party.

Our new energy-efficient office building at our Group Headquarters was completed in November 2016.

Building an industry digital platform

To facilitate frictionless connections between different industry players, domain experts and data scientists, DNV GL started working with Microsoft Azure and other partners to launch Veracity, a secure industry data analytics and data management platform.

The potential for smarter use of data is enormous. The key to unlocking this potential is trust and the ability to operate across silos. This is where we in DNV GL see ourselves playing a critical role. We see this as a natural extension of our role as a widely trusted, independent party with deep domain expertise and strong analytics capabilities.

Looking to the future

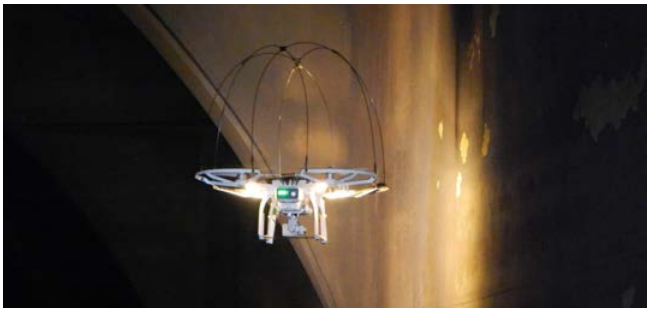
Our customers are increasingly turning to us for advice about the long term. The two foresight studies we issued in 2016, Technology Outlook 2025 and Future of Spaceship Earth, were very well received in all markets across the world.

Collaborative innovation

Collaborative innovation continues to be a cornerstone for our company. One out of many joint industry projects we launched in 2016 is on standard-setting for floating wind turbines. The project is run together with 14 companies from the wind, oil & gas and maritime sectors.

First drone surveys performed in ship tanks

DNV GL carried out the first unmanned drone production surveys in ship tanks and started training drone pilots in Pireaus, Singapore, Houston and Shanghai. Drone surveys can reduce survey times, costs and safety risks for certain types of surveys.



Acquisitions in the power sector

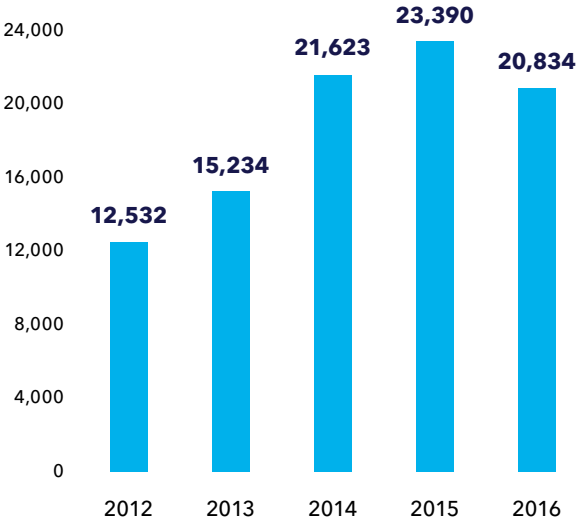
To further strengthen our energy services, we acquired power systems expert Gothia Power in Sweden and GreenPowerMonitor in Spain. This strengthened not only our energy position, but also our 'digital power' position. GreenPowerMonitor is a leading harvester of data from solar plants and uses this to provide insight and give advice to operators.

KEY FIGURES

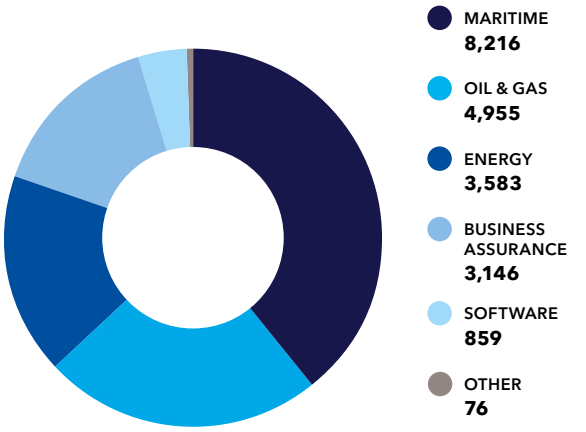
REVENUE (MILLION NOK)

20,834

LAST FIVE YEARS



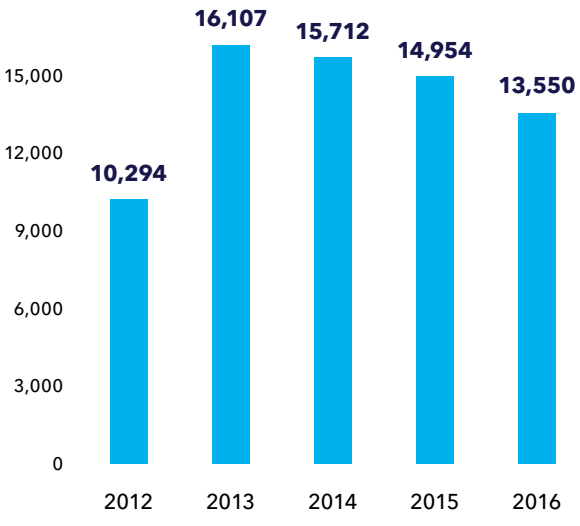
PER BUSINESS AREA



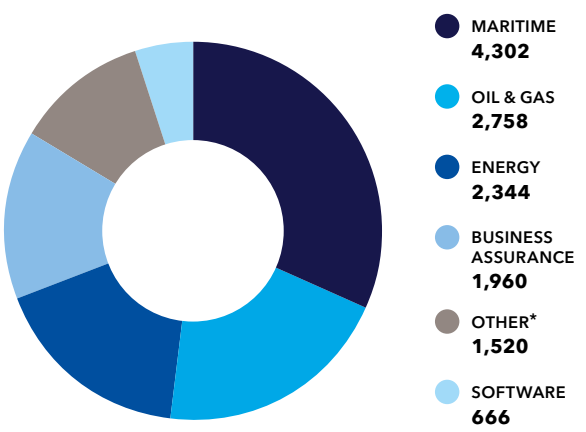
NUMBER OF EMPLOYEES

13,550

LAST FIVE YEARS



PER BUSINESS AREA

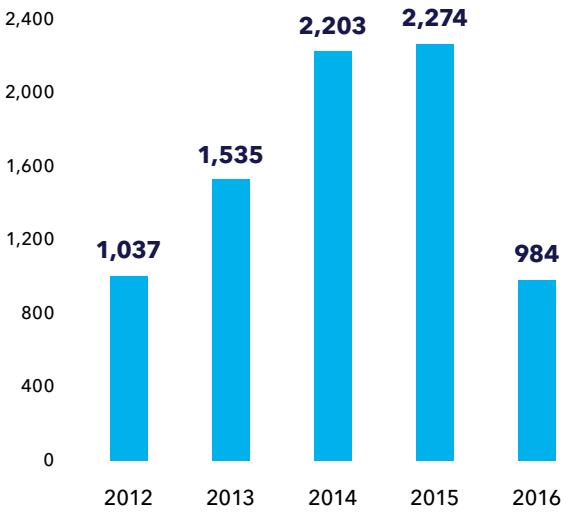


* Group functions, Research & Innovation and shared services

EBITA (MILLION NOK)

984

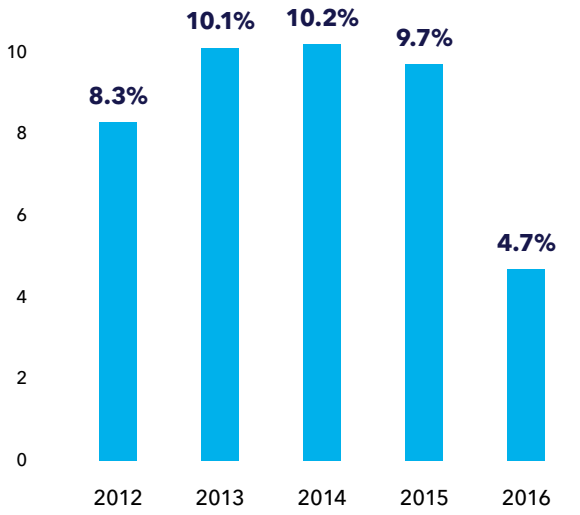
LAST FIVE YEARS



EBITA MARGIN (%)

4.7%

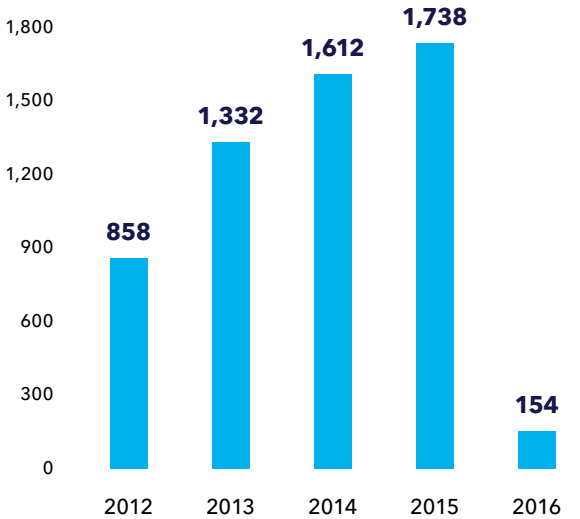
LAST FIVE YEARS



EBIT / OPERATING PROFIT (MILLION NOK)

154

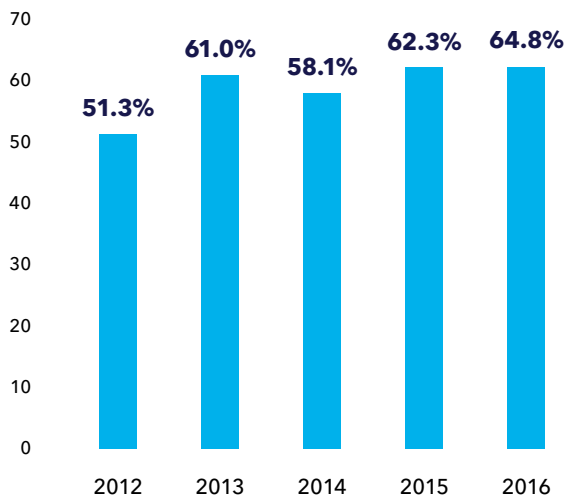
LAST FIVE YEARS



EQUITY RATIO (%)

64.8%

LAST FIVE YEARS



RESEARCH AND INNOVATION

DRIVING COLLABORATIVE INNOVATION AND STANDARDS

In 2016, DNV GL sustained its high level of investment in research and innovation. Rapid advances in digitalization and the global push towards decarbonization are twin forces driving our collaborative innovation efforts to deliver safety, cost and efficiency improvements.

DNV GL invests approximately 5% of its annual revenues in collaborative industry innovations, working together with customers and a range of universities, in extraordinary innovation concepts and technology development designed to catalyze wider industry research and development. We invest 1% of our annual group revenue on in-house, long-term, strategic research and innovation activities.

Joint industry projects

As a trusted third party and a source of technical expertise, DNV GL is an ideal partner for collaborative industry projects, we initiative and run more joint industry projects (JIPs) than any other organization in the industries we serve.

At year-end 2016, we were managing or participating in close to 100 JIPs and joint development projects across our business areas, linking with the private sector, research and academic institutions and regulatory bodies.

Notable joint projects ongoing or concluded in the last year include:

- The conclusion of a 2-year cross-industry project led by DNV GL aimed at halting the **proliferation of subsea documentation** and implementing a standardized approach to reduce engineering hours. The project resulted in a publicly available Recommended Practice for documentation reduction and reuse in typical subsea field development projects

- The **'Green Corridor'** JIP with several leading Asia-Pacific partners, explores the business case for LNG as marine fuel for bulk carriers operating between Western Australia and China. The project aims to develop an efficient LNG-fuelled capesize design that will undergo Approved in Principle (AiP) by DNV GL in the second quarter of 2017.

- In October 2016, DNV GL launched a JIP with a dozen leading wind industry partners to develop a new Best Practice for the **validation of turbulence models**. The industry currently relies on wind turbulence models developed decades ago when wind turbines were smaller than modern turbine types. The jointly developed guidelines aim to improve accuracy on site-specific load assessments, leading to a reduction in the cost of wind energy

Strategic research and innovation

DNV GL's long-term strategic research programmes are intended to help prepare our customers and ourselves for the future by generating new knowledge in key technology areas that have a long-term impact on the industries we serve. Current research activities are directed towards expanding our capabilities related to climate disruption and sustainable solutions, mastering digital technologies and complex cyber-physical systems, and in developing future business and delivery models.

The present portfolio of strategic research programmes includes:

- **Maritime** – research and innovation that contributes to safer, smarter and greener shipping, while preparing DNV GL for future developments in technology and regulation

- **Oil & Gas** – helping to position DNV GL at the forefront of risk-based and model-centric services on system level

- **Power & Renewables** - building competence, methods and tools within electricity grids to achieve competitive advantage and leadership position

- **Life sciences** – putting DNV GL's expertise to work in improving safety and quality in the healthcare and food sectors globally

- **Climate action** – promoting a low carbon future, building resilience and supporting adaptation to a changing climate

- **Digital assurance** – focusing on autonomous systems and big data analytics of sensor data for safer, better and more efficient operations

- **Ocean space** – positioning DNV GL at the forefront of ocean technologies

Highlighting our findings, sharing knowledge

Innovation is viewed as a companywide activity in DNV GL, and most of the strategic research programmes are predominantly staffed with experts on assignment from business operations. The programmes are all involved in a wide range of collaborative projects leveraging co-funding from a range of sources. The programmes also regularly issue publicly available **position papers** to highlight research findings and advance knowledge and progress on safer, greener and smarter operations.

The **2016 Group Technology and Research Review** provides a guide to recent position papers, selected research projects, technical competence building activities and our collaboration with universities. In addition, the review includes a comprehensive publications list.

Two standout publications, described more fully below, were issued in 2016: DNV GL's *Technology Outlook 2025* and *The Future of Spaceship Earth*.

Technology Outlook 2025 – predicting future trends

At five-year intervals, DNV GL publishes its Technology Outlook report, estimating technology uptake within shipping, energy and life sciences in the coming decade. The Technology Outlook report provides a basis for strategic discussions and insights into the technology landscape for customers and other stakeholders, as well as our own employees. Key topics from the report that was published in 2016 included 3D printing, cyber-physical systems, connected ships and hybrid energy systems with supergrids and microgrids. **http://to2025.dnvgl.com/**

The Future of Spaceship Earth

In an era of rapid change affecting not just socioeconomic trends and forces but the biosphere itself, DNV GL's customers are increasingly concerned about the long term operating environment. In response, DNV GL has constructed a model-based forecast through to 2050.

In 2016, the forecast was used to assess the likelihood of humanity achieving the 17 Sustainable Development Goals by 2030. The resulting report, **"The Future of Spaceship Earth"**, concludes that none of the global goals is likely to be achieved across all the world's major regions without extraordinary action being taken.

DNV GL believes that the private sector can rise to this challenge and, to inspire action, the report features the impact of 17 global companies on each of the goals. *The Future of Spaceship Earth* report has received widespread publicity and DNV GL has been commissioned to produce customized versions for various institutions and companies.

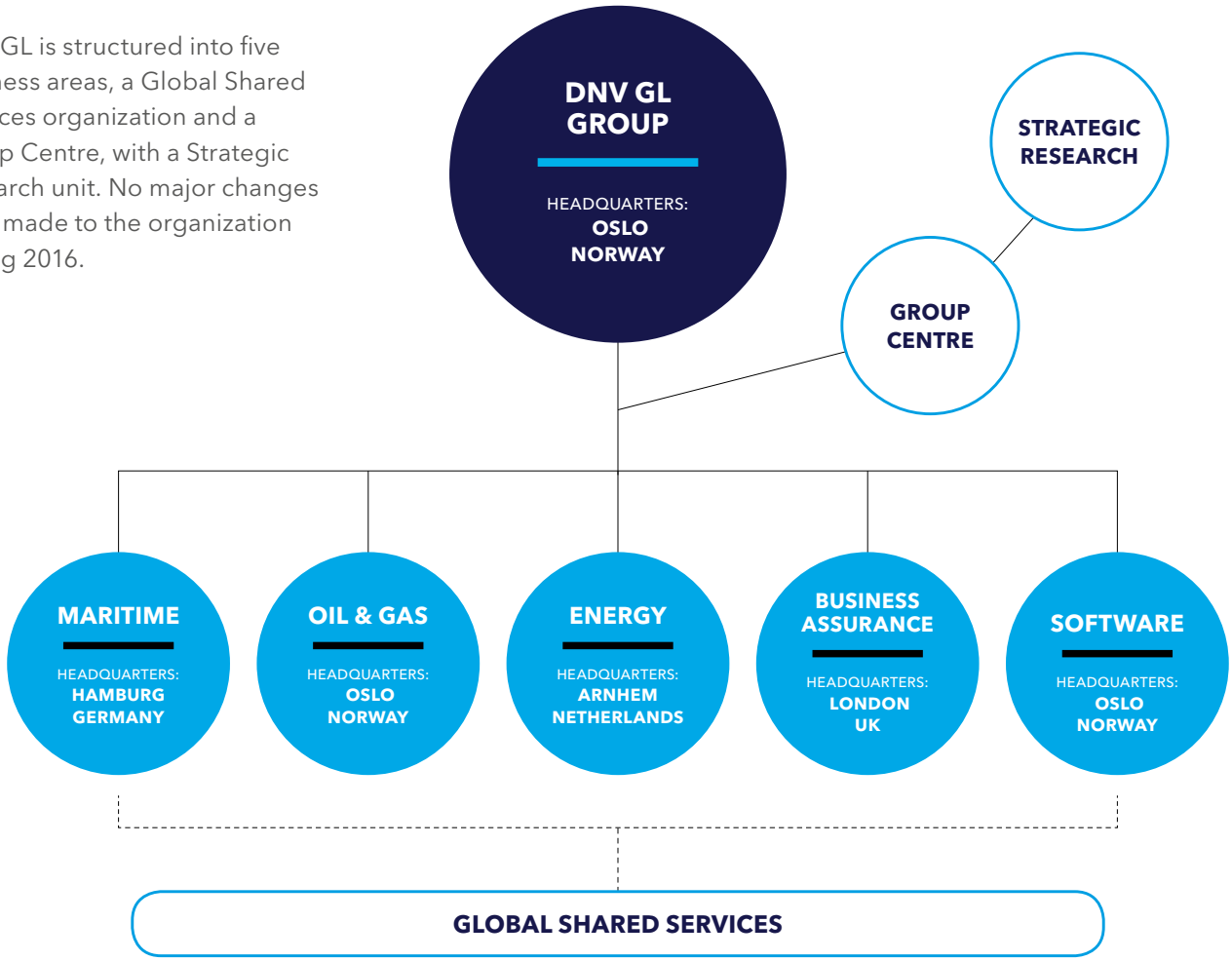
Building an open data platform across industries

2016 was also the year, where we started to build an open industry data platform. Together with customers from different industries, we are exploring the potential of gathering and combining big data sets and analyzing them to reduce down-time, increase efficiency and improve safety. Our Veracity industry data platform offers a secure place for frictionless connections between different industry players, domain experts and data analysts.

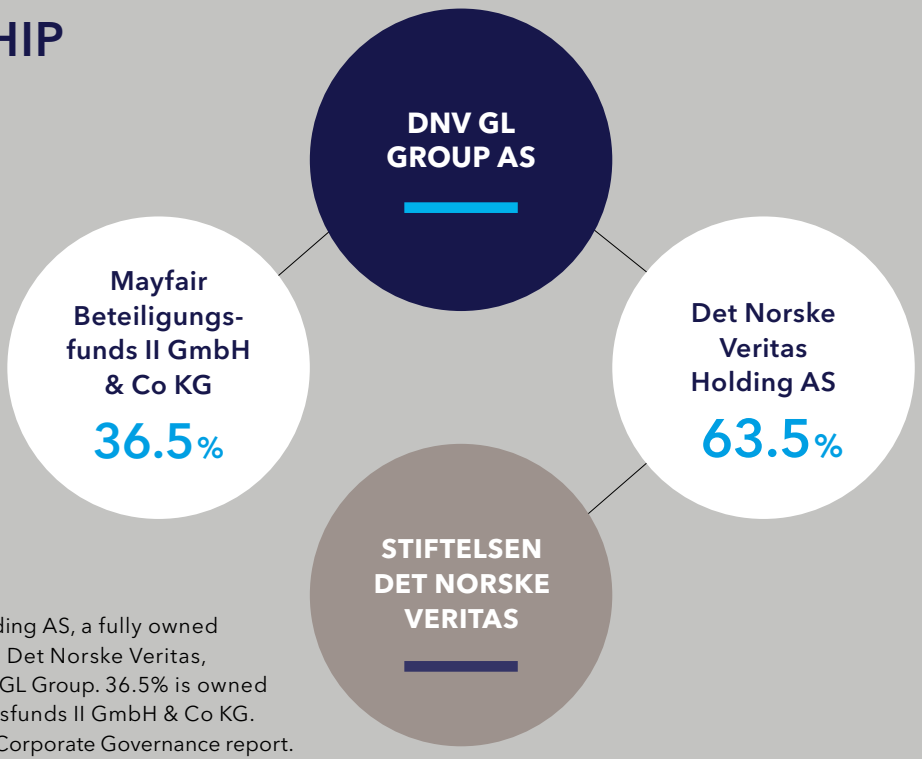
We are not looking to own data, but to unlock, qualify, combine and prepare data for analytics and benchmarking. As such, our ambition is that our Veracity data platform will bring industries together in digital eco-systems enabling them to enhance the exchange of data, build new services, create new insights and make better decisions. **www.dnvgl.com/data-platform**

GROUP STRUCTURE

DNV GL is structured into five business areas, a Global Shared Services organization and a Group Centre, with a Strategic Research unit. No major changes were made to the organization during 2016.

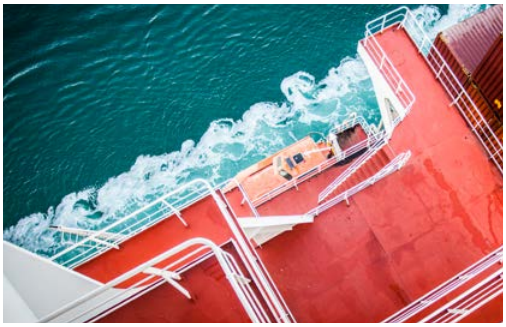


OWNERSHIP



Det Norske Veritas Holding AS, a fully owned subsidiary of Stiftelsen Det Norske Veritas, owns 63.5% of the DNV GL Group. 36.5% is owned by Mayfair Beteiligungsfunds II GmbH & Co KG. See more details in the Corporate Governance report.

MAIN SERVICES



MARITIME

We help enhance the safety, efficiency and sustainability of our customers in the global shipping industry, covering all vessel types and mobile offshore units.

SERVICES INCLUDE:

- Classification of ships and mobile offshore units
- Certification of materials and components
- Technical, safety, business risk and environmental advisory services
- Training and competence-related services

OIL & GAS

From the drawing board to decommissioning, we provide technical advice to enable oil and gas companies to enhance safety, increase reliability and manage costs in projects and operations.

SERVICES INCLUDE:

- Risk management advisory
- Technical advisory
- Noble Denton marine services
- Technical assurance
  - Certification and verification
  - Inspection services

ENERGY

We support our customers across the electric power value chain in ensuring reliable, efficient and sustainable energy supply.

SERVICES INCLUDE:

- Power testing, inspections and certification
- Renewables advisory services
- Renewables certification
- Electricity transmission and distribution advisory services
- Energy efficiency services

BUSINESS ASSURANCE

We help customers in all industry sectors build sustainable business performance and create stakeholder trust.

SERVICES INCLUDE:

- Management system certification
- Product assurance
- Supply chain assessment and assurance
- Sustainability strategy and reporting
- Certification of persons
- Training services
- Food & beverage certification and assessment
- Healthcare accreditation and assessment

SOFTWARE

Our software solutions are based on our broad domain competence and developed to improve our customers' operational efficiency and business optimization.

PRODUCTS INCLUDE SOFTWARE FOR:

- Design and Engineering
- Process safety, Risk and Reliability
- Asset Integrity and Performance
- Asset Simulation and Optimization
- Ship Management and Operations
- QHSE and Enterprise Risk
- Ship and Offshore Class
- Electric Grid, Reliability and Performance

THE EXECUTIVE COMMITTEE

The Executive Committee is the Group President & CEO's management team. It deals with issues and decisions related to strategy, markets and customers, target setting, financial development, investments, performance management, mergers and acquisitions, pricing strategy, and major management appointments.

During 2016, the Executive Committee remained unchanged and consists of nine people. It includes the Group CEO, the CEOs of the five business areas, the Chief Financial Officer, Chief HR Officer and Chief Group Development Officer.

REMI ERIKSEN

Group President & CEO

Norwegian **Joined:** 1993

Remi Eriksen became Group President and CEO of DNV GL in August 2015, succeeding Henrik O. Madsen. He was previously the Chief Operating Officer of the DNV GL Group, having served as CEO of DNV Maritime and Oil & Gas and in other senior roles in Asia, Europe and the Americas.

Amongst many other leadership roles, he is on the Executive Committee of World Business Council for Sustainable Business Development (WBCSD), and provides critical guidance to the WBCSD Low Carbon Technology Partnerships initiative (LCTPi).

He holds a Master's in Electronics and Computer Science from the Norwegian Institute of Technology and executive education from Rice University, IMD and INSEAD.

KNUT ØRBECK-NILSSEN

CEO Maritime

Norwegian **Joined:** 1990

Knut Ørbeck-Nilssen has been heading our Maritime business area since August 2015. Prior to that he was the Chief Operating Officer and President of Maritime and Director of Division Europe, Africa & Americas.

Knut has held senior management positions within both maritime and oil & gas. He holds a Bachelor of Engineering degree from Heriot-Watt University in Edinburgh, Scotland, where he was awarded a First Class Honour's Degree in Civil Engineering in 1990.

ELISABETH TØRSTAD

CEO Oil & Gas

Norwegian **Joined:** 1995

Elisabeth Tørstad has two decades in management positions at DNV GL, and comes from the role of Chief Technology Officer and prior to that as Chief Operating Officer for Maritime and Oil & Gas the Americas and Sub-Saharan Africa division.

Elisabeth has a cross disciplinary background and has held management positions with global responsibilities within the Maritime, Oil & Gas and Renewable Energy business areas. Her academic background includes a cand. scient. degree from the University of Oslo and a degree of Business Administration from the Norwegian School of Management.

THE EXECUTIVE COMMITTEE

DITLEV ENGEL

CEO Energy

Danish **Joined:** 2016

Ditlev Engel was Group President & CEO of global wind turbine manufacturer Vestas Wind Systems A/S from 2005 to 2013. Prior to joining Vestas, he had 20 years of experience at the global coatings manufacturer Hempel A/S, the last five years as Group President & CEO.

Ditlev has driven many global green investment initiatives as chair of Denmark's Green Investment Fund, a member of the Energy Partner Network of the World Economic Forum, advisor to the International Energy Agency, chair of the Green Growth Working Group at G20 Summits, co-founder of the Green Growth Action Alliance and member of UN's Sustainable Energy for All. He has degrees in business administration, finance & accounting from Copenhagen Business School and the General Management Programme from INSEAD.

LUCA CRISCIOTTI

CEO Business Assurance

Italian **Joined:** 2001

Luca Crisciotti became the CEO of Business Assurance in March 2012. In addition, he currently holds the position as the president of the IIOC (Independent International Organization for Certification Bodies), the trade body of many key international certification bodies.

With a background in the certification industry, Luca started his career in DNV GL as a Sales Manager in Rome, Italy. He continued as the Business Development Manager for Division South Europe before moving to Japan for three years as Country Manager. He then moved to Shanghai, Greater China, taking over as Director of Operations in Business Assurance Asia & Australia.

Luca has a degree in Business Economics from the University "La Sapienza" in Rome.

ARE FØLLESDAL TJØNN

CEO Software

Norwegian **Joined:** 1992 **Rejoined:** 2009

Are Føllesdal Tjønn has over 25 years of experience in software development and leadership positions within the maritime and oil & gas industries. After a tenure of fourteen years in leadership roles, Are returned to DNV GL in 2009 to lead the Software business area after having first joined DNV GL as Senior Research Engineer in 1992.

He earned a MSc. in Computer Science and Cybernetics from the University of Oslo in 1988.

THE EXECUTIVE COMMITTEE

THOMAS VOGTH-ERIKSEN

Chief Financial Officer

Norwegian **Joined:** 1988

Thomas Vogth-Eriksen has been Chief Financial Officer since 2012. He held several senior management positions in DNV GL before that, most recently as the CEO of Business Assurance, the certification arm of the DNV GL Group. Thomas brings international experience of almost 15 years from New York, London, Shanghai, and Milan.

He has served as board member in International Association of Certification bodies and the Norwegian Chambers of Commerce in London, Oslo and Shanghai. Thomas has a Master of Business & Economics, Business Administration from the Norwegian Business School.

CECILIE B. HEUCH

Chief HR Officer

Norwegian **Joined:** 2004

Cecilie Blydt Heuch has been the Chief HR Officer at DNV GL since 2006. Prior to that she had several roles within Market Analysis in Hydro Aluminium and within Strategy and Business Development in the fertilizer industry in Yara.

Cecilie graduated from Institut d'Etudes Politiques de Paris. She has a MSc from London School of Economics and a Business Diploma from Henley Management College. She has 11 years of international experience from Italy, France and England. Cecilie became a Director of the Board of Fred Olsen Energy ASA in 2007.

DAVID WALKER

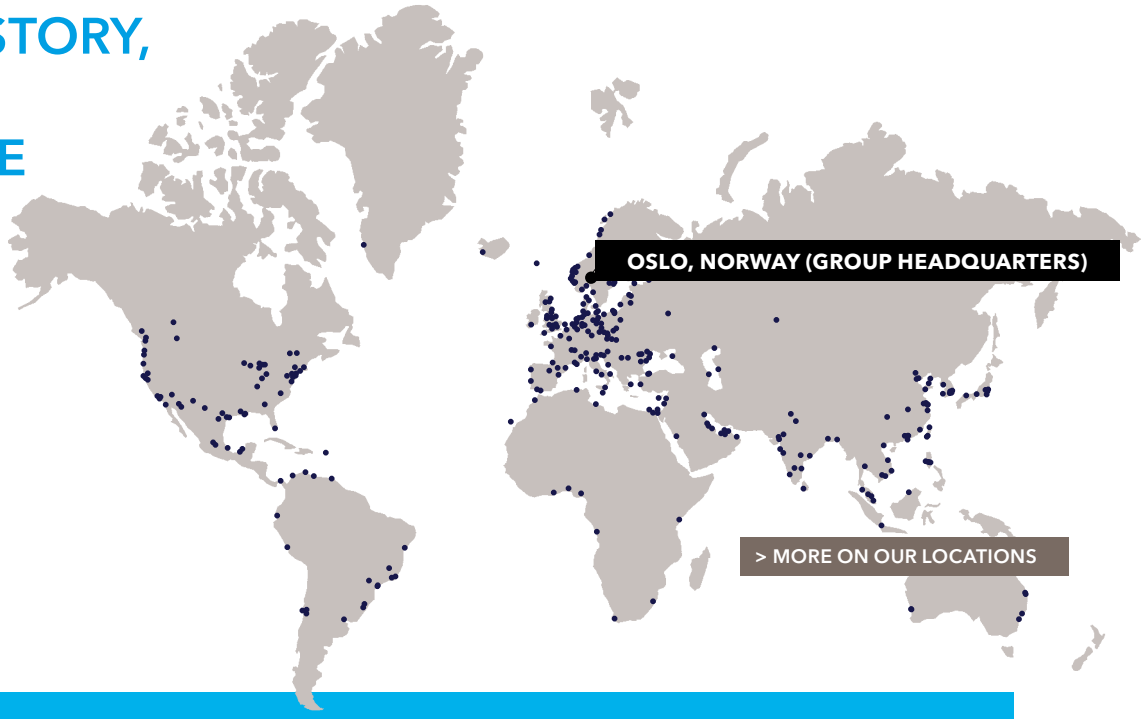
Chief Group Development Officer

British **Joined:** 2007

David Walker has been Chief Group Development Officer since 2015. Previously he was CEO of the Energy business area. Before joining DNV GL he worked in senior positions for Amoco and then BHP Billiton.

In addition to leading DNV GL's business in power and renewables, David has managed major capex projects in the Middle East, large oil & gas production facilities in the North Sea, and been an exploration geologist. His current role sees him heading up DNV GL's strategy process, mergers & acquisitions, research & development, and sustainability units. David holds a BSc (Hons) degree from the University of Edinburgh, and an MSc (Distinction) from Imperial College, London.

LONG HISTORY, GLOBAL PRESENCE



CUSTOMERS

≈100,000

ESTABLISHED

1864

> MORE ON OUR HISTORY

OFFICES WORLDWIDE

350

COUNTRIES

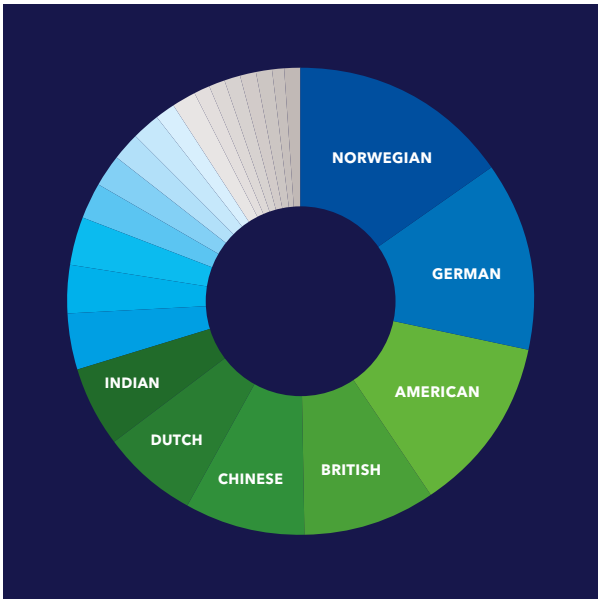
100+

EMPLOYEES BY NATIONALITY

AS PER 31.12.2016

Norwegian	1,860	Danish	239
German	1,610	Singaporean	230
American	1,493	Malaysian	184
British	1,109	Swedish	178
Chinese	1,002	French	162
Dutch	829	Japanese	137
Indian	667	Greek	133
Korean	454	Canadian	127
Polish	420	Egyptian	119
Italian	404	Mexican	117
Brazilian	288	Australian	112
Spanish	285		

Nationalities > 100 shown in table
Nationalities > 600 shown in pie chart



FROM VISION TO IMPACT

SAFER, SMARTER AND GREENER SOLUTIONS

Our vision of having a global impact for a safe and sustainable future sets the direction of our business activities. Our commitment to customers and society is driven by our purpose. Guided by our values, we strive to do the right things and to do things right.

OUR PURPOSE

To safeguard life, property and the environment

OUR VISION

Global impact for a safe and sustainable future

OUR VALUES

We build trust and confidence
We never compromise on quality or integrity
We are committed to teamwork and innovation
We care for our customers and each other
We embrace change and deliver results

UN SUSTAINABLE DEVELOPMENT GOALS

DNV GL supports the UN Sustainable Development Goals, which are well aligned with our purpose, vision and values.

These global goals stimulate the way we run and develop our business. We already provide strong business solutions for many of the Sustainable Development Goals, including:

SDG 7: Affordable and clean energy
SDG 9: Industry, innovation and infrastructure
SDG 13: Climate action

Going forward, we consider these goals to be relevant indicators of market trends and will pursue stronger business positions for goals:

SDG 3: Good health and well-being
SDG 12: Responsible consumption and production
SDG 14: Life below water

More information on how our work has supported the Sustainable Development Goals in 2016 is presented in the Market section.

DNV GL's strategy sets ambitious goals for further developing the company's established leadership positions within the maritime, oil & gas and energy industries, and within management system certification services and software solutions. Our aim is for customers to experience a more agile, responsive and data-smart company, catering even better to their business needs.

To build further resilience to volatile market conditions in its existing core industries, the company also wants to become a trusted assurance provider within the healthcare and food sectors.

WHAT IS IMPORTANT TO US

DELIVERING VALUE FOR OUR CUSTOMERS AND SOCIETY AT LARGE

With our strong global foothold in many industries, close to 100,000 customers, more than 13,000 employees and involvement in a range of partnerships across industries, we aspire to deliver value in the short and long term.

We engage with both external and internal stakeholders to find DNV GL's most important risks, opportunities and impacts on economic, environmental and social topics. Our stakeholders include customers, owners, employees, suppliers, government bodies, civil society organizations, industry associations, research institutions and media.

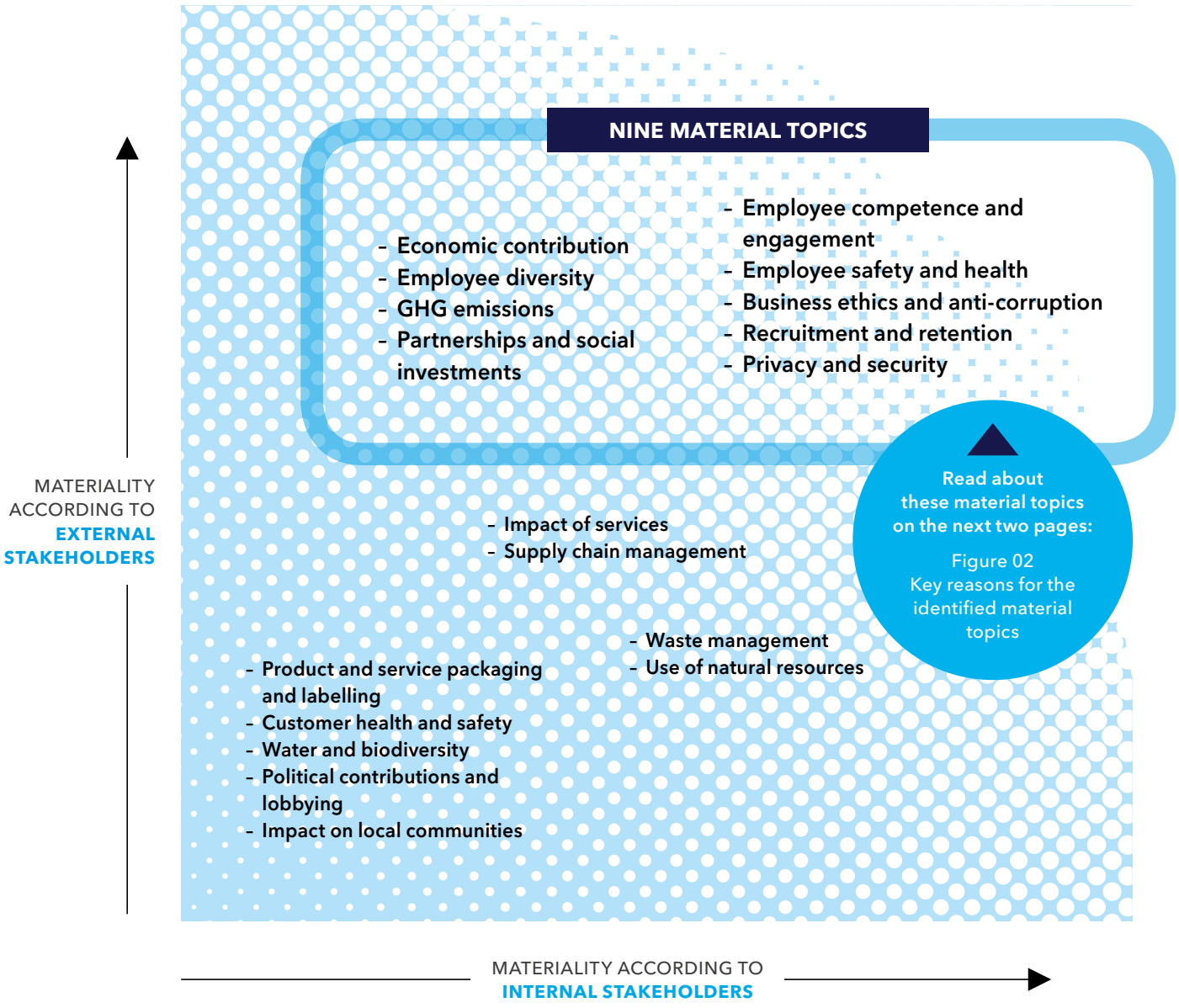
To direct our efforts to what our stakeholders find important, we conduct an annual materiality assessment review. This process is defined in a governing document and aligned with our risk- and brand-management processes. Due to downsizing and cost-cutting in 2016, the formal materiality assessment engaging external stakeholders was postponed until 2017. We welcome all input regarding important topics and strive to incorporate stakeholders' views in the way we run and develop our business.

MANAGING MATERIAL ASPECTS

DNV GL's materiality matrix reflects our key sustainability risks, impacts and opportunities. Our stakeholders globally are identified as employees, owners, customers, suppliers, governmental bodies, civil society organizations, industry associations, research institutions and media.

We give highest priority for what we do and report to the sustainability aspects identified as being of the highest materiality to both internal and external stakeholders.

FIGURE 01 **DNV GL SUSTAINABILITY MATERIALITY MATRIX**



When assessing the importance of external and internal stakeholders' views, we have identified key reasons for the identified material topics:

FIGURE 02 **KEY REASONS FOR THE IDENTIFIED MATERIAL TOPICS**

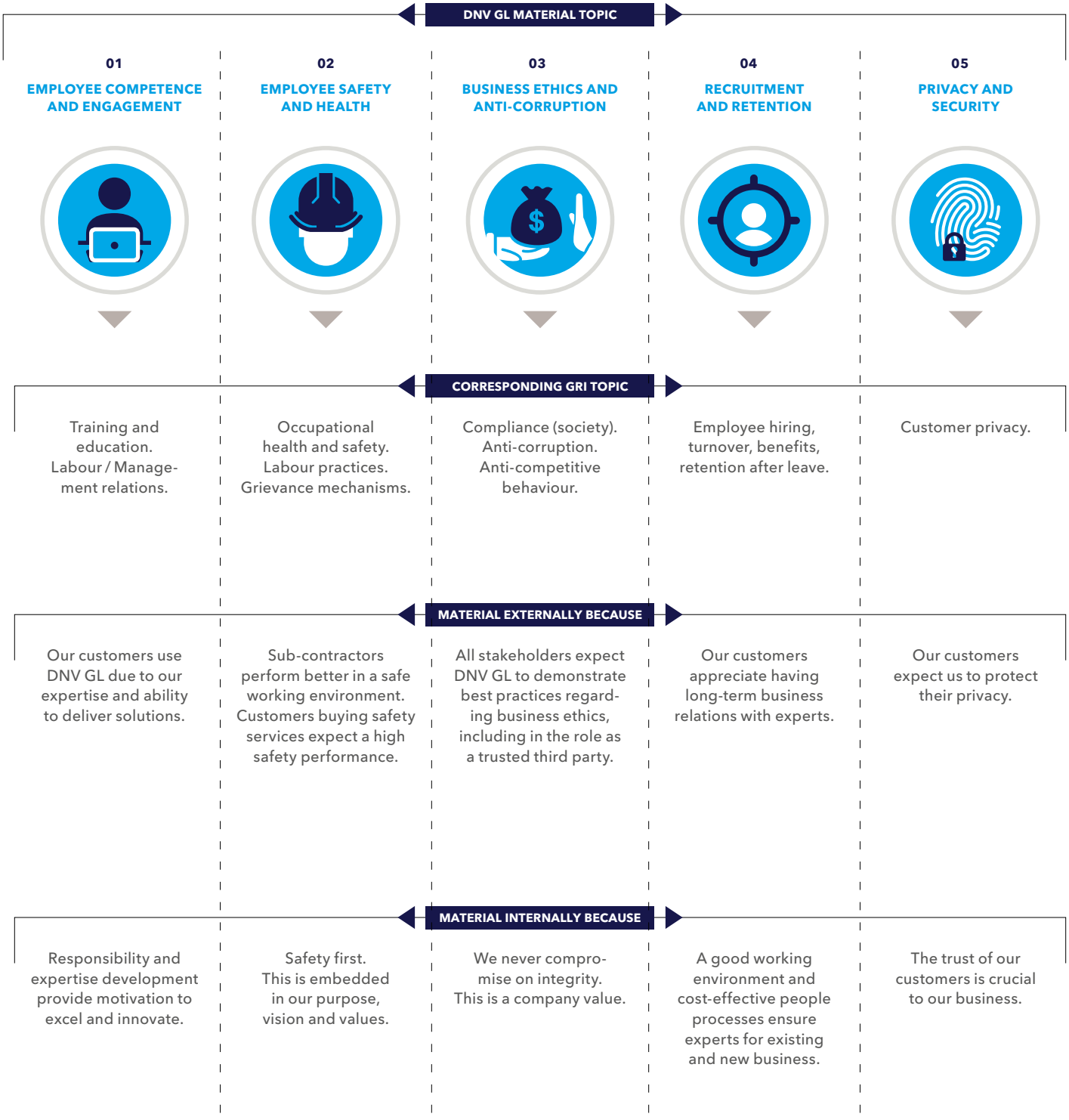
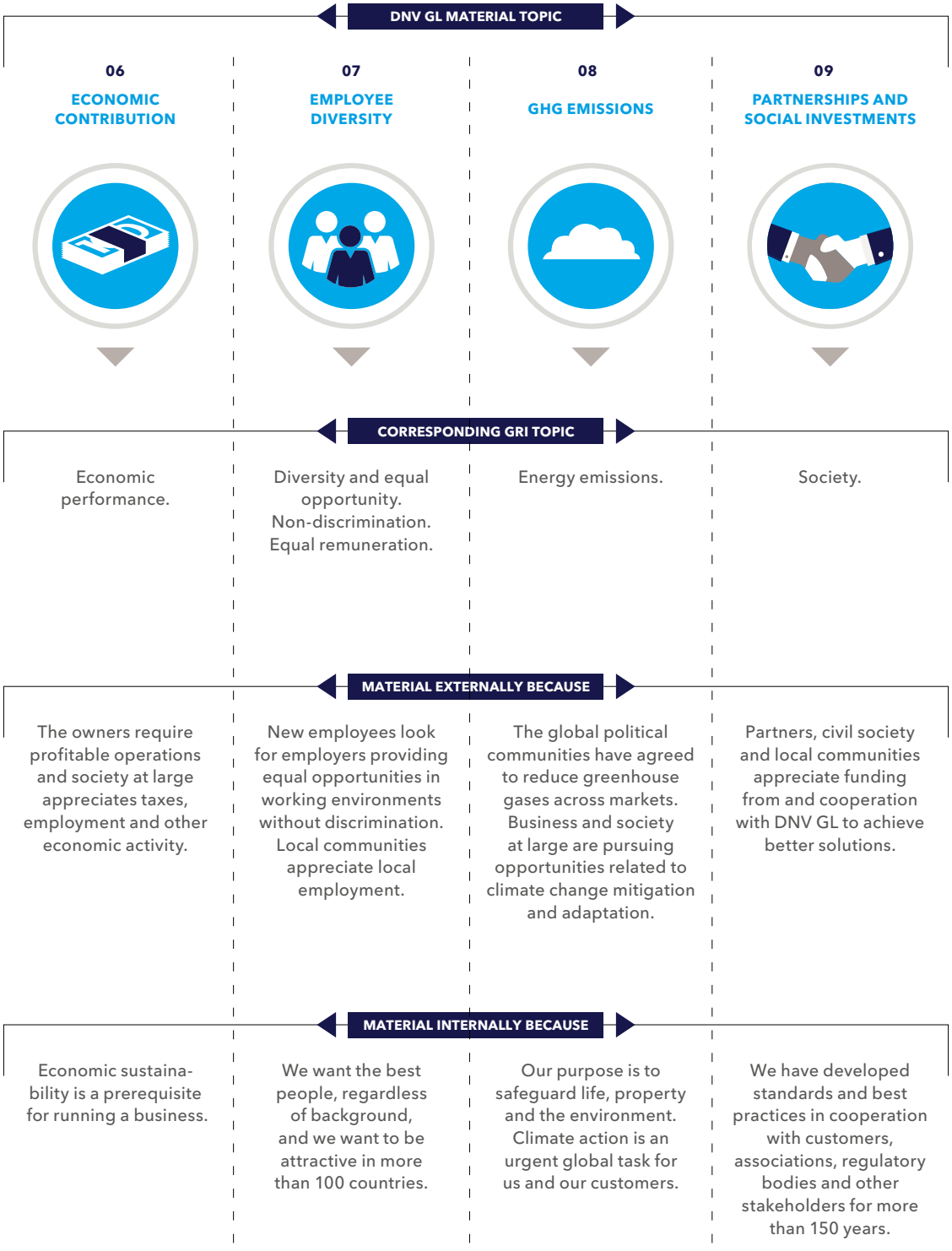
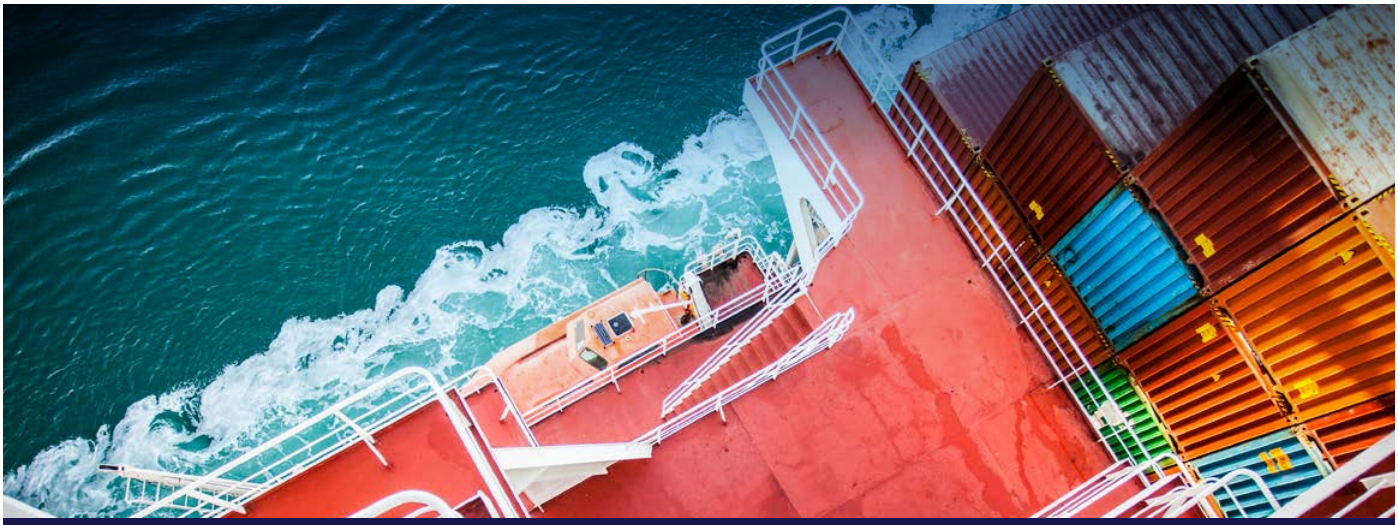


FIGURE 02 **KEY REASONS FOR THE IDENTIFIED MATERIAL TOPICS** CONTINUED



MARKETS

We assist our customers in identifying, assessing and managing their most critical risks. We enhance their business performance by assessing and advising on safety, quality, technology, business and sustainability aspects. We certify or verify compliance and drive new standards and best practices within five markets: maritime, oil and gas, energy, business assurance, and software.



MARITIME

MEETING EXTRAORDINARY CHALLENGES

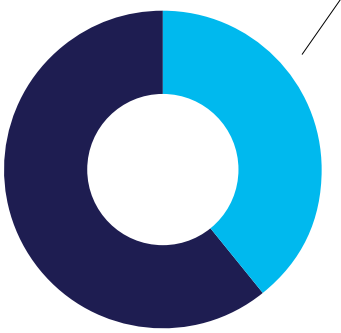
In 2016, the maritime industry faced a year of extraordinary challenges. Low freight rates, consolidation, tight financing, reduced contracting and new regulations forced adaptation and tough choices on every player in virtually every segment. In this environment, DNV GL looked for new ways to help customers succeed.

REVENUE

Maritime's share of total (20,834)

8,216

NOK MILLION

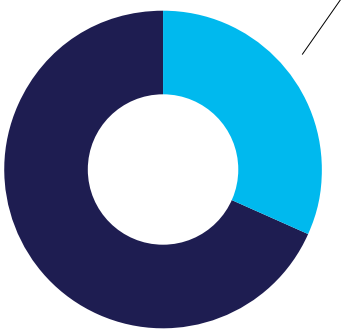


EMPLOYEES

Maritime's share of total (13,550)

4,302

EMPLOYEES



2016 REVIEW

Newbuilding orders at historic lows – success in cruise

Ship newbuilding contracts were historically low in 2016. Only some 940 new vessels (18.3 million Gross Tonnes (GT)) were ordered over the whole year – a drop of over 50% from 2015. In the major ship segments, only a few large projects were undertaken and competition among the classification societies was intense. Over the course of the year, however, DNV GL captured the largest share of ship-newbuilding classification contracts, with 27.2% of the ship tonnage contracted between owners and yards.

DNV GL achieved a strong showing in the cruise sector, which in newbuilding terms was once again one of the few bright spots in the industry, and was entrusted with most of the major orders in 2016. Highlights included two 56,000 GT cruise ships for Saga, two additional Quantum class 170,000 GT cruise vessels for RCCL, both to be built at Meyer Werft, and the first 201,000 GT 'Global' class cruise vessels – the largest cruise ships ever to be built in Germany.

The year also saw the delivery of the DNV GL-classed Harmony of the Seas to Royal Caribbean Cruises. Not only is this vessel the largest cruise ship ever to set sail at 227,000 GT and a length of 361 metres, Harmony of the Seas is also 20% more fuel-efficient than her sister ships.

4,090

Number of vessels
enrolled in our Emergency Response Service, supporting ships in distress.

First drone surveys

The inspection of ship tanks and holds can be a costly, time consuming and potentially dangerous operation. Using drones to check the condition of structural components has the potential to reduce survey times and staging costs, while improving safety for the surveyors.

In 2016, DNV GL carried out the first unmanned drone production surveys on the MV Apollo chemical tanker owned by Carl Büttner Shipmanagement GmbH in Bremerhaven, Germany. Two DNV GL surveyors used the drone to inspect 14 tanks over two and a half days – resulting in a saving to the customer of two to three days and Euro 14,000–28,000.

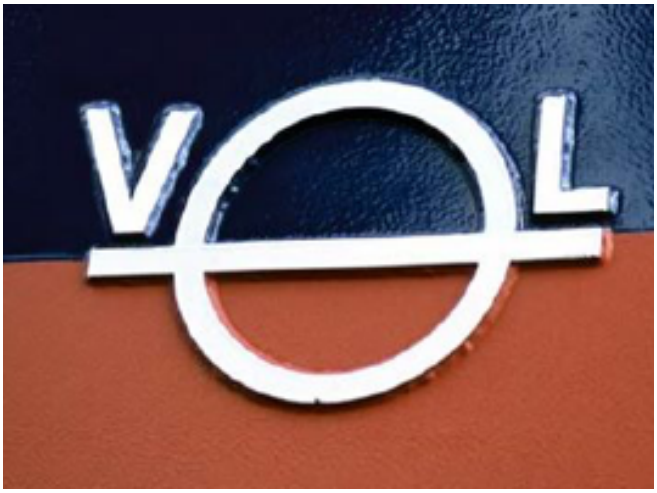
DNV GL is currently building a network of trained drone pilots based in Piraeus, Singapore, Houston and Shanghai. This will allow us to offer drone survey inspections from any of these hubs. At the same time, we are developing guidelines and updates to our rule set to reflect the use of remote inspection techniques.

New classification rules in force

Following an extensive consultation process, the DNV GL classification rules came into force in January 2016. Alongside 38 ship-type-specific notations, the new rule set features 72 additional notations. These notations ensure that vessels are designed and equipped for their intended operation while supporting the use of the latest technology and enabling shipowners and managers to stay compliant with national and international regulations.

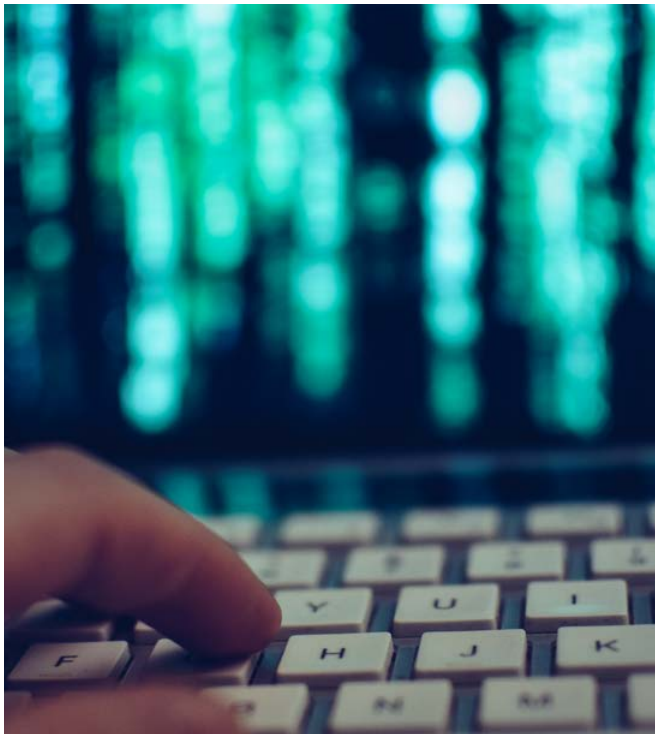
With input from some 800 stakeholders, the new rules are the first that can truly claim to have been developed in close cooperation with the industry. And this collaboration is continuing: 27 joint development projects focusing on the new DNV GL rules were launched in 2016.

We also introduced a new load line or Plimsoll mark with the letters 'VL'. Linking back to the history of the merged company, 'VL' stands for 'Veritas' and 'Lloyd'.



Cybersecurity emerges as key safety challenge

Ships and mobile offshore units are becoming increasingly reliant on software-dependent systems, making cyber security an important operational and safety issue for the maritime world. To help the industry address potential cyber hazards, DNV GL published a Recommended Practice (RP) on "Cyber Security Resilience Management". Developed in cooperation with customers, the RP provides guidance on risk assessment, general improvements to cyber security and the verification of security improvements and management systems.



The importance of cybersecurity was demonstrated when experts from DNV GL's Marine Cybernetics team, working with partners at the Norwegian University of Science and Technology (NTNU), contacted Siemens about a denial of service (DoS) vulnerability in a series of their programmable logic controllers. The vulnerability could have allowed hackers to shut down the drilling control system, a blowout preventer, power management systems, or an emergency shutdown system remotely.

A changing regulatory landscape

One of the factors impacting our customers this year was a trio of incoming regulations with the potential to transform the industry. They are a sign of things to come, as regulatory and societal pressures drive shipping to lower its environmental impact. These tough regulations also suggest that we will see a more demanding operational framework, with higher expectations from the industry, in the future.

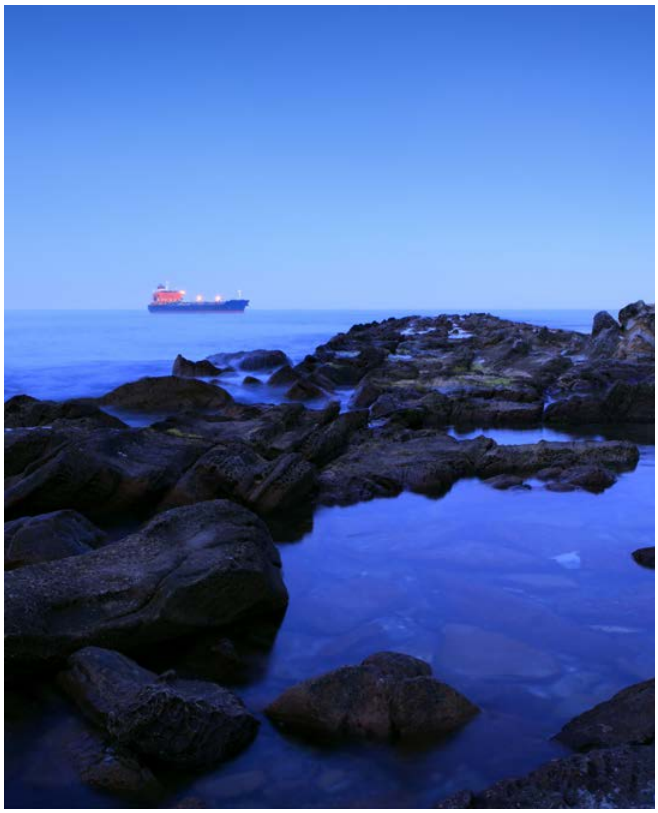
On 27 October 2016, the International Maritime Organization (IMO) agreed on a global fuel sulphur limit of 0.5% which will enter into force in 2020. Up to 70,000 ships may be affected by the regulation, according to IMO estimates. DNV GL issued a guidance paper to assist in navigating both the regulatory landscape and the alternatives for compliance and to provide an introduction to the choices and challenges ahead.

On 8 September 2016, the IMO's International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) was ratified. As a result, we expect that 8,700 DNV GL-classed vessels will require an International BWM Certificate by 8 September 2017.

DNV GL classification works to ensure the safe implementation of ballast water treatment requirements on board vessels. To help in this process, we developed the "Guide to Approval of Retrofit Ballast Water Management System Installations". The purpose of this is to provide a procedure for the retrofit installation of a ballast water management system on a DNV GL-classed ship, including the required approvals. In addition, we developed a decision-making tool that helps shipowners choose the system most suitable for their ship and, most importantly, supports them in avoiding costly systems which are not compliant.

Another important regulation is the EU MRV (Monitoring, Reporting and Verification) regulation, which aims to quantify and reduce CO_2 emissions from shipping. This will create a new kind of benchmarking system in Europe. Shipping companies must prepare a monitoring plan for any vessels affected by the regulation by 31 August 2017. From 1 January 2018, they will also have to monitor and report the verified amount of CO_2 emitted by their vessels on voyages to, from and between EU ports and will be required to provide information on energy efficiency parameters.

DNV GL prepared an overview of how the MRV regulation will affect the maritime industry and what shipping companies need to do to achieve compliance. DNV GL is also actively participating in the MRV sub-group sessions. Through our involvement and extensive knowledge, we are working to promote a practical MRV solution that is flag neutral, technically sound and accommodates the specific needs of the shipping industry.



20,000

customer cases handled by DATE experts in 2016.

97%

of customer cases were closed within the time frame set by the customer.

The new giants

Over the last 50 years, containers have enjoyed a dramatic growth in capacity. As the leader in the containership market DNV GL looks at how containerships have transformed over the years, while at the same time reshaping the landscape of global trade.

458
meters

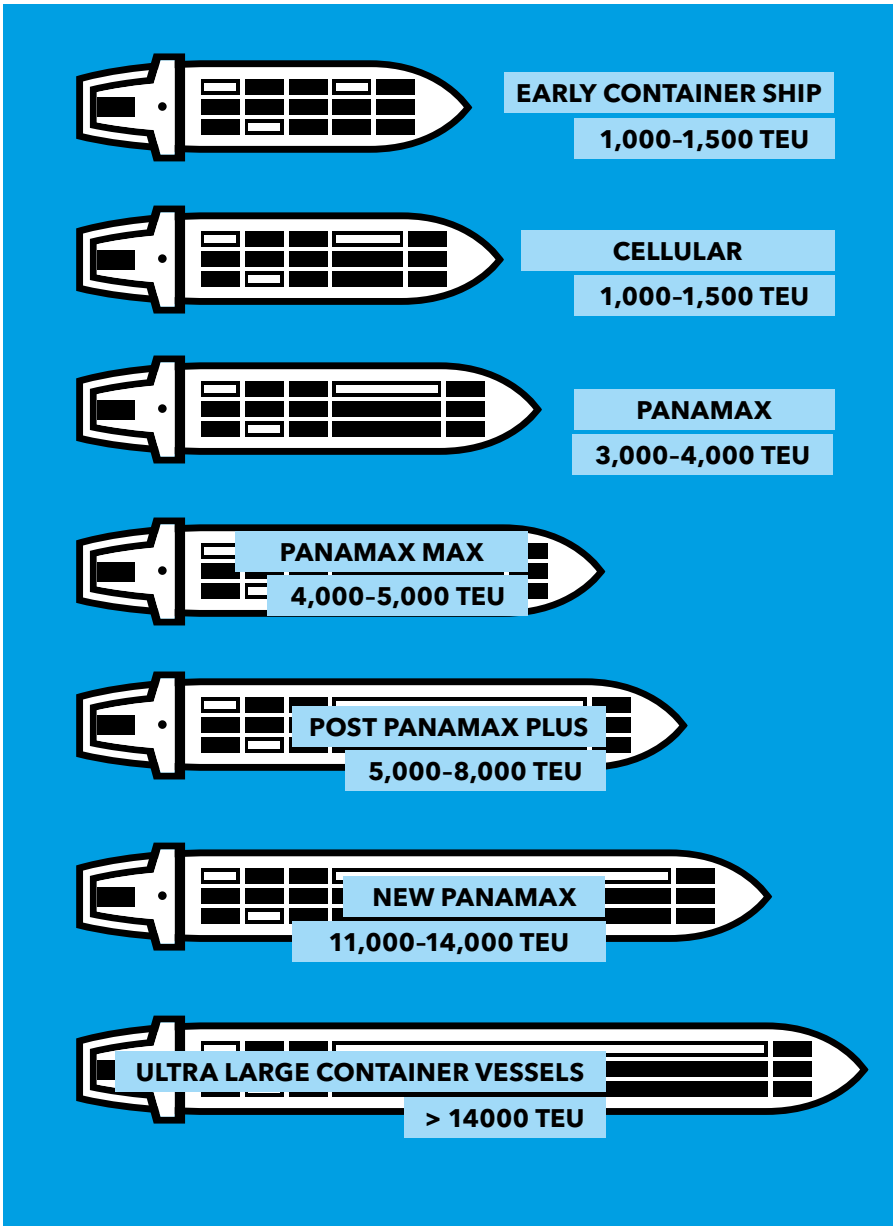
Containerships are growing but still haven't reached the record longest ship, the Knock Nevis at 458 m in length.

21,000
TEU

The largest to date is an ultra-container ship that can transport 20,150 containers, with a length of 400m and breadth 58.8m. Deliveries at the end of 2017 and 2018 will be over 21,000 TEU

50%
lower CO_2 emissions

One of the advantages of a 20,000 TEU vessel is that the CO2 emissions generated by transporting each container are 50% lower than a ship that carries 8000 TEU



1,200%
growth in carrying capacity

Container ship carrying capacity has grown over 1200%, roughly over the past 50 years. (1968 = 1530 TEU). If this same could be said of other ship types, then we would have cruise ships that held over 26,000 passengers (today's largest is 6700, in the 1970's 2200) and ultra large tankers that hold over 50 million barrels of oil (today's largest = 3.1million barrels).

240%
growth

Since 2006, the container fleet has grown on average by 9% per annum in capacity terms and the total growth in that 10 years is 240%. However, the number of vessels has only increased by 3.7% each year.

40%

The fleet now totals over 20 million TEU – DNV GL vessels account for over 40% of that (8million TEU) plus.

62

Almost half (62 out of 147) of all container ships on order (larger than 3000TEU) are being built to DNV GL class.

SUSTAINABLE SOLUTIONS – CASES FROM 2016

To help our maritime customers enhance the sustainability of their businesses, DNV GL works to develop, implement, certify and enable new technologies, systems and practices that let them improve their safety, environmental performance and efficiency.

Blue North improves crew safety and energy management

The new longline fishing vessel Blue North was delivered in 2016 to DNV GL rules. A 'moon pool' for bringing the catch and longline gear on board means that the crew are not exposed to rough seas, freezing temperatures, darkness and the risk of being swept overboard.

The diesel-electric propulsion system powers azimuth thrusters, resulting in fuel savings of up to 30% and an overall reduction in operating expenses. The engine-, cooling-, and heat recovery system recycles the water used to cool the ship's engines into potable water while capturing heat. This significantly reduces the energy demand and means wastewater is not released back into the ocean.

Partnership to develop the Ecoship cruise ship

DNV GL signed a memorandum of understanding with the Japan-based international non-profit NGO Peace Boat, forming a partnership to develop the Ecoship cruise ship. The Ecoship design is based on biophilic principles – using the solutions nature has evolved. It incorporates cutting-edge technology to improve efficiency, reduce waste and minimize environmental impacts.

Some of the most notable features include: ten masts to harness wind energy for propulsion, solar-panel-covered sails and a 6,000 m^2 top-deck solar farm, a closed-loop water system to reuse, purify and re-purpose water, and waste heat recovery systems which it is hoped can reclaim 80% of the energy normally lost to the air and water.

First 'Clean Lay-up' declaration issued

DNV GL issued the first 'Clean Lay-up' declaration under its newly released classification guideline. The guideline enables shipowners and managers to demonstrate that their vessel is laid up in a responsible manner and in a way that respects the local environment while fulfilling all safety requirements.

Bluewater's Munin FPSO, laid up in Labuan, Malaysia, recently received the first declaration of this kind. The new guideline brings the best practices in the field together. It addresses a broad spectrum of issues, including noise, air emissions (NOx and SOx), onboard waste and hull cleaning.

ECO Solutions reduces carbon footprint

DNV GL's ECO Solutions line has greatly enhanced our customers' sustainability, especially in terms of reducing carbon footprints. To date, more than 2,500 vessels have been enrolled in one or more of DNV GL's ECO Solutions. The solutions cover all ship types and enable owners and operators to examine every aspect of a vessel's performance.

In 2016, DNV GL's fleet performance management solution ECO Insight added a range of new analytical and reporting features to this market-leading portal, as well as becoming an incentive partner to the Environmental Ship Index.

First vessel certified according to new IMO Polar Code

Because of less ice and easier access to polar waters, IMO saw the need for a common set of minimum requirements for vessels entering Arctic and Antarctic waters from January 2017.

In 2016, after a successful survey, DNV GL and the Danish Maritime Authority confirmed that the AHTS Magne Viking was officially the first vessel confirmed to be in compliance with the new IMO Polar Code.

DNV GL also worked with the Norwegian Maritime Authority to issue the first polar ship certificate to a Norwegian ship, the platform survey vessel M/V Stril Polar.

OIL & GAS

DRIVING EFFICIENCY FOR THE LONG TERM

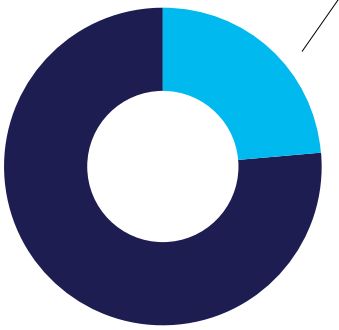
As our customers adapt to the new reality of 'lower for longer' oil and gas prices and highly volatile energy markets, we help them to identify cost savings and still remain safe and sustainable for the long term.

REVENUE

Oil & Gas' share of total (20,834)

4,955

NOK MILLION

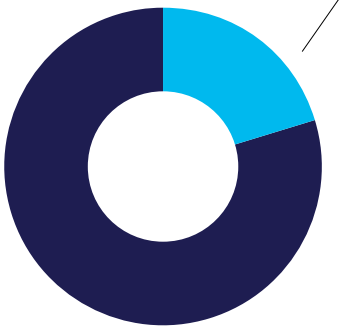


EMPLOYEES

Oil & Gas' share of total (13,550)

2,758

EMPLOYEES



2016 REVIEW

An industry in flux

Nearly three-quarters of senior industry professionals prepared their company for a sustained period of low oil prices at the beginning of 2016, according to DNV GL research. Oil prices fluctuated between USD 27–58 per barrel for Brent Crude across the year and gas prices remained low on a global scale. The 2016 spot price averages for JKM, NBP and Henry Hub were respectively 26%, 27% and 3% lower than the 2015 averages.

This has prompted painful cost-cutting measures, such as head-count reductions, capex freezes and a squeezed supply chain. Large upstream projects were cancelled, postponed or radically re-designed to become economically viable. At the same time, investments in new refining capacity increased for the first time in years and it is estimated that 2016 capacity additions will be almost 70% higher than the 2015 additions. New LNG and regasification terminals were also developed, reflecting the supply of low-priced products.

Reinforcing our business strategy

The challenging market has also affected DNV GL. Wide-ranging cost-cutting was implemented in line with falling revenues, and the Oil & Gas business area was re-sized and restructured to increase efficiency while retaining core competencies.

We stayed close to customers to ensure that we remain relevant to them in a new market reality, and our 2016 total sales volume was only marginally behind the 2015 order intake. We focused on guiding the sector towards long-term sustainability by assisting organizations to reduce capital and operating expenditure by cutting complexity, embracing digitalization, increasing collaboration and driving standardization.

49%

of senior oil and gas professionals agree that their organization needs to embrace digitalization to increase profitability (source: DNV GL).

Growing our position in the mid- and downstream sectors

Our technical expertise continued to help the gas industry develop sustainable solutions for the long term. This includes handling the future gas supply from mixed sources. Our Real-Time Networks project with UK gas distributor SGN helps to accurately measure energy flows within the network and progressed towards field trials in 2016.

We also commenced a new study on LNG markets in the European Union (EU), part of an EU co-financed project to develop a safe, efficient, small-scale bunkering and LNG-refulling network in Iberia.

As the emphasis on safety grows in China, DNV GL presented the results of an International Safety Rating System (ISRS) assessment of four refineries to representatives of the national safety authorities. The results were used to depict the status, gaps, challenges and improvement areas for the country's HSE performance.

The industry's first technology qualification scheme to assure the accuracy of gas flow meter systems in field conditions was brought to market by DNV GL in 2016. It draws upon specialist expertise and equipment at our multiphase-flow and high-pressure, natural gas flow laboratories.

We also celebrated the 40th anniversary of DNV-OS-F101, the first and still relevant global standard for the design, construction and operation of offshore submarine pipelines. It has been used for high-profile projects, such as Langeled and Polarled in the North Sea, Australia's Wheatstone and South Stream in the Black Sea.

We further strengthened our position and order book in the pipeline segment across Europe and the Americas. Among several projects, we are currently verifying the design, engineering, materials, compressors, main equipment, construction and start-up for Phase Two North of Mexico's Los Ramones pipeline, in addition to providing inspection services in China for the Phase Two South.

Cutting complexity in the upstream sector

Services to help customers cut complexity and cost upstream were in high demand in 2016. Contracts won include a significant Master Service Agreement with Norway's Statoil to provide a broad scope of safety, platform technology, structural reanalysis and pipeline technology studies; the asset integrity inspection management of Hess Denmark's South Arne field; and installation engineering services for a current converter platform for China's COSCO SHIPPING.

In Australia, DNV GL began work to support the transition of the Ichthys LNG mega project from the project investment phase to operation in 2017. We also won a significant contract with Petroleum Development Oman to provide site inspection services for oil, gas and infrastructure projects and vendor inspection in 35 locations globally.

The low oil price has prompted increased asset divestment and decommissioning. The five largest international oil companies targeted nearly NOK 150 billion in asset sales in 2016. We have therefore seen a rapid increase in demand for our technical, commercial, environmental and safety due diligence services globally.

Drawing upon more than 10 years of experience, from desktop assessments and offshore supervision to marine services and environmental and safety studies, we also contributed to the development of an online tool for Decom North Sea to facilitate knowledge sharing.

Technology foresight enabling digital transformation

DNV GL's strategic ambitions include leading the oil and gas industry safely through its digital transformation. We work with companies across the supply chain to remove cultural and organizational barriers, building trust in and improving the security of data for enhanced safety, cost efficiency and sustainability.

Demand for DNV GL's cyber security expertise has grown as attacks on oil and gas assets and operations increase in scale and complexity. Among several projects, our experts are assisting Total E&P Norge with cyber security risk management offshore Norway.

Our customer interface for digital services, My DNV GL, now offers digital standards, recommended practices and guidelines. One example is the energy industry's only standards for the warranty approval of marine operations. Other services available from the customer portal include MyQRA, a tool that unlocks detailed information from quantitative safety risk assessments to help professionals better understand hazards and make decisions based on real-time information.

40th

anniversary of DNV-OS-F101 in 2016.

This is the industry's first and still relevant global Standard for design, construction and operation of offshore submarine pipelines.

2,900

tonnes load capacity

Our new laboratories in Bergen, Norway, are home to one of the world's largest tensile testing machines.

12.8 USD million

The cost of **cybercrimes** that energy and utilities companies face each year in lost business and damaged equipment, according to Ponemon Institute research for HP Enterprise Security (October 2015).

Leveraging innovation through collaboration

We invest 5% of our revenue in research and innovation. We want our experts to stay at the forefront of technical development, to provide long-term foresight for customers and to innovate in collaboration with customers and industry players. We initiated 43 new oil and gas joint industry projects (JIPs) in 2016, including one to develop best cyber security practice for oil and gas installations.

Phase I of a DNV GL-led JIP to promote a global standard for the safe and cost-effective engineering and construction of offshore oil and gas installations delivered four recommended practices in collaboration with South Korean fabrication yards. These enable significant cost reductions and increase predictability without compromising on quality and safety.

Managing safety and risk – putting our labs to the test

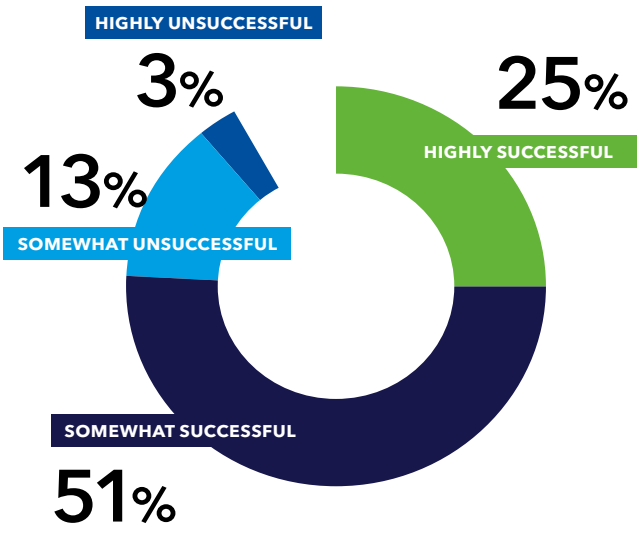
Best-practice safety and risk management remain at the core of our industry, and DNV GL has maintained its position as a leading technical advisor. Our global network of 14 laboratories has now investigated more than 2,000 incidents and failures. In 2016, these ranged from investigating the catastrophic failure of an FPSO gas turbine to domestic explosions in the UK gas distribution networks.

We also invited companies to share experiences through an ongoing JIP to identify and provide access to updated trends based on data regarding failure mechanisms, root causes, materials and equipment. A systematic approach to capturing and sharing learnings from past failures allows this knowledge to be used as decision support in early-phase developments.

We further strengthened our laboratory capacity and capabilities, opening new facilities in Bergen, Norway, which have one of the world's largest tensile testing machines. A new training facility at our Spadeadam Testing and Research Centre in the UK has given visitors the unique chance to see, hear and feel the full impact of ignited hydrocarbon releases.

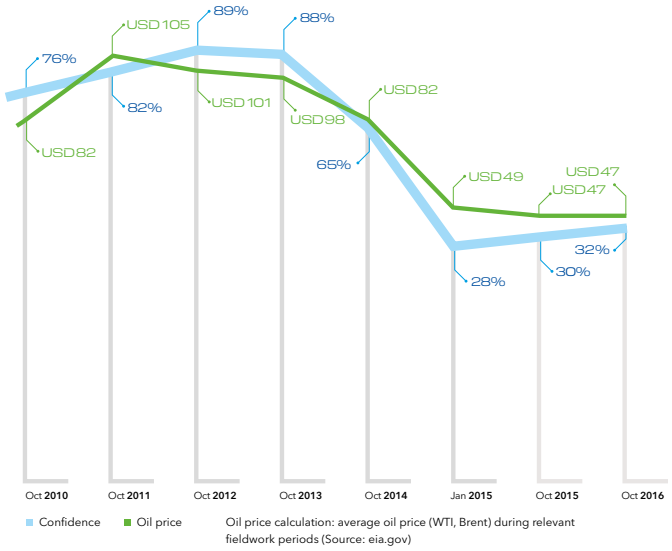
THE OUTLOOK FOR THE OIL AND GAS INDUSTRY IN 2017

How successful have organizations been in achieving cost efficiency targets in 2016?



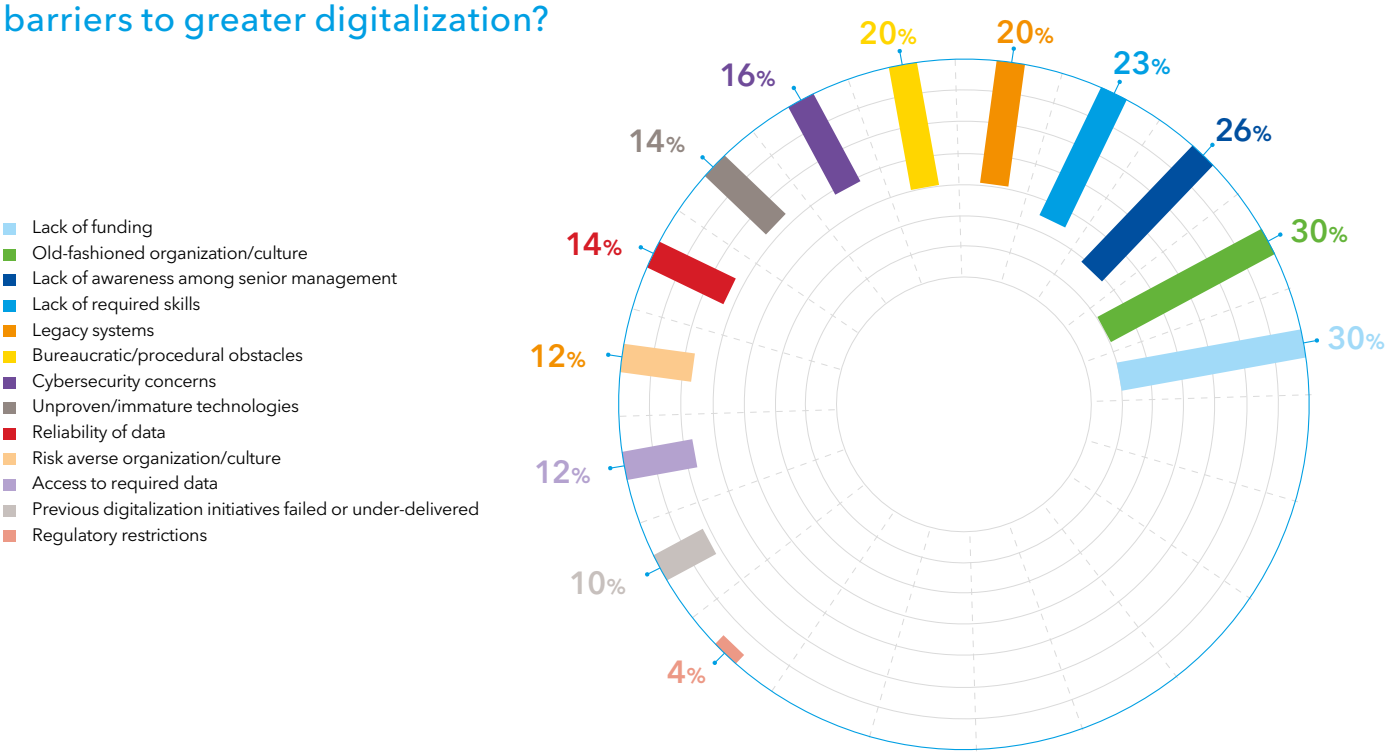
Source: Short-term agility, long-term resilience: The outlook for the oil and gas industry in 2017: dnvgl.com/industryoutlook2017

Oil price versus overall industry confidence



Source: Short-term agility, long-term resilience: The outlook for the oil and gas industry in 2017: dnvgl.com/industryoutlook2017

What are organizations' primary barriers to greater digitalization?



SUSTAINABLE SOLUTIONS – CASES FROM 2016

To maintain its investor appeal and social licence to operate, the oil and gas sector must meet international and national targets on climate change while continuing to provide affordable energy. DNV GL helps customers to meet this complex challenge.

Natural gas – an ideal partner for power generation

We see natural gas as an ideal partner for power generation from renewables and continued our long-standing practice of placing strategic importance on research and innovation on gas-related topics.

This includes cost-efficient solutions for enhanced reliability up-, mid- and downstream. Together with customers, we run several joint industry projects related to the future for gas in the energy mix.

Global oil and gas resource map

We analysed the cost-effective CO_2 abatement potential for installations offshore Norway, and launched a global resource map summarizing the regional environmental, social and economic impacts of exploiting oil and gas resources. Download our two new position papers for advice on how to reduce the environmental impact.

Providing expertise in CCS technology

We continued to provide expertise in carbon capture and storage (CCS) as a necessary technology to mitigate climate change. The Norwegian CLIMIT Programme and Australian Department of Industry, Innovation and Science awarded DNV GL and Energy Pipelines CRC just over NOK 40 million for a test programme to improve the safety and efficiency of CO_2 pipelines.

First global guideline for hydrocarbon leak-detection

Together with partners, we also issued the first global guideline for hydrocarbon leak-detection systems offshore; produced guidance for designing cost-efficient, sensor-based environmental monitoring systems for offshore oil and gas; and showed how wind-powered water injection for enhanced oil recovery offshore can be clean, reliable and cost effective.

ENERGY

DRIVING THE ENERGY TRANSITION

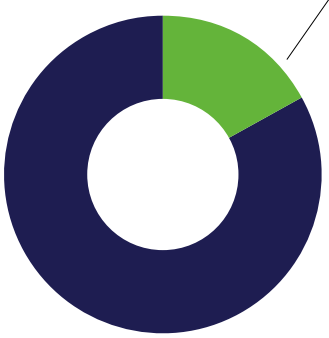
Solar and wind energy became price competitive in 2016, pushing the energy transition forward. Larger flows of renewable energy, digitalization and the electrification of transport, industry and households make power networks more complex. We help the energy industry to manage the complexity of this fast-changing environment.

REVENUE

Energy's share of total (20,834)

3,583

NOK MILLION

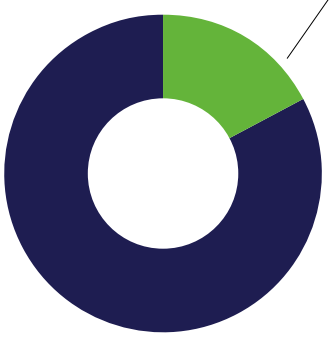


EMPLOYEES

Energy's share of total (13,550)

2,344

EMPLOYEES



2016 REVIEW

Maximizing the potential of wind

The year 2016 can be described as a remarkable year for renewables. In some countries, wind-generated electricity overtook electricity generated from coal. Meanwhile, the cost of building offshore wind farms fell to new, record-low levels. The sector reduced offshore-wind costs faster than expected, but lower costs and increased competition put pressure on product quality and delivery. Standards and certification help to create confidence in new products.

In 2016, we successfully certified an offshore wind farm and a first-of-its-kind offshore accommodation platform and launched a new set of renewables certification services specifications. We continued to gain better insights into the costs and feasibility of wind projects through a validation of wind turbine turbulence models and coupled analysis of floating offshore wind turbines.

17,000+

ENERGY EFFICIENCY ASSESSMENTS

have been conducted since the assessment programme was implemented in 2015 by Consumers Energy.

6 GW solar power

Installed solar power being SCADA-based controlled and monitored by DNV GL.

1 GW solar power

DNV GL has supported the securitization in eleven PV project portfolios globally representing 1 GW.

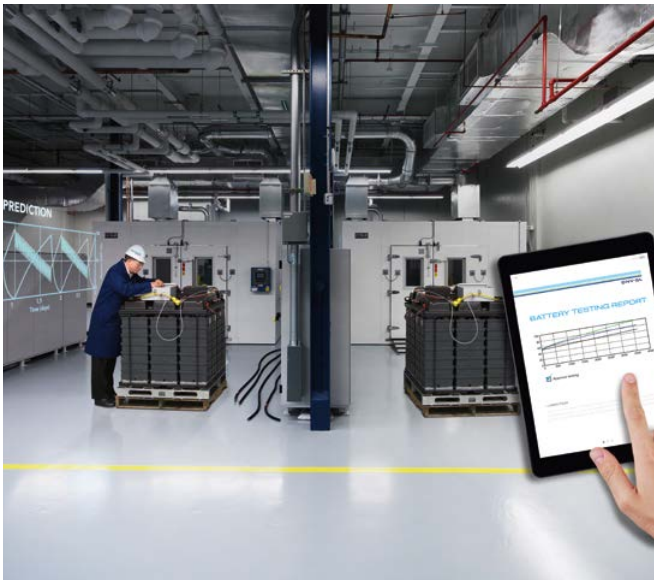
Improving quality and driving down solar costs

During 2016, we strengthened our offering to a variety of players in the increasingly competitive solar power industry. We supported utilities in developing utility-scale solar plants and helped investors in the financial securitization of these projects. The rapid drop in solar panel prices has led to fierce competition among solar panel manufacturers, resulting in varying product quality and reliability.

DNV GL developed the Product Qualification Programme to mitigate risks for photovoltaic (PV) equipment buyers and solar plant investors by providing independent and reliable performance data. Adding to our services to help drive down the cost of solar power even further, we are developing a global, satellite-based irradiance database for any solar plant location in the world, suitable for use as the primary input to energy production analyses.

Backing energy storage for grid flexibility

Energy storage is a promising option for responding to the variability of renewable generation and creates flexibility in the power grid. However, storage is a complex matter in the energy value chain. As an example of our storage advisory services, DNV GL conducted an in-depth analysis of the multiple benefits of pumped storage hydro for the UK and the many issues that obstruct its development. Based on our GRIDSTOR Recommended Practice, we performed a technology assessment for an investor and helped a utility to develop an energy storage service offering.



Tackling grid complexity

One of the most pressing challenges today is the integration of renewable energy sources into interconnected grids, creating a complex system made up of many parts that is difficult to control, monitor and manage in real-time. We regularly investigate power failures in grid operations. DNV GL has issued a position paper about the system validation of active control systems, or power cybernetics, as a key to manage operational risks in critical power systems.

2016 was the first year in which a 700+ kV transformer underwent a full short-circuit test in our KEMA Laboratory. We helped system operators to interconnect grids – for instance in the HVDC COBRA cable project – and to install advanced decentralized monitoring and control systems, as well as backups in case of an emergency. We also developed new tools to better monitor the health of assets using the available SCADA infrastructure.

Protecting cyber vulnerabilities

Electricity grids are a key part of a country's critical infrastructure. As networks become smarter, more complex and decentralized, they become vulnerable to cyberattacks. For this reason, DNV GL opened a Technical Assurance Laboratory in Peterborough, UK – its fourth worldwide. The facility is equipped to perform a wide range of testing activities on different technologies.

Services offered are: smart meter, smart home, smart grid products and cyber security testing for a multitude of products, including specialized vulnerability analysis using leading-edge fuzz testing tools which have been developed in-house. We are one of the leading parties in the development of test tools for cyber security standards.

90%

We are involved in 90% of all offshore wind farms as a certification body.

6.1%

emissions reduction
are reported by the San Mateo County supported by user-friendly tools developed and maintained by DNV GL.

Running award-winning efficiency programmes

The origin of energy efficiency programmes can be traced back to the energy crises in the 1970s. Since then, energy efficiency has evolved to become a highly valuable element, with significant energy savings and economic benefits. We run different multi-year and award-winning energy saving and climate action programmes, mainly in the US. In Massachusetts, 11 million people participate in energy saving programmes and in Michigan we conducted over 17,000 energy saving assessments in 2016.

The San Mateo Climate Action Planning programme reported a reduction in greenhouse gas emissions of 6.1%. In addition, DNV GL used its Rapid Assessment Management Programme to help utilities globally better understand and bundle profitable energy saving measures. In Singapore, we support the Smart Energy Community project based on knowledge gained from the PowerMatching City project in the Netherlands.

765 kV

KEMA Type Test Certificate
First-ever ultra-high voltage power transformer (315 MVA, 765 kV) successfully passed the dynamic short circuit tests in our laboratories.

40

DNV GL has executed 40 qualification programmes across 30 manufacturers for the PV module reliability scorecard.

Converting data into new insights

Digitalization and big data are changing the energy industry. We apply and expand our high-level analysis services to convert data into valuable information for our customers. We develop bottom-up forecast models for electricity and water demand. In the Middle East, we support the deployment of monitoring equipment to collect information on electricity and water consumption behaviour, driving the efficient use of resources.

In the field of renewable energy supply, we are applying SCADA-based condition monitoring to help customers take decisions. We have developed a renewable asset benchmarking tool and a solar irradiance database and our asset health risk model for electricity grids is being integrated with our Cascade monitoring tool to expand our grid asset management capabilities and still provide customers with a manufacturer-independent tool under one licence and with one user interface.

Stronger position through acquisitions

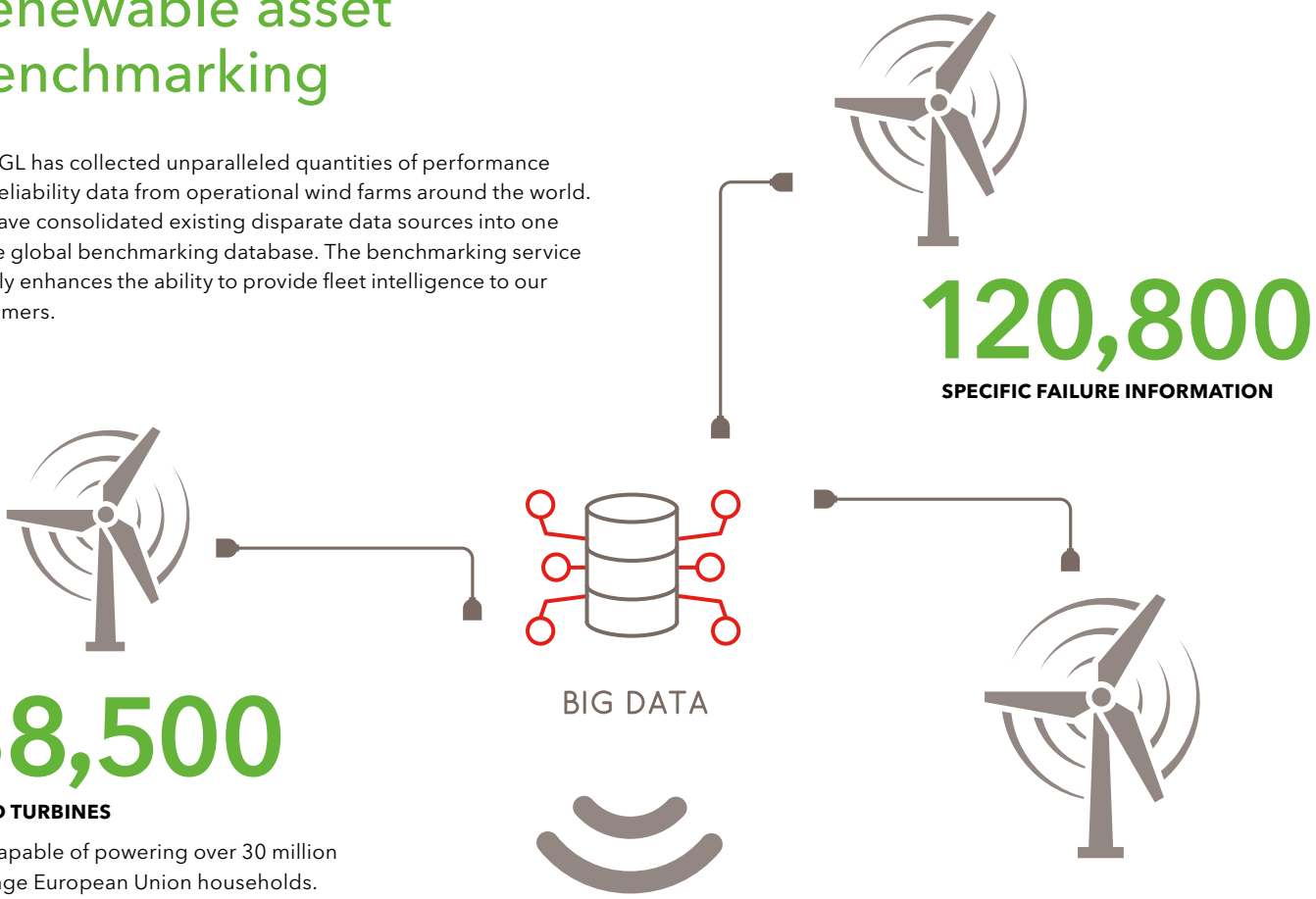
In January, DNV GL acquired Gothia Power: this premium technical advisor, offering advanced analysis and measurements for power production, electricity transmission, distribution and consumption, strengthens DNV GL's service portfolio and expertise in supporting energy companies' ongoing integration of renewables into transmission and distribution grids.

In July, DNV GL acquired GreenPowerMonitor (GPM), a leading provider of solar monitoring, control and asset management systems for renewable power plants. GPM brings knowledge and technical expertise as well as digital delivery platforms and data-driven services.

At the end of 2016, GPM monitors over 2,000 facilities ranging from 2 kilowatts – 266 megawatts for over 200 customers in 50 countries. The total installed capacity we monitor adds up to over 6 gigawatts.

Renewable asset benchmarking

DNV GL has collected unparalleled quantities of performance and reliability data from operational wind farms around the world. We have consolidated existing disparate data sources into one single global benchmarking database. The benchmarking service greatly enhances the ability to provide fleet intelligence to our customers.



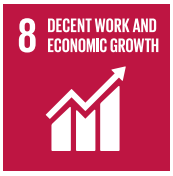
SUSTAINABLE SOLUTIONS – CASES FROM 2016

Decarbonization of the energy sector is the mainstream of our energy services. Renewables are attracting investors, creating jobs and connecting people to electricity globally. We help our customers to develop, operate and maintain renewable energy projects, keep the grids operational and manage the use of energy by inspecting, testing and certifying products and by running climate action and energy saving programmes.

Safe, reliable and sustainable supply of energy

In power generation, investments in renewables are increasing, and wind and solar PV generate power at competitive price levels. We help numerous customers around the globe to develop renewable energy projects.

By playing an active role in industry associations, committees and working groups, we help to develop international standards to guarantee a safe, reliable and sustainable supply of energy. We also provide technical and management advisory services, like to Parc Cynog solar farm in Wales.



Supporting renewable energy projects

Within renewables, including large-scale hydropower, the number of jobs is being estimated at 10 million. Most jobs are in solar PV, followed by wind. By supporting renewable energy projects, including the construction, operation and maintenance of generation assets, we create jobs for highly skilled people.

With the acquisition of GreenPowerMonitor, we now employ 150 solar experts and are one of the largest independent solar service providers. This includes monitoring and control of 6 GW of solar generation globally.

Implementing cyber-security measures

The penetration of new renewables into the grid is becoming significant, challenging the industry to maintain the quality and security of supply. We help our customers to update their data acquisition and energy management systems to deal with the grid's changing behaviour.

As digitalization moves on, systems are becoming more vulnerable to cyber-attacks. We help our customers to secure their operations by implementing cyber-security measures and tested equipment.

Singapore-based smart energy community testbed

Inspired by our PowerMatching City project, we partner with external stakeholders to participate in and gain knowledge and experience of developing a Singapore-based smart energy community testbed in a university campus.

The testbed gives insights into smart-grid technologies' and concepts' impact on communities and sustainable energy end-use.

Supporting energy efficiency in Massachusetts

We support the US state of Massachusetts in running its energy efficiency programme, which has over 11 million participants, to achieve energy efficiency savings and maximize the economic and environmental benefits.

In the EU, we support the industry in implementing Article 8 of the Energy Directive, leading to energy savings on an industry level.

Tools to examine climate action planning measures

In California in the US, we run an award-winning energy saving and climate action programme. We have developed and maintain several tools to examine climate action planning measures, including methodologies for calculating each measure's costs, benefits and greenhouse gas emission reductions. The project has already reported an overall decrease in county-wide emissions of 6.1% from 2005 to 2013.

BUSINESS ASSURANCE

SUSTAINABLE ASSURANCE TO BUILD TRUST

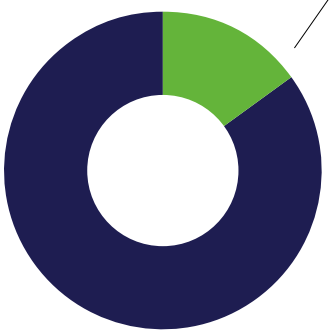
The need for independent third-party assurance continues to grow – driven by stakeholder demands, legislation and increasingly complex and global value chains. DNV GL continues to partner with companies operating with trade in all forms to build trust and respond to demands for more sustainable operations.

REVENUE

Business Assurance's share of total (20,834)

3,146

NOK MILLION

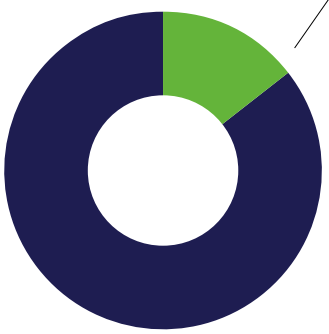


EMPLOYEES

Business Assurance's share of total (13,550)

1,960

EMPLOYEES



2016 REVIEW

Sustainability and analytics in certification

Management system certification services account for the lion's share of our Business Assurance portfolio and performed well in 2016. DNV GL continues to hold a leading market share position. The International Standards Organisation (ISO) revised the ISO 9001 and ISO 14001 standards in 2015. In 2016, revisions were also made to sector-specific quality management standards, such as the aviation, space and defence standard (AS9100D) and the automotive standard (IATF 16949:2016). Many of our customers are in the process of implementing needed changes in order to transition to these new standards before 2018.

DNV GL fully supports ISO's drive to incorporate sustainability into its standards. We are helping customers make an efficient transition to the new standards to ensure that management system certification contributes to more sustainable operations. During the year, we worked hard on a new key innovation called Lumina™. This is a set of performance benchmarking tools providing more in-depth insight into a company's performance and comparisons with peers.

Applying big data analytics to the millions of audit data collected provides unique market-based insight that companies can use to identify and prioritize areas of improvement. Lumina is accessible through the 'My DNV GL' customer portal together with other customer-facing applications that allow customers to manage their certification audits and communicate their certification to stakeholders.

1.6 mill.

The number of findings in our database to which we apply advanced analytics to provide customers with more insight from every management system audit.

Building digital trust

The trend we see is that the need for assurance is increasing and evolving into new areas, especially in the digital space. In addition to Lumina, we explored other big data concepts in 2016. Within life sciences, we explored and developed data custodian roles in the aquaculture and healthcare sectors, where disruptive technologies hold the potential to deliver substantial impacts on human life and the environment as well as social and financial gains.

However, as such disruptive technologies continue to evolve, there is a need to build trust around digital platforms for storing, managing, sharing and analysing data such as personal patient data and commercial data. This represents an opportunity for DNV GL and for the industry.

Expanding our assurance portfolio

DNV GL also registered significant growth in areas such as product assurance (14%), supply chain management (14%) and other assurance services contributing to responsible consumption and production. Within our product assurance service lines, we expanded our capacity in key global markets, covering North American and international assurance schemes. We also rationalized our service portfolio to focus on high-performing services in growing and emerging markets. We continued to expand our leading position in functional safety in Korea and Japan.

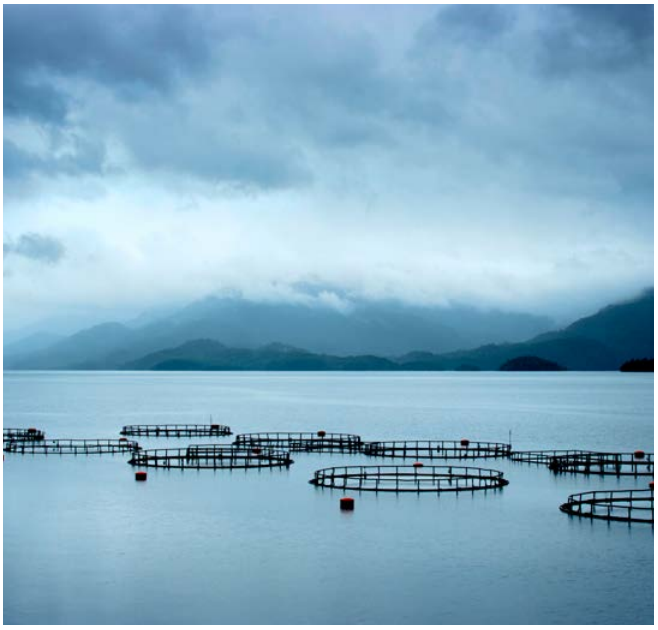
DNV GL's supply chain services performed exceptionally well. We continued our work to help shape the market, not only through audit services, but also by participating in efforts to improve the framework around social audits. In 2016, DNV GL became a member of the Association for Professional Social Compliance Auditors (APSCA) and engagement will continue with involvement in social audit standards.

As regards other assessment services, green- and climate-bond services continued to grow, with DNV GL verifying 10% of the USD 188 billion of green bonds issued to date. With the value of issuances in 2016 almost double the 2015 total of USD 42 billion, there continues to be a significant potential for us to assure that labelled green bonds are in fact 'green'. As investors and companies continue to integrate sustainability, we see a growing need for our independent assessment of policies, processes and data.

Assuring the food value chain

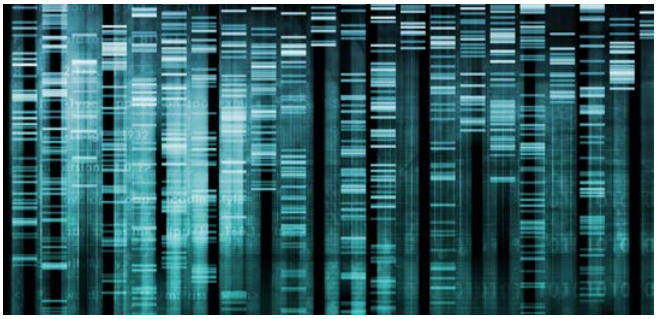
The food and beverage sector grew by 13% in 2016. DNV GL continues to be a preferred provider of certification, verification, assessment and training services to assure food safety and sustainability across the food eco-system. Food safety remains a strong driver and main pillar in our service portfolio and was a significant reason for us achieving the UN Sustainable Development Goal (SDG) on food security.

Stakeholder demands for responsible consumption and production continue to drive services ranging from traceability to responsible sourcing, and from supply chain to resource management. In 2016, DNV GL increased its activities relating to aquaculture. Feeding the planet in the foreseeable future will rely heavily on seafood protein. With the successful integration of certification company Noomas, DNV GL has grown its aquaculture portfolio to address the entire aquaculture value chain.



13% growth in the food and beverage sector in 2016

Increasing our healthcare footprint



2016 was a strong year for healthcare with overall revenue up 18% from 2015, with the US leading the way with growth of 26%. Australia and China also showed exceptional growth while a healthcare footprint has now been established in South East Asia with key reference projects being delivered for our hospital accreditation services, Managing Infection Risk Certification and Stroke Certification.

Together with DNV GL's Global Technology & Research department, we have continued to pursue ideas developed in the extraordinary innovation project "Business Assurance in Next Generation Genomics".

We have positioned DNV GL as a major partner in BIGMED, a key Norwegian innovation project exploring precision medicine. BIGMED will work to identify barriers to the implementation of precision medicine. Within the project DNV GL shall explore potential new roles and services linked to data quality governance, assurance of genomic pipelines and the responsible sharing of sensitive genomic data.

Are companies leveraging big data?

Digitization has changed the playing field of many traditional industries and is constantly revealing new opportunities. Across all industries and sectors, companies are eyeing data analytics to manage performance, risks and opportunities – finding new ways to use data to obtain actionable knowledge, insight and predictions.

Companies seem to have just started embarking on this journey, but they appear to be very aware of the future potential of big data to disrupt and create benefits.

2016 VIEWPOINT SURVEY

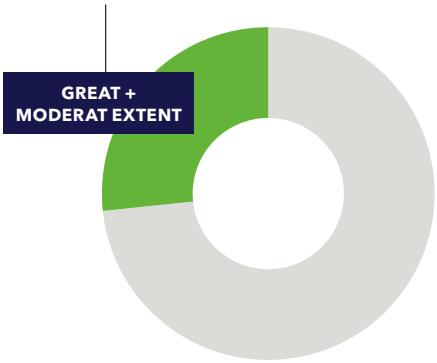
Are you able to leverage big data to boost your productivity and value creation?

The survey highlights that business professionals are optimistic about big data opportunities.

Sample: **1,189** professionals from within DNV GL – Business Assurance's customer community.

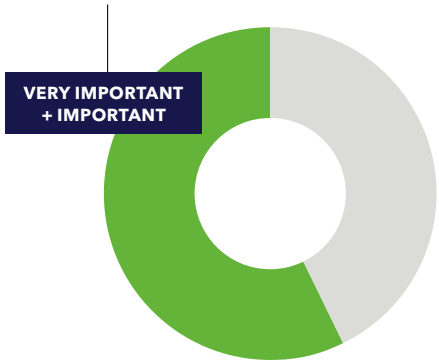
Q: To what extent does your company leverage big data to boost your productivity and value creation?

26.8%



Q: How important will big data capabilities (competences, technology, methods, etc.) be to your company in 2–3 years time?

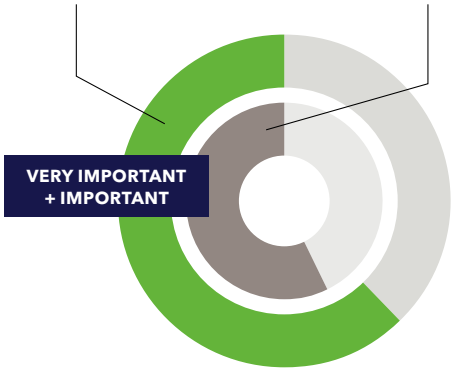
57.4%



Q: How important will big data capabilities be to your company in 2–3 years?

FOOD INDUSTRY (77) **62.3%**

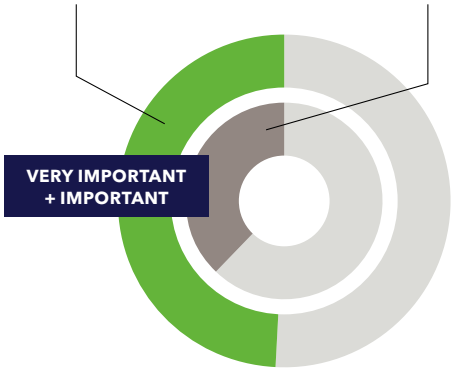
TOTAL (1,189) **57.4%**



Q: How do you foresee that big data will affect your business in the next 2–3 years?

FOOD INDUSTRY (77) **49.4%**

TOTAL (1,189) **37.8%**



Sustainability in core business

Corporate strategies are increasingly addressing how the company protects and develops its business assets and ensures a sustainable future for the organization.

By integrating sustainability into long-term strategies, business policies, objectives, processes and procedures, companies can shape their strategy and operations to address change and stakeholder expectations while strengthening their competitiveness and sustainable value creation.

2016 VIEWPOINT SURVEY

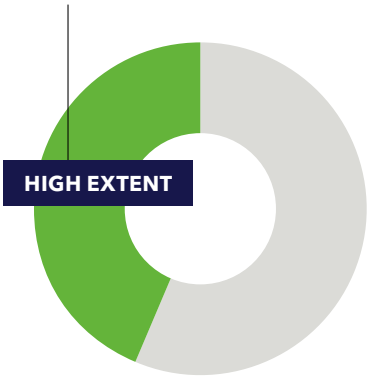
Is sustainability integrated in core business?

The survey reveals that many companies have quite a way to go and need direction.

Sample: **1,524** professionals from within DNV GL – Business Assurance's customer community.

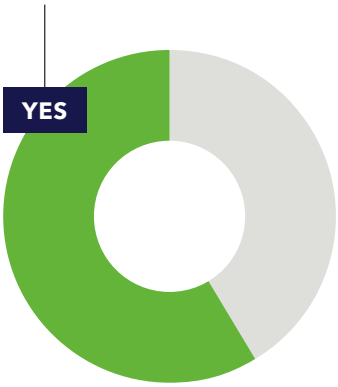
Q: To what extent is sustainability integrated in your company's overall business strategy?

43.8%



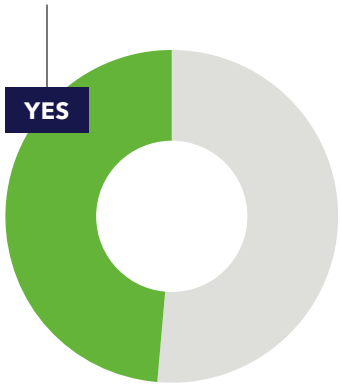
Q: Does your company have a sustainability integration strategy/policy?

58.8%



Q: Does your company have measurable goals on sustainability integration?

48.8%



SUSTAINABLE SOLUTIONS – CASES FROM 2016

Consumers and other stakeholders are increasingly demanding sustainable operations, and these may soon be the only way for companies to create value. DNV GL helps customers build sustainable business performance while meeting the world's social, environmental and economic needs.

Contributing to the world's food security

As a world-leading certification body, we continue to work with over 10,000 food & beverage companies worldwide. Through our work to assure food safety for customers around the world, we make a contribution towards food security, as well. We also work with companies to assure the sustainability of their products.

Our services are applied to our customers' manufacturing plants and entire supply chains, all the way to the farms both on land and at sea. The ability to assure enough food for all is about increasing production, but also requires a supply of food that is safe for everyone to eat and produced in a sustainable way.

Water management projects to reduce the use of water in production

We continue to work with customers on specific water management projects to benchmark and reduce the use of water in their production in both the food industry and other industries, such as the electronics industry.

Supporting the aquaculture and fisheries

Seafood will be a main source of protein in the future. This means preserving existing sources in the wild while growing, responsibly, the farmed ones. We continue to work with customers in the aquaculture sector and with wild catch to assure safety and sustainability throughout the supply chain. Services in this sector now range from fish farm equipment certification (NYTEK regulations) to food safety, environmental sustainability and chain of custody traceability, such as certification to the Aquaculture Stewardship Council (ASC) and GlobalGAP standards. In the wild-catch sector, we continue to be a trusted partner through the Marine Stewardship Council (MSC), helping our customers to assure and communicate, in a transparent way, that the products reaching consumers stem from sustainable sources.

Helping customers to build more sustainable operations

We work with 80,000 customers to help assure the performance of their processes, products, facilities and supply chains, and help them to continually improve and gradually build more sustainable operations. This is primarily through our management system certification services, but also through our verification, product assurance, supply chain management and training services.

With our customers, we address quality, environmental and safety aspects and fraud & corruption as well as ethical aspects in their production (ethical supply chain audits, SA8000), sourcing (FSC, sustainable fisheries, sustainable supply chain certification) and other consumer-oriented certification schemes. In 2016, we also launched an app called Sustainable!® directed towards consumers with the aim of creating awareness of carbon and water footprints.

SOFTWARE

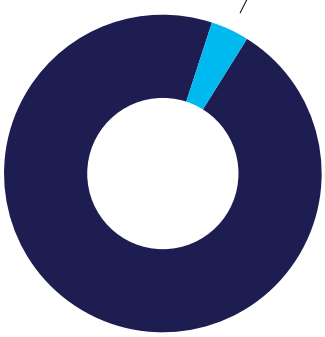
THE DIGITAL PARADIGM SHIFT

Advances in information and communication technology are continuing to shift the way systems and networks are organized in the industries we serve. In 2016, we started to fundamentally change the way our software solutions are delivered.

REVENUE

Software's share of total (20,834)

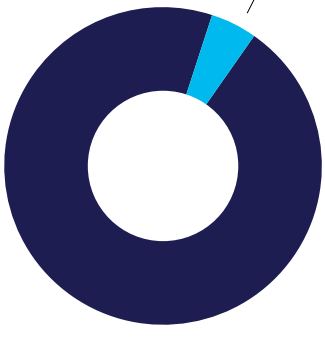
859
NOK MILLION



EMPLOYEES

Software's share of total (13,550)

666
EMPLOYEES



2016 REVIEW

Facilitating digital transformations

Our software solutions are important tools for delivering services from other DNV GL entities, such as classification and advisory services, to the maritime and oil and gas industries. **DNV GL – Software** generated external revenues of NOK 859 million. Including services delivered to other DNV GL units, equalling NOK 163 million, Software delivered total revenues of NOK 1,022 million in 2016, a growth of 2.8% from 2015.

To help our customers with their **digital transformation**, we are tying our software offerings relating to asset integrity management and analysis tools together across domains and platforms. Our software products and services support design and engineering, risk assessment, asset integrity and optimization, QHSE and asset operations and management.

We are working towards data smart solutions in all areas, building **cloud-enabled digital asset ecosystems** that combine insights and data from several sources and applications that were previously distinct and separate domains. These strategic initiatives will not only increase efficiency and improve risk management, but will also enable unparalleled accessibility, collaboration and insight for our customers.

In 2016, Software initiated a programme aimed at creating digital asset ecosystems for the **following areas**: pipeline, structure, plant, ship and electric grid. Part of creating a digital ecosystem is to collect data from many sources, including asset databases, structural analyses, inspection and environmental data, connected equipment and sensors (the Internet of Things) and unstructured data sources, such as emails, reports and documents.

Enabling smart shipping operations

In the challenging 2016 market, our maritime software solutions for ship management and operations were increasingly important to ship owners and managers. They were looking for data smart solutions to support compliance and efficiency and reduce the operational expenditure (Opex) of fleet management and operations. DNV GL's maritime software solutions were contracted for 620 new vessels, bringing the total up to 4,600 vessels worldwide, a growth of approximately 15%.

Reporting and monitoring features were added to our **Navigator Insight software** to accommodate the new EU regulation on measuring, reporting and verifying emissions from ships, making the solution available for customer implementation by 2017, before the regulation comes into effect on 1 January 2018.

A Customer Advisory Board consisting of seven shipping companies across different segments, geographies and fleet sizes was established in 2016. This board provides important input to our maritime software product roadmaps and long-term product strategy.

Smart data for key pipeline decisions

Increasing demand for oil and gas has resulted in a growing need for pipeline capacity. Safety concerns were at the forefront also in 2016, as pipeline operators tried to maintain safety levels with fewer resources at hand. The number of incidents increased, and valuable data from lifecycle management has not been sufficiently incorporated into day-to-day operational processes, leading to a lack of insight when crucial decisions are made. Our solutions help optimize operations and efficiently manage risks.

Several digitalization initiatives leverage cloud-based technology. During 2016, we developed the cloud-based Synergi ticket risk assessment solution and a parametric studies application, targeted for release in 2017. The pipeline team continued to focus on the merger of two legacy integrity products and developed a new liquid steady state capability to complement our existing multi-phase flow tool, supporting efficient operations for gas-gathering companies.

A more efficient, flexible electricity grid

The utilities markets were positive in 2016 and DNV GL continued to expand globally. We surpassed our target in our main market, North America, where over 55% of our customers engaged actively through user group meetings and helped shape the plans for our digital asset ecosystem offering.

The market is focusing on key needs and requirements within software solutions: Support for efficiency gains, a new level of data integration and management, including data quality, more and better insights and foresight into the technical condition of their asset base.

We are renewing our technology stack to become more cloud-based, open and modular. This will also help us to manage complexity and respond to customers' needs with higher flexibility and efficiency. We demonstrated parts of the new technology stack in our inspection solution, Cascade Inspector, and our life and asset health solution, Cascade Foresight. Both these tools were built in 2016 for release in 2017.

Asset integrity and structural analysis advances

Despite a continuing contraction in the ship and offshore new-building market, Sesam maintains a solid revenue through increased market share. Our focus in the structure ecosystem in 2016 was therefore on the Opex phase, specifically structural reanalysis for operation and life extension. This resulted in more customers using our structural analysis software Sesam despite further reductions in Capex spending. We made a significant impact within the fixed offshore market too by further establishing Sesam with key accounts in Asia.

In 2016, we also registered stronger interest in Sesam for both fixed and floating offshore wind structures. Within the ship segment, our Nauticus Machinery software maintained its market shares in a contracting market.

We started the groundwork for tying together our offerings across domains and platforms within asset integrity management and structural analysis during the year. This includes implementing software-as-a-service (SaaS) offerings and the cloud-enablement of analysis tools.

Enhancing downstream process plant performance

We increased our market shares in the downstream process plant software segment during a challenging year. In 2016, we initiated cloud computing services for reliability, availability and maintainability (RAM) and risk-based inspection (RBI) through Synergi Plant. RAM, traditionally used in the design phase, is being brought more into the operational context for improved performance and profitability. We made significant progress in the European market with key customers rolling out the asset integrity management solutions Synergi Plant and Synergi Plant RBI.

Our Safeti and Synergi Plant software showed strong growth in Asia, and Australia became an emerging market where we expect significant expansion going forward.

As part of our efforts to tie together software solutions for our customers in a digital asset ecosystem, a prototype integration between RAM and integrity management received positive feedback. This takes operational data into RAM analysis to compare actual asset performance with performance as designed, enabling more accurate predictions of future performance which will improve mitigation measures.

Improving QHSE best practices

There is a high level of activity in the market, with an increase in competition levels, mergers and acquisitions. More stringent legislation, greater awareness around safety and sustainability issues and the need for increased efficiency are spurring growth. Our customer base has been maintained and we have seen growth in annual service level agreements.

After launching the new software-as-a-service (SaaS) subscription offering early in the year, we have seen a positive response in the market. In 2016, we improved dashboards and analytics, developed new modules for third-party and survey management, and standardized best practices in the solution.

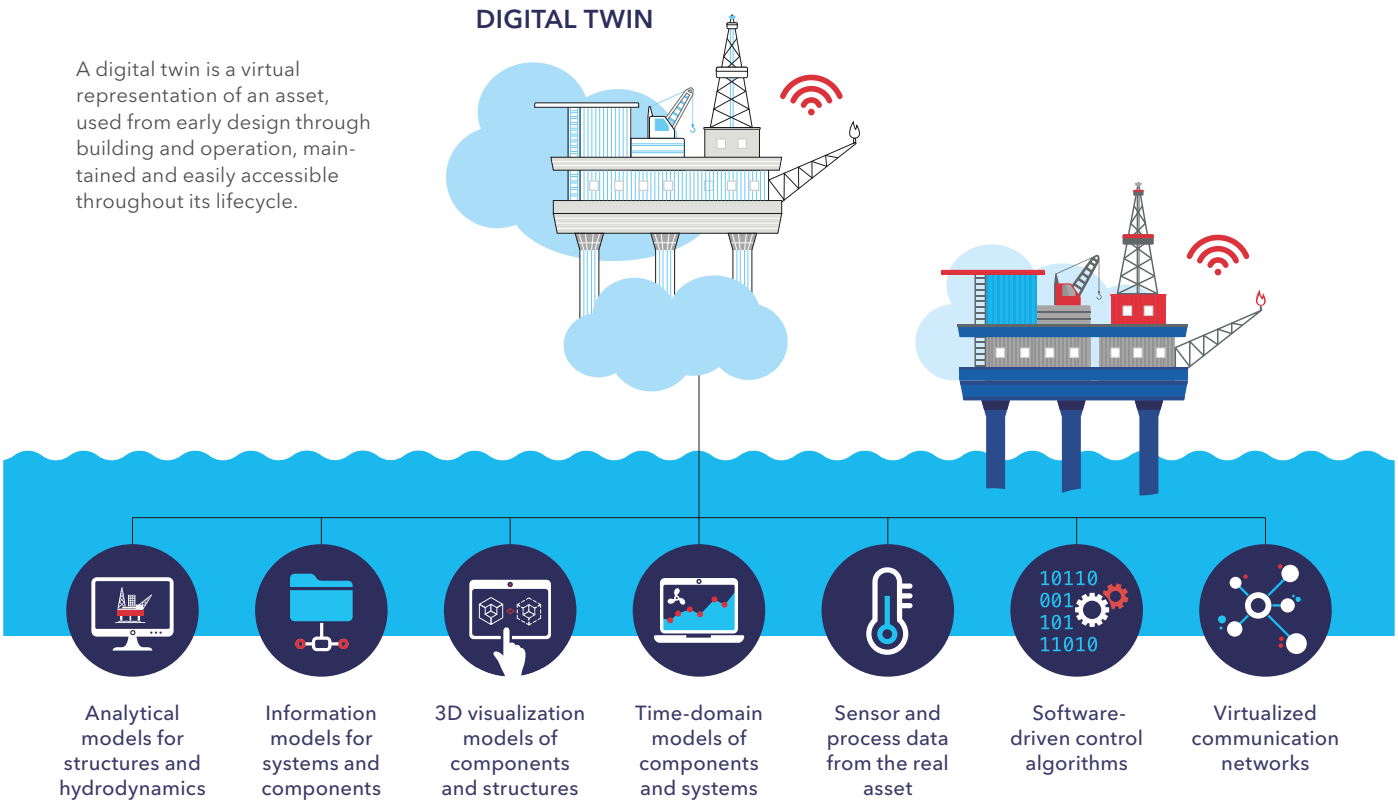
750,000

USERS OF SYNERGI LIFE

Over 350 companies – or 750,000 users - are now using Synergi Life in more than 100 countries.

Digital twin – a single source for better performance

A digital twin is a virtual representation of an asset, used from early design through building and operation, maintained and easily accessible throughout its lifecycle.



SUSTAINABLE SOLUTIONS – CASES FROM 2016

Companies are increasingly looking to implement data smart solutions for integrating systems that improve the management of occupational and process safety and reduce their environmental footprint, including lowering greenhouse gas emissions. DNV GL Software's solutions, used by thousands of customers in a range of industries, support sustainable performance through risk management, design optimization, reducing energy consumption and reporting.

Synergi Life: digital decision-making tool with more than 750,000 users

We see a shift in regulation and the way companies respond to sustainability risks by using digital decision-making tools. According to the Verdantix Global EH&S Survey 2016, DNV GL's Synergi Life is one of the world's most recognized EH&S (environment, health and safety) software brands. Synergi Life risk management software covers non-conformances, incidents, risks, risk analyses, audits, assessments and improvement suggestions. Synergi Life's QHSE software system for enterprise risk is used by over 350 companies worldwide, with more than 750,000 users globally across industries such as energy, healthcare, transport, local government, construction, etc.

Enabling higher water quality standards

In 2016, four new modules were added to Synergi Water which improve data smart water modelling and enable higher water quality standards.

Safeti software helps operators manage the risk of accidents

Our software solution for quantitative risk analysis, Safeti, helps operators manage the risk of accidents. Complex scenarios are modelled and analysed, and the new features added in 2016 mean the analyses are done more efficiently and in greater detail, making for better risk management.

RAM analysis for effective optimization of existing assets

The world is facing a new reality when it comes to sustainability risks and opportunities. For instance, the efficient operation of oil & gas facilities – upstream, midstream or downstream – with a minimum of waste and hazardous emissions is now mainstream. Green processes are no longer the exception, but the norm.

A Reliability, Availability and Maintainability (RAM) analysis provides key parameters to guarantee a sustainable process. The equation is quite simple: more reliable processes use less feed products, reduce the size of storage and deliver the same amount of end-product. DNV GL's Maros software brings RAM studies beyond the design stage, with more effective optimization of existing assets.

Monitoring environmental impact of shipping

With Navigator Insight software, shipping companies can support the realization of their environmental policy and monitor fulfilment of the obligations of the ISO 14001 standard, including continuous reduction of their environmental impact. For example, the container shipping company Hamburg Süd, supported by our maritime software solutions, has seen positive improvements in relation to its self-imposed environmental target to lower CO_2 emissions by 45% by 2020. At the end of 2015, it had achieved a reduction of almost 35% compared to the 2009 base year.

To increase transparency and reduce its environmental footprint, Hamburg Süd is now using DNV GL's Navigator Insight for voyage reporting while having also implemented our ECO Insight solutions for fleet performance analysis. This way, Hamburg Süd can implement their environmental policy and monitor fulfilment of the obligations of the ISO 14001 standard, including continuous reduction of their environmental impact, and also analyse and compare fleet and vessel performance, benchmark against the market and identify the right improvement levers for fuel and emission reductions.

SUSTAINABILITY

Our vision of having global impact for a safe and sustainable future sets the direction of our business. Our commitment to customers, ourselves and our partners are guided by our purpose of safeguarding life, property and the environment.

SUSTAINABLE LEADERSHIP

GLOBAL IMPACT FOR A SAFE AND SUSTAINABLE FUTURE

Our vision guides us in balancing business opportunities and risks, striving to ensure sound operational performance and strategic positioning for profitable growth. We use the global Sustainable Development Goals as a framework for creating customer value through solving societal needs.

DNV GL supports Sustainable Development Goals and strives to run its own business sustainably, to enable its customers to enhance their sustainability and to promote sustainable business with partners.

TARGETS AND RESULTS

Based on our materiality assessment, we set our priorities, run our business and report our sustainability performance in relation to the following topics:

- Health and safety
- Business ethics and anti-corruption
- People
- Environment and climate
- Sustainable procurement
- Partnerships for sustainability

Targets, results, plans, the management approach and reviews are provided in each of the corresponding sections integrated in this Annual Report.

DNV GL reports in accordance with the Global Reporting Initiative Standards at the Comprehensive Level, and a third party has conducted a limited assurance of the report.

The reporting period for the information provided is the 2016 calendar year. The sustainability reporting is integrated into the annual report and the last report was made available on 10 May 2016.

Our key sustainability performance in 2016 provides an overview of our results regarding material topics:

KEY SUSTAINABILITY PERFORMANCE

HEALTH AND SAFETY

1.4

IN INJURY RATE
due to lost day injuries per million worked hours

- 2.5 in Absentee rate due to sickness
- OHSAS 18001 certification

BUSINESS ETHICS

93%

OF EMPLOYEES
completed Code of Conduct training

- 44 potential compliance cases

PEOPLE

87%

OF EMPLOYEES
have a higher education at PhD, Master or Bachelor degree levels

- 22% female managers and 115 nationalities among our employees

ENVIRONMENT AND CLIMATE

30.0

THOUSAND TONNES OF CO_2 EMISSIONS

- 87.5 GWH in energy consumption
- ISO 14001 certification

SUSTAINABLE PROCUREMENT

≈100%

OF EMPLOYEES
involved in indirect procurement trained in the Supplier Code of Conduct

- ≈100% of contracts with new suppliers included the Supplier Code of Conduct

PARTNERSHIPS FOR SUSTAINABILITY

17

UN GLOBAL COMPACT PARTNER COMPANIES
launched the 'Future of Spaceship Earth' report at the UN Headquarters

- World Business Council for Sustainable Development appointed DNV GL Group President and CEO to its Executive Council

APPROACH

For DNV GL, corporate sustainability is about delivering long-term value in financial, environmental, social and ethical terms, and this is embedded in the Group's Purpose, Vision and Values. We consider this approach and the fostering of a company culture beyond compliance as fundamental in securing the Group's business success through sound operational performance and strategic positioning for profitable growth.

Strategy

DNV GL's Group strategy defines our commitment to corporate sustainability, and this is further outlined in all business areas' annual operating plans. We see both opportunities and risks related to sustainability topics and aim to capitalize on the growing demand for greener, safer and more transparent business solutions.

Certification

DNV GL's business areas are certified according to the ISO 9001 standard and DNV GL as an organization is certified to the ISO 14001 and OHASAS 18001 standards.

UN Global Compact and the SDGs

We have been committed to the UN Global Compact since 2003 and continue to integrate its ten principles on human rights, labour standards, environmental performance and anti-corruption work into our business strategy and operations.

We support the global Sustainable Development Goals (SDGs), which are well aligned with our Purpose, Vision and Values. These global goals stimulate the way we run and develop our business.

Responsibilities

The Board maintains overall responsibility for the Group's sustainability performance, risk management and compliance with our Code of Conduct. The Group President & CEO is responsible for compliance with relevant governing documents cascaded down the organization according to mandates and KPIs.

Our performance in ongoing operations is a line responsibility, and results are monitored on a regular basis through top-down business reviews and bottom-up risk assessments. In addition, the Sustainability Forum is constituted by the Executive Committee.

Opportunities, risks and impacts

Our key opportunities are derived from our ability to strengthen our positions in the growing markets for safer and greener solutions. Likewise, opportunities arise from our strongest asset: skilled and motivated employees with a high level of integrity.

Our key risks are related to how our revenues are exposed to different degrees of sustainable activities, including adaptation to the COP21 Paris Agreement on climate change, and to new markets for sustainable products and services. Our corporate sustainability programme is also designed to manage our risk of not conducting our own operations with integrity and quality.

As a professional service provider, our key impact on sustainability is how we enable customers to enhance the safety and sustainability of their operations. Through our classification, certification and technical assurance services, along with software and independent expert advisory services and recommended practices, we help our customers seize opportunities and manage risks. This includes mitigating and adapting to climate change, ensuring safe operations in demanding environments, enabling energy-and resource-efficient solutions, assuring food safety and implementing responsible sourcing in complex value chains.

Stakeholder engagement

We see proactive stakeholder engagement as important for continuing to build trust and strengthen our market positions in a digital, low-carbon economy. Our extensive partnership activities include joint industry and research projects, membership of several industry associations and standards organizations, cooperation with governmental bodies and partnerships with NGOs and individuals.

We intend to influence the global sustainability agenda and be fit for the future through our close relationships with more than 80,000 business customers, our global partnerships and our comprehensive analysis of technology and sustainability trends shaping future markets.

REVIEW

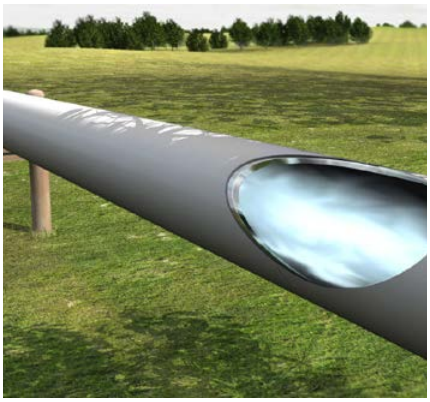
In 2016, we continued to enable sustainable performance through three pillars: activities within our own organization, business activities for customers, and collaborative activities through partnerships.

Highlights with customers

Sustainable business activities for customers include:

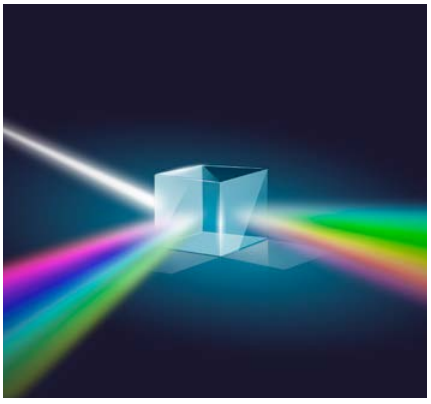
More than 750 vessels with DNV GL's digital ECO Insight fleet management solution.

The first ship certificates in compliance with the new International Maritime Organization Polar Code.



A large CCS test programme to improve the safety and efficiency of CO_2 pipelines.

The energy efficiency, saving and climate action programmes in Massachusetts, California and the EU.



The Lumina™ performance benchmark tools for management system audits; and the responsible sourcing support to major food & beverage and consumer packaged goods players.

The launch of the 'Future of Spaceship Earth' report at the UN Headquarters along with 17 UN Global Compact companies at the forefront in targeting the global Sustainable Development Goals.

More information on DNV GL's sustainable solutions is provided in the presentation of each business area in this Annual Report.

Highlights internally and through partnerships

In 2016, our prioritized sustainable leadership activities in our own organization and collaborative activities through partnerships were as follows:

2016 SUSTAINABLE LEADERSHIP PRIORITIES

Health and safety

- Health resilience and wellbeing
- Crisis management and travel safety
- Health and safety training
- Collaboration and knowledge sharing

Business ethics and anti-corruption

- Anti-corruption process in high-risk countries
- Training in anti-corruption and anti-fraud work
- Involvement of business-area specialists
- Personal data protection training
- New Supplier Code of Conduct
- New due diligence questionnaire for sub-contractors

People

- Strategy implementation
- Connect individual employee goals with Group strategy
- Leadership capabilities through digital and targeted offerings
- Development of a customer-centric culture

Environment and climate

- Plan measures to become climate neutral for travel and buildings by 2020
- Data quality and reporting practices for Scope 1, 2 and 3 greenhouse gas emissions
- Assurance of carbon-neutral operation of Norwegian offices and travel

Sustainable procurement

- Integration of sustainability into procurement projects
- Training of key personnel
- Software to monitor supplier compliance

Partnerships for sustainability

- UN Global Compact continued cooperation
- World Business Council for Sustainable Development Executive Committee
- Future of Spaceship Earth with 17 global brands
- Global Opportunity Reports
- WWF joint project with Statkraft
- Red Cross activities globally

For 2017, our prioritized sustainable leadership activities in our own organization and collaborative activities through partnerships are:

2017 SUSTAINABLE LEADERSHIP PRIORITIES

Health and safety

- Be the benchmark of our industries
- Establish a Global Health and Wellbeing Framework to shift the focus from reactive stress management to a proactive and positive approach to employee wellbeing
- Strengthen the ability to learn, and actively avoid and recover, from serious incidents

Business ethics and anti-corruption

- Reflect the findings from a risk assessment and introduce express training sessions addressing the needs of employees in their daily work.
- Set up an Export Control Network
- Provide awareness training on the reporting of misconduct
- Monitor the implementation of the new Supplier Code of Conduct and Instruction on Subcontractors and Intermediaries

People

- Continue to improve clarity and direction, including how individual employees contribute to the achievement of our strategic goals
- Support the company's digital transformation, including employees' competence development and the attraction and retention of new types of expertise
- Secure sustainable diversity in terms of gender and nationality in customer-facing and operational roles

Environment and climate

- Implement a global plan with measures to become climate neutral with regard to travel and buildings by 2020
- Measure greenhouse gas emissions from air travel for 100% of employees
- Include more locations in the environmental and climate reporting
- Add waste to environmental reporting and establish a reporting baseline
- Engage in initiatives to understand our customer services' impact on the environment

Sustainable procurement

- Implement procurement software which enables supplier data to be tracked and the introduction of sustainable procurement processes to be monitored. The tool will initially cover indirect suppliers.
- Initiate systematic sustainability risk assessments of selected supplier categories

Partnerships for sustainability

- UN Global Compact – continued collaboration
- World Business Council for Sustainable Development Executive Committee
- Global Opportunity Explorer platform with UN Global Compact partners
- WWF and Statkraft joint digital tool for sustainable multi-purpose hydropower
- Red Cross expert, voluntary and funding activities worldwide

Economic contribution

Financial robustness is fundamental for sustainable operations and making a contribution to society at large. Our financial reporting is included in this Annual Report.

TABLE 01 ECONOMIC CONTRIBUTION

The economic value we generated and distributed globally in 2016 was as follows:

AMOUNTS IN NOK MILLION	Nordics	Central Europe	West, South and East Europe	Great Britain	North America	South America	North Asia	South Asia	India, Middle East and Africa
Revenues[1]	4 089	2 678	2 723	1 759	3 790	377	3 121	1 165	1 165
Operating costs[2]	1 085	643	1 074	666	1 554	204	1 174	487	459
Employee wages and benefits	3 091	1 563	1 563	1 126	2 050	220	1 500	818	622
Payments to providers of capital[3]	7	1	2	1	14	9	-	6	4
Payments to government	187	9	82	11	144	6	133	16	39
Community investment	18	–	–	–	–	–	–	–	–
Economic value retained	-300	461	3	-45	28	-63	315	-161	41

The financial assistance we received from governments in 2016 was as follows:

Total Tax relief	-	-	-	-	-	-	-	-	-
Government subsidies	-	-	-	-	-	-	36	26	-
Investment grants, research and development grants, and other relevant types of grants from government	2	-	3	-	-	-	-	-	-
Awards from government	-	-	-	-	-	-	2	-	-
Other financial benefits received or receivable from any government for any operation	-	-	-	-	-	-	-	1	-

1 External revenue and interest income
2 Operating costs excluding employee wages and benefits and amortizations
3 External interest expenses

HEALTH AND SAFETY

SAFEGUARDING OUR PEOPLE

We aim to be the safest place to work compared to other companies in our industries. We aspire to zero harm to, and ensuring a healthy working environment for, our workforce.

DNV GL supports Sustainable Development Goal 3 and strives to ensure healthy lives and promote wellbeing for all at all ages.

TARGETS AND RESULTS

We will work to strengthen our attitudes, beliefs and behaviour, and continually strive towards becoming a learning organization with respect to occupational health and safety, meaning that we must continue to learn from experience and change our behaviours accordingly. This is to ensure that we safeguard our people and maintain a healthy and resilient workforce.

Targets

- **Zero harm and healthy workplace**
  Be the benchmark of our industries.
- **Health and wellbeing**
  Strengthen the resilience and wellbeing of our workforce.
- **Crisis management and travel safety**
  Sustain the level of Emergency Preparedness in our organization and improve travel safety for all employees.
- **Health and safety training**
  Ensure we have an up-to-date, aligned and relevant Group Health and Safety training portfolio.
- **Collaboration and knowledge sharing**
  Improve Health and Safety collaboration and set up arenas for knowledge sharing and best practice exchange.

Results

- **Zero harm and healthy workplace**
  Injury Rate of 1.4, Occupational Disease Rate of 0.9, Lost Day Rate of 28.4 and Absentee Rate of 2.5.
- **Health and wellbeing**
  Implementation of a global stress management framework across the Group.
- **Crisis management and travel safety**
  Implementation of two designated travel agencies. Implementation of the Travel Tracker tool from International SOS. Set-up of an International Next of Kin Call Centre to be mobilized in case of emergency.
- **Health and safety training**
  Implementation of three new global e-learning courses; Stress Management, Office Ergonomics and Driving Safety.
- **Collaboration and knowledge sharing**
  Restructuring of the HSE organization by establishing a regional network of nine HSE specialists aligned with the new organization of our Global Shared Services units.

Plans ahead

- **Zero harm and healthy workplace**
  Be the benchmark of our industries.
- **Health and safety culture**
  Establish a Global Health and Wellbeing Framework to shift the focus from reactive stress management to a proactive and positive approach to employee wellbeing (2017).

  Measure the maturity of our Health and Safety Culture in a re-run of a global survey of all employees (2018).
- **Incident investigation**
  Strengthen the ability to learn and actively avoid and recover from serious incidents (2017).
- **Crisis management**
  Perform a full-scale exercise with the Next of Kin Call Centre provider (2018).

APPROACH

DNV GL puts health and safety first. Our purpose since 1864 is to safeguard life, property and the environment – and we demonstrate this by taking our own medicine. The backbone of our occupational health and safety management system is that all employees are fully aware of their right to say 'No' when they consider a situation to be unsafe.

Safety and wellbeing of our employees

Our workplace environment is important to both us and our stakeholders because it concerns the safety and wellbeing of our employees and is important for our attractiveness as an employer. Moreover, our core business is to enable our customers to enhance their safety so we strive to apply best practice for our own people.

Health and safety management system

We are committed to continuously improving our occupational health and safety performance. Our comprehensive, global occupational health and safety management system is certified according to the OHSAS 18001 standard and embedded in our Group management system. The health and safety organization is structured along two lines of responsibility; geographically and per business area.

Incident reporting system and tool

For reporting and managing incidents and hazards, we use our in-house developed, commercial software Synergi™ Life. This includes the use of the Synergi™ Life Mobile App for immediately reporting an occurrence at any time or place. Employees can also anonymously report incidents and hazards.

Our Health and Safety incident-recording system complies with local laws and regulations in the countries where we operate. In countries with little legislation, the DNV GL Group requirements, which comply with Norwegian regulations, are adhered to. These are aligned with the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases.

Knowledge sharing

A significant objective of incident and hazard reporting is to share and learn from experience gained across organizational units. Learning is shared through quarterly presentations of incidents assessed as having medium or high loss potential and there is open access to the incident and hazard database internally. We focus on transparency, training and tools when working towards a mature health and safety culture.

Reporting to management

Health and safety performance is reported to the Executive Committee on a bi-monthly basis. Quarterly reports are made available to all employees on the intranet.

REVIEW

Our health and safety performance in 2016 is considered good, with stable results regarding injuries and diseases and improvements regarding lost days, but with a moderate set-back regarding sickness absence.

Injury rate

We achieved an injury rate of 1.4 in 2016, a 7% decrease from 2015. The decrease is related to natural variations over the rolling 12 months. The result is within acceptable industry standards, but we will continue to strive for improvements. Region Central Europe has the highest injury rate. However, almost 50% of the reported injuries resulting in lost time are cases involving minor harm to the employee involved.

Occupational disease rate

We achieved an occupational disease rate of 0.9 in 2016, a 10% decrease from 2015 due to fewer stress cases being reported in 2016.

Lost day rate

There were 731 days off due to accidents and occupational diseases, down from 1,305 days in 2015. The Lost Day Rate was 29.3, down 40% from 2015. This significant decrease in the Lost Day Rate is due to three stress cases and four injuries reported in 2015, resulting in a total of 636 days' absence. There is enhanced management attention to and awareness of employee wellbeing during the downsizing and restructuring process in the company. However, there are strong indications that stress cases are underreported in Synergi™ Life. In 2016, most stress cases were recorded in the Nordics region. This is reflected in the lost day rate.

TABLE 02 **HEALTH AND SAFETY INCIDENTS STATISTICS**

	2012	2013	2014	2015	2016
Fatal accidents	0	0	0	0	0
Lost day injuries[1]	30	38	42	40	34
Injuries with no lost days	102	124	221	183	162
Occupational diseases with lost days	17	19	29	36	23
Occupational diseases with no lost days			124	80	106
Near accidents	244	284	492	582	410
Hazards			1 333	2 588	1 982
Injury rate (IR)	1.9	2.0	1.4	1.5	1.4
Occupational diseases rate (ODR)			1.0	1.0	0.9
Lost day rate (LDR)				49.2	29.3
Absentee rate (%)	2.2	2.1	2.0	2.2	2.5

1) Lost day injuries reported for 2015 corrected from 41 to 40 due to a typo.

FIGURE 03 **INJURY RATE, OCCUPATIONAL DISEASES RATE AND NUMBER OF REPORTS PER EMPLOYEE**

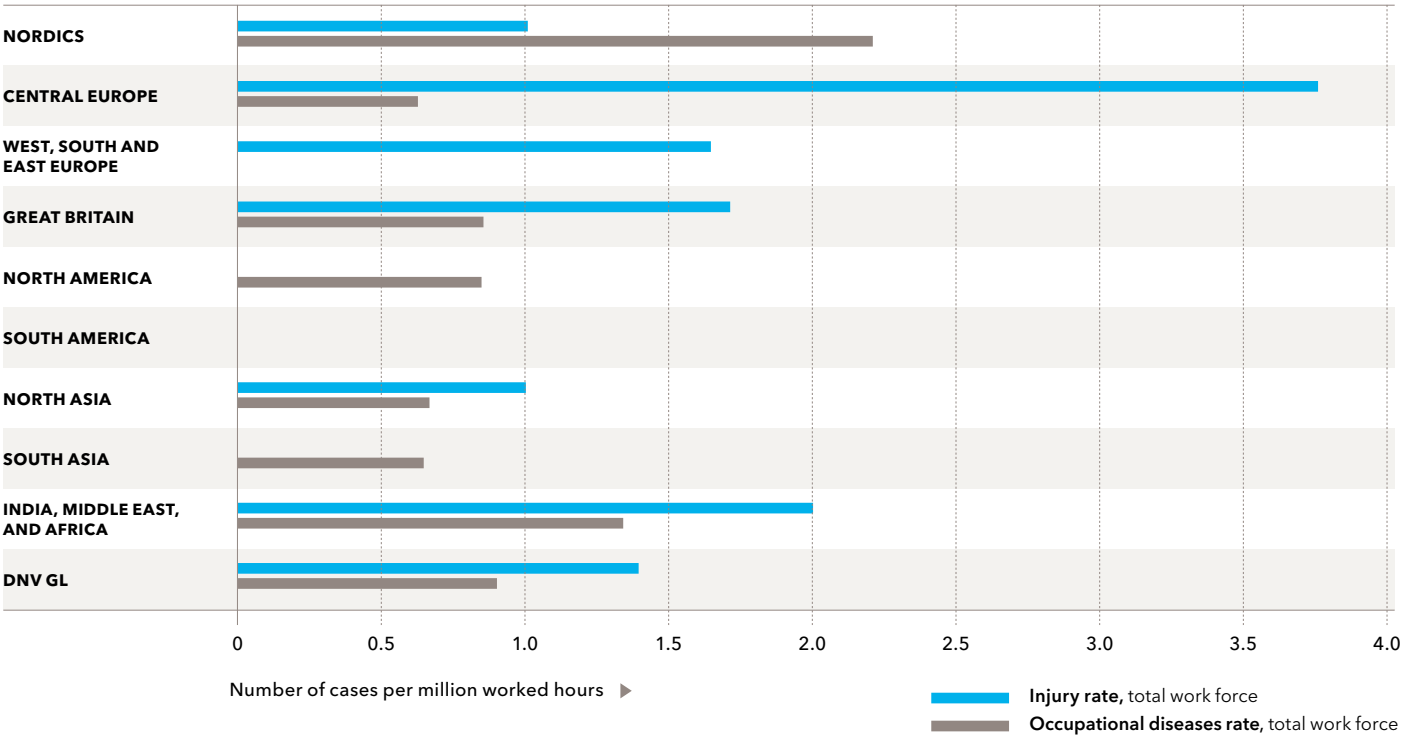
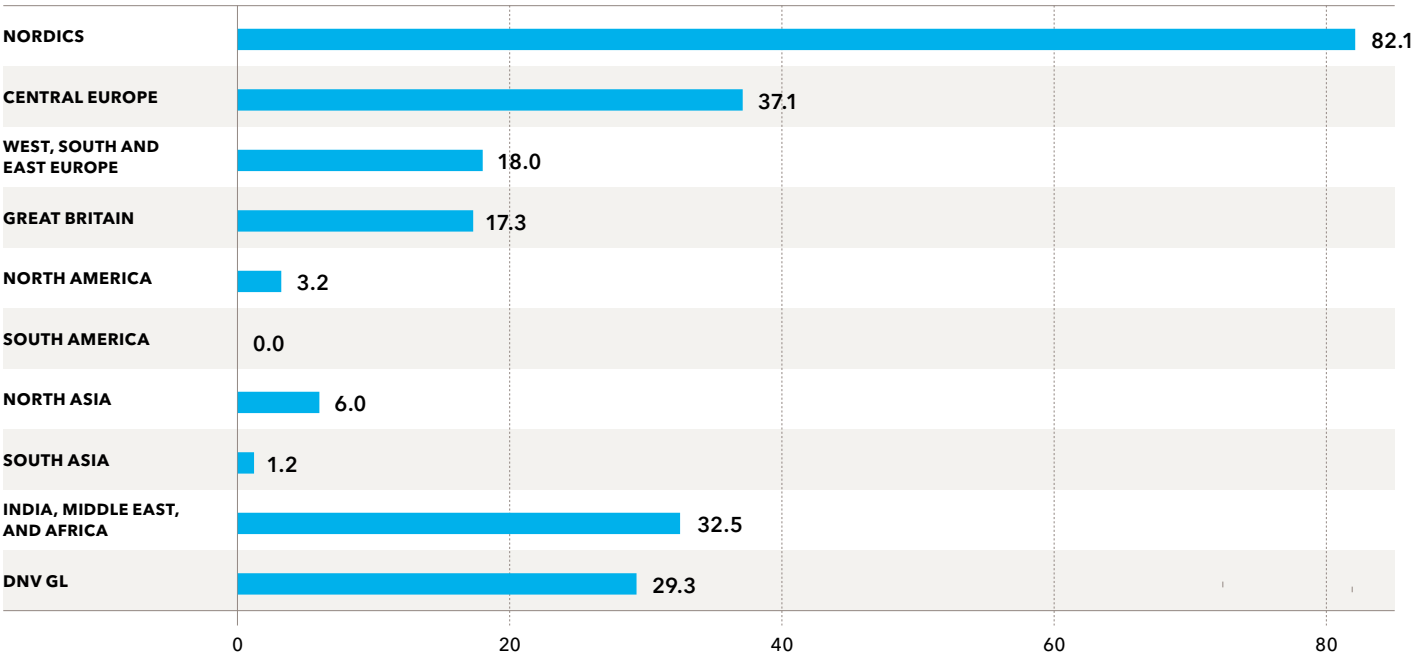


FIGURE 04 **LOST DAY RATE (LDR): THE IMPACT OF OCCUPATIONAL ACCIDENTS AND DISEASES**
TIME OFF WORK FOR THE AFFECTED EMPLOYEES



Absentee rate

The absentee rate is still at a low level and is calculated to be 2.5%, a 14% increase from 2015. This increase is within acceptable variations and no in-depth analysis is available. However, there are some indications that the increase in sick leave is partly due to restructuring and the ongoing downsizing.

The absentee rate per region is not available. Our current systems are not configurated to extract sickness data for the whole company across the nine Global Shared Services regions. This issue has been addressed in order to further improve our reporting. We have not registered an absentee rate higher than 2.9% in any of the business areas.

Incidents and hazards reporting

During the year, 2,817 incidents and hazards related to occupational health, safety and the environment were reported. This represents 0.20 reports per employee and is a decrease of 16% from 2015. The decrease in the number of reports may be related to the ongoing redundancies and restructuring in the company throughout 2016. The regional reporting of injuries and occupational diseases varies. To some extent, these differences are assumed to reflect differences in reporting culture. There is still a need for increased understanding of the importance of reported incidents and hazards as a knowledge basis for improving occupational health and safety performance.

Of the reported incidents and hazards, 26% were assessed as having medium or high loss potential. In 2016, 539 work-related cases were reported using the SynergiTM Life mobile app, up 65% from 326 cases in 2015.

Types of injury

Incidents and hazards included in the statistics are work-related cases involving employees. However, two cases recorded in 2016 were related to other workers (non-DNV GL employees). When calculating injury and disease rates, the hours worked by other workers are not included, and thus both the injury rate and disease rate appear to be slightly too high. However, this deviation is not significant for understanding our health and safety performance.

No workers are involved in occupational activities with a high incidence of specific diseases. Our occupational health and safety risks are related to work processes resulting in injuries and to workplace conditions where exposure over a period, or a normal work activity, results in occupational diseases.

Health and wellbeing

We have implemented a global stress management framework designed to provide practical tips and techniques on how to deal with challenges related to stress. The framework gives an overview of physical reactions to, and symptoms of, stress and how to deal with them immediately and in the longer term, including information about how to seek help when required. An e-learning module on stress management was also implemented and very well received by our employees worldwide.

Crisis management and travel safety

During the past year, we have strengthened our emergency preparedness procedures. We have run seven emergency exercises involving operations in Australia, Germany, Greece, Nigeria, Singapore as well as for the whole business areas of Oil&Gas and Software. We have also closely monitored our ability to respond to real events, such as the terrorist attacks in Paris and Brussels. Based on what we learn, we are constantly adjusting and improving our ability to respond should any of our employees be affected.

In addition, two key initiatives have been put in place to further safeguard our people:

- Implementation of the Travel Tracker tool from International SOS. This tool enables us to quickly establish an overview of our travellers in the area with their exact geographical locations and their need for help.

- Set-up of an International Next of Kin Call Centre to be mobilized in case of emergency. This will enable us to respond to next of kin and other affected employees in an effective, personal and professional way.

Health and safety training

In 2016, we launched three new global e-learning solutions for all employees. These deal with stress management, office ergonomics and driving safety.

In addition, as part of ongoing initiatives to improve the quality of incident investigation of cases recorded in Synergi™ Life, Systematic Cause Analysis Technique classroom training was provided at six locations. The target group consisted of our HSE professionals and others who are required to investigate incidents. The courses have been well received amongst employees in Oslo, Newcastle, Singapore, Shanghai, Hamburg and Houston and we will continue to focus on incident investigation in 2017.

Involving employees

To ensure that employees' opinions are heard, local occupational health and safety evaluations are held annually throughout the company. Our objective is to improve awareness by involving employees in identifying occupational health and safety improvement initiatives.

In 2016, local HSE evaluations in all countries where we have offices were coordinated by the Country Chairs and reported through the annual HSE Management System Review process. About 73% of employees participated in local HSE evaluations, down from 78% in 2015. The decrease is related to natural variations, but we will continue to strive for improvements.

In addition, formal occupational health and safety committees have been established in 16 countries in accordance with local legal requirements. At the year-end, 55% of our workforce were represented in formal joint management, worker health and safety committees, the same as in 2015.

Most collective agreements cover elements related to health and safety, e.g. overtime hours, employee competence development and the company's focus on safety and sustainability. Comprehensive internal governing documents regulate health and safety policies and instructions to all employees at global and local levels; hence safety and health topics are to a lesser extent included in local collective agreements.

HSE organization

During 2016, we restructured the HSE organization by establishing a regional network of nine HSE specialists to act as experts supporting a group of countries on common HSE matters, such as travel, driving and office work across the organization. The aim of this reorganization is to facilitate and promote openness and cross-geographical and Business Area collaboration, communication and knowledge sharing. The new HSE organization is also aligned with our new nine Global Shared Services units.

Health and safety performance statistics for other workers

Separate safety and health statistics for other workers (non-DNV GL employees) are not currently available. The configuration of our existing HR and financial systems does not distinguish between workers not employed by DNV GL. Within this category, the systems do not provide information on hours worked by non-DNV GL employees working under the DNV GL management system. Both the HR and financial systems are in the process of being replaced and these challenges will be resolved once the new systems are operational.

Health and safety performance statistics by gender

Our health and safety performance is not reported by gender. An important objective of incident and hazard reporting is to increase reporting and share gained experience across organizational units. For this reason, there is open access to, and an improved user interface with, our incident and hazard database.

Reference to gender is not included in the reporting system to limit the possibility of disclosing someone's identity. DNV GL's health and safety policies and practices apply to all employees and information on gender is not considered relevant for the optimal allocation of resources to occupational health and safety improvement activities.

BUSINESS ETHICS AND ANTI-CORRUPTION

FOSTERING A CULTURE OF INTEGRITY

Our value 'We never compromise on quality or integrity' is the leading principle for fostering a common culture of integrity across all operations. For this reason, we have a zero-tolerance policy for corruption and unethical behaviour that applies to all employees, subcontractors, agents and suppliers.

DNV GL supports Sustainable Development Goal 16 and strives to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

TARGETS AND RESULTS

DNV GL's business model is based on trust at all levels and in all business environments. Trust can only be achieved when we persistently maintain high standards of business and personal conduct. We strive to reflect the DNV GL values in everything we do in order to demonstrate ethical leadership and uphold our reputation for integrity.

Targets

- Monitor the implementation of the anti-corruption process in high-risk countries.
- Roll out classroom training Module 3 – Refresher on Anti-Corruption and Fraud.
- Further improve communication measures and increase the involvement of business-area-nominated persons.
- Awareness training for personal data protection.
- A new Supplier Code of Conduct as well as due diligence questionnaires for subcontractors.

Results

- The implementation of the anti-corruption process in high-risk countries is being monitored.
- The roll-out of classroom training Module 3 – Refresher on Anti-Corruption and Fraud was kicked off in high-risk countries.
- Communication measures were further enhanced: new "2016 training session on ethical conduct", case studies and fraud and corruption evaluation templates were prepared and published to facilitate team discussions.
- The e-learning module on Personal Data Protection was rolled out for relevant functions.
- A new Supplier Code of Conduct as well as due diligence questionnaires for subcontractors were published.

Plans ahead

- Reflect the findings from a risk assessment and introduce express training sessions, addressing the needs of employees in their daily work.
- Set up an Export Control Network.
- Awareness training on the reporting of misconduct.
- Monitor the implementation of the new Supplier Code of Conduct and instruction on Subcontractors and Intermediaries.

TABLE 03 REPORTED POTENTIAL COMPLIANCE CASES

	NEW CASES		
Case type	2016	2015	2014
Labour Related[1]	10	7	6
Allegations[2]	7	10	18
Data Protection	10	4	1
Ethical Issues	10	3	1
Others	7	16	6
Total	44	40	32

1 There were no confirmed incidents of discrimination in 2016.
2 There was one case related to loss of customer data in 2016.

No critical concerns were reported in 2016. There were no legal actions pending or completed during the reporting period regarding anti-competitive behaviour or violations of anti-trust and monopoly legislation in which DNV GL was identified as a participant. We have not identified any significant fines or non-monetary sanctions for non-compliance with laws and/or regulations in the environmental, social or economic area.

APPROACH

Integrity, ethics and anti-corruption are important to DNV GL and its stakeholders and compliance is fundamental to remain professionally objective and independent in the services we deliver to our customers and society at large. To build trust, we aim to foster a sound business ethics culture also beyond compliance.

Code of Conduct

Our Code of Conduct outlines high-level principles in two main areas: DNV GL's conduct of its business; and the personal conduct of people involved in DNV GL's business at all levels, both in ordinary work situations and when there are challenges to our personal or professional integrity.

Effective compliance is based on the global governance of our management system, compliance organization and clear-cut reporting lines, as well as close cooperation between Group Compliance, all business areas and Global Shared Services.

Zero tolerance

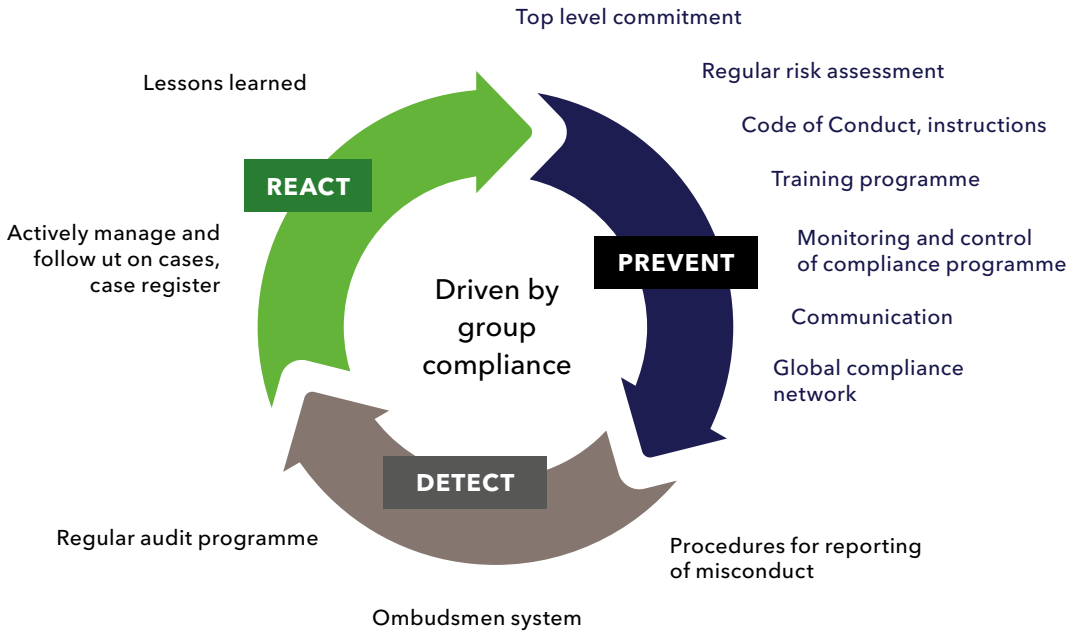
We do not tolerate any violation of applicable laws, including anti-corruption, privacy and export control laws, our Code of Conduct or internal instructions.

As a global company with activities in a range of sectors, we face differing local regulations and practices which in turn result in a diverse risk picture. We continuously revise and update our policies to reflect changes in legislation and our own experiences.

Top management focus

All members of the Board of Directors and the Executive Committee regularly receive presentations, training and information on DNV GL's anti-corruption regime. In addition, the Group Compliance Officer regularly reports new developments and case statistics to the Board's Audit Committee and Executive Committee, ensuring regular discussions on improvement measures and their implementation.

FIGURE 05 **COMPLIANCE PROGRAMME ACCORDING TO ISO 19600**



Compliance programme

Our compliance programme with its related instructions is based on the Code of Conduct and owned by the Board. To help our managers meet their responsibilities, the compliance programme focuses on integrity in business dealings, anti-corruption, anti-trust, export control, sanctions and data protection. Respective instructions on these topics and how to report misconduct are in place. This enables us to:

1) mitigate business risks
2) safeguard brand reputation and build trust amongst our employees, customers and other key stakeholders
3) ensure a compliance management system meeting the requirements of the ISO standard 19600
4) stay competitive and meet customer requirements
5) report to our stakeholders with third party verification of annual performance

Risk management

The management of corruption and fraud risks is integrated into the regular risk management processes and the Group Compliance Officer is a member of the Group Risk Forum. Compliance risks are regularly assessed to evaluate the focus areas and continuously improve the compliance programme.

Communication

Communication, including the tone from the top and mandatory e-learning modules, is a key success factor in the programme. The Code of Conduct is communicated to all employees through the line and published on the company website and intranet. The governing documents relating to our compliance programme are published as internal management system instructions.

Training

All employees, regardless of category and region, are to complete the mandatory e-learning modules on Code of Conduct and Anti-Corruption and Anti-Trust. For this reason, we do not monitor completion by category and region.

Customer privacy

Customer data are handled in accordance with the confidentiality obligations that follow from the terms and conditions of our contracts with customers. For personal data, comprehensive instructions are in place outlining our standards to protect the personal data of employees and customers.

Anti-trust

The instruction on Anti-Trust is supplemented by a guideline on "Dos and Don'ts for competition law". Anti-Trust is also part of the mandatory training programme.

Supply chain

We expect our suppliers and sub-contractors to uphold the same business ethics standards and have published instructions on our requirements. The instruction on subcontractors and intermediaries as well as the reviewed supplier code of conduct shall be provided to all relevant business partners. Group Compliance is monitoring the implementation in each business area, which also includes the use of questionnaires for subcontractors, freelancers and agents as part of our due diligence process.

We do not report total number and percentage of business partners that the our anti-corruption policies and procedures have been communicated to, broken down by type of business partner and region, due to lack of information.

Reporting of misconduct

Our employees and customers are encouraged to report actual or suspected misconduct, such as, but not limited to, concerns related to bribery, fraud or labour grievances by colleagues, suppliers, subcontractors or agents working on behalf of our company. The different channels for reporting misconduct are set out in our instruction on the reporting of misconduct. Internally, issues should be handled through the normal line-management route. If this is not feasible, the Group Compliance Officer or one of the Ombudsmen should be contacted.

Information on how customers, employees and other stakeholders should report potential misconduct is published on **www.dnvgl.com** and the intranet. Anonymous reporting of concerns is ensured through the internal and external Ombudsmen.

REVIEW

Building an enduring culture of integrity requires constant attention. In 2016, we continued developing our governance documents and focused strongly on awareness measures.

Governing documents

In 2016, a major revision of the Instruction on Subcontractors and Intermediaries was published, also to enhance our risk-based approach. This quality revision introduced a new Supplier Code of Conduct and due diligence questionnaires or subcontractors and agents. The Sponsorship Instruction was updated to address compliance-relevant issues with the Code of Conduct and the Anti-Corruption Instruction.

With respect to foreign-trade laws, a draft guideline on the US export controls and licensing law was prepared.

Concerning data protection, a guideline for personal data risk evaluation and impact assessment was prepared. Furthermore, the guideline on third parties handling personal data was revised.

Training

The existing e-learning modules on the Code of Conduct and Anti-Corruption and Anti-Trust are mandatory for all permanent and temporary employees. By the year-end, 93% (83%) of all employees had completed the Code of Conduct e-learning module, while 92% (81%) had completed the e-learning module on Anti-Corruption and Anti-Trust. Measures were taken in early 2017 to ensure that all employees complete these mandatory e-learning modules.

By mid-February 2017, 96% have completed both the Code of Conduct and Anti-Corruption and Anti-Trust e-learning modules. The training statistics are compiled in line with the different business areas' structures, which deviate from each other regarding countries and regions. However, due to the overall high completion rate, satisfactory business ethics training can be ascertained across markets and we have not identified any particular employee category that is lagging behind in the mandatory training.

Interactive team training on anti-corruption and fraud for high-risk countries was introduced and provided by Group Compliance at most Country Chair meetings of the internally defined high-risk countries. Line managers then started to cascade the training down their line. The roll-out of the training started in 2016 and will be finalized at the beginning of 2017.

A new e-learning module on Personal Data Protection has been rolled out to all employees in relevant functions. This explains what personal data is and enables participants to recognize situations where they will need to pay attention to data protection and states who to contact in case of questions.

TABLE 04 COMPLETION RATES FOR BUSINESS ETHICS TRAINING

	Code of Conduct course		Anti-Corruption & Anti-Trust course	
Business Area	2016	2015	2016	2015
Maritime	99	89	99	88
Software	98	81	97	79
Global Shared Services	91	84	89	80
Group functions	91	74	89	67
Business Assurance	90	71	87	68
Energy	89	87	88	87
Oil & Gas	89	78	88	77
Total	93	83	92	81

Identification of fraud and corruption

In DNV GL, fraud and corruption risks are included in the regular risk assessment process. As an appendix to the corporate risk management procedure, a questionnaire is available to support risk managers in evaluating compliance risks in their areas of responsibility. All business areas conducted a risk assessment in 2016. The DNV GL risk management tool included 27 identified and active fraud and corruption risks in 2016. The risks were identified as being in Business Assurance (10), Oil & Gas (7), Global Shared Services (7), Maritime (2) and Energy (1).

Measures for high-risk countries

We implement extra measures in countries with a high risk of fraud or corruption. In 2015, high-risk countries were identified and subjected to extraordinary measures, such as special training (new training "Module 3 – Refresher on Anti-Corruption and Fraud"), audits, reviews, etc., for a period of three years. In 2016, the Country Chairs of high-risk countries encouraged the implementation of respective measures. As part of this process, a separate risk assessment process for high-risk countries has been established, in which the Country Chairs, in close cooperation with local line management, identify local risks and report mitigating actions for these.

Sanctions-check tool

An automatic sanctions-check tool was introduced to the most important Customer Relationship Management (CRM) systems to ensure the constant automatic monitoring of business partner data while decreasing the administrative burden of manual checks, which were previously part of the regular data administration.

Export control network

Recent sanctions have increased the attention paid to export control law and sanctions and highlighted the need to set up appropriate processes to handle this subject. A process to establish an extended global export control network was therefore started, including the selection of countries for which an export control designated person should be nominated depending on the business volume and strictness of local applicable laws.

Data protection representatives

The Data Protection set-up was extended with Regional Data Protection Representatives at the end of 2015. In 2016, regular communication with and training of the Regional Data Protection Representatives took place to facilitate their understanding of key processes and, in turn, enable them to answer questions regarding these raised by our business areas in the regions and actively communicate on data protection.

Communication

Communication, including the tone from the top, remains crucial for a successful compliance programme. In 2016, the Compliance Officer continued to present updates and highlights concerning the compliance programme to the Control Committee, Board of Directors, Board Audit Committee and Group Executive Committee as well as several Country Chair meetings. The global compliance network members will continue to actively raise awareness of compliance issues in their respective countries and help communicate the compliance programme.

New internal ombudsman

In 2016, an experienced senior HR manager took over the role as the internal Ombudsman. The internal Ombudsman continues to be available as an ethics helpline, an independent and impartial discussion partner and support for employees.

PEOPLE

DIGITAL TRANSFORMATION AND DOWNSIZING

Despite the contraction in many markets, we continue to invest to position DNV GL for the future. We have had to downsize and restructure in many parts of the company to adapt to the decline in activity. Still, we continued to invest in research, technology development and digital transformation.

DNV GL supports Sustainable Development Goals 4, 5, 8 and 10 and strives to promote quality education, gender equality, decent work and economic growth, and reduced inequalities.

TARGETS AND RESULTS

We want to be a company which attracts, retains and further develops competent people who are committed to our Purpose, Vision and Values. A high-quality recruitment process, along with an attractive and competitive employee value proposition and varied capability- and career-development opportunities, is crucial to attract, engage and retain our people. We want to be 'the best place to develop your competence.'

Targets

- Improve internal perception of clarity and direction, including how the strategy is being implemented and how individual employees contribute to the achievement of strategic goals.
- Improve leadership capabilities in the organization through digital and targeted offerings.
- Support the development of a customer--centric business culture.

Results

- Internal perception of clarity and direction has declined with 3-percentage-point from 2015.
- The Leadership Accelerator online tool was launched to fill the gaps between formal leadership training courses. The Leading Leaders course address strategic priorities.
- All business areas run activities tailored to better serve local customers. Management teams have prioritised to meet with customers globally.

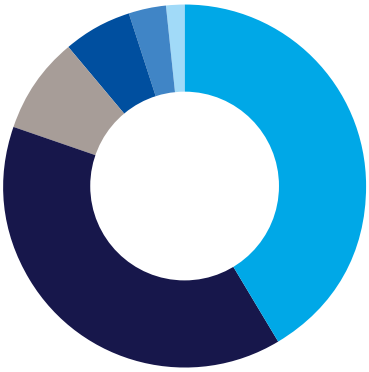
115 nationalities are represented among our employees, and 20 countries have 100 or more employees.

87% of employees have a higher education at PhD, Master or Bachelor degree levels

Plans ahead

- Continue to improve clarity and direction internally, including how individual employees contribute to the achievement of our strategic goals.
- Support the company's digital transformation, including employees' competence development and the attraction and retention of new types of expertise.
- Secure sustainable diversity in terms of gender and nationality in customer-facing and operational roles.

FIGURE 06 EMPLOYEES' LEVEL OF EDUCATION



Master	41%
Bachelor	40%
Basic education	8%
Doctorate / PhD	6%
2-year college	3%
Technical / professional	2%
Sum: Bachelor, Master or PhD level degree	87%

Education levels are largely captured through an employee self-service system.

APPROACH

Our role as a professional service provider and source of expertise relies on the knowledge, skills and attitudes of our people. We therefore make efforts to develop highly competent, high performing and engaged people who are committed to our Purpose, Vision and Values.

Responsibilities

The Group President and CEO approves our People, Leadership and Roles & Responsibilities policies. The Group HR & HSE function establishes our policies and sets the direction for how HR is to be managed. Group HR & HSE works closely with the HR teams in the business areas and Global Shared Services to ensure aligned implementation across the company. People management is a line responsibility, and our line managers are supported by HR managers and a range of tools facilitating the HR processes.

We value dialogue and have broad geographic employee representation on DNV GL's Board of Directors. Our management works constructively with employee organizations through the Global Employee Forum, regional and local Works Councils and unions, and in daily operations.

Strategy and management system

Our Group strategy and management system, including our People Policy, provide the overall governance for how we attract and develop experts and build a strong company culture. These policies also direct our value-based leadership expectations and facilitate the operations of the business areas, regions and Group units, as well as the overall development of DNV GL.

Code of Conduct

Our Code of Conduct is embedded in our management system and outlines our ethical business conduct and ethical personal conduct principles. The Code upholds the principles of non-discrimination, equal opportunity, the right to join labour unions and fair employment. We consider the company's Purpose, Vision and Values as instrumental in attracting and retaining the diverse workforce necessary in global markets.

We emphasize the importance of sound management of human and labour rights. All employees are introduced to the company's policies as part of the on-boarding process, and human and labour rights according to the UN Global Compact are part of this introduction. DNV GL's e-learning Code of Conduct course is mandatory for all permanent and temporary employees and close to all employees have completed this. A number of relevant classroom and e-learning courses are available for employees for purchasers.

DNV GL's Statement on Modern Slavery and Human Trafficking has been issued further to section 54 (1) of the United Kingdom's Modern Slavery Act 2015 and constitutes the DNV GL UK's slavery and human trafficking statement for the financial year ending 31 December 2016. The statement is available **here**.

Diversity and equal opportunities

To realize the potential in the organization, we seek diversity in terms of age, gender and nationality. We strive for the diversity of our workforce to be reflected at all management levels. We conduct mentoring programmes, including reverse mentoring of senior leaders by 'next generation' colleagues. We also have an annual global summit for up-and-coming talent.

Freedom of association

All employees have a documented right to freedom of association through the DNV GL management system and the company's commitment to the UN Global Compact. The majority of our supply chain consists of highly educated sub-contractors, who are typically self-employed but to a lesser degree part of an employee association, though there are no requirements imposed in this regard.

Most collective agreements cover elements related to health and safety, e.g. overtime hours and employee education as well as the company's focus on HSE topics. Since DNV GL has comprehensive internal HSE instructions and some of these are even further detailed in the business areas, there has not been a need to include these in local collective agreements too.

Minimum notice periods at DNV GL are typically 4-8 weeks for substantial operational changes. Notice periods vary by country, often guided by national legislation and additional provisions. However, the notice period for such changes is not normally specified in collective agreements.

89% of employees agree with this statement: "I am committed to working towards the future success of the DNV GL Group"

Competence development

We have internal governing documents detailing competence and training. We follow the 70:20:10 learning model, which has been identified as the most effective mix for learning – 70% from experience and doing the job, 20% through interaction with other people and 10% from e-learning and classroom courses. Business-area-specific training takes place to ensure the required competencies within our different services.

In addition to a range of mandatory training, there are cross-DNV GL programmes to develop leadership and technical stewardship. Mentoring is a key part of how we work, and we facilitate learning from colleagues around the globe through various mentoring programmes.

Our global career model facilitates employees' competence development. Skills management and lifelong learning programmes have been established for all employees. The competence planning includes an individual development plan and is an integral part of the annual goal setting dialogue that is a key element of the performance management process.

All employees are assessed annually on results and behaviour through a structured performance management process. The assessment, development and selection of new managers are based on DNV GL's expectations for leaders: Respect and Care, Foresight, Customer Focus, and Result Orientation.

Remuneration

As a knowledge company whose main resources are our employees, we depend on cooperation, teamwork and knowledge sharing. The annual salary review and remuneration process is common for all employees, including management, and is documented in the DNV GL Management System. Approximately 45% of the employees are covered by some form of collective bargaining agreement. No vote on remuneration policies is applicable.

External remuneration consultants are used to collect and analyse relevant market data for benchmarking purposes. For around the 20 largest countries in which we operate, this is done through access to country-specific salary and benefit databases covering thousands of people. There is no relationship between the remuneration consultant/data collector and the management.

The review procedure for the members of the Executive Committee differs slightly as a review is conducted and recommendations made by the Board's Compensation Committee before being concluded. The final decision on the remuneration of the Group President and CEO is taken by the Board of Directors based on the input from the Board's Compensation Committee.

Profit-share schemes are the most appropriate variable pay to support our values. We have two major global schemes:

- **Profit Share** (Salary grades 1-9): all eligible employees receive the same percentage of their base salary in bonus, based on DNV GL Group results.

- **Bonus Bank** (Salary grades 10–15): an annual individual profit share accrual is determined based on grade and a correlated earnings percentage, individual assessment rating, annual base salary and DNV GL Group and Business Area EBITA at reference rates versus targets.

In addition to these two global schemes, sales schemes are available in some Business Areas. No employee can be a member of more than one scheme.

Career endings

Due to the global nature of our operations, transition assistance programmes are implemented locally to meet local legislation and requirements. Local assistance programmes are set up in the case of large downsizing programmes. At all times, ways are sought to retain the employees in the organization, including but not limited to:

- All available positions are advertised internally
- External recruitment restrictions are implemented to facilitate internal transfers
- All employees shall have a development plan which should focus on DNV GL's future capability needs and the employee's own career ambitions
- The DNV GL Management System sets requirements to seek mitigating actions before manning reductions are considered or executed:
  - Stop external recruitment
  - Cancel employment agreements and contracts with external consultants, sub-contractors, assistance and temporary staff
  - Reduce non-invoiceable travel costs/increase the use of video conferences
  - Reduce overtime, implement salary freezes/ reductions, etc.
  - Identify and execute internal transfer opportunities

REVIEW

2016 was the toughest year for our company in 30 years because of the continued downturn in the maritime and oil & gas markets. We have had to take steps to adapt to the decline in business volume, including headcount reductions. The downsizing has been difficult for everyone – for those who have had to leave us, as well as for those who remain with the company.

Despite the decline in revenue, we continue to invest in our future and are building competence and taking positions to keep the company strong in the future. Our digital transformation is continuing at full speed, and everyone can contribute.

Downsizing

We continue to reduce costs but have also had to right-size the organization in line with the lower activity experienced and forecast in certain areas. We are now almost 2,500 fewer colleagues than we were just two years ago. Regions have had to balance customer needs, competencies and the cost base. Mitigating measures, including a salary freeze, were implemented where possible. When headcount reductions have been necessary, it has been emphasized that these processes are to be handled in line with our values and principles, as well as local legislation.

Investment in digital transformation

40% of our investment in technology and research is in our company's digital transformation – building competence, services and infrastructure. A Digital Accelerator unit was established to develop our digital platform business. There are also extensive digitalization initiatives in our Group Technology and Research unit, all business areas and Global Shared Services IT.

To move fast on digital transformation, we need to foster more technological curiosity and update our work processes to fit the new reality. We have started in a small way and have implemented a version of lean start-up methodology and agile ways of working in some parts of the organization, introduced reverse mentoring, and experimented with new ways of sharing knowledge. Going forward, we aim to more radically change our ways of working and further experiment in terms of how we are organized.

High enablement, declining employee engagement

The 2016 People Engagement Process Survey, which had a 92% response rate, showed that DNV GL continues to exceed the global norms for enablement, empowerment, organization and collaboration. Employee enablement remains clearly above Korn Ferry Hay Group's High Performance Norm, indicating that people continue to feel their skills are fully utilized and that work environments support them well.

The employee engagement score of 74% is now on a par with Korn Ferry Hay Group's Global Norm, but has fallen year-on-year since 2014. Downsizing appears to have had a negative impact on perceptions of leadership and DNV GL as an employer of choice. Having said this, DNV GL's results are comparable with those of other companies undergoing equivalent difficult organizational changes, including redundancy processes.

The organization has also sent a clear message that we must improve clarity and direction. With a 3-percentage-point decline from 2015 in the overall positive rate for the clarity and direction questions, we did not achieve the Group-wide KPI for 2016, which was a 2-percentage-point improvement.

Returning to work after parental leave is encouraged

Due to the use of various HR management systems, we are currently unable to monitor the number of people taking maternity or paternity leave across the company, or, consequently, the turnover statistics for these employees. We are in the process of establishing common HR and finance systems which will enable such monitoring across the company. The process is expected to be completed in 2017. However, the available data does not indicate that those on parental leave have any higher turnover than other employees.

Hearing from the next generation

It is important to hear from the 'next generation' as it represents the future of our company. As the company's executive top management does not always get to meet next generation colleagues that often, in 2016 we hosted our first Next Generation Summit, where up-and-coming talent from across the global organization engaged directly with the Executive Committee on strategy execution and business improvement.

Characteristics of our employees

The following tables provide detailed information on categories, types, age, gender, regions, turnover, new hires, payment and benefits for our employees and workforce.

FIGURE 07 **EMPLOYEES' ENGAGEMENT AND ENABLEMENT**

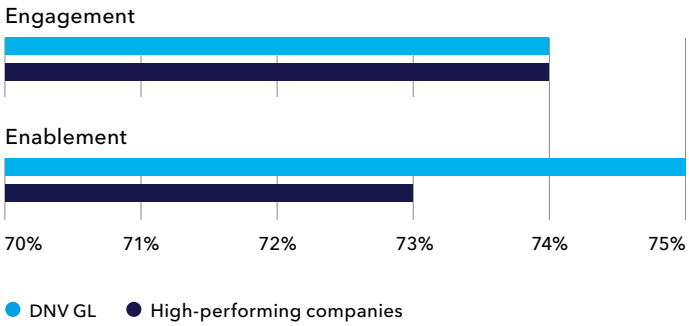


TABLE 06 **EMPLOYEES RECEIVED REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEWS**
BY GENDER FOR PERMANENT EMPLOYEES

Gender	Rated performance	Completed performance process
Female	99%	92%
Male	98%	91%
Total	98%	91%

TABLE 05 **INTERNAL CLASSROOM TRAINING**
BY CATEGORY AND GENDER

HOURS/EMPLOYEE

Employee category	Female	Male
1	7.5	5.0
2	0.8	
3	2.0	1.3
4	1.6	1.1
5	2.3	3.7
6	5.4	7.1
7	5.3	7.4
8	5.8	11.7
9	5.2	12.6
10	8.6	10.1
11	5.8	9.0
12	3.2	4.7
13	2.1	3.4
14	1.5	3.1
15		0.8
Total	4.6	9.2

The overview excludes on-the-job training, internal e-learning, and external training. We aim at 70% on-the-job training in our competence development.

TABLE 07 **EMPLOYEES AND WORKFORCE BY CONTRACT, TYPE AND GENDER**

	Male	Female	Total
Permanent employees	9 142	4 079	13 221
Full-time	8 815	3 517	12 332
Part-time	327	562	889
Temporary employees	202	127	329
Total number of employees	9 344	4 206	13 550
Total number of subcontractors and extraordinary personnel	4 790	4 790	6 369

TABLE 08 **EMPLOYEES BY REGION AND TYPE**

	Permanent employees)	Temporary employees	Total
Nordics	3 047	17	3 064
Central Europe	1 668	18	1 686
UK, Ireland and Sub-Saharan Africa	1 189	28	1 217
West, South and East Europe	2 218	69	2 287
India, Middle East and Africa	722	44	766
North America	1 851	13	1 864
South America	302	1	303
North Asia	1 404	108	1 512
South Asia	820	31	851

TABLE 09 **EMPLOYEES BY CATEGORY, GENDER AND AGE**

	GENDER		AGE				
Employee category	Female	Male	< 30	31-40	41-50	51-60	> 60
1	1	3	1	1		2	
2	19	22	9	13	10	6	3
3	156	82	80	80	35	32	11
4	366	138	137	167	111	65	24
5	694	295	247	354	226	134	28
6	792	752	542	515	275	173	39
7	653	1 165	392	849	363	170	44
8	576	1 748	120	1 277	599	275	53
9	410	1 779	7	776	882	422	102
10	304	1 555		298	858	524	179
11	130	975		73	456	444	132
12	72	492		9	174	284	97
13	18	193			56	105	50
14	10	105			33	56	26
15	5	40			5	26	14
Grand Total	4 206	9 344	1 534	4 412	4 083	2 718	802

TABLE 10 **EMPLOYEE TURNOVER AND NEW EMPLOYEE HIRES – TOTAL NUMBER AND RATES**
BY AGE, GENDER AND REGION

AGE

Employee turnover	<31	31–40	41–50	51–60	>60	Total
Total number	213	733	440	294	192	1872
Rate	20%	16%	10%	10%	16%	13%
Opening Count 2016	1084	4601	4430	3067	1206	14 388

New employee hires

Total number	258	318	129	63	22	790
Rate	33%	40%	16%	8%	3%	100%

GENDER

Employee turnover	Male	Female
Total number	1198	674
Rate	12%	15%
Opening Count 2016	9918	4470

New employee hires

Total number	506	284
Rate	64%	36%

REGION

Employee turnover	Nordics	Central Europe	West, South and East Europe	UK, Ireland and Sub-Saharan Africa	India, Middle East and Africa	North America	South America	North Asia	South Asia	Grand total
Total number	405	183	167	205	101	343	42	192	234	1872
Rate	13%	10%	8%	15%	13%	17%	12%	11%	23%	13%
Opening Count 2016	3156	1817	2167	1397	803	2012	343	1677	1016	14 388

New employee hires

Total number	82	38	219	55	59	240	22	29	46	790
Rate	10%	5%	28%	7%	7%	30%	3%	4%	6%	100%

TABLE 11 **AVERAGE BASE SALARY FEMALE/MALE**
BY EMPLOYEE CATEGORY. FOR THE 10 COUNTRIES WITH MOST EMPLOYEES

Salary grade	Average female/male
NORWAY	
06	97%
07	97%
08	96%
09	100%
10	100%
11	99%
12	102%
13	99%
UNITED STATES	
05	96%
06	100%
07	101%
08	96%
09	100%
10	103%
GERMANY	
05	106%
06	105%
07	105%
08	98%
09	94%
10	100%
UNITED KINGDOM	
05	102%
06	104%
07	95%
08	100%
09	101%
10	107%
CHINA	
06	82%
07	101%
08	99%
09	103%
THE NETHERLANDS	
05	82%
06	102%
REPUBLIC OF KOREA	
08	96%
SINGAPORE	
06	97%
07	104%
08	98%
09	80%
INDIA	
06	88%
POLAND	
06	97%
07	88%
08	95%
WEIGHTED AVERAGE	
	98.5%

TABLE 12 **HIGHEST PAID INDIVIDUAL TO THE AVERAGE RATIO AND INCREASE**
PERCENTAGE INCREASE. FOR THE 10 COUNTRIES WITH MOST EMPLOYEES

Country	Currency	Ratio Salary Highest/ Average 2016	Average Increase 2015–16	Increase highest paid 2015–16	Ratio Increase Highest/ Average	Number of employees
Norway	NOK	7.09	0.8%	0.0%	0.00	2059
United States	USD	3.30	2.5%	2.0%	0.80	1277
Germany	EUR	3.70	2.2%	0.7%	0.32	1109
United Kingdom	GBP	3.92	0.9%	0.0%	0.00	928
China	CNY/RMB	5.81	1.0%	0.0%	0.00	749
The Netherlands	EUR	3.42	3.1%	0.0%	0.00	537
Republic of Korea	KRW	2.44	0.9%	2.5%	2.78	364
Singapore	SGD	4.55	0.8%	0.0%	0.00	327
India	INR	7.55	6.6%	8.0%	1.21	281
Poland	PLN	2.37	1.6%	0.0%	0.00	237

TABLE 13 **BENEFITS PROVIDED TO FULL-TIME EMPLOYEES ONLY**
FOR THE 10 COUNTRIES WITH MOST EMPLOYEES

BENEFITS	NORWAY			GERMANY		
	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time
Life insurance	Yes	Yes	Yes	Yes	Yes	Yes
Health care	Yes, voluntary[1]	Yes, voluntary[1]	Yes, voluntary[1]	Yes, voluntary	Yes, voluntary	Yes, voluntary
Disability cover	Yes	Yes	Yes	Yes	Yes	Yes
Parental leave	Yes	Yes	Yes	Yes	Yes	Yes
Retirement provision	Statutory + DB or DC	Statutory + DB or DC[2]	Statutory + DC[2]	Statutory + DB or DC	Statutory + DB or DC	Statutory + DB or DC
Stock ownership	N/A	N/A	N/A	N/A	N/A	N/A
Profit share/bonus	Yes	Yes	No	Yes	Yes	No

1) No employer contribution 2) If 20%+ FTE

BENEFITS	UNITED STATES			UNITED KINGDOM		
	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time
Life insurance	Yes	Yes	Yes	Yes	Yes	Yes
Health care	Yes, voluntary[1]	Yes, voluntary[1]	Yes, voluntary[1]	Yes, voluntary[1]	Yes, voluntary[1]	Yes, voluntary[1]
Disability cover	Yes	Yes	Yes	Yes	Yes	Yes
Parental leave	Yes, maternity	Yes, maternity	Yes, maternity per legislation	Yes, maternity	Yes, maternity	Yes, maternity per legislation
Retirement provision	Statutory + DC matching	Statutory + DC matching	Statutory + DC matching	Statutory + DC matching	Statutory + DC matching	Statutory + DC matching
Stock ownership	N/A	N/A	N/A	N/A	N/A	N/A
Profit share/bonus	Yes	Yes	No	Yes	Yes	No

1) Employer pays 85% for employee

1) Employer pays 85% for employee

BENEFITS	CHINA			THE NETHERLANDS		
	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time
Life insurance	Yes	Yes, excl. interns	Yes, excl. interns	Yes	Yes	Yes
Health care	Yes	Yes, excl. interns	Yes, excl. interns	Yes, voluntary	Yes, voluntary	Yes, voluntary
Disability cover	Yes	Yes	Yes, excl. interns	Yes	Yes	Yes
Parental leave	Per legislation	Per legislation	Per legislation	Yes	Yes	Per legislation
Retirement provision	Statutory + DC matching	Statutory + DC matching	Statutory + DC matching	Statutory + ABP or DC	Statutory + ABP or DC	Statutory + ABP or DC
Stock ownership	N/A	N/A	N/A	N/A	N/A	N/A
Profit share/bonus	Yes	Yes	No	Yes	Yes	Yes, per legislation

TABLE 13 **BENEFITS PROVIDED TO FULL-TIME EMPLOYEES ONLY**
FOR THE 10 COUNTRIES WITH MOST EMPLOYEES

CONTINUED

BENEFITS	REPUBLIC OF KOREA			SINGAPORE		
	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time
Life insurance	Yes	Yes	Yes	Yes	Yes	Yes
Health care	Statutory	Statutory	Statutory	Statutory	Statutory	Statutory
Disability cover	Yes	Yes	Yes	Yes	Yes	Yes
Parental leave	Yes	Yes	Yes, per legislation	Yes	Yes	Yes, per legislation
Retirement provision	Statutory EoS or DC	Statutory EoS or DC	Statutory EoS or DC	Statutory	Statutory	Statutory
Stock ownership	N/A	N/A	N/A	N/A	N/A	N/A
Profit share/bonus	Yes	Yes	No	Yes	Yes	No

BENEFITS	INDIA			POLAND		
	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time	Permanent / Full-time	Permanent / Part-time	Temporary / Full- and Part-time
Life insurance	Yes	Yes	Yes	Yes	Yes	Yes
Health care	Yes	Yes	Statutory	Statutory	Statutory	Statutory
Disability cover	Statutory	Statutory	Statutory	Yes	Yes	Yes
Parental leave	Yes[1]	Yes[1]	Yes, per legislation	Yes	Yes	Yes, per legislation
Retirement provision	Statutory	Statutory	Statutory	Statutory + DC	Statutory + DC	Statutory + DC
Stock ownership	N/A	N/A	N/A	N/A	N/A	N/A
Profit share/bonus	Yes	Yes	No	Yes	Yes	No

1) 12 weeks maternity + 5 days paternity

DB: Defined Benefit plan
DC: Defined Contribution plan

Contributions to defined benefit plans are not percentage-based, and all defined benefit plans are closed to new members. For the countries with ongoing defined benefit plans, the employer contributions range from 14% (Germany) to 30% (UK). In the UK, employee contribution is 3–5%. Please see Note 8 for details on defined benefit plan obligations.

ENVIRONMENT AND CLIMATE

ESTABLISHING A BASELINE FOR GREENER OPERATIONS

DNV GL's purpose is to safeguard life, property and the environment. Climate action is an increasingly crucial task for the world, and also a priority for us. In Norway, DNV GL's operations of buildings and travel are now verified as carbon neutral.

DNV GL supports Sustainable Development Goal 13 and strives to take urgent action to combat climate change and its impacts.

TARGETS AND RESULTS

We aim to deliver smarter, safer and greener performance in everything we do. We take a precautionary approach and are committed to managing and continually improving our environmental and climate performance. This is to ensure that we safeguard the environment and climate and comply with regulations and expectations.

Targets

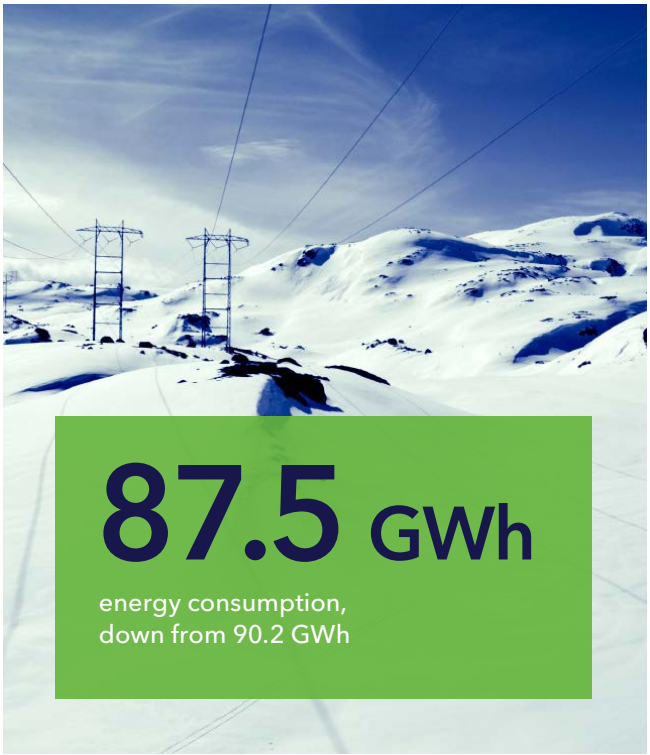
- Develop a global plan with measures to become climate neutral with regard to travel and buildings within 2020.
- Improve data quality and reporting practices for Scope 1, 2 and 3 greenhouse gas emissions.
- Run a pilot for carbon-neutral operation of Norwegian offices (energy consumption and waste) and travel in 2016, with necessary offsets verified by an independent third party.

Results

- A global plan to become climate neutral with regard to travel and buildings within 2020 has not yet been established.
- A baseline for the carbon footprint from air travel has been established for 93% of DNV GL employees booking their air travel through two designated travel agencies.
- The reporting of greenhouse gas emissions from air travel is automated and no longer requires manual data input.
- New organization with nine regions and a network of dedicated HSE regional specialists has been implemented, resulting in improved data collection and reporting processes.
- Carbon neutral operation of Norwegian offices (energy consumption and waste) and travel in 2016, with necessary offsets verified by an independent third party.

Plans ahead

- Implement a global plan with measures to become climate neutral with regard to travel and buildings within 2020.
- Measure greenhouse gas emissions from air travel for 100% of employees.
- Include more locations in the environmental and climate reporting.
- Add waste to environmental reporting and establish a reporting baseline.
- Engage in initiatives to understand our customer services' impact on the environment.



APPROACH

We strive to foster a culture in which we continuously improve our environmental and climate impact, whether this stems from our operations, services, or employees' personal activities. As a signatory to the UN Global Compact, taking a precautionary approach in managing environmental and climate aspects is embedded in how we run our business.

Code of Conduct

Our Code of Conduct states that we are to work to reduce the environmental impact of our own operations, procurements, investments and property management. Further, we are to minimize our emissions and consumption of energy and natural resources, and actively contribute to environmental protection by promoting the development and deployment of environmentally friendly technologies.

Climate neutral by 2020 strategy

To address the urgent global need for climate action, DNV GL's strategy states that the company is to take measures to become carbon neutral in relation to office buildings and travel activity by the end of 2020.

Environmental management system

DNV GL has been certified in accordance with ISO 14001 since 2008 and this certification is key to ensuring that the Group operates in a safer, smarter and greener manner. The certification also contributes to DNV GL being trusted as a leader that enables the safe and sustainable performance of its customers. To implement environmental initiatives, internal and external audits are undertaken on test sites and laboratories.

Climate and environmental governance

This is stated in our HSE policy and implemented by a common approach, processes and systems for managing our environmental performance throughout the Group. HSE coordinators support line management, and the Group HSE function is responsible for governing and controlling environmental performance across business units using the Synergi™ Life tool and dedicated travel agencies.

Environmental reporting system and tool

Environmental measurements, incident reporting and performance monitoring of material topics, energy consumption, emissions and waste management are followed up annually using the Synergi™ Life tool.

Green solutions and supply chains

Our operational priorities are to reduce our operations' energy consumption and emissions to air, and the measuring and monitoring of these aspects are recorded and followed up annually. We seek appropriate and sustainable approaches and choose green solutions. If no such solution can be found, we shall as far as possible apply the solutions with the least negative environmental impact. If we undertake work which may have environmental impacts that are different to those of our normal operations, such impacts shall be identified and evaluated.

Suppliers and subcontractors who provide services in compliance with our environmental policies and standards shall be preferred.

Calculation of greenhouse gas emissions

The greenhouse gas emissions have been calculated in line with the GHG Protocol (World Business Council for Sustainable Development and World Resources Institute). For 2016, we have used the financial and operational control approach, with the operational control criteria defining the boundary for consolidating the greenhouse gas emissions. Only location-based emissions are reported, due to lack of information on contractual instruments and residual mix needed to calculate marked-based values. Going forward, to improve our GHG reporting we plan to include market-based reporting according to the GHG Protocol guidelines.

All emission factors, excluding grid emission factors, are based on Defra CO_2 emission factors. **Read more**.

Grid emission factors, excluding Norway, are based on Defra factors. For Norway, the grid emission factor is based on local official numbers **(Read more)**. Indirect emissions from electricity and district heating have been calculated using country-specific grid average emission factors published by Defra.

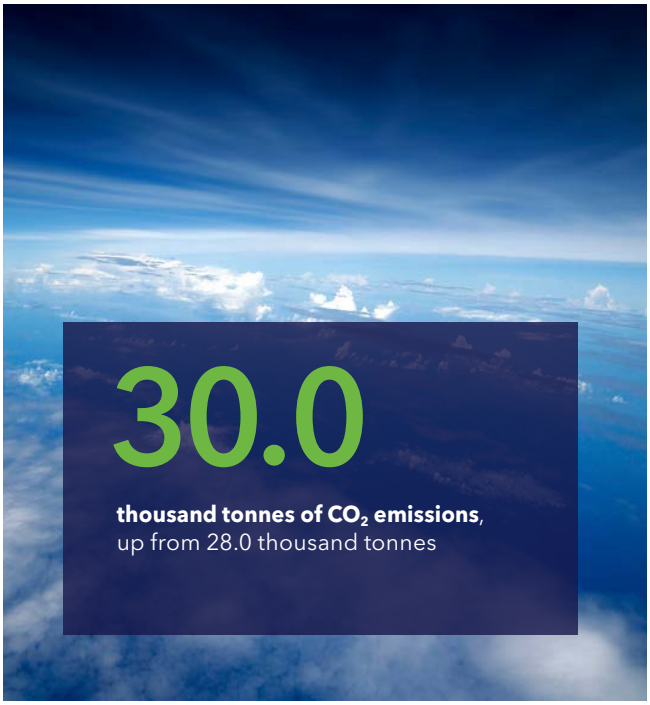
REVIEW

We achieved verified carbon neutral operations in Norway in 2016, by reducing and offsetting for our greenhouse gas emissions. With our strategy to become carbon neutral in 2020, our environmental and climate activities in 2016 focused on establishing the global baseline and reporting processes for our greenhouse gas emissions.

Environmental compliance

Zero non-compliance cases involving environmental regulations and zero fines related to environmental aspects were reported in 2016.

No risk related to climate change is considered material. Action has been taken to mitigate the potential risk of flooding at the Arnhem laboratory, which is situated on reclaimed land beside the River Rhine. This includes an early-warning system as well as the purchase of protection material. The related financial implications are limited.



Verified carbon neutrality in Norway

Several measures have been implemented to identify, assess and manage reductions in greenhouse gas emissions. One of the measures taken to become carbon neutral in relation to office buildings and travel activity by the end of 2020 was a pilot project to achieve carbon neutral operations at Norwegian offices (energy consumption and waste) and travel in 2016. The necessary offsets are verified by an independent third party.

Insufficient reporting routines

Reporting on energy and greenhouse gases is not complete and the data quality is uncertain for Scope 1, 2 and 3 emissions. In 2016, we reported on 73 locations that account for 81% of our employees but there is still uncertainty as to the completeness of the reporting by many of these locations.

For 2016, we do not report the greenhouse gases CH_4, N_2O, HFCs, PFCs, SF_6 or NF_3. Emissions of NO_X and SO_X are considered immateria. We are not aware of having any emissions of ozone depleting substances.

As part of our 2016–2020 strategy of taking measures to becoming carbon neutral with regard to travel and buildings, we will address the completeness and quality of our reporting in 2017 and increase the share of our locations reporting their energy consumption and greenhouse gas emissions.

Improved tracking of emissions from air travel

Two global travel agencies have replaced local contracts, ensuring automatic carbon-footprint tracking for business travel. In addition to reduced travel costs through these global frame agreements, the agencies help us set the baseline for travel-related emissions and maintain an overview of our travellers for safety reasons.

Energy consumption slightly reduced

The total reported energy consumption was 87.5 GWh, a decrease of 3% from 2015 due to fewer locations and changes in operations in 2016. The energy-consumption level of the locations reported in 2015 remained the same in 2016. The laboratories in Hamburg, Stuttgart, Mülheim and Herne in Germany were divested. The locations Perth, Australia and Jakarta, Indonesia were excluded from the 2016 reporting due to downsizing.

The energy consumption per employee for the reported locations was 8.5 MWh in 2016, a 5% increase from 2015. The total surface area of these locations increased by 11% because of office relocations and the rebuilding of facilities, and the downsizing led to fewer employees per surface area.

Electricity from the grid decreased to 52.8 GWh, down 2% compared to 2015. The specifically ordered renewable electricity off-site was 10.2 GWh in 2016, 10% more than in 2015. Non-renewable energy produced on-site at the reporting locations decreased to 15.4 GWh, down 16%.

Arnhem Power TIC reported green energy on-site generated by a 50 kV power supply – 10,875 MWh was reported for 2016 and 10,794 MWh for 2015. Previously, this green energy on-site was not reported. Since the location-based emissions for this green energy on-site are zero, the lack of reporting does not affect emissions.

Greenhouse gas emissions increased

The greenhouse gas emissions (Scope 1 and 2) were 29,993 tCO_2e from the 73 reporting locations in 2016. This is a 7% increase from 2015, with a corrected growth of 8% in emissions for locations included in reports for 2015 and 2016.

The increase in the CO_2 footprint is mainly due to the increase in the consumption of sulphur hexafluoride to 359 kg in 2016, from 263 kg in 2015, by the Arnhem Power TIC location. The Arnhem Power TIC Laboratory is one of the major contributors to our greenhouse gas emissions and in 2016 emissions from this location increased by 30% compared to 2015. The specific greenhouse gas emissions (Scope 1 and 2) from the 73 reporting locations were 2.9 tCO_2 per person in 2016, up 16% from 2015.

The greenhouse gas emissions (Scope 3) from air travel were 17,282 tCO_2e. The data is provided for locations that have implemented the new global contracts with travel agencies, currently covering 93% of permanent and temporary employees. Only emissions from air travel are reported for Scope 3.

TABLE 14 GREENHOUSE GAS EMISSIONS

	GHG Emissions (tCO_2e)
Scope 1: Direct GHG emissions from operations	11,204
Scope 2: Indirect GHG emissions from consumed energy	18,789
Scope 3: Direct GHG emissions from air travel	17,282

SUSTAINABLE PROCUREMENT

STRENGTHENING SUSTAINABLE PROCUREMENT PRACTICES

We continue to strengthen the company's global governance systems, preparing systematic sustainable procurement practices group-wide. Our focus on environmentally sound offices resulted in the development of one of the first near-zero-emission commercial buildings in China.

DNV GL supports Sustainable Development Goal 12 and strives to ensure sustainable consumption and production patterns.

TARGETS AND RESULTS

The sustainability and ethical standards to which DNV GL is committed also extend to our suppliers. Our current ambition is to fully implement a consistent sustainable procurement programme which will enable us to effectively engage with our suppliers worldwide and monitor their performance.

Targets

- **Implementation**
  Integrate sustainability into all procurement projects.
- **Training**
  Deliver training to key personnel in procurement functions.
- **Procurement software**
  Establish software to monitor supplier compliance.
- **Performance reporting**
  Report on and review performance.

Results

- **Implementation**
  Nearly all contracts entered into with new suppliers in 2016 included the Supplier Code of Conduct, which was revised at the end of 2015. Almost all the Group procurement procedures were updated and aligned with the Supplier Code of Conduct.
- **Training**
  Regional procurement managers trained their respective teams in the new and updated procurement policies and procedures.
- **Procurement software**
  Procurement software, which will enable the tracking and monitoring of supplier data globally, was selected.
- **Performance reporting**
  Global software for tracking performance was not implemented, hence consolidated reporting for 2016 is not possible.

Plans ahead

- **Implementation of procurement software**
  Implement procurement software which enables supplier data to be tracked and the introduction of sustainable procurement processes to be monitored. The tool will initially cover indirect suppliers.
- **Supplier risk assessments**
  Initiate systematic sustainability risk assessments of selected supplier categories.
- **Performance reporting**
  Based on the implementation of the procurement software, we aim to report on indirect-procurement supply chain performance in 2018.

APPROACH

DNV GL's Supplier Code of Conduct outlines our expectations for suppliers and is aligned with the UN Global Compact's ten principles on human rights, labour standards, environmental performance and anti-corruption. We procure most services and products locally. The responsibility for governing documents, strategies, processes, tools and global procurement projects is organized centrally in our Global Shared Services unit.

Characteristics of our supply chain

We divide our suppliers into two main groups:

Direct suppliers that provide services which are part of our deliveries to customers. These suppliers are, for example, subcontractors that provide technical expertise or conduct management-system certifications on our behalf.

Indirect suppliers that provide goods and services which are related to our overall business activities, such as the facility management of our office buildings, travel, ICT hardware and software, financial services, insurance and office supplies. The five largest categories by expenditure are Subcontractors; Indirect suppliers ex. travel; Travel; Office and real estate expenses; and IT and communications.

All suppliers must accept our Supplier Code of Conduct

We must use suppliers which accept our Supplier Code of Conduct. Suppliers are required to sign the Supplier Code of Conduct or accept it as a mandatory appendix to the contract.

In addition, subcontractors must comply with HSE requirements that are equivalent to our own requirements. Furthermore, checklists are in place to ensure an appropriate ethical standard for hired subcontractors in line with our Codes of Conduct. New indirect suppliers must be screened for inherent sustainability risks. Where needed, suppliers are requested to conduct self-assessments.

Sustainable procurement policies aligned with the UN Global Compact principles

Our commitment to corporate sustainability extends to our relationships with suppliers, subcontractors, contractors and intermediaries. Our Supplier Code of Conduct outlines our expectations for suppliers and is aligned with the UN Global Compact's ten principles on human rights, labour standards, environmental performance and anti-corruption.

Further instructions that among other things support sustainability principles are given in management-system documents, such as the instructions for procurement, instructions for contracting subcontractors and intermediaries, real-estate management policy and real-estate leasing guideline.

High environmental standards for offices

Our Global Real Estate Leasing Guidelines state that "We will use office premises and other properties which are in compliance with our environmental policies, e.g. increased energy efficiency of buildings, sustainable energy sources, reducing energy consumption and atmospheric emissions".

Global governance, local purchasing

We procure most services and products locally. However, the responsibility for policies, processes, tools and global procurement projects is centralized. The business areas are responsible for direct procurement which is part of our deliveries to customers. Indirect procurement is managed by Global Shared Services. When we will implement indirect-procurement software globally, we will track supplier data and monitor compliance to our procurement processes. Based on this, we will efficiently report on our consolidated sustainable procurement practices. supplier data to be tracked and the implementation of sustainable procurement processes to be monitored.

REVIEW

In 2016, we continued to implement sustainable procurement practices. The review of all relevant governance documents was completed and software which will enable the tracking, monitoring and reporting of supplier data was selected. Moreover, an agreement for yet another green office building was entered into.

Implementation of the Supplier Code of Conduct

All contracts entered into with new suppliers in 2016 included the DNV GL Supplier Code of Conduct. This code covers social, environmental and ethical criteria. We do not yet have in place a system which enables consolidated reporting on the percentage of new suppliers that were screened on these criteria, or consolidated reporting on supplier impact assessments. A system which enables consolidated reporting on supplier screening based on environmental and social criteria will be implemented in 2017.

New procurement database ready for implementation

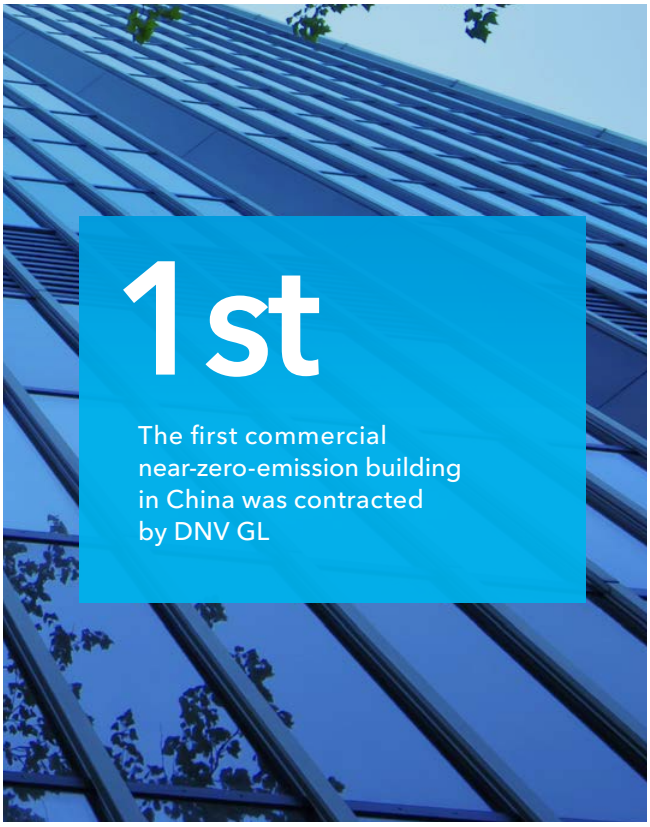
The work of establishing a more systematic approach to sustainable procurement management continued in 2016. The review of all procurement instructions was completed. Furthermore, we selected integrated procurement software which will enable supplier data to be tracked and the implementation of sustainable procurement processes to be monitored.

First commercial near-zero-emission building in China

In 2016, we entered into an office lease in Shanghai which the Chinese environmental authorities have chosen as a pilot project for "a near-zero-emission building". This is the first commercial near-zero-emission construction in Shanghai, and probably the first in China. The objective of this pilot project is to utilize the experience in other commercial buildings in China. The project is supported by the World Bank. The building will be completed in August 2017 and will accommodate around 120 DNV GL staff.

Safer business travel

The safety of our employees is of critical importance, whether they are in the office, on customer's site or on business travel. In 2016, we entered into global agreements with two travel agents, enabling a full overview of the whereabouts of all employees on business travel. Furthermore, all employees receive relevant safety and security information about the travel destination in advance of their trip and ongoing notifications during the trip.



PARTNERSHIPS FOR SUSTAINABILITY

TOGETHER WE ACHIEVE MORE

As part of our vision to have a global impact for a safe and sustainable future, we strive to act faster and achieve more in collaboration with others. We provide technology and sustainability expertise as well as funding in local and global partnerships that focus on climate, social and governance innovation.

DNV GL supports Sustainable Development Goal 17 and strives to strengthen the means of implementation and revitalize the global partnership for sustainable development.

Industry associations

Through our daily business in more than 100 countries, we work together with customers, suppliers and competitors in industry associations and on initiatives at national, regional and global levels.

We strive to bring our technical insight and market foresight into the work of industry associations to create sustainable business environments.

Our main memberships include:

GROUP

United Nations Global Compact (UNGC)
World Business Council for Sustainable Development (WBCSD)
Confederation of Norwegian Enterprise (NHO)

MARITIME

International Association of Classification Societies (IACS)
Entity for the Quality Assessment and Certification of Organisations Recognised by the European Union (QACE)
International Council on Combustion Engines (CIMAC)

OIL & GAS

Norwegian Oil and Gas Association (NOROG)
International Gas Union (IGU)
Oil and Gas UK

ENERGY

International Council on Large Electric Systems (CIGRE)
Global Wind Energy Council (GWEC)
Solar Power Europe

BUSINESS ASSURANCE

Independent International Organisation for Certification (IIOC)
International Confederation of Inspection and Certification (CEOC)
Consumer Goods Forum (CGF)

SOFTWARE

Institute of Electrical and Electronics Engineers (IEEE)
Pipeline Simulation Interest Group (PSIG)
American Gas Association (AGA)

We participate in several global multi-stakeholder initiatives supporting economic, environmental and social principles across sectors, including the UN Global Compact, UN Climate Technology Centre and Network, World Business Council for Sustainable Development, Global Opportunity Network, The Red Cross and WWF.

17 PARTNERSHIPS FOR THE GOALS

UN Global Compact

DNV GL became a signatory to the UN Global Compact in 2003 and we are committed to embedding the ten principles on human rights, labour, environment and anti-corruption in our corporate strategy, management system and day-to-day operations. We also align our annual report with this framework. In 2016, we continued our strong collaboration with the UN Global Compact through two flagship reports on global opportunities and pioneers of the UN Sustainable Development Goals.

Global Opportunity Network

DNV GL was a founding partner of the Global Opportunity Network together with the UN Global Compact and Sustainia in 2013. The network presents the Global Opportunity Report annually. Together, we are now inviting partners to join us in scaling up what we aim to develop into the world's biggest digital platform for Sustainable Development Goals solutions.

Future of Spaceship Earth – Business Frontiers

Our Group President and CEO, Remi Eriksen, launched the report 'Future of Spaceship Earth – Business Frontiers' at the UN headquarters during the 71st UN General Assembly. This report presents our forecast of the likelihood of humanity achieving each of the 17 SDGs by 2030. It also dives into private-sector solutions for attaining the goals and, for each SDG, we highlight a UN Global Compact signatory company pioneering progress. The 'Future of Spaceship Earth' has attracted broad interest amongst customers and the media and we have held local launches in London, Oslo and Delhi. Read more

Brazil – assessment of sustainable business

In collaborative research with the Brazilian Committee of the UN Global Compact (CBPG), we assessed 20 companies against the 17 SDGs, considering their initiatives, strategies and projects which contribute to the implementation of the SDGs. Our CEO of DNV GL – Business Assurance, Luca Crisciotti, presented the assessment results at the Annual Forum of the UN Global Compact Local Network in São Paulo.

Leaders summit

During the annual UN Global Compact Leaders Summit, our EVP Group Development, David Walker, presented an analysis called From Global Risks to Global Opportunities which was based on the Global Opportunity Reports.

Advanced reporter

We achieved the 'UN Global Compact Advanced' reporting level for Communication on Progress in our 2015 Annual Sustainability Report.

Climate Technology Centre and Network

Since 2014, DNV GL is the strategic partner of the Climate Technology Centre and Network (CTCN) to support its operations by utilizing our extensive experience of technology transfer, knowledge management and capacity building.

The CTCN is the operational arm of the UNFCCC Technology Mechanism, hosted by UN Environment and the UN Industrial Development Organization.

Private-sector engagement

To stimulate technology cooperation among developed and developing countries, we facilitate private-sector involvement in CTCN.

Knowledge management

We continue to deploy the multi-functional knowledge-management system, featuring a matchmaking facility for technology providers and developing countries and an online climate-technology library.

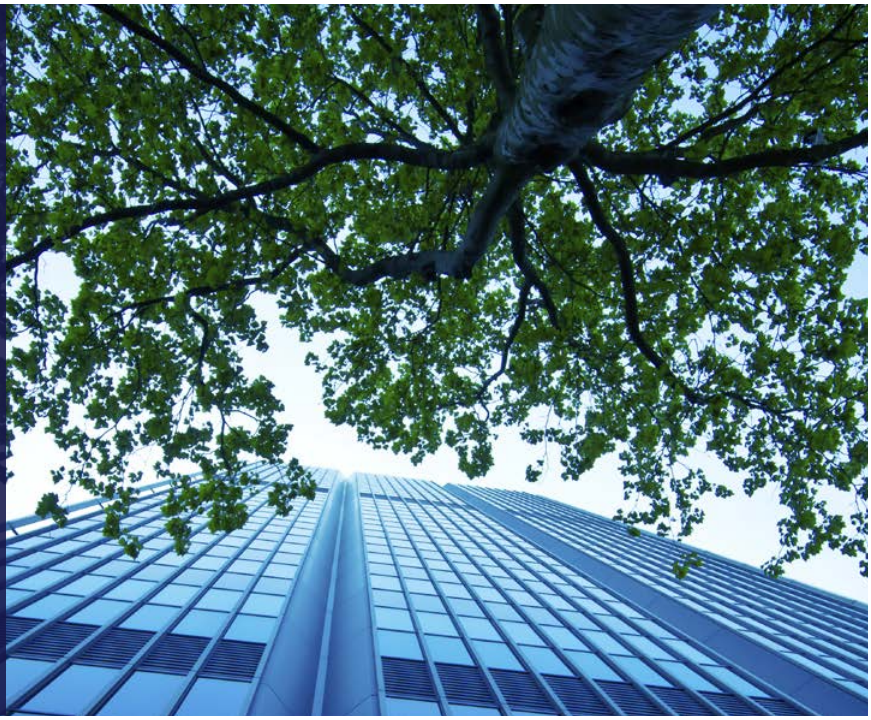
Technical assistance

We assist developing countries with their technology development through the deployment of DNV GL's global network of experts as part of the CTCN technical assistance programme.

Monitoring, evaluation and management systems

We are implementing CTCN's monitoring and evaluation system to show positive impact on UN Global Sustainable Development Goals and climate change.

World Business Council for Sustainable Development



DNV GL has been an active member of the World Business Council for Sustainable Development (WBCSD) since 1999. Our Group President and CEO is a member of the Executive Committee and our EVP Group Development is a member of the Climate Cluster Board.

Our membership of the WBCSD provides a partnership platform for our advocacy of more sustainable and responsible business practices globally. We continue to engage in several climate- and energy-related programmes to explore and deploy new technologies and solutions.

Low Carbon Technology Partnerships initiative

This is an action-oriented programme, led by the WBCSD, International Energy Agency (IEA) and Sustainable Development Solutions Network (SDSN), that gathers over 150 global companies and 70 other partners. We contributed to the work on scaling up renewables with two business solutions:

- Corporate renewable power purchase agreements: scaling up globally
- Low-carbon microgrids

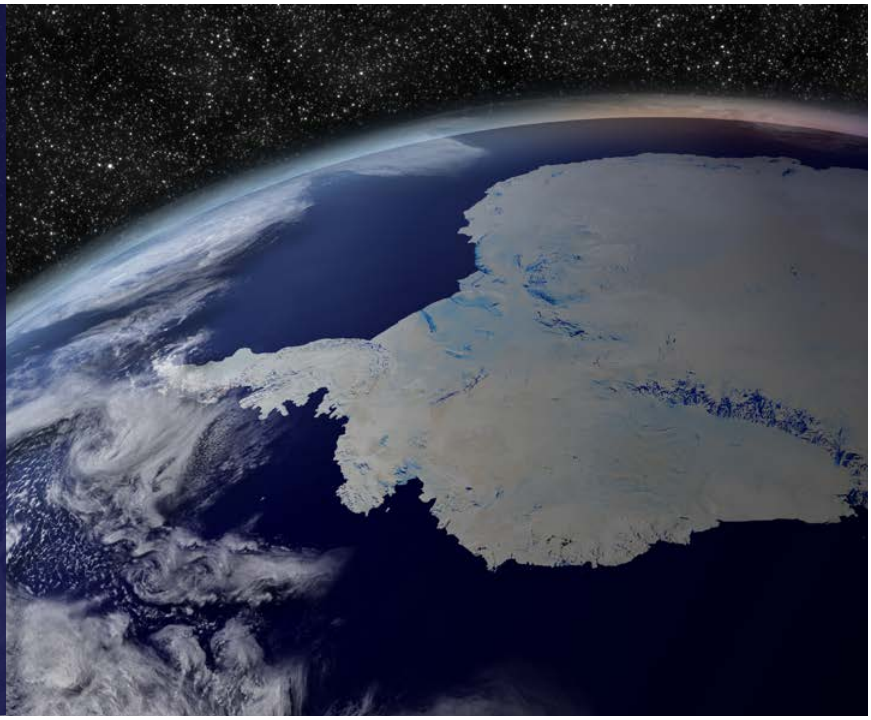
Zero Emissions Cities

We are co-lead for a programme in which 10 global and local companies collaborate with city officials to reach zero emissions in cities by focusing on smart mobility, buildings and energy infrastructures.

Our engagement in the zero-emission cities programme includes the development of replicable and scalable models for pilots for Amsterdam, San Diego and Singapore and active stakeholder outreach related to these.

Read more

Global Opportunity Network



DNV GL was a founding partner of the Global Opportunity Network together with the UN Global Compact and Sustainia in 2013. The network presents the Global Opportunity Report annually, showcasing how global risks can be turned into opportunities targeting the Sustainable Development Goals.

We have yearly canvassed 5,500 leaders from business, government and civil society across five continents and asked them to rank 15 sustainability opportunities. Based on this, we have found 120 projects around the globe to showcase practical solutions to global challenges.

Global Opportunity Report 2016

The second Global Opportunity Report, addressing risks in 2015, was launched in Oslo in January 2016. It demonstrates 15 opportunities for business and society and addresses the risks 'loss of ocean biodiversity', 'accelerating transport emissions', 'resistance to life-saving medicine', 'youth unemployment' and 'global food crisis'. **View report**

Global Opportunity Report 2017

From the World Economic Forum Risk Report, we identified five risks to address; 'unstable regions', 'soil depletion', 'rising inequality', 'cities disrupted by climate change' and 'cyber threats'. The opportunities related to these risks include: micro grids that make cities more resilient to climate change; smart water technology that provides access to safe, clean water; bacteria that revitalize depleted soil; open access to peer-to-peer trading; education and re-skilling to stabilize post-conflict regions; and ethical hackers who test cyber security.

The third Global Opportunity Report was launched in Oslo in January 2017. **View report**

Global Opportunity Explorer

To enable the shortest distance from a risk to an opportunity, the UN Global Compact, DNV GL and Sustainia are now inviting partners to join us in scaling up what we aim to develop into the world's biggest digital platform for Sustainable Development Goals solutions.

With the Global Opportunity Explorer, we intend to set the agenda for sustainable business and provide first and deep access to a digital engagement platform with new market opportunities, business models and solutions as well as direct access to entrepreneurs world-wide.

The Red Cross

We have partnered with the Red Cross since 2004 with the objectives of strengthening its capacity to carry out humanitarian work and creating opportunities for our employees to volunteer for Red Cross projects. Our partnership involves annual financial contributions to the Norwegian, Netherlands and British Red Cross organizations, as well as extraordinary donations.

Our employees also provide technical, digital, safety and sustainability expertise to Red Cross projects that are related to our core business. Through this, we aim to learn and contribute to Sustainable Development Goals 6 (clean water and sanitation) and 11 (sustainable cities and communities).

Norway

Our employees are involved in volunteering and fundraising, including for homework support, activity holidays for less privileged children and their families, and as blood donors.

Syria

A special donation campaign to support the disaster relief and emergency activities in Syria was run by the employees and matched by DNV GL.

The Netherlands

Signed in 2014, our partnership agreement includes:

- DNV GL supports two projects; Disaster preparedness and Risk reduction
- DNV GL contributes to and supports employee funding of Red Cross activities
- The Red Cross provides first aid training for all our employees

The Philippines

As presented in the Norwegian Government White Paper on the Sustainable Development Goals and Norwegian Development Policy (Meld. St. 24 (2016/17)), we developed the 'Capacity, Emergency and Post-Emergency Map' together with Red Cross experts in the field as a comprehensive system for collecting, analysing and presenting data digitally.

Relevant information as to vulnerability and capacity, including on infrastructure, rescue teams, real-time monitoring of activities, weather forecasts, flooding predictions, etc., is made available to ensure more efficient safeguarding of lives, the environment and assets. This is the first prototype of a digital tool that will serve prevention, preparedness, response and early-recovery programmes related to severe climate change and corresponding natural disasters.

The UK

Signed in 2014, our partnership agreement is based on 50/50 company/employee fundraising. We have jointly arranged events and activities, including a sponsored swim, quizzes and a health campaign to walk the distance around the world.

Vietnam

We have supported community water and sanitation projects in Vietnam since 2008, and focused on the Ha Giang province in 2016. Donations from our Software Customer Survey were made to support this. Employees from Vietnam, Malaysia and Singapore are also involved in Red Cross activities, including the annual Volunteer Day to support the development of agriculture, hygiene and education.

WWF

We have been OnePlanetBusiness partners with WWF since 2012, with the aim of ensuring a safe and sustainable future in which biodiversity and ecological processes are conserved and resources are used sustainably. Our partnership also serves as an arena in which to build competence and challenge each other about low-carbon society and climate change adaptation.

We are providing expertise and funding to three projects during the 2015–18 period.

More power, better nature

Together with WWF and Statkraft, we are running a joint project to develop a digital tool that collects and presents current knowledge to identify challenges, opportunities and solutions related to hydropower projects. By cooperating, we build on our different strengths and are able to provide a digital geographic information system tool "More Power, Better Nature" that:

- Addresses society's need for sustainable multi-purpose hydropower
- Provides value to our stakeholders by allowing shared access to the latest knowledge about risks and opportunities
- Is relevant for the Sustainable Development Goals, including: 7. Affordable and clean energy; 11. Sustainable cities and communities; 13. Climate action; 14. Life below water; 15. Life on land; and 17. Partnerships for the goals.

Climate-risk management in a public-ownership portfolio

We submitted joint recommendations to the Norwegian Government Competence Forum on how to assess the climate risk exposure of state-owned companies. The methodology used to assess the climate risk of investment portfolios was further developed and presented to the Norwegian Ministry for Trade, Industry and Fisheries. This corporate climate risk framework is also applicable to business entities.

Advisory Board of the Global Opportunity Network

The CEO of WWF Norway is a member of the Advisory Board of the Global Opportunity Network, guiding the process to assess risks and opportunities and bring insight to the network's deliverables.

PERFORMANCE

The Board of Directors report provides a comprehensive review of DNV GL's strategy and performance for the year as well as the Board's outlook for the future. The financial statements are prepared in accordance with the Norwegian Accounting Act and regulations on simplified IFRS. The sustainability reporting is according to the GRI Standards. The financial reporting is audited and the sustainability reporting is assured by an independent third party.

BOARD OF DIRECTORS' REPORT

2016 was the first year of the current strategy period, 2016 to 2020. After one year, the strategy has proven to be relevant, robust and adequate through challenging market developments and significant changes in global trends, risks and opportunities. However, the accelerated contraction in the oil and gas and maritime markets resulted in currency-neutral negative growth in 2016.

The Board of Directors believes that DNV GL's performance in 2016, against a backdrop of difficult markets, demonstrates that the company has responded well to the challenges posed throughout the year while defending its global positions.

Cost-cutting initiatives were accelerated in line with falling revenue, and various parts of the organization have been re-sized and restructured to increase efficiency while maintaining core competencies. The reduction in headcount has required the attention of both the management and Board throughout the year.

The company achieved revenues of NOK 20,834 million in 2016. Lower business volume in Maritime and Oil & Gas in 2016 as well as capacity adjustments led to reduced earnings before interest, tax and amortizations (EBITA), which totalled NOK 984 million.

The Board sincerely thanks the management and employees for the hard work and commitment they have displayed throughout 2016.

Corporate governance

DNV GL considers sound corporate governance to be fundamental in securing trust in the company and a cornerstone for achieving the greatest possible value creation over time in the best interests of DNV GL's customers, employees, shareholders and other stakeholders.

The Board of Directors has decided to report annually on corporate governance in accordance with the Norwegian Code of Practice for Corporate Governance (the "Code of Practice"), and to apply these principles to the extent relevant for the DNV GL Group as a private limited company with two shareholders. The Code of Practice covers 15 topics, and DNV GL's Corporate Governance report covers each of these topics and describes DNV GL's adherence to the Code of Practice. The Corporate Governance report also describes the legal basis and principles for DNV GL's corporate governance structure. The full report can be accessed here: www.dnvgl.com/annualreport.

"Lower business volume in Maritime and Oil & Gas in 2016 as well as capacity adjustments led to reduced earnings before interest, tax and amortizations (EBITA), which totalled NOK 984 million.

The management company of the DNV GL companies is DNV GL Group AS, registered in Norway and governed by the Norwegian Private Limited Companies Act. This company is owned by Det Norske Veritas Holding AS ("DNV Holding") (63.5%) and Mayfair Beteiligungsfonds II GmbH & Co. KG ("Mayfair") (36.5%) and is the result of the merger of the DNV Group and GL Group in 2013.

DNV GL's Board of Directors consists of 14 members, of whom nine are elected by the General Meeting based on nominations made by DNV Holding (six members) and Mayfair (three members). Five members are elected by and among DNV GL employees worldwide.

The Board's combined expertise represents a range of stakeholders, markets and disciplines. The composition of the Board changed in August 2016. Dr. Wolfhart Hauser was appointed as the new Vice-Chairman, and Markus Wandt, Sami Badarani and Liselott Kilaas were appointed as new members of the Board. Liv Aune Hagen and Nina Ivarsen were elected as new members of the Board by and from DNV GL employees. The Board would like to thank J. Hinrich Stahl, Heinrich Frankemölle, Johannes Lafrentz, Hilde Tonne, Silje Grjotheim and Odd E. Sund for their past contributions as board members.

The Board held six ordinary board meetings and four extraordinary meetings in 2016. The average attendance at these board meetings was close to 100%. The Board's Audit Committee held four meetings in 2016 and the attendance at these was 100%. The Board's Compensation Committee held three meetings in 2016 and the attendance at these was 100%.

Organization and people

The DNV GL Group has operations in close to 100 countries and headquarters located at Høvik, just outside Oslo, Norway. DNV GL is organized in a group structure with five business areas: Maritime, headquartered in Hamburg, Germany; Oil & Gas, headquartered in Høvik, Norway; Energy, headquartered in Arnhem, the Netherlands; Business Assurance, headquartered in London, UK; and Software, headquartered in Høvik, Norway. Global Shared Services provides HR, Finance and IT support services to all business areas and Group functions and is headquartered in Høvik, Norway.

The total number of employees at year-end 2016 was 13,550 (14,954 at year-end 2015), of which 98% are permanent employees. In addition, 6,369 (5,862 in 2015) subcontractors and other personnel were engaged. The decline in the number of employees by almost 2,500 over the last two years reflects the fact that 2016 has been the most challenging year for DNV GL in 30 years due to the continued downturn in the maritime and oil & gas markets. Employee turnover in 2016 was 13% (10% in 2015), with voluntary turnover at 5.5% (5.4% in 2015). Headcount reduction processes were carried out in numerous business and support units in 2016. There are ongoing headcount reduction processes in a few markets, and the cost base is thoroughly scrutinized. At the same time, the ongoing digital transformation and continued prioritization of investment in innovation are intended to secure future activity.

A career in DNV GL should not be hindered by nationality, gender or age if the employee has the competence, attitude and values needed for the role. The Board considers the company's purpose, vision and values to be instrumental in attracting and retaining the diverse workforce necessary in global markets. The Board also emphasizes the importance of sound management of human and labour rights. The DNV GL statement pursuant to the UK Modern Slavery Act is signed by the Board and published on the company website.

The employees represent 115 countries, and groups of more than 100 employees come from 20 of these nationalities. The largest regions in terms of number of employees are the Nordics, West and South-East Europe, North America, Central Europe and Northern Asia. 87% (87%) of permanent employees have higher education. The proportion of female employees is 31% (31%) and the proportion of female managers is 23% (22%). The weighted average female salary is 99% (99%) of the weighted average male salary.

The DNV GL Board of Directors consists of 7 (8) men and 7 (6) women from 5 (5) nationalities. The Executive Committee consists of 7 (6) men and 2 (3) women from 4 (3) nationalities.

DNV GL scores high for employee enablement and on par for employee engagement, benchmarked with the Korn Ferry Hay Group's reference group of high-performing companies, as measured by the annual People Engagement Process survey.

> After one year, the strategy has proven to be relevant, robust and adequate through challenging market developments and significant changes in key global trends and risks.

Strategy

DNV GL's strategy sets ambitious goals for further developing the company's established leadership positions within the maritime, oil & gas and energy industries, and within management system certification services and software solutions. Customers will experience a more agile, responsive and data-smart company, catering even better to their business needs.

After one year, the strategy has proven to be relevant, robust and adequate through challenging market developments and significant changes in key global trends and risks.

To build further resilience to volatile market conditions in its existing core industries, the company wants to also become a trusted assurance provider within the life science sector. Both organic and non-organic growth are being pursued within healthcare and food safety and sustainability, which are markets with a significant growth potential. The objectives of safeguarding life and building trust and confidence in these industries fit well with the company's purpose, vision and values.

In the maritime industry, DNV GL's goal is to maintain its position as the leading classification society for ships and mobile offshore units, with the largest or second-largest market share in each major segment. The company is taking the lead in driving safety at sea, and customers will continue to experience DNV GL as the standard setter and most innovative classification society through applied R&D, cutting-edge advisory services and data-smart, customer-centric solutions and support.

DNV GL aspires to be the leading global provider of assurance, risk management and technical advisory services to the upstream, midstream and downstream oil and gas market. It aims to use its technical expertise, innovation capabilities and unique laboratories to enable the oil and gas industry to rapidly improve its efficiency in order to meet the challenges of low oil and gas prices, while not compromising on safety and environmental performance.

With a growing world population, urbanization and increasing demand for energy, DNV GL helps its customers in the energy sector to manage the reliability and end-user affordability of electricity while safeguarding the environment. DNV GL will continue to address all three legs of this energy trilemma by: retaining its globally leading position as a provider of advisory and certification services to both the onshore and offshore wind energy sectors; building a leading position in solar and energy storage; strengthening its position as the world leader in the independent testing, inspection and certification of grid components; and further expanding its energy efficiency services.

DNV GL aspires to be the world's number one Management System Certification provider by revenue. It aims to generate at least 50% of its Business Assurance revenues from offerings other than Management System Certification in segments such as sustainability, supply chain management and product certification by 2020.

As a software provider, DNV GL wants to further strengthen its position in the oil & gas and maritime industries and establish a leading position in renewable energy and power transmission, distribution and use.

The strategy also sets ambitions to stay at the forefront in terms of technology and continuously develop the skills and knowledge of its employees. The company will continue to increase its use of digital solutions to offer better services to customers, improve efficiency and generate new revenue streams.

Market

In the maritime world, 2016 presented a set of particularly challenging market conditions for most shipping segments as well as the offshore segment. Rates remained under substantial pressure, asset values continued to deteriorate and 2016 was the third-highest year ever for scrapping. Despite this, the world fleet grew by 1% in terms of number of vessels and 3% in terms of gross tonnage (GT), as 2,618 ships with a total of 67 million GT were delivered. In the newbuilding market, just 940 ships, 18.3 million gross tonnes (GT), were contracted in 2016. This represents a 70% drop compared to 2015 and is the lowest total in 32 years (in terms of GT). The offshore market came more or less to a complete halt, with new builds being cancelled or delayed from the yards and existing units being laid up on a vast scale.

> However, in a very depressed market, our share was significantly higher than in 2015 and DNV GL led all classification societies, with 25% of global orders by GT.

Consequently, DNV GL's newbuilding order intake was much lower than in recent years. However, in a very depressed market, our share was significantly higher than in 2015 and DNV GL led all classification societies, with 25% of global orders by GT. In a highly competitive market for the fleet in service, strong efforts in Greece and Germany resulted in positive class entries in these regions. At the end of 2016, the DNV GL-classed fleet stood at 12,404 vessels and MOUs, totalling 277.5 million GT, an increase of 3.3% in gross tonnage.

The cruise market was once again a bright spot – with cruise newbuilding orders more than tripling and the majority of orders going to DNV GL. In contrast, in the container market, 2016 was possibly the most impactful year since the invention of the 20-foot box. Global container capacity equalling nearly 600,000 TEU was removed from service – particularly the "out of favour" Panamax-

size vessels. This segment has been influenced by an accelerated consolidation trend, with operators trying to combat overcapacity with mergers.

Several new initiatives were launched in 2016 to help customers perform at the highest level, especially in compliance with international rules. The Port State Control (PSC) Initiative worked to raise crew awareness of the detainable items found on DNV GL ships and the preparation procedures for PSC inspections. This led to the DNV GL-classed fleet's PSC statistics continuing to improve in 2016.

During 2016, DNV GL launched new digital services and tailored apps to make life easier for its customers. These include enabling customers to check regulatory compliance (MRV readiness), search for potential digital weaknesses and find new opportunities quickly and easily through the MyDNVGL customer portal.

Direct Access to Technical Experts (DATE) is a service where customers can connect with the relevant expert and set a time for a request to be resolved. The service was used more than 20,000 times in 2016, with over 97% of requests being completed by the customer's deadline and with 90% of customers giving the service a 4- or 5-star rating (out of 5).

In challenging market conditions, our customers' focus has been on cost containment and reducing operating costs. The value proposition for our software for ship management and operations has proven attractive and we have achieved good growth and profitability for these software solutions. We experience good traction for these products in all markets, especially Asia.

The oil and gas industry is adjusting to a new normal, with more volatile oil and gas markets and lower price levels for all energy sources. All players have been forced to take painful cost-cutting measures by reducing their capital expenditure and headcount. Several companies throughout the value chain are also making strategic shifts in their portfolio towards lower-cost projects, shorter investment cycles and higher levels of flexibility.

DNV GL has kept a strategic focus on long-term value creation for its oil and gas customers through investments in innovation and competence building. There has been a specific focus on digitalizing DNV GL's service portfolio. This provides enhanced value for customers through models and information which are easily updated and utilized for the project's lifetime. For example, the first digitally-enabled standards were introduced for the warranty approval of marine operations. The company also introduced an interactive reporting service with 3D visuals that brings quantitative risk assessments into the digital age.

By providing a neutral ground for industry collaboration and building on its deep technical expertise, the company launched 43 new joint industry projects to help oil and gas customers reduce both complexity and cost.

A solid order book for the pipeline business – with growth in demand for services across Europe and the Americas last year – reflected DNV GL's expert position and track record for innovation in this area. In 2016, DNV GL celebrated the 40th anniversary of the industry's first and still relevant global standard for the design, construction and operation of offshore submarine pipelines.

DNV GL continues to be at the leading edge of implementing new technologies in the pipeline market and is supporting a UK gas distribution operator with a project that will pave the way for networks that can handle mixed-source gas with varying energy content cost-effectively and securely.

In these challenging times, oil and gas customers are focusing on maintaining a high uptime and improving the efficiency and productivity of their assets. Our software solutions for the oil and gas market have seen good growth and increased their market share in upstream as well as midstream and downstream segments. Our integrity management and asset optimization solutions have experienced increased traction.

New important oil and gas contracts include a new master service agreement with Statoil for pipeline technology, platform technology, safety and structural reanalysis; in-service verification services to Australia's Ichthys project; and a significant contract with a major Middle East-based operator for site inspection services.

Demand increased for DNV GL's due diligence services, which support buyers, sellers and financers throughout the value chain as they update their portfolios to be better positioned in the current market. At the same time, planning for the decommissioning of old oil and gas infrastructures has increased, and DNV GL is playing an important role to ensure this can be done in a safe and environmentally sound manner.

2016 was characterized by lower energy costs. Renewables have now become mainstream in the market and interests have shifted to optimizing operations and managing assets. Consolidation in the wind turbine market led to fewer new models and less demand for type certificates, but wind project certification is a growing market in the US and Asia. In addition, new players, including oil companies, are entering the market and investing in large-scale infrastructure projects.

The integration of renewables into grids and rise of storage as a back-up solution require transmission and distribution grids to adapt and become more flexible. This drives the need for DNV GL's services for validating investments in storage, complex control systems and energy management. New, more complex grid infrastructures and the rise of super grids in Asia are driving the need to quality test high-voltage and high-power grid equipment.

> To strengthen its energy services, DNV GL acquired power systems expert Gothia Power in Sweden and Spain's Green Power Monitor, a global leader in solar monitoring.

With ageing grid infrastructures, asset reliability and performance is a key focus area for the company's grid and utility customers. DNV GL experienced good growth in the related software segment and sees increasing traction internationally. To strengthen its energy services, DNV GL acquired power systems expert Gothia Power in Sweden and Spain's Green Power Monitor, a global leader in solar monitoring.

As a global assurance provider, DNV GL - Business Assurance works with a diverse customer base which continues to call for assurance in many ways and forms. Stakeholder and legislative drivers, coupled with complex and global value chains, continued to increase the need for independent third-party certification. Management system certification remained the main service.

The overall ISO management system certification market expanded by 3% worldwide (2015 figures). Within this market, DNV GL is maintaining a leading position in terms of market share and innovation.

The expansion of DNV GL's assurance portfolio continued, with growth of 13% in Product Assurance and 14% in Supply Chain Management and other assurance services that help companies work towards responsible consumption and production. Within the food and beverage industry, growth exceeded expectations once again. Similarly, healthcare services accelerated in 2016.

The integration of Noomas was completed successfully, supporting the expansion of the aquaculture portfolio to address the entire aquaculture value chain.

In 2016, we initiated projects exploring big data concepts and data custodian roles in the aquaculture and healthcare sectors. Due to the collaboration with industry players, experts and governmental bodies, these projects have the potential to address major industry challenges by building trust into digital platforms, data sharing and data analytics. Working to preserve health or provide food, the activities will continue to support our Life Science strategy in 2017 and beyond.

Despite continued challenging and contracting markets in 2016, all DNV GL - Software's product lines either maintained or increased their revenue.

All product lines grew their market share. Sales to new customers accounted for 27% of the total sales. DNV GL - Software secured 255 new accounts in 2016, while the total volume of new licence sales contracted by 14% compared to 2015. Software consulting services once again experienced strong annual growth in revenue.

Operational efficiency and cost management are continuing to improve the financial performance of our software business. All product lines except for one show profitable operations, and are still in accordance with our business plan.

Financial performance

DNV GL Group AS achieved operating revenues of NOK 20,834 million in 2016, a revenue decline of NOK 2,556 million from 2015. The nominal growth is -11%, and reflects a contraction in the business volume from the maritime and oil and gas segments. Currency-neutral organic growth was -12%, while non-organic growth accounted for 1%. The non-organic growth includes the acquisitions of Noomas, Gothia Power and Green Power Monitor and the divestment of the Oil & Gas Material & Failure Analysis laboratory in Germany. The positive currency effect weakened throughout the year and ended at 2%.

The Maritime business area recorded revenues of NOK 8,216 million. That corresponds to a contraction of 17% compared to 2015, with an accelerated business-volume contraction in the second half of 2016. The Oil & Gas business area reported revenues of NOK 4,955 million, representing a contraction of 18%. The Energy business area posted revenues of NOK 3,583 million, reflecting a nominal growth of 2% that comes from favourable currency effects and the acquisitions of Gothia Power and Green Power Monitor. Business Assurance concluded the year with a nominal growth of 4% and revenues of NOK 3,146 million. Supply chain management and Assurance services contributed to significant growth beyond the MSC services. The Software business area delivered a profitable nominal growth of 4% and external revenues of NOK 859 million in a challenging market.

Lower business volume in Maritime and Oil & Gas in 2016 as well as capacity adjustments led to a reduction in the earnings before interest, tax, amortization and impairment (EBITA) from NOK 2,274 million in 2015 to NOK 984 million in 2016, reflecting an EBITA margin just short of 5%. Significant one-off cost elements related to the downsizing of the organization and the corresponding reduction in office space were booked in 2016.

Goodwill impairment test at year-end 2016 showed that Energy is in an impairment situation. A goodwill impairment of NOK 299 million has been reflected in the income statement for 2016.

After the goodwill impairment and NOK 531 million amortization of intangible assets, the operating profit (EBIT) decreased by NOK 1,584 million, from NOK 1,738 million in 2015 to NOK 154 million in 2016.

The net financial expenses were NOK 18 million in 2016, compared to NOK 12 million in 2015. The main financial items in 2016 were positive currency effects (NOK 50 million), which were more than offset by net interest costs from defined benefit pension plans (NOK 37 million), interest costs on the external credit facility and other interest costs and financial expenses.

The 2016 tax expense is NOK 352 million. The high tax level is partly due to non-tax-deductible items like goodwill impairment, withholding taxes on remitted earnings and losses from operations without recognition of tax assets.

The loss for the year was NOK 216 million, compared to last year's net profit of NOK 1,014 million.

The net cash flow for the year was negative by NOK 628 million due to investments, the repayment of external credit facility and distribution of dividends. The cash flow from operations was NOK 662 million in 2016, positively influenced by improved accounts-receivable collection and an overall reduction in working capital. The cash flow from investments was NOK 682 million in 2016. Net investments of NOK 284 million in tangible fixed assets were mainly in laboratories in Arnhem, the Netherlands, as well as office-related and IT-equipment investments. Of the investments in intangible assets, NOK 327 million was primarily related to new software platforms. Acquisitions totalled NOK 235 million and divestments NOK 155 million in 2016. The NOK 607 million negative cash flow from financing activities includes NOK 100 million net repayments of the external credit facility and dividend payments of NOK 507 million.

At the year-end, the DNV GL Group had liquidity reserves of NOK 3,628 million plus a credit line of NOK 1,600 million.

The Group has a strong balance sheet with an equity ratio of 65% of total assets. Due to the strengthening of NOK against most currencies, foreign currency losses of NOK 1,057 million relating to net investments in foreign subsidiaries were reflected in the equity in 2016.

Net actuarial losses of NOK 86 million from defined benefit pension plans were reflected in equity at year-end. NOK 159 million of the actuarial losses was caused by changed assumptions in the actuarial calculations, while gains of NOK 100 million follow from the actual return on the plan assets in the Norwegian pension.

The accounts of the parent company, DNV GL Group AS, show a profit for the year of NOK 152 million. The Board proposes to transfer the profit for the year to other equity.

The Board confirms that the going concern assumption applies and that the financial statements have been prepared on this basis. Although the Board regards DNV GL's financial performance for 2016 as unsatisfactory, the equity ratio and liquidity is strong. Both parameters contribute to a robust platform to achieve our strategic targets and maintain our independence as a financially strong and trusted company. The Board also confirms that, to the best of its knowledge, the information presented in the financial statements gives a true and fair view of the assets, liabilities, financial position and results of the DNV GL Group for the period, and that there are no material events after the balance sheet date affecting the 2016 financial statements.

Innovation

Innovation is a cornerstone of DNV GL's business model. It is also central to the differentiation strategy that enables DNV GL to meet its strategic goals and has allowed the company for many decades to be a preferred and trusted risk-management and technology advisor to the maritime, energy, oil & gas and life science industries.

Consequently, the company is upholding its commitment to invest 5% of its annual revenues in research and innovation activities despite ongoing cost-cutting measures. The purpose is to deliver the best insight and technical capabilities to help its customers work safer, smarter and greener.

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the best insight and technical capabilities to help its customers work safer, smarter and greener. Innovative solutions and foresight are co-created and shared with the industries in which DNV GL is active.

Of the total 5% of annual revenues invested in research and innovation, one fifth is allocated to long-term strategic research. To support the company's strategic ambition of becoming a data-smart company, over half of the research and innovation activities are dedicated to digitalization and automation.

One example of foresight provided by the strategic research programme is the Technology Outlook 2025 report that was launched globally in Shanghai during the first half of 2016. Here DNV GL explores the technologies likely to be taken up in the next ten years.

Corporate sustainability

For DNV GL, corporate sustainability is about delivering long-term value in financial, environmental, social and ethical terms; this is embedded in the Group's purpose, vision and values. The Board considers this approach, and the fostering of a company culture beyond compliance, as fundamental in securing the Group's business success.

> In 2016, DNV GL continued to enable sustainable performance through three pillars: activities within its own organization, business activities for customers, and collaborative activities through partnerships.

DNV GL has been a signatory to the United Nations Global Compact since 2003, and the Board sees the integration of the ten principles on human rights, labour standards, environmental performance and anti-corruption as critical for capturing long-term value.

In 2016, DNV GL continued to enable sustainable performance through three pillars: activities within its own organization, business activities for customers, and collaborative activities through partnerships.

The Board finds collaboration and proactive stakeholder engagement important for the company to continue to build trust and strengthen its market positions. Internally, DNV GL continued to strengthen its global governance systems by preparing group-wide systematic sustainable procurement practices. DNV GL continued to support the World Business Council for Sustainable Development, the Global Opportunity Network, the Red Cross, and the WWF. In 2016, DNV GL launched the 'Future of Spaceship Earth' report at the UN Headquarters along with 17 other companies at the frontier of targeting the UN's global Sustainable Development Goals (SDGs).

Going forward, DNV GL sees the SDGs as a framework for strengthening its market positions. DNV GL provides strong business solutions for many of the SDGs, including 3) Good Health and Well-being; 7) Affordable and Clean Energy; 9) Industry, Innovation and Infrastructure; and 13) Climate Action. The Board considers the Sustainable Development Goals to be relevant indicators of market trends and foresees stronger business positions for goals 11) Sustainable Cities and Communities, 12) Responsible Consumption and Production and 14) Life below Water, and this is reflected in the Group strategy.

The Board refers to the Annual Report [www.dnvgl.com/annual-report] for a complete account of corporate sustainability, including information on materiality, management approach and performance within health and safety, business ethics and anti-corruption, people, environment and climate, sustainable procurement as well as partnerships.

DNV GL reports in accordance with the GRI Standards at the Comprehensive Level, and a third party has conducted a limited assurance of the report.

Health, safety and environment

DNV GL's purpose is to safeguard life, property and the environment. The Group aims to be the safest place to work compared to other companies in its industries and is committed to managing and continually improving its health and safety performance. The overall goal is to prevent injuries and occupational disease among its employees and workforce. DNV GL has been certified in accordance with OHSAS 18001 since 2011, and the Board considers this to be a key indicator for ensuring that the Group itself operates in a safe manner.

In 2016, there were no fatalities involving DNV GL employees or other workers. At year-end, the 12-month rolling average was 1.4 (1.5) for the Injury Rate, 0.9 (1.0) for the Occupational Disease Rate , 29.3 (49.2) for the Lost Day Rate and 2.5% (2.2%) for the Total Absence Rate. The number of lost day injuries was 34 (40), the number of occupational diseases resulting in absence was 23 (36), the number of injuries with no lost days was 162 (183) and the number of near-accidents was 410 (582). The long-term trend for

> The Group aims to be the safest place to work compared to other companies in its industries and is committed to managing and continually improving its health and safety performance.

injuries and occupational diseases is stable and the trend for lost days has improved, but the absence trend has worsened. All in all, DNV GL's health and safety performance is average compared with industry benchmarks, and a programme is in place to continuously improve the health and safety culture.

DNV GL's governing Procurement document includes compliance with equivalent health and safety requirements for services rendered on the DNV GL premises and for subcontracted survey-type work outside normal office locations.

The Group is committed to managing and continually improving its environmental performance. DNV GL has been certified in accordance with ISO 14001 since 2008.

Environmental measurements, incident reporting and performance monitoring of significant topics such as energy consumption, emissions to air and waste management are followed up annually. Internal and external audits are undertaken to assure performance.

The Board is monitoring the implementation of the Group strategy to ensure that DNV GL takes measures to become carbon neutral in relation to office buildings and travel activity by the end of 2020. The pilot in Norway achieved the carbon neutral operation of Norwegian offices and travel in 2016, with necessary offsets verified by an independent third party.

In 2016, zero cases of non-compliance with environmental regulations and zero fines related to environmental aspects were reported. The recorded energy consumption was 87.5 GWh (90.2 GWh), a decrease mainly due to the lower number of locations. Scope 1 and 2 greenhouse gas emissions came to 29,993 tCO2e (28,099 tCO2e), an increase mainly due to 30% higher greenhouse gas emissions from the expanded Arnhem Power TIC Laboratories. The specific energy consumption per employee was 8.5 MWh (7.5 MWh) and specific greenhouse gas emissions per employee were 2.9 tCO2e (2.5 tCO_2e).

From 2016, credible travel carbon-footprint tracking for 93% of employees has been included. The baseline for these Scope 3 greenhouse gas emissions was 17.3 tCO2e. The programme to help employees reduce their personal environmental footprint was put on hold due to the extraordinary market conditions and ongoing cost-cutting initiatives across the Group.

Business ethics and anti-corruption work

The DNV GL value, "We never compromise on quality or integrity" is the leading principle for fostering a common culture of integrity across all operations. DNV GL has a zero-tolerance policy for corruption and unethical behaviour that applies to all employees, subcontractors, agents and suppliers. DNV GL, its stakeholders and the Board emphasize the necessity of remaining professionally objective and independent in the services the Group delivers to customers and society at large.

DNV GL's compliance programme and related instructions are based on the Code of Conduct and are the responsibility of the Board. Anti-corruption, anti-trust, export controls, sanctions and data protection are the programme's focus areas, and respective instructions are in place.

Compliance risks are regularly assessed as part of the corporate risk management process to evaluate the focus areas and continuously improve the compliance programme. The Group Compliance Officer reports new developments and case statistics to the Board's Audit Committee quarterly, as well as to the Executive Committee when relevant. In 2016, 44 (40) potential compliance cases were reported and handled, with no confirmed incidents of corruption.

Communication, training and mandatory e-learning courses are used to raise and maintain awareness. Information on how to report potential misconduct is published on the company website and the intranet and there is also an ethical helpline and anonymous whistle-blowing channel. Governing documents related to compliance for subcontractors, export control, data protection and sponsorships were published in 2016. An extended global export control network was started, and regular communication and training with the Regional Data Protection Representatives took place. In addition, an automatic sanctions-check tool was integrated into the Customer Relationship Management systems.

Corporate risk management

The Board underlines the importance of continuously having a comprehensive understanding of the risks facing DNV GL that could affect corporate values, reputation and key business objectives. DNV GL has processes in place to proactively identify such risks at an early stage to initiate adequate mitigating measures and actions. DNV GL's risk management policy is part of the management system and ensures that the risk management processes and culture are an integral part of everything the company does. The policy is aligned with the ISO 31000 framework.

The Board formally reviews the risk management status and outlook twice a year. The review of risks and opportunities is conducted as part of both the strategy revision process and the annual plan process.

DNV GL calculates its risk-adjusted equity on an annual basis, taking into consideration the most important risk factors. Based on value-at-risk methodology, the analysis includes potential losses from operations, foreign-exchange exposure, financial investments and pension plan assets and liabilities. The book equity less the maximum calculated loss illustrates DNV GL's total risk exposure and the amount that can be lost in a worst-case scenario. This exercise gives the Board a measurable overview of the key quantified risks and DNV GL's capacity to take on additional risk.

The drop in the oil price and its effect on the demand for DNV GL's services were a focus area in the Board's risk assessments throughout the year. Developments in the maritime sector were

another issue of great concern. Both the declining newbuilding market and the competitive situation in the classification industry have been assessed as part of the risk picture facing DNV GL. Mitigating actions addressing overcapacity and the cost base have been prioritized.

Serious quality, safety and integrity risks in the company represent another focus area. Numerous barriers exist to minimize the chance of such events occurring, and DNV GL's management system is constantly being scrutinized to ensure we are managing this risk satisfactorily.

The company's ambitions to take a role in the emerging digital economy entail an increased cyber security risk. Among other mitigating actions is the work to achieve ISO 27001 certification. The Board will review the cyber security risk annually going forward.

DNV GL's main financial risks are market risk (interest rate and foreign currency risk), credit risk and liquidity risk.

Interest rate risk: as the company has limited external borrowings, its exposure to interest rate risk is primarily due to its defined benefit pension commitments. Lower interest rates over the past few years have led to an increase in the pension commitments. The company has closed all existing defined benefit pension schemes to new entrants. In addition, there is limited exposure to the risk of changes in market interest rates for DNV GL's forward exchange contracts.

Foreign currency risk: DNV GL has revenues and expenses in approximately 70 currencies. Of these, six (NOK, EUR, USD, CNY, KRW and GBP) make up approximately 75% of the total revenue. In most currencies, the company has a natural hedge through a balance of revenue and expenses. The foreign currency policy is to focus on hedging expected cash flows, primarily in US dollars. However, DNV GL is also materially exposed to the re-evaluation of balance sheet items, including net investments in foreign subsidiaries.

Credit risk: receivable balances are monitored on an ongoing basis with the result that the company's exposure to bad debts is limited. There are no significant concentrations of credit risk within the company. In 2016, there was a special focus on accounts receivable processes and systems. With respect to credit risk arising from the other financial assets, which comprise cash, cash equivalents and certain derivative instruments, DNV GL's exposure to this arises from any default of the counterparty, with a maximum exposure equal to the market value of these instruments.

Liquidity risk: DNV GL monitors its liquidity risk on a continuous basis. The liquidity planning considers the maturity of both the financial investments and financial assets (e.g. accounts receivable, other financial assets) and projected cash flows from operations.

Outlook

The global economic outlook remains influenced by low growth, low interest rates and low commodity prices. Growth in Asia is significantly influenced by the uncertainty related to the Chinese economy. Developments in the hydrocarbon sector are being heavily influenced by low prices due to oversupply. Meanwhile, the falling costs of renewable energy are altering the power generation mix. Overall, growth in the consumption of all energy forms in the developing world has been offset by efficiency measures in the developed world. Globalization is being challenged in several major countries, as evidenced by the UK Brexit vote and the election of President Trump in the USA. Several European countries face national elections in 2017, including Germany, France and Norway, and these may exacerbate this trend. Globally, the geopolitical situation became more tense during 2016.

Cyber security at global, company and personal levels is now a serious emerging risk. Hence, overall, we see a higher level of uncertainty regarding national and regional protection measures being introduced on free trade, the movement of people and the transfer of technology.

Against this complex backdrop, the Board believes the challenging market situation for shipping and offshore oil & gas will continue during the period ahead, even allowing for a more optimistic outlook in selected sectors such as the cruise industry. The overcapacity situation is continuing, and several vessels are still to be delivered from the yards, resulting in continued net fleet growth despite the limited increase in seaborne trade. The ship newbuilding market dropped considerably again in 2016 and we can only expect a modest recovery towards 2019, or even 2020. Newbuildings for the offshore sector will probably take longer to recover, with only select opportunities in floating production and re-gasification. Classification societies must adapt to this challenging market

situation, but the Board regards the aggressive price competition by certain competing classification societies as unsustainable and potentially undermining the value of classification. However, DNV GL is committed to uphold its contribution to quality and safety at sea.

The oil and gas sector is heavily influenced by lower energy prices for both its own products and those from competing energy sources. Projects with shorter investment cycles attract more interest in the market, and unconventional resources contribute to market volatility. At the same time, production from existing fields must be maximized while ensuring much-needed efficiency and productivity gains. The volatility in the upstream sector is reflected further down the value chain with more short-term trade agreements and larger variations in the quality of the products to be routed through pipeline systems, terminals, refineries and distribution networks. The shift in the market opens new opportunities for DNV GL to support active portfolio management throughout an asset's life-cycle, as well as in areas where digital service offerings combined with in-depth technical expertise can drive the necessary efficiency gains in entire energy systems.

Within the energy sector, the company will continue to focus on renewable energy, power transmission & distribution and sustainable energy use. Investments in the renewable energy sector are influenced by the reduced cost of fossil fuel, new trade agreements, political decisions and subsidies. However, the Board believes this sector will grow significantly due to the drop in the cost of both renewable energy and energy storage that largely offsets renewable energy's interruptible nature, making this combination increasingly competitive. The expansion and inter-

> The demand for management system certification is expected to increase in the near term due to the introduction of an updated ISO 9001 standard.

connectivity of transmission and distribution grids and increased focus on energy efficiency will also continue to create several opportunities for DNV GL in the coming years. The company has a strong position within Testing, Inspection and Certification for these industries and has an extensive service and competence platform on which to build.

The demand for management system certification is expected to increase in the near term due to the introduction of an updated ISO 9001 standard. Other business assurance services, such as supply chain management, that focus on sustainable business development, global best practices, new standards and business innovation will continue to grow, and DNV GL is well positioned to be at the forefront in these areas. The company will explore opportunities within the Life Science domain, with a focus on

> In general, we are seeing a paradigm shift due to digitalization. The way we deliver value is changing, brought on by a revolution in information technology. We are starting to rely on new networks and new ways of working.

healthcare and food supply risk. Aquaculture, which combines these opportunities with DNV GL's historic marine capabilities, will be a focus area.

In general, we are seeing a paradigm shift due to digitalization. The way we deliver value is changing, brought on by a revolution in information technology. We are starting to rely on new networks and new ways of working. The Cloud offers limitless computing power and storage capacity. The additional power made available through the Internet of Things (IoT) and machine learning provides opportunities that were previously unthinkable. DNV GL's 'Veracity' data platform will bring industries together in digital eco-systems, enhancing the exchange of data, creating new insights and building new services. DNV GL will continue to invest in in-house software development to meet the growing demand for software-as-a-service and mobile applications.

The Board of Directors believes that DNV GL's performance in 2016 against a backdrop of difficult markets demonstrates that the company has responded well to the challenges posed throughout the year. The company has, and will continue to develop, a broad competence and resource base to provide guidance and support to customers in a business environment where the need for technical and digital expertise, trust and risk management is evident.

THE BOARD OF DIRECTORS OF DNV GL GROUP AS, HØVIK, 24 APRIL 2017

LEIF-ARNE LANGØY CHAIRMAN	**DR. WOLFHART HAUSER** VICE CHAIRMAN	**SAMI BADARANI**	**LIV AUNE HAGEN**	**REBEKKA GLASSER HERLOFSEN**
NINA IVARSEN	**LISELOTT KILAAS**	**CLEMENS KEUER**	**CHRISTELLE G. V. MARTIN**	**METTE BANDHOLTZ NIELSEN**
C. THOMAS REHDER	**MORTEN ULSTEIN**	**MARKUS WANDT**	**XU, BEI BETTY**	**REMI ERIKSEN** GROUP PRESIDENT & CEO

BOARD OF DIRECTORS' PROFILES

LEIF-ARNE LANGØY
Chair

Nationality: Norwegian **Born:** 1956

Position:
Managing Director, LAPAS AS

Education:
Norwegian School of Economics and Business Administration

Member of the board:
Since June 2010.
Chairman since June 2011

Directorship(s) outside DNV GL:
Chairman of Kværner ASA; Chairman of Sparebanken Møre; Vice Chairman of The Resource Group AS (TRG); Member of the Board of Farstad Shipping ASA; Chairman of Stiftelsen Det Norske Veritas; Chairman of Det Norske Veritas Holding AS

DR. WOLFHART HAUSER
Vice Chair

Nationality: German **Born:** 1949

Position:
Chairman, FirstGroup plc

Education:
Master Degree Medicine LMU Munich; Doctorate TU Munich

Member of the board:
Since August 2016

Directorship(s) outside DNV GL:
First Group plc; RELX Group plc; Associated British Foods plc

MORTEN ULSTEIN

Nationality: Norwegian **Born:** 1953

Position:
Managing Director, Borgstein AS

Education:
Rolls Royce Business Leadership Program, 2000. Training programmes at IMD, Lausanne 1990–92. The University of Trondheim, The Norwegian Institute of Technology, Master of Science in Naval Architecture and Marine Engineering 1973–77

Member of the board:
Since June 2011

Directorship(s) outside DNV GL:
Chairman of the Island Offshore Group of companies; Vice Chairman of Stiftelsen Det Norske Veritas; Vice Chairman of Det Norske Veritas Holding AS; Member of the Board of Directors of Norwegian Hull Club

C. THOMAS REHDER

Nationality: German **Born:** 1956

Position:
Managing Partner, Carsten Rehder GmbH & Co KG

Education:
Business Studies at European Business School, Frankfurt

Member of the board:
Since 2009

Directorship(s) outside DNV GL:
Past President of European Community Shipowners Association; Board member of German Shipowners Association; Stiftelsen Det Norske Veritas; Det Norske Veritas Holding AS

REBEKKA GLASSER HERLOFSEN

Nationality: Norwegian **Born:** 1970

Position:
CFO, Wallenius Wilhelmsen Logistics ASA

Education:
Norwegian School of Economics and Business Administration (MSc)

Member of the board:
Since June 2013

Directorship(s) outside DNV GL:
Statoil ASA; Stiftelsen Det Norske Veritas; Det Norske Veritas Holding AS

CHRISTELLE G. V. MARTINI

Nationality: French **Born:** 1960

Position:
Engie, Director of Group Ethics & Compliance

Education:
MBA from Paris-Dauphine University, International Executive MBA 2009 HEC, London School of Economics and New York Stern (Trium)

Member of the board:
Since June 2013

Directorship(s) outside DNV GL:
Engie Energies Services; Foundation Paris Dauphine University; Stiftelsen Det Norske Veritas; Det Norske Veritas Holding AS

CLEMENS KEUER

Nationality: German **Born:** 1959

Position:
Chairperson, DNV GL SE Group Works Council

Education:
Degree in Computer Science, University of Hamburg

Member of the board:
Since 2013

Directorship(s) outside DNV GL:
Stiftelsen Det Norske Veritas; Det Norske Veritas Holding AS

NINA IVARSEN

Nationality: Norwegian **Born:** 1962

Position:
Chairperson of VEFF & Head of Global Employee Forum

Education:
Master of Management, Stavanger University; a number of courses from other universities, incl. University of Denver, US, and a PhD programme in Psychology from the University of Oslo

Member of the board:
Since August 2016

Directorship(s) outside DNV GL:
Stiftelsen Det Norske Veritas; Det Norske Veritas Holding AS

LIV AUNE HAGEN

Nationality: Norwegian **Born:** 1988

Position:
DNV GL Consultant Shipping Advisory

Education:
MSc Industrial Economics and Technology Management

Member of the board:
Since August 2016

Directorship(s) outside DNV GL:
Stiftelsen Det Norske Veritas; Det Norske Veritas Holding AS

LISELOTT KILAAS

Nationality: Norwegian **Born:** 1959

Position:
CEO, Aleris Group

Education:
MBA, IMD International; MSc in Math. Statistics

Member of the board:
Since August 2016

Directorship(s) outside DNV GL:
Stiftelsen Det Norske Veritas;
Det Norske Veritas Holding AS

SAMI BADARANI

Nationality: French **Born:** 1963

Position:
Member of the board DNV GL Group AS

Education:
MS Electricity from Ecole Supérieure d'Electricité; Management and Business Courses at GE Training Center, New York

Member of the board:
Since August 2016

Directorship(s) outside DNV GL:
None

BETTY BEI XU

Nationality: Chinese **Born:** 1977

Position:
DNV GL Compliance Director, Mainland China and TSC Administration Manager (China)

Education:
Bachelor of Business Administration, 2011, Diploma – Informatics

Member of the board:
Since 2015

Directorship(s) outside DNV GL:
Observer at Stiftelsen Det Norske Veritas;
Observer at Det Norske Veritas Holding AS

MARKUS WANDT

Nationality: German **Born:** 1969

Position:
Investment Director, Maryland GmbH

Education:
Diplom-Kaufmann, Philipps-Universität Marburg, Germany

Member of the board:
Since August 2016

Directorship(s) outside DNV GL:
None

METTE BANDHOLTZ

Nationality: Danish **Born:** 1963

Position:
DNV GL Senior Support Specialist Oil & Gas (Denmark)

Education:
Bachelor, Technical and Legal English

Member of the board:
Since 2011

Directorship(s) outside DNV GL:
Stiftelsen Det Norske Veritas;
Det Norske Veritas Holding AS

FINANCIAL REPORTING

The financial statements for DNV GL Group AS include consolidated income statement, statement of comprehensive income, balance sheet, statement of cash flow, statement of changes in equity and notes for DNV GL Group AS and all companies in which DNV GL Group AS directly or indirectly has actual control.

KEY FIGURES

AMOUNTS IN NOK MILLION	2016 IFRS	2015 IFRS	2014 IFRS	2013[1] IFRS	2012[2] NGAAP
INCOME STATEMENT					
Operating revenue	20 834	23 390	21 623	15 234	12 532
EBITDA	1 352	2 649	2 551	1 807	1 238
Depreciation	368	375	348	271	201
EBITA	984	2 274	2 203	1 535	1 037
Amortization and impairment	830	536	592	203	179
EBIT/ Operating profit	154	1 738	1 612	1 332	858
Net financial income (expenses)	(18)	(12)	70	(14)	38
Profit before tax	136	1 726	1 681	1 318	896
Profit (loss) for the year	(216)	1 014	1 007	825	579
BALANCE SHEET					
Non-current assets	15 469	16 575	15 447	14 135	3 462
Current assets	11 533	13 705	12 930	11 395	6 160
Total assets	27 002	30 279	28 377	25 530	9 622
Equity	17 509	18 850	16 496	15 561	4 937
Non-current liabilities	3 798	4 046	4 939	4 232	1 333
Current liabilities	5 695	7 383	6 942	5 736	3 352
CASH FLOW ITEMS, WORKING CAPITAL AND INVESTMENTS					
Purchase of tangible fixed assets	365	695	583	450	236
Working capital	5 838	6 321	5 988	5 659	2 808
Cash flow	(628)	207	57	(570)	(927)
NUMBER OF EMPLOYEES	13 550	14 954	15 712	16 107	10 294
FINANCIAL RATIOS					
PROFITABILITY					
EBITDA margin	6.5%	11.3%	11.8%	11.9%	9.9%
EBITA margin	4.7%	9.7%	10.2%	10.1%	8.3%
EBIT/ Operating margin	0.7%	7.4%	7.5%	8.7%	6.8%
Pre-tax profit margin	0.7%	7.4%	7.8%	8.7%	7.2%
Net profit margin	-1.0%	4.3%	4.7%	5.4%	4.6%
LIQUIDITY					
Liquidity reserves	3 628	4 193	3 978	3 875	1 774
LEVERAGE					
Equity ratio	64.8%	62.3%	58.1%	61.0%	51.3%

DEFINITION OF RATIOS

Profitability

EBITDA:
Earnings before interest, tax, depreciation, amortization and impairment

EBITDA margin:
EBITDA x 100 / Operating revenue

EBITA:
Earnings before interest, tax, amortization and impairment

EBITA margin:
EBITA x 100 / Operating revenue

Operating margin:
Operating profit x 100 / Operating revenue

Pre-tax profit margin:
Profit before tax x 100 / Operating revenue

Net profit margin:
Profit (loss) for the year x 100 / Operating revenue

Liquidity

Cash flow:
Net change in liquidity from cash flow statement

Liquidity reserves:
Cash and bank deposits

Leverage

Equity ratio:
Equity x 100 / Total assets

[1] The business combination with GL SE Group was effective from 1 October 2013 and GL SE Group is consolidated from this date onwards.

[2] Key figures for 2012 (NGAAP) have been restated to reflect the demerger of DNV Petroleum Services and the real estate companies in Norway (effective 1 Jan. 2013).

CONSOLIDATED INCOME STATEMENT

DNV GL GROUP AS			AMOUNTS IN NOK MILLION		DNV GL GROUP AS CONSOLIDATED		
2016	2015	2014		NOTE	2016	2015	2014
			OPERATING REVENUE				
25.8	25.0	13.3	Sales revenue		20 834.0	23 390.3	21 622.8
25.8	25.0	13.3	**Total operating revenue**	4	20 834.0	23 390.3	21 622.8
			OPERATING EXPENSES				
0.0	0.0	0.0	Payroll expenses	5,7,8	12 554.2	13 116.0	11 597.5
0.0	0.0	0.0	Depreciation	14	368.2	374.8	348.4
0.0	0.0	0.0	Amortization and impairment	12,13	829.7	535.8	591.5
29.3	30.5	15.1	Other operating expenses	6,7	6 927.9	7 625.5	7 473.8
(3.5)	(5.5)	(1.8)	**Operating profit (loss)**		154.0	1 738.1	1 611.5
			FINANCIAL INCOME AND EXPENSES				
0.0	0.0	0.0	Income / (loss) from associates	15	(1.7)	5.6	22.8
226.6	4 386.9	182.0	Other financial income	9	96.5	96.4	175.1
(21.2)	(357.8)	(209.8)	Financial expenses	9	(112.7)	(114.4)	(128.0)
205.4	4 029.1	(27.8)	Net financial income (expenses)		(17.9)	(12.4)	69.9
201.9	4 023.6	(29.7)	**Profit (loss) before tax**		136.1	1 725.7	1 681.5
(50.0)	(7.1)	8.4	Tax expense	11	(352.0)	(711.9)	(674.4)
151.9	4 016.5	(21.2)	**Profit (loss) for the year**		(215.8)	1 013.8	1 007.1
			Profit (loss) for the period attributable to:				
			Non-controlling interest		12.9	11.1	8.2
			Equity holders of the parent		(228.7)	1 002.7	998.9
			Total		(215.8)	1 013.8	1 007.1

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

DNV GL GROUP AS 2016	DNV GL GROUP AS 2015	DNV GL GROUP AS 2014	AMOUNTS IN NOK MILLION	DNV GL GROUP AS CONSOLIDATED 2016	DNV GL GROUP AS CONSOLIDATED 2015	DNV GL GROUP AS CONSOLIDATED 2014
151.9	4 016.5	(21.2)	**Profit (loss) for the year**	(215.8)	1 013.8	1 007.1
			Other comprehensive income not to be reclassified			
			to profit or loss in subsequent periods:			
			Actuarial gains/(losses) on defined benefit pension plans	(85.8)	540.5	(920.2)
			Other comprehensive income to be reclassified			
			to profit or loss in subsequent periods:			
			Currency translation differences /			
			Translation differences foreign operations	(1 056.7)	1 335.5	1 707.0
			Share of other comprehensive income from associates	60.8	(22.7)	(29.4)
0.0	0.0	0.0	**Other comprehensive income for the period, net of tax**	(1 081.6)	1 853.4	757.3
151.9	4 016.5	(21.2)	**Total comprehensive income for the period**	(1 297.5)	2 867.2	1 764.4
			Total comprehensive income attributable to:			
			Non-controlling interest	12.9	11.1	8.2
			Equity holders of the parent	(1 310.3)	2 856.2	1 756.2
			Total	(1 297.5)	2 867.2	1 764.4

CONSOLIDATED BALANCE SHEET

ASSETS

DNV GL GROUP AS			AMOUNTS IN NOK MILLION		DNV GL GROUP AS CONSOLIDATED		
31 DEC. 2016	31 DEC. 2015	31 DEC. 2014		NOTE	31 DEC. 2016	31 DEC. 2015	31 DEC. 2014
			NON-CURRENT ASSETS				
			INTANGIBLE ASSETS				
6.1	9.0	16.0	Deferred tax assets	11	1 087.1	1 103.7	1 192.6
0.0	0.0	0.0	Goodwill	12,13	8 023.4	8 632.7	8 068.3
0.0	0.0	0.0	Other intangible assets	12	2 992.3	3 313.6	3 420.7
6.1	9.0	16.0	Total intangible assets		12 102.9	13 050.1	12 681.6
			TANGIBLE FIXED ASSETS				
0.0	0.0	0.0	Land, buildings and other property		967.4	1 039.2	1 011.5
0.0	0.0	0.0	Office equipment, fixtures and fittings		1 487.8	1 624.7	1 199.6
0.0	0.0	0.0	Total tangible fixed assets	14	2 455.2	2 663.9	2 211.1
			NON-CURRENT FINANCIAL ASSETS				
11 744.6	11 606.7	11 606.7	Investments in subsidiaries	2	0.0	0.0	0.0
0.0	0.0	0.0	Investments in associates	15	189.5	130.4	147.4
0.2	0.2	0.0	Available for sale investments		40.7	42.4	42.6
411.0	516.0	516.0	Net pension assets	8	321.7	283.0	4.9
1 339.9	1 385.6	785.3	Loan to subsidiaries		0.0	0.0	0.0
0.5	0.5	0.0	Other long-term receivables	18	358.9	404.8	359.5
13 496.1	13 509.0	12 908.0	Total non-current financial assets		910.8	860.6	554.4
13 502.2	13 518.0	12 924.0	**Total non-current assets**		15 468.9	16 574.5	15 447.1
			CURRENT ASSETS				
			DEBTORS				
0.0	0.0	0.0	Trade debtors	17	4 228.3	5 240.7	5 141.7
0.0	0.0	0.0	Work in progress		2 668.4	3 388.2	2 881.5
24.2	430.9	175.6	Other receivables group companies		30.6	37.2	30.9
0.4	0.6	0.0	Other debtors		977.2	845.8	897.6
24.6	431.5	175.6	Total debtors		7 904.6	9 511.8	8 951.6
694.3	476.4	592.5	Cash and bank deposits	20	3 628.0	4 193.0	3 978.2
718.9	907.9	768.1	**Total current assets**		11 532.6	13 704.8	12 929.8
14 221.2	14 425.9	13 692.3	TOTAL ASSETS		27 001.5	30 279.3	28 376.9

CONSOLIDATED BALANCE SHEET
EQUITY AND LIABILITIES

DNV GL GROUP AS 31 DEC. 2016	DNV GL GROUP AS 31 DEC. 2015	DNV GL GROUP AS 31 DEC. 2014	AMOUNTS IN NOK MILLION	NOTE	DNV GL GROUP AS CONSOLIDATED 31 DEC. 2016	DNV GL GROUP AS CONSOLIDATED 31 DEC. 2015	DNV GL GROUP AS CONSOLIDATED 31 DEC. 2014
			EQUITY				
			PAID-IN CAPITAL				
100.0	100.0	100.0	Share capital	23	100.0	100.0	100.0
9 323.5	9 323.5	9 323.5	Share premium		9 323.5	9 323.5	9 323.5
			RETAINED EARNINGS				
4 078.8	3 926.9	417.4	Other equity		8 051.5	9 386.7	7 037.3
0.0	0.0	0.0	Non-controlling interest		33.9	40.0	35.5
13 502.3	13 350.4	9 840.9	**Total equity**		17 508.9	18 850.2	16 496.4
			LIABILITIES				
			NON-CURRENT LIABILITIES				
0.0	100.0	500.0	Interest bearing loans and borrowings	21	0.0	100.0	500.0
0.0	0.0	0.0	Pension liabilities	8	2 451.3	2 408.8	2 659.6
0.0	0.0	0.0	Deferred tax liabilities	11	644.1	994.9	988.1
130.5	416.5	528.9	Loan from subsidiaries		0.0	0.0	0.0
0.0	0.0	0.0	Non-current provisions	19	273.5	106.6	110.7
0.0	0.0	0.0	Other non-current liabilities		428.8	435.5	680.3
130.5	516.5	1 028.9	Total non-current liabilities		3 797.7	4 045.8	4 938.7
			CURRENT LIABILITIES				
0.0	0.0	0.0	Overdrafts		0.0	0.0	4.5
0.0	1.3	0.0	Trade creditors		465.3	477.1	476.6
0.0	0.0	7.0	Taxes payable	11	384.2	741.7	699.1
0.0	0.0	0.0	Public duties payable		380.9	506.4	482.4
571.7	25.0	2 263.0	Short-term liabilities group companies		21.7	23.5	27.2
0.0	506.9	503.5	Dividend declared to shareholders		0.0	506.9	503.5
0.0	0.0	0.0	Current provisions	19	671.5	475.5	164.4
16.8	25.8	49.1	Other current liabilities	16	3 771.3	4 652.1	4 584.0
588.4	559.0	2 822.6	Total current liabilities		5 694.9	7 383.3	6 941.8
718.4	1 075.5	3 851.5	**Total liabilities**		9 492.6	11 429.1	11 880.6
14 221.2	14 425.9	13 692.3	**TOTAL EQUITY AND LIABILITIES**		27 001.5	30 279.3	28 376.9

THE BOARD OF DIRECTORS OF DNV GL GROUP AS, HØVIK, 24 APRIL 2017

LEIF-ARNE LANGØY CHAIRMAN	DR. WOLFHART HAUSER VICE CHAIRMAN	SAMI BADARANI	LIV AUNE HAGEN	REBEKKA GLASSER HERLOFSEN
NINA IVARSEN	LISELOTT KILAAS	CLEMENS KEUER	CHRISTELLE G. V. MARTIN	METTE BANDHOLTZ NIELSEN
C. THOMAS REHDER	MORTEN ULSTEIN	MARKUS WANDT	XU, BEI BETTY	REMI ERIKSEN GROUP PRESIDENT & CEO

CONSOLIDATED STATEMENT OF CASH FLOW

DNV GL GROUP AS			AMOUNTS IN NOK MILLION	DNV GL GROUP AS CONSOLIDATED		
2016	2015	2014		2016	2015	2014
			CASH FLOW FROM OPERATIONS			
201.9	4 023.6	(29.7)	Profit before tax	136.1	1 725.7	1 681.5
0.0	0.0	0.0	Gain/loss on disposal of tangible fixed assets	(5.8)	(23.6)	(2.3)
0.0	0.0	0.0	Gain on divestments	(131.9)	0.0	(18.7)
0.0	0.0	0.0	Gain on conversion of loan to associated companies	0.0	0.0	(26.3)
0.0	0.0	0.0	Loss (gain) from change of defined benefit pension plans	(64.1)	30.6	(175.0)
0.0	(365.0)	(175.4)	Group contributions recorded as financial income	0.0	0.0	0.0
0.0	0.0	0.0	Depreciation, amortization and impairment	1 197.9	910.6	940.0
0.0	0.0	0.0	Tax payable	(600.2)	(858.1)	(702.9)
			Change in work in progress, trade debtors			
(1.3)	1.3	0.0	and trade creditors	1 289.8	44.9	(701.1)
88.7	85.6	(37.1)	Change in accruals, provisions and other	(1 160.3)	384.2	663.0
289.3	3 745.5	(242.1)	**Net cash flow from operations**	661.6	2 214.3	1 658.2
			CASH FLOW FROM INVESTMENTS			
0.0	0.0	0.0	Acquisitions (business combinations)	(234.6)	(82.4)	(288.8)
0.0	0.0	(670.0)	Settlement minority share owners N.V. KEMA	0.0	0.0	(670.0)
0.0	(118.0)	0.0	Settlement minority share owners Marine Cybernetics AS	0.0	(118.0)	0.0
0.0	0.0	0.0	Divestments of subsidiaries	155.1	0.0	12.0
0.0	0.0	0.0	Investments in tangible fixed assets	(365.1)	(694.9)	(582.7)
0.0	0.0	0.0	Investments in intangible assets	(327.1)	(256.0)	(175.0)
0.0	0.0	0.0	Sale of tangible fixed assets (sales value)	80.8	52.4	32.9
0.0	0.0	0.0	Change in other investments	8.7	0.0	(98.6)
0.0	(118.0)	(670.0)	**Net cash flow from investments**	(682.3)	(1 098.9)	(1 770.2)
			CASH FLOW FROM FINANCING ACTIVITIES			
(240.3)	(713.2)	(500.0)	Change in loan from subsidiaries	0.0	0.0	0.0
0.0	0.0	0.0	Change in overdraft	0.0	(4.5)	4.5
			Change in net position towards participants			
305.8	(2 302.9)	1 482.7	in the cash pool system	0.0	0.0	0.0
105.0	0.0	0.0	Repayment of loan to DNV GL Pension Fund	0.0	0.0	0.0
(100.0)	(400.0)	500.0	Borrowings	(100.0)	(400.0)	500.0
(506.9)	(503.5)	(335.5)	Dividend paid	(506.9)	(503.5)	(335.5)
365.0	176.0	4.3	Group contribution paid/received	0.0	0.0	0.0
(71.4)	(3 743.6)	1 151.6	**Net cash flow from financing activities**	(606.9)	(908.0)	169.0
217.9	(116.0)	239.4	**Net increase/(decrease) in cash and bank deposits**	(627.6)	207.4	57.0
476.4	592.5	353.1	Liquidity at beginning of period	4 193.0	3 978.2	3 874.7
0.0	0.0	0.0	Cash in acquired companies	62.6	7.4	46.5
694.3	476.4	592.5	**Liquidity at end of period**	3 628.0	4 193.0	3 978.2

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

CHANGES IN EQUITY IN **DNV GL GROUP AS**

AMOUNTS IN NOK MILLION

	SHARE CAPITAL	SHARE PREMIUM	OTHER EQUITY	CURRENCY TRANSLATION DIFFERENCES	NON-CONTROLLING INTEREST	TOTAL
Equity at 1 January 2015	100.0	9 323.5	417.4	0.0	0.0	9 840.9
Profit for the period			4 016.5			4 016.5
Dividend accrued			(506.9)			(506.9)
Equity at 31 December 2015	100.0	9 323.5	3 926.9	0.0	0.0	13 350.4
Profit for the period			151.9			151.9
Equity at 31 December 2016	100.0	9 323.5	4 078.8	0.0	0.0	13 502.3

CHANGES IN EQUITY IN **DNV GL GROUP AS** CONSOLIDATED

AMOUNTS IN NOK MILLION

	SHARE CAPITAL	SHARE PREMIUM	OTHER EQUITY	CURRENCY TRANSLATION DIFFERENCES	NON-CONTROLLING INTEREST	TOTAL
Equity at 1 January 2015	100.0	9 323.5	4 453.4	2 584.0	35.5	16 496.4
Profit for the period			1 002.7		11.1	1 013.8
Dividend accrued			(506.9)			(506.9)
Actuarial gains/(losses) on defined						
benefit pension plans			540.5			540.5
Exchange differences				1 335.5		1 335.5
Share of other comprehensive income						
from associates			(22.7)			(22.7)
Other equity changes					(6.5)	(6.5)
Equity at 31 December 2015	100.0	9 323.5	5 467.1	3 919.5	40.0	18 850.2
Profit/(loss) for the period			(228.7)		12.9	(215.8)
Actuarial gains/(losses) on defined						
benefit pension plans			(85.8)			(85.8)
Exchange differences				(1 056.7)		(1 056.7)
Share of other comprehensive income						
from associates			60.8			60.8
Other equity changes			(24.9)		(19.0)	(43.8)
Equity at 31 December 2016	100.0	9 323.5	5 188.6	2 862.9	33.9	17 508.9

NOTES

01 SIGNIFICANT ACCOUNTING POLICIES

BASIS FOR PREPARATION. The financial statements are prepared in accordance with the Norwegian Accounting Act § 3-9 and Regulations on Simplified IFRS as enacted by the Ministry of Finance 3 November 2014. In all material aspects, Norwegian Simplified IFRS requires that the IFRS recognition and measurement criteria (as adopted by the European Union) are complied with, but disclosure and presentation requirements (the notes) follow the Norwegian Accounting Act and Norwegian Generally Accepted Accounting Standards.

The financial statements are presented in Norwegian Kroner (NOK) and all values are rounded to the nearest million (NOK million), except when otherwise indicated.

CONSOLIDATION PRINCIPLES. The consolidated statements include the parent company DNV GL Group AS and all companies in which the parent company directly or indirectly has controlling interest. The group controls an entity when the group is exposed to, or has rights to, variable return from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the group and deconsolidated from the date that control ceases. The group accounts show the Group's consolidated Income statement, Statement of Comprehensive Income, Balance Sheet, Statement of Changes in Equity and Statement of Cash Flow as a single economic entity. Subsidiaries follow the same accounting principles as the parent company. All intra group assets and liabilities, equity, income, expenses and cash flows relating to transactions between Group entities are eliminated in the consolidated accounts.

The consolidated financial statements have been prepared on the basis of going concern.

BUSINESS COMBINATIONS AND GOODWILL. Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred measured at the acquisition date at fair value. Acquisition-related costs are expensed in Income statement as incurred.

Identifiable assets acquired and liabilities assumed are recognized at their fair value at the acquisition date. Goodwill is recognized as the residual value between fair value of the consideration transferred and the fair value of the identifiable net assets.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquire are assigned to those units.

The allocation of costs in a business combination is changed if new information on the fair value becomes available and is applicable on the date when control is assumed. The allocation may be altered within one year from acquisition date.

SUBSIDIARIES. Investments in subsidiaries are recognized at cost in the accounts of the parent company. Investments carried at cost are measured at the lower of their carrying amount and fair value less costs to sell.

The fair values of the investments are tested annually based on external and/or internal indicators implying revaluation. If estimated fair value is less than the carrying amount, the investments are impaired in the Balance sheet statement and the corresponding cost is recognized in the income statement. Impairment losses recognized in prior periods are reversed if the basis for the impaired value no longer exists or have decreased.

In the accounts of the parent company, dividends, group contributions and other distributions are recognized in the same year as they are recognized in the financial statement of the subsidiary according to the Norwegian Regulation of simplified IFRS § 3-1. If dividends / group contribution exceed withheld profits after acquisition, the excess amount represents repayment of invested capital, and the distribution will be deducted from the recorded value of the acquisition in the Balance sheet statement for the parent company.

DIVIDEND TO EQUITY HOLDERS OF THE PARENT COMPANY. Dividends declared to shareholders are recognized as a liability at the end of the reporting period according to the Norwegian Regulation of simplified IFRS § 3-1.

INVESTMENTS IN ASSOCIATES AND JOINT VENTURES. An associate is an entity in which the Group has a significant influence but does not control the management of its financial and operating policy decisions (normally when the Group owns 20%-50% of the company).

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The considerations made in determining significant influence or joint control, are similar to those necessary to determine control over subsidiaries.

Investments in associated companies and joint ventures are accounted for using the equity method.

Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the associate or joint venture since the acquisition date. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is not tested for impairment individually.

The income statement reflects the Group's share of profits after tax of the associate or joint venture. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognized directly in the equity of the associate or joint venture, the Group recognizes its share of any changes, when applicable, in the statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the associate or joint venture are eliminated to the extent of the interest in the associate or joint venture. When the Group's share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the associate.

The aggregate of the Group's share of profits (or losses) of an associate and a joint venture is shown in the income statement as financial items.

The financial statements of the associate or joint venture are prepared for the same reporting period as the Group.

The recognized value of the associate or joint venture in the Statement of Financial Position is tested for impairment annually or more frequently when deemed necessary.

NON-CONTROLLING INTEREST. The non-controlling interest in the consolidated financial statements, represent the minority's share of the carrying amount of the equity in entities with minority shareholders.

CLASSIFICATION AND VALUATION OF ASSETS AND LIABILITIES.
The Group presents assets and liabilities in statement of financial position based on current/non-current classification. An asset is current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realized within twelve months after the reporting period

or

- Cash or cash equivalent unless restricted from being exchanged

or used to settle a liability for at least twelve months after the reporting period

All other assets are classified as non-current.

Current and non-current liabilities are classified correspondingly.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

Current assets are valued at the lower of cost and net realizable value. Short-term debt is recognized at fair value and subsequently measured at amortized cost. Transaction cost on short-term borrowings are usually minor, and the value of short-term debt at amortized cost is therefore normally identical with face value.

Fixed assets are valued at cost. However, if a decline in value is expected not to be temporary, fixed assets are impaired to the recoverable amount. Fixed assets with a limited useful economic life are depreciated in accordance with a linear depreciation plan.

REVENUE RECOGNITION. Revenue is recognized when it is probable that future economic benefits will flow to the Group and the revenue can be measured reliably, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties.

Revenue from services is recognized by reference to the stage of completion (percentage of completion method). Stage of completion is measured by reference to hours incurred/ contract costs incurred to date as a percentage of total estimated hours/ total estimated contract costs for each contract. When the contract outcome cannot be measured reliably, revenue is recognized only to the extent that the expenses incurred are recoverable.

When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognized as an expense immediately.

When the selling price of a software product includes an identifiable amount for subsequent servicing (e.g. after sales support and product enhancement/ maintenance on the sale of software products), that amount is deferred and recognized as revenue over the period during which the service will be performed. The amount deferred covers the expected costs of the services under the agreement together with a reasonable profit on those services.

DEBTORS. Trade receivables and other current receivables are recorded in the balance sheet initially at fair value and subsequently measured at amortized cost less provision for impairment. Provisions for doubtful debts are calculated on the basis of individual assessments. Impairments of trade receivables are recognized in the income statement if objective indicators suggest that the due amounts cannot be covered in full.

TAXES. Income tax expense comprises both current tax and deferred tax, including effects of changes in tax rates. Current and deferred tax is recognized in income statement, except to the extent that they relate to items recognized in equity or other comprehensive income, of which the tax is also recognized in equity or other comprehensive income.

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The current and deferred income tax is calculated based on tax rates (and tax laws) that have been enacted or substantively enacted, in the countries where the Group operates and generates taxable income at the end of the reporting period. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax is recognized on temporary differences between the carrying amount of assets and liabilities and the corresponding tax bases as well as on tax losses carried forward at the reporting date. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets for temporary differences and tax loss carry forwards are recognized to the extent that it is probable that future taxable income will be available at the level of the relevant tax authority for utilization. Tax increasing and tax reducing temporary differences expected to reverse in the same period are offset and calculated on a net basis as far as this relate to the same taxable entity and the same taxation authority.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

FOREIGN CURRENCIES. The Group's consolidated financial statements are presented in Norwegian Kroner (NOK), which is also the parent company's functional currency. The functional currency of an entity is the currency of the economic environment in which the company primarily operates. For each entity the Group determines the functional currency and items included in the financial statements of each entity are measured using that functional currency.

Transactions in foreign currencies are initially recorded by the Group's entities at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognized in the Income statement. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

Forward exchange contracts are included at market value at the reporting date.

On consolidation, the assets and liabilities of foreign operations, including goodwill and fair value adjustments are translated into NOK at the rate of exchange prevailing at the reporting date. The Income statements are translated at the average exchange rate for the financial year. Exchange rate differences arising are recognized in other comprehensive income (OCI). On disposal of a foreign operation, the component of OCI relating to that particular foreign operation is recognized in the Income statement.

Realized and unrealized currency effects not reflected in OCI are included on a net basis in either other financial income or other financial expenses.

PROPERTY, PLANT AND EQUIPMENT. Property, plant and equipment are stated at cost less accumulated depreciation and accumulated impairment losses. Depreciation is calculated on a straight-line basis over the expected useful life of the assets. The estimated useful life, residual values and depreciation method are reviewed, and adjusted if appropriate, at the end of each reporting period. Periodic maintenance costs are capitalized and depreciated over the expected maintenance period. Other repair and maintenance costs are recognized in the Income statement as incurred. Improvement and upgrading are assigned to the purchase cost / carrying amount and depreciated along with the asset.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gains or losses is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

LEASES. Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Operating lease payments are recognized as an operating expense in the Income statement on a straight-line basis over the period of lease.

BORROWING COSTS. Borrowing costs are recognized in the Income statement in the period in which they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

INTANGIBLE ASSETS. Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses. Except for capitalized development costs, all other internally generated intangibles are reflected in the Income statement in the period in which the expenditure is incurred.

The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period for an intangible asset with a finite useful life are reviewed at least at the end of each reporting period.

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually, either individually or at the cash-generating unit level. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

RESEARCH AND DEVELOPMENT COSTS. Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset when the Group can demonstrate:

- The technical feasibility of completing the intangible asset so that the asset will be available for use or sale
- Its intention to complete and its ability and intention to use or sell the asset
- How the asset will generate future economic benefits
- The availability of resources to complete the asset
- The ability to measure reliably the expenditure during development

Following initial recognition of the development expenditure as an asset, the asset is carried at cost less any accumulated amortization and accumulated impairment losses. Amortization of the asset begins when development is complete and the asset is available for use. The asset is amortized over the period of expected future benefit. During the period of development, the asset is tested for impairment annually.

IMPAIRMENT OF NON-FINANCIAL ASSETS. The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples or other available fair value indicators.

The Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the Group estimates the asset's or CGU's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the Income statement.

Goodwill is tested for impairment annually as part of the Group's annual plan process and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

CASH AND BANK DEPOSITS. Cash and bank deposits in the Balance sheet comprise petty cash and cash at bank and short-term deposits with a maturity of three months or less, which are subject to an insignificant risk of changes in value. Cash and bank deposits are initially and subsequently measured at fair value.

PROVISIONS. Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable (more likely than not) that the Group will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a financial expense.

RESTRUCTURING PROVISIONS. Restructuring provisions are recognized only when the Group had a constructive obligation, which is when a detailed formal plan identifies the business or part of the business concerned, the location and number of employees affected, a detailed estimate of the associated costs, and an appropriate timeline, and the employees affected have been notified of the plan's main features.

ONEROUS LEASE. Provision for onerous lease contracts represents the present value of the future lease payments that the Group is presently obligated to make under non-cancellable onerous operating lease contracts, less revenue expected to be earned on the onerous lease, including estimated future sub-lease revenue, where applicable. The estimate may vary as a result of changes in the utilisation of the leased premises and sub-lease arrangements where applicable.

POST EMPLOYMENT BENEFITS. The group operates various post-employment schemes, including both defined benefit and defined contribution pension plans.

A defined contribution plan is a pension plan under which the Group pays fixed contribution into a separate entity (a fund/insurance company) and will have no legal or constructive obligation to pay further contributions. The pension cost related to the defined contribution plans is equal to the contributions to the employee's pension savings in the accounting period.

Multi-employer plans are accounted for as defined contribution plans.

A defined benefit plan is a pension plan that is not a defined contribution plan. In the defined benefit plans, the Group's obligation is to provide the agreed benefit to current and former employees, actuarial risk and investment risk fall in substance on the Group. The Group's defined benefit plans are both funded and unfunded.

Actuarial assumptions are made to measure the pension obligation and the pension expense. Actuarial assumptions are mutually compatible and reflect the economic relationship between factors such as inflation, rate of salary increase and discount rate. The actuarial assumptions comprise: demographic assumptions such as mortality and employee turnover and financial assumptions such as discount rate, rate of salary- and pension benefit increase.

The pension obligations are measured on a discounted basis. Pension plan assets are valued at their fair value. The fair value of plan assets is deducted from the present value of the defined benefit obligation when determining the net defined benefit liability or assets.

Actuarial gains and losses are recognized through other comprehensive income (OCI). Actuarial gains and losses are not reclassified to profit or loss in subsequent periods.

Changes to existing defined benefit plans that will lead to changes in pension obligation are recognized in the statement of income as they occur. Gains or losses linked to changes or terminations of pension plans are also recognized in the statement of income when they arise.

Net interest on the net defined benefit/ assets is presented as part of financial items.

Service costs comprising current service costs, past-service costs, gains and losses on curtailments and non-routine settlements is presented as part of payroll expenses.

USE OF ESTIMATES. The preparation of the Group's consolidated financial statements in accordance with simplified IFRS requires management to make judgements, estimates and assumptions about the carrying amount of assets and liabilities at the end of the reporting period that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experiences and other factors that are considered to be relevant. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Update of accounting estimates are recognized in the period of which the estimate is updated, if the update affects only that period, or in the period of the update if the update affects both current and future periods.

CONTINGENT LIABILITIES AND ASSETS. Contingent liabilities are not recognized in the annual accounts. Significant contingent liabilities are disclosed, with the exception of contingent liabilities that are unlikely to be incurred. Contingent assets (unless virtually certain) are not recognized in the annual accounts but are disclosed if the inflow of economic benefits is probable.

EVENTS AFTER THE REPORTING PERIOD. New information on the company's financial position on the end of the reporting period which becomes known after the reporting period is recorded in the annual accounts. Events after the reporting period that do not affect the company's financial position on the end of the reporting period but which will affect the company's financial position in the future are disclosed if significant.

CASH FLOW STATEMENT. The cash flow statement is presented using the indirect method. Cash and cash equivalents includes cash, bank deposits and other short-term, highly liquid financial assets with maturities of three months or less.

02 GROUP INFORMATION

DNV GL GROUP AS CONSOLIDATED CONSISTS OF THE PARENT COMPANY DNV GL GROUP AS AND THE FOLLOWING SUBSIDIARIES:	BUSINESS OFFICE		SHARE CAPITAL IN 1000 LOCAL CURR.[1]	OWNERSHIP	BOOK VALUE
DNV GL AS	Bærum, Norway	NOK	5 000	100%	9 506.7
DNV GL Business Assurance Group AS	Bærum, Norway	NOK	1 033	100%	1.1
DNV GL Netherlands B.V.[2]	Arnhem, Netherlands	EUR	9 015	100%	2 236.7
DNV KEMA AS (dormant)	Bærum, Norway	NOK	100	100%	0.1
Total investment in subsidiaries					11 744.6

[1] incl. share premium
[2] Changed name from N.V. KEMA in 2016

03 BUSINESS COMBINATIONS AND SALE OF OPERATIONS

SIGNIFICANT CHANGES IN GROUP STRUCTURE 2016

18 January 2016, DNV GL acquired 100% of the shares in Gothia Power AB. Gothia Power is an established consulting company with a strong market position and network in the electric power field in Sweden. The company offers advanced analysis and measurements for power production, power transmission and power consumption. For DNV GL Group, the acquisition of Gothia Power establishes DNV GL's technical and strategic power systems in the Swedish and Baltic energy markets and further strengthens DNV GL's leading position worldwide.

In July 2016, DNV GL acquired 100% of the shares in GreenPower-Monitor. GreenPowerMonitor is an international company, with headquarter in Barcelona, that offers products and services in the renewable energy sector, with a specific focus in the photovoltaic space. The company is a leading provider of solar monitoring, control and asset management systems. For DNV GL Group, the acquisition of GreenPowerMonitor fits strategically by bringing together world leading domain knowledge, technical expertise as well as digital delivery platforms and data-driven services.

In October 2016, the Oil & Gas Material & Failure Analysis laboratory in Germany (Germanischer Lloyd Prüflabor GmbH) was sold to Element Materials Technology Herne GmbH. Germanischer Lloyd Prüflabor GmbH offers material testing, metallurgical examinations and failure investigations through its four labs in Germany. A sales gain of NOK 125 million from the transaction is included in the income statement for 2016. The divestment was settled in cash.

ACQUISITIONS 2016

COMPANY / ACTIVITIES	TRANSACTION DATE	OWNERSHIP	PURCHASE CURRENCY	ACQUISITION COST LOCAL CURRENCY (THOUSAND)	EXTERNAL REVENUE INCL. IN 2016 ACCT. MILL NOK
Gothia Power AB	18.01.16	100%	SEK	83 300	21.9
GreenPowerMonitor	07.07.16	100%	EUR	16 177	41.5

PRELIMINARY PURCHASE PRICE ALLOCATION (PPA) AMOUNTS IN NOK MILLION	ACQUISITION COST	OF WHICH:				
		CUSTOMER RELATIONS	CUSTOMER CONTRACTS	DEF. TAX	NET ASSETS	GOODWILL
Gothia Power AB	84.3	12.4	4.9	(4.7)	6.1	65.7
GreenPowerMonitor	150.3	34.7	3.1	(10.6)	45.4	77.7

CASH FLOW ON ACQUISITION
AMOUNTS IN NOK MILLION

Net cash acquired with the subsidiaries	62.6
Consideration paid in cash	(234.6)
Net cash flow on acquisition	(172.0)

03 BUSINESS COMBINATIONS

SIGNIFICANT CHANGES IN GROUP STRUCTURE 2015

13 February 2015, DNV GL acquired ISC (100% of the shares in International Standards Certification Pty Ltd., Australia and 100% of the shares in International Standard Certification Japan Co. Ltd). ISC is an international certification body, with a particular presence in Australia and Asia. ISC is a full-service international certification and training body accredited by JAS-ANZ (Joint Accreditation System – Australia New Zealand) and Exemplar Global as a certified training organization. It provides extensive certification and training services for products and systems across key industry sectors, including healthcare and food & beverage.

For the DNV GL Group, the acquisition of ISC will increase DNV GL's presence and growth in key industries such as the healthcare industry. The acquisition is also strengthening the DNV GL brand, positioning and growth within the Assurance sector.

31 August 2015, DNV GL acquired 100% of the shares in Noomas Sertifisering AS. Noomas is a leading Norwegian inspection and certification body within fish farming and equipment.

Noomas is Norway's leading inspection and certification body within aquaculture and equipment used within the industry. Their objective is to support aquaculture farms through certification to become safer and more sustainable. Noomas primarily delivers accredited certification services to help the industry meet regulations and requirements for floating fish farms and related equipment.

For the DNV GL Group, the acquisition of Noomas increase the capability in the aquaculture section, in particular in Norway which has a strong position in global marine aquaculture. Noomas' technical services targeting the operations of fish farms compliment the existing portfolio for the aquaculture value chain.

70% of the shares in Marine Cybernetics AS (Norway) were acquired May 2014. In addition, DNV GL AS entered into an agreement with the owners of the remaining 30% of the shares, where DNV GL AS had an obligation to acquire the remaining shares after three years at an agreed price. 100% of Marine Cybernetics AS was included in the DNV GL Group AS consolidated accounts from 1 May 2014 with no minority interest. The expected payment for the remaining shares was reflected as a liability. In December 2015, this liability was settled.

ACQUISITIONS 2015

COMPANY / ACTIVITIES	TRANSACTION DATE	OWNERSHIP	PURCHASE CURRENCY	ACQUISITION COST LOCAL CURRENCY (THOUSAND)	EXTERNAL REVENUE INCL. IN 2015 ACCT. MILL NOK
International Standard Certification Japan Co., Ltd.	13.02.15	100%	JPY	1 046	7.6
International Standards Certification Pty Ltd, Australia	13.02.15	100%	AUD	6 019	21.1
Noomas Sertifisering AS	31.08.15	100%	NOK	43 549	8.5

The acquisition cost in excess of net book value of the equity has been allocated to goodwill.

CASH FLOW ON ACQUISITION

AMOUNTS IN NOK MILLION

Net cash acquired with the subsidiaries	7.4
Consideration paid in cash	(82.4)
Net cash flow on acquisition	(75.0)

04 EXTERNAL OPERATING REVENUE

DNV GL GROUP AS CONSOLIDATED

GEOGRAPHICAL AREA
AMOUNTS IN NOK MILLION

	2016	2015	2014
Nordic countries	4 006.8	4 438.4	4 542.1
Europe and Africa	7 325.5	7 642.9	7 387.2
Asia Pacific	5 349.8	6 710.8	5 800.6
North and South America	4 151.9	4 598.2	3 892.9
Total operating revenue	20 834.0	23 390.3	21 622.8

BUSINESS AREA
AMOUNTS IN NOK MILLION

DNV GL – Maritime	8 216.1	9 885.9	8 877.8
DNV GL – Oil & Gas	4 954.5	6 053.6	6 264.2
DNV GL – Energy	3 582.5	3 522.6	3 122.1
DNV GL – Business Assurance	3 145.9	3 024.0	2 491.7
DNV GL – Software	859.1	823.9	783.3
Other	76.0	80.3	83.7
Total operating revenue	20 834.0	23 390.3	21 622.8

For management purposes, the Group is organized into business areas based on the industries in which the Group operates. DNV GL is structured into five business areas; Maritime, Oil & Gas, Energy, Business Assurance and Software.

05 PAYROLL EXPENSES

DNV GL GROUP AS CONSOLIDATED

AMOUNTS IN NOK MILLION

	2016	2015	2014
Salaries	10 030.0	10 309.5	9 332.6
Payroll tax	1 233.1	1 244.5	1 213.7
Pension costs	905.5	940.5	820.3
Effect of pension plan changes/ curtailment effects	(64.1)	70.0	(175.0)
Other contributions	449.7	551.5	406.0
Total payroll expenses	12 554.2	13 116.0	11 597.5
Man years	13 298	14 682	15 428
Total bonus expenses	53.0	67.0	451.8

06 OTHER OPERATING EXPENSES

DNV GL GROUP AS CONSOLIDATED

AMOUNTS IN NOK MILLION	2016	2015	2014
Travel expenses	1 164.1	1 304.5	1 251.0
ICT and communication expenses	875.5	889.4	897.8
Rent and real estate expenses	1 020.8	1 032.2	826.4
Loss on claim	46.9	98.5	95.2
Expenses group companies	211.1	225.1	228.0
Other expenses	3 609.5	4 075.9	4 175.4
Total other operating expenses	6 927.9	7 625.5	7 473.8

The Group recognized expenses of NOK 753.9 million in relation to operating leases in 2016.
Operating lease relates mainly to office rent, with lease terms between 1–15 years and company cars, with lease terms between 1–5 years.

MINIMUM LEASE PAYMENTS RELATING TO OPERATING LEASE

Within one year	670.7	742.9	592.2
After one year but not more than five years	1 890.7	2 138.2	1 613.8
More than five years	1 026.2	1 381.9	928.3
Total	3 587.6	4 262.9	3 134.3

07 REMUNERATION AND LOANS TO GROUP CEO, EXECUTIVE COMMITTEE, BOARD OF DIRECTORS ETC.

COMPENSATION GUIDELINES FOR THE GROUP CEO AND THE MEMBERS OF THE EXECUTIVE COMMITTEE. The compensation guidelines for the members of the Executive Committee support DNV GL's vision of being a global organization with a long-term perspective. The main compensation elements are focused around a market based salary, a bonus scheme with a retention element and a few standard employee benefits in line with the local markets.

The Group CEO and executive management team participate in the standard pension and insurance schemes applicable in the country where their employment contracts are signed (currently Italy, Netherlands, Norway and United Kingdom). All members of the Executive Committee have standard employment contracts and standard terms and conditions regarding notice period and severance pay, with the exception of the Group CEO, who has an extended notice period of 6 instead of 3 months.

DNV GL has a bonus scheme in place with a retention component for employees in higher employment grades. The bonus is based on a combination of the DNV GL results at Group and Business Areas levels respectively; namely financial achievement at Group level (EBITA) by 60% and financial achievement at Business Area level (EBITA) by 40%. Target bonus and cap varies by salary grade and performance assessment and is tailored to the two highest levels of management. Target bonus for the Executive Committee is 25% and the maximum value is at 50% of base salary. The earned bonus is divided in three parts and the first part is paid the following year and thereafter another third the following two years. The pay-outs are forfeited if the executive resigns.

EXECUTIVE COMPENSATION DURING 2016
Ahead of the salary review process taking place as of 01 April every year, the senior executive compensation was compared to external benchmarks using Korn Ferry Hay Group's data collected throughout 2015 as well as information publicly accessible from other comparable companies.

Remi Eriksen, the Group CEO, is not part of the general bonus programme, but receives a discretionary bonus determined on an annual basis by the Board of Directors. Pay-out may not exceed 50% of base annual salary and there was no pay-out granted in 2016 in line with the overall results for most of the Business Areas. Pay-out shown in the table below is accrued in the Bonus Bank scheme before becoming a Group CEO.

Compensation package for Remi Eriksen consist of: Annual salary of NOK 5 500 thousand and a car allowance of NOK 250 thousand. Eriksen has a right to retire at 65 years. If terminated from DNV GL, Group CEO is entitled to 12 months of base salary beyond the notice period of six months.

07 REMUNERATION AND LOANS TO GROUP CEO, EXECUTIVE COMMITTEE, BOARD OF DIRECTORS ETC.

REMUNERATIONS AND LOANS TO THE EXECUTIVE COMMITTEE FOR 2016

AMOUNTS IN NOK THOUSAND

	REMUNERATIONS				LOANS AT 31 DEC. 2016			
	SALARY	OTHER BENEFITS	BONUS	PENSION COST	LOAN AMOUNT	INTEREST RATE	REPAYMENT PERIOD	SECURITY
Remi Eriksen	5 532	282	903	360				
Thomas Vogth-Eriksen	3 033	185	568	267	1 328	0.83%	Apr. 2024	Mortgage
Cecilie B. Heuch	2 404	166	534	111				
Luca Crisciotti	2 240	341	986	1 011[2]				
David Walker	3 159	245	510	0				
Elisabeth Tørstad	2 836	167	168	300	900	0.83%	May 2035	Mortgage
Ditlev Engel[1]	2 270	912	0	0				
Knut Ørbeck-Nilssen	2 700	98	165	270				
Are Føllestad Tjønn	1 547	156	128	105				

[1] Member of the Executive Committee from 4 April 2016, remuneration disclosed from April - December
[2] Statutory payments to the Italian social security institute INPS

REMUNERATIONS TO THE BOARD OF DIRECTORS PAID OUT IN 2016

AMOUNTS IN NOK THOUSAND

	REMUNERATION BOARD OF DIRECTORS	REMUNERATION BOARD AUDIT COMMITTEE	REMUNERATION BOARD COMPENSATION COMMITTEE
Leif-Arne Langøy	420		32
Dr. Wolfhart Hauser[2]	138		13
J. Hinrich Stahl[1]	220	31	7
Sami Badarani[6]	117	31	
Heinrich Frankemölle[4]	187		
Sille Grjotheim[3]	162		
Liv Aune Hagen[5]	117		
Rebekka Glasser Herlofsen	280	50	
Nina Ivarsen[5]	117		
Clemens Keuer	280		

AMOUNTS IN NOK THOUSAND

	REMUNERATION BOARD OF DIRECTORS	REMUNERATION BOARD AUDIT COMMITTEE	REMUNERATION BOARD COMPENSATION COMMITTEE
Liselott Kilaas[5]	118	25	
Johannes Lafrentz[4]	187		7
Christelle G.V. Martin	280		
Mette Bandholtz Nielsen	280		
C. Thomas Rehder	280		
Odd E. Sund[3]	162		
Hilde M. Tonne[3]	162	25	
Morten Ulstein	280		20
Markus Wandt[6]	117		13
Xu Bei Betty	280		

[1] Vice Chairman of the Board of Directors until 15 August 2016
[2] Vice Chairman of the Board of Directors from 15 August 2016
[3] Member of the Board of Directors until 1 August 2016
[4] Member of the Board of Directors until 15 August 2016
[5] Member of the Board of Directors from 1 August 2016
[6] Member of the Board of Directors from 15 August 2016

FEES TO THE AUDITORS FOR 2016

AMOUNTS IN NOK THOUSAND

	DNV GL GROUP AS	GROUP AUDITOR OTHER NORWEGIAN ENTITIES	GROUP AUDITOR NON-NORWEGIAN ENTITIES	OTHER AUDITORS	TOTAL
Statutory audit	3 165	1 794	19 049	3 259	27 268
Tax consulting services	40	53	4 255	341	4 689
Other audit related services	471	233	1 083	280	2 067
Non-audit services	254	0	0	318	572

08 PENSION COSTS, PLAN ASSETS AND DEFINED BENEFIT PENSION LIABILITIES

DNV GL Group AS has both defined contribution pension plans and defined benefit pension plans. 10 918 employees are covered by the defined contribution pension plans while 3 940 persons (employees and pensioneers) are covered by defined benefit pension plans. All defined benefit pension plans are closed for new entrants, however active members still build up their pension rights under these plans.

End of service benefit schemes in some countries outside Norway (mainly Middle East and Asian countries with statutory defined benefit plan requirements) are still open for new entrants. These end of service benefit schemes are required by law and fully settled at retirement/ resignation.

The structure of the defined benefit pension plans depends on the legal, tax and economic conditions in the respective country, and is usually based on length of service and remuneration of the employee. The defined benefit pension plans are covered through separate pension funds, through arrangements with independent insurance companies or through unfunded plans.

The defined benefit pension plans in Norway are financed through a separate pension fund. For defined benefit pension plans in Germany, the major plans are unfunded with the gross liability reflected as a pension liability, however there are also pension plans in Germany financed through independent insurance companies. Of the other defined benefit pension plans, the major UK plans are financed through a separate pension fund, while the other plans are mainly financed through independent administrative funds/insurance companies. The pension cost and the pension liabilities as included in the accounts and in this note, are based on the presented actuarial assumptions, together with remuneration of the employee and length of service.

Contribution to the Group's pension plans are made in accordance with common actuarial methods and statutory regulations in the country where the pension plan is administered. Total pension costs for 2016 are NOK 841.4 million of which NOK 187.1 million are related to the defined benefit pension plans and NOK 654.3 million are related to the defined contribution pension plans and end of service benefit schemes.

The Norwegian companies in the Group are subject to the Norwegian Pension Act. The companies' pension schemes fulfil the requirements of the law. Norwegian employees are covered either by the Norwegian defined contribution pension plan (mainly employees employed after 1 January 2005), or the defined benefit pension plan organized in one Norwegian pension fund (employees employed before 1 January 2005) and in one unfunded pension plan (employees employed before 1 January 2005). The pension assets in the Norwegian pension fund are invested as follows:

MARKET VALUE OF PLAN ASSETS IN NORWAY
AMOUNTS IN NOK MILLION

	31 DEC. 16	31 DEC. 15	31 DEC. 14
Buildings and property	181.0	290.0	352.0
Mutual equity funds and hedge funds	3 010.1	2 399.9	2 325.7
Norwegian bonds and bond funds	1 693.6	1 785.7	1 166.5
Non-Norwegian bonds and bond funds	208.6	197.0	195.0
Bank accounts, other assets and liabilities	869.6	1 316.5	1 754.2
Total market value of plan assets Norway			
(DNV GL Pension fund)	5 962.9	5 989.0	5 793.4
Actual return on plan assets	272.9	210.3	459.8

PENSION COST – DEFINED BENEFIT PENSION SCHEMES
AMOUNTS IN NOK MILLION

	FUNDED NORWEGIAN DEFINED BENEFIT PENSION PLANS			GERMAN DEFINED BENEFIT PENSION PLANS			OTHER DEFINED BENEFIT PENSION PLANS		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Net present value of this year's									
pension contribution	148.7	176.6	169.2	47.5	50.5	37.8	41.9	51.2	20.0
Effect of plan changes/curtailments	(56.0)	0.0	(175.0)	(8.1)	0.0	0.0	0.0	30.6	0.0
Payroll tax	13.1	24.9	48.5	0.0	0.0	0.0	0.0	0.0	0.0
Net present value of this year's									
pension contribution	105.8	201.4	42.8	39.4	50.5	37.8	41.9	81.8	20.0
Net interest on the net defined									
benefit liability (asset)	(12.3)	1.6	(14.3)	47.7	48.6	58.6	3.0	4.6	2.3
Payroll tax	(1.7)	0.2	(2.0)	0.0	0.0	0.0	0.0	0.0	0.0
Net interest on the net defined									
benefit liability (asset)	(14.0)	1.9	(16.3)	47.7	48.6	58.6	3.0	4.6	2.3

08 PENSION COSTS, PLAN ASSETS AND DEFINED BENEFIT PENSION

NET PENSION ASSET (LIABILITIES) - DEFINED BENEFIT PENSION SCHEMES

AMOUNTS IN NOK MILLION

	FUNDED NORWEGIAN DEFINED BENEFIT PENSION PLANS			GERMAN DEFINED BENEFIT PENSION PLANS			OTHER DEFINED BENEFIT PENSION PLANS		
	31 DEC. 16	31 DEC. 15	31 DEC. 14	31 DEC. 16	31 DEC. 15	31 DEC. 14	31 DEC. 16	31 DEC. 15	31 DEC. 14
Market value of plan assets	5 962.9	5 989.0	5 808.4	62.7	60.7	61.1	1 857.8	2 276.7	2 018.2
Actuarial present value of pension liabilities	(5 630.2)	(5 680.6)	(5 955.3)	(2 359.0)	(2 347.7)	(2 347.3)	(2 012.8)	(2 394.6)	(2 146.8)
Payroll tax	(11.0)	(29.3)	(93.1)	0.0	0.0	0.0	0.0	0.0	0.0
Net pension asset (liabilities)	321.7	279.1	(240.0)	(2 296.3)	(2 287.0)	(2 286.1)	(155.0)	(117.9)	(128.6)

END OF SERVICE BENEFIT SCHEMES

AMOUNTS IN NOK MILLION

	NORWEGIAN SCHEMES			GERMAN SCHEMES			OTHER SCHEMES		
	31 DEC. 16	31 DEC. 15	31 DEC. 14	31 DEC. 16	31 DEC. 15	31 DEC. 14	31 DEC. 16	31 DEC. 15[1]	31 DEC. 14[1]
Net liability	0.0	0.0	0.0	0.0	0.0	0.0	(183.5)	(214.5)	(245.4)
Hereof recorded in the balance sheet as:									
Net pension asset	321.7	279.1	0.0	0.0	0.0	0.0	0.0	3.9	4.9
Pension liabilities	0.0	0.0	(240.0)	(2 296.3)	(2 287.0)	(2 286.1)	(155.0)	(121.8)	(133.5)
Other non-current liabilities	0.0	0.0	0.0	0.0	0.0	0.0	(183.5)	(214.5)	(245.4)

[1] Regrouped from pension liabilitites to other non-current liabilities in the balance sheet statement 31 December 2015 and 31 December 2014

The assumptions (discount rate, covered bonds) for calculation of the pension liabilities in Norway have been changed from 2.6% to 2.5%. The changed assumptions led to increased pension liabilities of NOK 94 million in 2016.

The assumptions (discount rate) for calculation of the pension liabilities in Germany have been changed from 2.2% to 1.8%. The changed assumptions led to increased pension liabilities of NOK 114 million in 2016.

As a consequence of new regulations in Norway for disability pension (effective 1 January 2017), disability pension have been organized in a defined contribution scheme from 1 January 2017. Curtailment effect of NOK 5 million (gain) has been reflected in the income statement in 2016.

As a consequence of capacity adjustments in 2016, curtailment effects (gain) of NOK 59 million (NOK 51 million in Norway and NOK 8 million in Germany) have been reflected in the income statement in 2016.

THE CALCULATIONS OF THE PENSION LIABILITIES ARE BASED ON THE FOLLOWING ACTUARIAL ASSUMPTIONS:

	NORWEGIAN SCHEMES[2]			GERMAN SCHEMES			OTHER SCHEMES		
	31 DEC. 16	31 DEC. 15	31 DEC. 14	31 DEC. 16	31 DEC. 15	31 DEC. 14	31 DEC. 16	31 DEC. 15	31 DEC. 14
Discount rate[1]	2.5%	2.6%	2.3%	1.8%	2.2%	2.2%	1.0-8.1%	1.0-9.5%	2.1-3.7%
Projected annual salary adjustment	2.8%	2.8%	3.0%	2.5%	2.5%	3.0%	2.5-10.0%	2.0-10.0%	2.0-4.0%
Projected annual increase in pension benefit	1.8%	1.8%	1.8%	1.5%	1.5%	2.0%	0.0-3.1%	0.0-3.0%	0.0-3.2%
Projected annual increase of Norwegian government basis pension	2.3%	2.3%	2.5%						
Expected annual return on plan assets	2.5%	2.6%	2.3%	1.8%	2.2%	2.2%	1.0-7.9%	1.0-9.5%	2.1-3.7%

[1] Covered bond rate for Norwegian schemes.
[2] The pension liability calculations for the Norwegian schemes are based on K2013BE (standard best estimate mortality table).

The retirement age in the group differs from country to country. In the most significant pension plans the ordinary retirement age is 67 years (Norway) and 65 - 67 years (Germany). To align with German regulations, the major German pension plans are gradually shifting from 65 to 67 years based on the year of birth of the plan members. Some managers and employees are entitled to early retirement before 67, with full pension rights earned.

SENSITIVITY ANALYSIS OF PENSION CALCULATIONS. The sensitivity analysis below have been determined based on reasonably possible changes of the respective assumptions occurring at the end of the reporting period, while keeping all other assumptions unchanged. Sensitivities decrease (increase) defined benefit obligation year-end.

ASSUMPTIONS AMOUNTS IN NOK MILLION	DISCOUNT RATE		FUTURE SALARY INCREASES	
	0.5% INCREASE	0.5% DECREASE	0.5% INCREASE	0.5% DECREASE
Impact on defined benefit obligation Norwegian plans	516.0	(534.0)	(142.0)	184.0
Impact on defined benefit obligation German plans	163.3	(167.1)	(18.6)	18.4

09 FINANCIAL INCOME AND FINANCIAL EXPENSES

DNV GL GROUP AS			AMOUNTS IN NOK MILLION	DNV GL GROUP AS CONSOLIDATED		
2016	2015	2014		2016	2015	2014
7.7	4 000.5	3.0	Dividend from subsidiaries	0.0	0.0	0.0
0.0	365.0	176.0	Group contribution received	0.0	0.0	0.0
0.0	0.0	0.0	Profit (loss) from investment in associates (note 15)	(1.7)	5.6	22.8
0.0	0.0	0.0	Gain from sale of avaliable for sale investments	7.2	0.0	0.0
0.0	0.0	0.0	Net interest on the net defined benefit liability (asset) (Note 8)	(36.6)	(55.5)	(44.5)
2.3	5.7	6.7	Other interest received	35.4	38.6	35.6
76.8	6.9	(4.8)	Net interest income (expense) group companies	0.0	0.0	0.0
(8.2)	(17.2)	(12.3)	Other interest expenses	(45.9)	(23.7)	(49.8)
132.7	(327.9)	(190.0)	Currency gains (losses)	49.7	49.3	118.8
(5.9)	(3.8)	(6.4)	Other financial items	(25.9)	(27.2)	(12.9)
205.4	4 029.1	(27.8)	**Net financial income (expenses)**	(17.9)	(12.4)	69.9

10 FINANCIAL MARKET RISK

The Group's main financial market risks are liquidity risk, foreign currency risk, credit risk, interest rate risk and pension plan risk.

LIQUIDITY RISK. The Group monitors its liquidity risk on an ongoing basis. The liquidity forecasting considers planned investments in non-current assets, financing activities, working capital needs, as well as projected cash flows from operations.

FOREIGN CURRENCY RISK. The Group has revenues and expenses in approximately 65 currencies. Of these, six currencies (EUR, USD, NOK, GBP, CNY and KRW) make up for approximately 78% of the total revenue. In many currencies the group has a natural hedge through a balance of revenue and expenses. The policy of the Group is to hedge significant project exposures and future cash flows through forward exchange contracts. As part of the hedging strategy, the Group has forward exchange contracts equivalent to NOK 1 198 million. The Group does not apply hedge accounting and realized and unrealized gains and losses are recognized in the income statement. Unrealized net loss at year end is NOK 24.0 million.

A change in USD exchange rate of +/- 1 percentage point will lead to a change in operating revenue of approximately +/- NOK 34 million and a change in operating profit (EBIT) of approximately +/- NOK 2 million. A change in EUR exchange rate of +/- 1 percentage point will lead to a change in operating revenue of approximately +/- NOK 55 million and an insignificant change in operating profit (EBIT).

CREDIT RISK. Receivable balances are monitored on an ongoing basis with the result that the Group's exposure to bad debts is limited. There are no significant concentrations of credit risk within the Group. With respect to credit risk arising from the other financial assets of the Group, which comprises cash and cash equivalents and certain derivative instruments, the Group's exposure to credit risk arises from default of the counterparty, with a maximum exposure equal to the market value of these instruments.

INTEREST RATE RISK. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's forward exchange contracts and the multi-currency revolving credit facility. Both risks are considered to have limited effect.

PENSION PLAN RISK. The Group is exposed to volatility in the financial market affecting the value of the pension plan assets. The Group is also exposed to interest rate volatility effecting the pension liabilities. In addition, inflation and real wages development will have impact on the pension liabilities.

11 TAX

DNV GL GROUP AS 2016	DNV GL GROUP AS 2015	DNV GL GROUP AS 2014	AMOUNTS IN NOK MILLION	DNV GL GROUP AS CONSOLIDATED 2016	DNV GL GROUP AS CONSOLIDATED 2015	DNV GL GROUP AS CONSOLIDATED 2014
			Tax expense consists of:			
0.0	0.0	7.0	Norwegian income tax	0.0	101.5	106.2
46.0	0.0	0.0	Tax effect group contribution	0.0	0.0	0.0
1.2	0.2	0.4	Income tax outside Norway	626.4	722,0	656.7
47.1	0.2	7.4	Total tax payable	626.4	823.5	762.9
2.9	7.0	(15.8)	Change in deferred tax in Norway	(59.9)	(141.0)	45.2
0.0	0.0	0.0	Effect of changed tax rate	12.9	13.9	0.0
0.0	0.0	0.0	Change in deferred tax outside Norway	(227.4)	15.4	(133.7)
2.9	7.0	(15.8)	Total change in deferred tax	(274.4)	(111.6)	(88.,5)
50.0	7.1	(8.4)	**Tax expense**	352.0	711.9	674.4
50.5	1 086.4	(8.0)	Tax on profit at 25% (27% in 2015 and 2014)	34.0	465.9	454.0
			Tax effect of:			
0.0	0.0	0.0	Foreign tax exempt branches	0.0	1.3	(24.1)
0.0	0.0	0.0	Non refundable foreign withholding taxes	153.8	60.1	27.7
0.0	0.0	0.0	Gain sale of shares	(30.1)	0.0	0.0
0.0	0.0	0.0	Impairment of goodwill	74.8	0.0	0.0
(0.7)	(1 080.0)	(0.4)	Other permanent differences	45.4	76.8	79.5
0.3	0.7	0.0	Effect of changed tax rate	12.9	13.9	0.0
0.0	0.0	0.0	Changes of previous years taxes	(2.8)	0.2	137.6
0.0	0.0	0.0	Tax assets not recognized current year	55.3	99.9	21.0
			Differences between tax rates in Norway	8.8	(6.3)	(21.2)
0.0	0.0	0.0	and abroad			
50.0	7.1	(8.4)	**Tax expense**	352.0	711.9	674.4
			Effective tax rate	259%	41%	40%
			Net tax-reducing/tax-increasing			
			temporary differences:			
0.0	0.0	0.0	Non-current assets	1 645.5	2 717.6	3 127.6
0.0	0.0	0.0	Current assets	254.0	94.4	149.5
(25.5)	(36.1)	(59.1)	Liabilities	(2 620.9)	(2 474.7)	(3 139.1)
0.0	0.0	0.0	Tax loss to be carried forward	(993.4)	(1 086.5)	(1 285.5)
(25.5)	(36.1)	(59.1)	**Basis for deferred tax asset/liability**	(1 714.9)	(749.2)	(1 147.5)
24 %	25 %	27 %	Tax rates applied	17–42%	17–42%	17–42%
6.1	9.0	16.0	**Deferred tax asset**	1 087.1	1 103.7	1 192.6
0.0	0.0	0.0	**Deferred tax liability**	(644.1)	(994.9)	(988.1)

The Group has accumulated tax-loss to be carried forward amounting to NOK 685 million. As the future utilization of these tax losses cannot be demonstrated, the related deferred tax asset (DTA) of NOK 154 million, is not recognized in the balance sheet.

NOK 20 million deferred tax income related to actuarial gains (losses) on defined benefit pension plans, has been reflected in other comprehensive income/ other equity, together with the related actuarial gain/ loss.

12 INTANGIBLE ASSETS

AMOUNTS IN NOK MILLION	GOODWILL	CUSTOMER CONTRACTS	CUSTOMER RELATIONS	TECHNOLOGY	TRADEMARKS	OTHER INTANGIBLE ASSETS	TOTAL
Acquisition cost							
1 January 2015	8 127.5	406.5	2 068.4	862.8	514.5	449.0	12 428.9
Additions	79.3	0.0	0.0	0.0	2.1	0.0	81.4
Additions from internal developments	0.0	0.0	0.0	0.0	0.0	253.9	253.9
Disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Currency translation differences	486.9	25.3	134.0	49.7	33.3	21.5	750.7
Total acquisition cost 31 Dec. 2015	8 693.8	431.8	2 202.5	912.5	549.9	724.4	13 514.9
Additions	143.3	7.9	47.1	0.0	4.7	0.0	203.1
Additions from internal developments	0.0	0.0	0.0	0.0	0.0	322.3	322.3
Disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Currency translation differences	(456.0)	(22.6)	(133.6)	(48.4)	(36.3)	(19.1)	(715.9)
Total acquisition cost 31 Dec. 2016	8 381.1	417.2	2 116.0	864.1	518.3	1 027.7	13 324.5
Accumulated amortization and impairment							
1 January 2015	(59.3)	(176.9)	(324.2)	(225.6)	0.0	(154.0)	(939.9)
Amortization	0.0	(104.5)	(208.3)	(175.6)	0.0	(47.4)	(535.8)
Impairment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Currency translation differences	(1.8)	(18.8)	(36.5)	(26.3)	0.0	(9.5)	(92.9)
Total accum. amortization and impairment 31 Dec. 2015	(61.1)	(300.1)	(569.0)	(427.6)	0.0	(210.9)	(1 568.6)
Amortization	0.0	(77.7)	(220.6)	(181.8)	0.0	(39.0)	(519.1)
Impairment	(299.0)	0.0	0.0	0.0	0.0	(11.6)	(310.6)
Disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Currency translation differences	2.3	17.4	35.6	25.7	0.0	8.6	89.6
Total accum. amortization and impairment 31 Dec. 2016	(357.7)	(360.4)	(754.1)	(583.6)	0.0	(252.9)	(2 308.7)
Net book value							
31 December 2016	8 023.4	56.8	1 361.9	280.5	518.3	774.8	11 015.7
31 December 2015	8 632.7	131.7	1 633.5	484.9	549.9	513.6	11 946.3
31 December 2014	8 068.3	229.7	1 744.3	637.2	514.5	295.1	11 489.0
Useful life		1–5 years	6–16 years	5–7 years	Indef.	5–10 years	

Other intangible assets mainly consist of capitalized software development costs and acquired software.
Goodwill is not amortized, but is tested annually for impairment (note 13).
Other intangible assets are amortized linearly, based on evaluation of useful life.
Trademarks has an indefinite useful life and are not amortized but tested for impairment annually.

13 IMPAIRMENT TESTING OF GOODWILL

Goodwill obtained through acquisitions is allocated to the Group's business areas and followed up and tested collectively for the group of cash-generating units that constitute the business area. The cash-generating units correspond to DNV GL's business areas Maritime, Oil & Gas, Energy, Business Assurance and Software. The test is performed at year-end. An impairment loss is recognized if the estimated recoverable amount is lower than the carrying amount of the cash generating unit. Goodwill is allocated to the business areas as follows:

AMOUNTS IN NOK MILLION	2016	2015	2014
Maritime	2 900.7	3 052.3	2 887.1
Oil & Gas	3 224.1	3 405.7	3 207.8
Energy	1 735.8	2 004.8	1 887.7
Business Assurance	145.4	152.5	68.2
Software	17.4	17.4	17.4
Total goodwill	8 023.4	8 632.7	8 068.3

The Group has used value in use to determine recoverable amounts for the cash-generating units. Value in use is determined by using the discounted cash flow method. The expected cash flows are based on the business areas' budgets and long term plans, which are approved by the Board of Directors and executive management. Budgets and long-term plans cover maximum a five year period. After the five years of explicit plans, the cash flows are stipulated by extrapolation.

KEY ASSUMPTIONS PER CASH-GENERATING UNIT	COST OF CAPITAL (WACC)	LONG-TERM NOMINAL GROWTH RATE
Maritime	7.4%	1.5%
Oil & Gas	7.3%	1.5%
Energy	7.4%	1.5%
Business Assurance	6.9%	1.5%
Software	7.6%	1.5%

At year-end 2016 the value in use for Energy, calculated as the present value of future cash flows, is NOK 299 million lower than the book values of the cash generating unit including goodwill, resulting in a corresponding impairment of NOK 299 million reflected in the income statement in 2016.

SENSITIVITY ANALYSIS. In connection with impairment test of goodwill, sensitivity analysis are carried out for each individual cash-generating unit. For Oil & Gas a decrease in EBITA-margin of 0.9% or a decrease in EBITA forecast of 9.5% will lead to impairment.

None of the other cash-generating units will be in an impairment situation before there are material changes in the key assumptions, and these changes are considered to be outside the probable outcome.

14 FIXED ASSETS

AMOUNTS IN NOK MILLION

	LAND, BUILDINGS AND OTHER PROPERTY	OFFICE EQUIPMENT, FIXTURES AND FITTINGS	TOTAL
Acquisition cost			
1 January 2015	1 437.2	3 395.1	4 832.3
Additions	64.6	630.3	694.9
Disposals	(27.4)	(118.1)	(145.5)
Currency translation differences	112.1	226.2	338.3
Total acquisition cost 31 December 2015	1 586.5	4 133.5	5 720.0
Additions	140.7	222.3	363.0
Additions from business combinations	0.0	2.2	2.2
Disposals	(38.1)	(269.7)	(307.8)
Divestment of a subsidiary (note 3)	0.0	(76.2)	(76.2)
Currency translation differences	(107.7)	(138.6)	(246.3)
Total acquisition cost 31 December 2016	1 581.4	3 873.5	5 454.9
			(will fix spacing here)
Accumulated depreciation and impairment			
1 January 2015	425.7	2 195.5	2 621.3
Depreciation	99.8	269.8	369.6
Impairment	0.2	5.0	5.2
Disposals	(17.8)	(99.0)	(116.8)
Currency translation differences	39.3	137.5	176.8
Total accumulated depreciation and impairment 31 December 2015	547.3	2 508.9	3 056.1
Depreciation	105.6	258.2	363.8
Impairment	0.7	3.7	4.4
Disposals	(12.5)	(243.1)	(255.7)
Divestment of a subsidiary (note 3)	0.0	(53.4)	(53.4)
Currency translation differences	(27.1)	(88.6)	(115.6)
Total accumulated depreciation and impairment 31 December 2016	614.0	2 385.7	2 999.7
Net book value			
31 December 2016	967.4	1 487.8	2 455.2
31 December 2015	1 039.2	1 624.7	2 663.9
31 December 2014	1 011.5	1 199.6	2 211.1
Useful life	15-67 years	3-15 years	
Depreciation plan	Linear	Linear	

15 INVESTMENT IN ASSOCIATES

DNV GL Group AS' ownership (through DNV GL AS) in StormGeo Holding AS is 27 %. The ownership (through DNV GL Business Assurance Group AS) in DNV Nemko Presafe AS is 50% and the investment is considered to be a joint venture. The investments are recognized in accordance with the equity method in the consolidated financial statements.

COMPANY AMOUNTS IN NOK MILLION	BUSINESS OFFICE	OWNERSHIP	ACQUISITION COST	SHARE OF PROFIT FOR THE YEAR	BOOK VALUE
DNV Nemko Presafe AS	Oslo	50%	14.1	(0.6)	8.3
StormGeo Holding AS	Bergen	27%	145.5	(1.1)	181.2

Book value in StormGeo Holding has in 2016 been adjusted for a positive change in OCI of NOK 60.8 million.

16 OTHER CURRENT LIABILITIES

AMOUNTS IN NOK MILLION	DNV GL GROUP AS CONSOLIDATED 31 DEC. 16	31 DEC. 15	31 DEC. 14
Advances from customers	1 995.9	2 492.7	2 052.4
Accrued bonus to employees	120.7	253.9	624.0
Accrued holiday allowances	495.4	542.2	558.8
Unrealized loss and interest related to forward contracts	25.2	35.7	58.7
Accrued expenses and other current liabilities	1 134.0	1 327.5	1 290.0
Total other current liabilities	3 771.3	4 652.1	4 584.0

17 TRADE DEBTORS

AMOUNTS IN NOK MILLION	DNV GL GROUP AS CONSOLIDATED 31 DEC. 16	31 DEC. 15	31 DEC. 14
Gross trade debtors	4 408.9	5 609.3	5 485.9
Provision for bad debts	(180.5)	(369.2)	(344.2)
Net trade debtors	4 228.3	5 240.7	5 141.7

18 OTHER LONG-TERM RECEIVABLES

AMOUNTS IN NOK MILLION	DNV GL GROUP AS CONSOLIDATED 31 DEC. 16	31 DEC. 15	31 DEC. 14
Loans to employees	46.4	54.7	59.0
Other long-term receivables	312.5	350.0	300.4
Total other long-term receivables	358.9	404.8	359.5

19 PROVISIONS

DNV GL GROUP AS CONSOLIDATED

AMOUNTS IN NOK MILLION	CLAIMS AND CONTINGENCIES	ONEROUS LEASE	OTHERS	TOTAL
Balance at 1 January 2014	216.6	0.0	46.9	263.5
Currency translation differences	14.2	0.0	1.7	16.0
Additions	38.0	0.0	70.4	108.4
Utilization	(23.0)	0.0	(32.6)	(55.7)
Reversal	(57.1)	0.0	0.0	(57.1)
Balance at 31 December 2014	188.7	0.0	86.4	275.1
Current	78.0	0.0	86.4	164.4
Non-current	110.7	0.0	0.0	110.7
Balance at 1 January 2015	188.7	0.0	86.4	275.1
Currency translation differences	6.9	0.0	0.0	6.9
Additions	50.0	0.0	396.5	446.5
Utilization	(6.0)	0.0	(74.5)	(80.5)
Reversal	(65.8)	0.0	0.0	(65.8)
Balance at 31 December 2015	173.7	0.0	408.4	582.1
Current	100.0	0.0	375.5	475.5
Non-current	73.7	0.0	32.9	106.6
Balance at 1 January 2016	173.7	0.0	408.4	582.1
Currency translation differences	(4.0)	0.0	(16.3)	(20.2)
Additions	3.0	367.3	600.5	970.8
Utilization	0.0	0.0	(581.0)	(581.0)
Reversal	0.0	0.0	(6.7)	(6.7)
Balance at 31 December 2016	172.8	367.3	404.9	945.0
Current	103.0	202.0	366.5	671.5
Non-current	69.8	165.4	38.4	273.5

Provisions for claims and contingencies concern fair value of pending legal disputes from acquisitions and provisions for other pending legal disputes.

Onerous lease provisions represent best estimates of the net lease obligations (net of incoming cash flows expected from sub-lease) under the onerous lease contracts at year-end 2016. The provisions have been discounted.

Included in other provisions are provisions for restructuring, termination benefits and onerous contracts.

20 CASH AND BANK DEPOSITS

DNV GL Group AS has a cash pool system with DNB ASA, in which most of legacy DNV legal entities participate. This system includes an overdraft facility of NOK 50 million. The overdraft facility is undrawn at year-end 2016.

DNV GL Group AS has a cash pool system with Danske Bank, in which some of the DNV GL legal entities in Norway, Denmark, Sweden, Finland, UK, Ireland, Faroe Islands, and the Baltics participate. This system includes an overdraft facility of NOK 100 million. The overdraft facility is undrawn at year-end 2016.

DNV GL Group AS has a cash pool system with Handelsbanken, in which some of DNV GL Group AS' legal entities in Sweden, Finland, Estonia, Latvia, Lithuania and Germany participate.

DNV GL Group AS has a cash pool system with Citibank, in which some of legacy DNV legal entities in the Euro-countries participate.

DNV GL Group AS has a cash pool system with Deutsche Bank, in which some DNV GL Group AS' legal entities in Europe participate. This system includes an overdraft facility of EUR 10 million. The overdraft facility is undrawn at year-end 2016.

DNV GL Group AS' wholly owned subsidiary in China, Det Norske Veritas China Company Ltd has an agreement for a CNY 10 million credit facility with Citibank in China. The facility is guaranteed by DNV GL AS through a parent company guarantee. The facility is undrawn at year-end 2016.

DNV GL Group AS' wholly owned subsidiary in India, DNV Business Assurance India Private Ltd has an agreement for an INR 250 million credit facility with Citibank in India. The facility is guaranteed by DNV GL Group AS through a parent company guarantee. The facility is undrawn at year-end 2016.

Balances on bank accounts participating in the cash pooling systems are considered as internal assets or liabilities vis-à-vis other Group participants. For DNV GL Group AS on a consolidated basis, the net total balance of NOK 321 million with DNB ASA, NOK 127 million with Handelsbanken, NOK 34 million with Citibank, NOK 67 million with Danske Bank and NOK 133 million with Deutsche Bank are included in Cash and bank deposits in the balance sheet at 31 December.

Cash and bank deposits in the balance sheet comprise cash at banks and on hand and short-term deposits with a maturity of three months or less, which are subject to an insignificant risk of changes in value.

21 LONG-TERM LOANS

DNV GL Group AS has an agreement for a NOK 1 600 million multi-currency revolving credit facility with Handelsbanken Norwegian branch of Svenska Handelsbanken AB. The facility expires in May 2021 and was undrawn per year-end 2016.

The credit agreement supporting this facility has certain covenants, including a negative pledge clause, and also restrict DNV GL Group AS' ability to freely dispose of material assets. The credit agreement further requires that DNV GL Group AS on a consolidated basis maintains a certain minimum level of equity and that the net interest bearing debt does not exceed a set level relative to total equity. DNV GL Group AS was well within all covenants at year-end.

22 GUARANTEES

DNV GL GROUP AS			AMOUNTS IN NOK MILLION	DNV GL GROUP AS CONSOLIDATED		
31 DEC. 16	31 DEC. 15	31 DEC. 14		31 DEC. 16	31 DEC. 15	31 DEC. 14
0.0	0.0	0.0	Guarantee commitments not included in the accounts	272.6	369.8	293.8

These guarantees are not secured by mortgage.

23 SHARE CAPITAL AND OWNERS

The share capital of DNV GL Group AS consist of 1 000 000 shares, with par value of NOK 100 each. The company is owned 63.5% by Det Norske Veritas Holding AS, with business office in Bærum, Norway and 36.5% by Mayfair Beteiligungsfonds II GmbH & Co. KG with business office in Hamburg, Germany.

24 RELATED PARTY TRANSACTIONS

DNV GL AS has a lease agreement for the office buildings at Høvik, Norway with the related party Det Norske Veritas Eiendom AS (wholly owned subsidiary of the majority shareholder of DNV GL Group, Det Norske Veritas Holding AS), the rent expensed in 2016 amounts to NOK 218.9 million.

DNV GL SE has a lease agreement for the office building in Hamburg, Germany, with the related party Brooktorkai 18 Immobilien GmbH & Co. KG (a company controlled by the same shareholders that also control the 36.5 % shareholder of DNV GL Group, Mayfair Beteiligungsfonds II GmbH & Co. KG), the rent expensed for 2016 amounts to NOK 56.7 million.

DNV GL AS has a lease agreement for the office building in Stavanger, Norway, with the related party DNV GL Pension fund, the rent expensed in 2016 amounts to NOK 10.2 million.

DNV GL AS has a management services agreement for the delivery of general management and administrative services with the related party Det Norske Veritas Holding AS (63.5 % shareholder). The revenue recognized for these services in 2016 is NOK 6.9 million.

DNV GL AS has a service agreement with the related party DNV GL Pension fund for management and administrative services. The revenue recognized for these services in 2016 is NOK 0.9 million.

Several subsidiaries of DNV GL Group AS have business transactions with the related party DNV Nemko Presafe AS (associated company). Total revenue recognized in 2016 was NOK 8.7 million and total purchases amount to NOK 17.6 million.

25 FINANCIAL ASSETS AND FINANCIAL LIABILITIES

DNV GL GROUP AS CONSOLIDATED

31 DECEMBER 2016 AMOUNTS IN NOK MILLION	FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH P&L	LOANS AND RECEIVABLES	AVAILABLE FOR SALE	OTHER FINANCIAL LIABILITIES
ASSETS				
Non-current assets				
Available for sale				
investments			40.7	
Loans to employees		46.4		
Other long-term				
receivables		312.5		
Current assets				
Cash and bank deposits		3 628.0		
Trade debtors		4 228.3		
Other debtors		1 007.8		
FINANCIAL LIABILITIES				
Non-current				
Other non-current				
liabilities				428.8
Current				
Trade creditors				465.3
Forward contracts	25.2			

DNV GL GROUP AS CONSOLIDATED

31 DECEMBER 2015 AMOUNTS IN NOK MILLION	FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH P&L	LOANS AND RECEIVABLES	AVAILABLE FOR SALE	OTHER FINANCIAL LIABILITIES
ASSETS				
Non-current assets				
Available for sale				
investments			42.4	
Loans to employees		54.7		
Other long-term				
receivables		350.0		
Current assets				
Cash and bank deposits		4 193.0		
Trade debtors		5 240.7		
Other debtors		883.0		
FINANCIAL LIABILITIES				
Non-current				
Interest bearing				
loans and borrowings				100.0
Other non-current				
liabilities				435.5
Current				
Trade creditors				477.1
Forward contracts	35.7			

To the Annual Shareholders' Meeting of DNV GL Group AS

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

OPINION. We have audited the financial statements of DNV GL Group AS, which comprise the financial statements for the parent company and the Group. The financial statements for the parent company and the Group comprise the balance sheet as at 31 December 2016, the income statement, statement of comprehensive income, statements of cash flows and changes in equity for the year then ended and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the financial statements have been prepared in accordance with laws and regulations and present fairly, in all material respects, the financial position of the Company and the Group as at 31 December 2016 and their financial performance for the year then ended in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway.

BASIS FOR OPINION. We conducted our audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Norway, and we have fulfilled our ethical responsibilities as required by law and regulations. We have also complied with our other ethical obligations in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

OTHER INFORMATION. Other information consists of the information included in the Company's annual report other than the financial statements and our auditor's report thereon. The Board of Directors and Group President & CEO (management) are responsible for the other information. Our opinion on the financial statements does not cover the other information, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information, and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF MANAGEMENT FOR THE FINANCIAL STATEMENTS. Management is responsible for the preparation and fair presentation of the financial statements in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with law, regulations and generally accepted auditing principles in Norway, including ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control;

- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management;

- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern;

- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation;

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

OPINION ON THE BOARD OF DIRECTORS' REPORT. Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors' report concerning the financial statements, the going concern assumption and proposal for the allocation of the result is consistent with the financial statements and complies with the law and regulations.

OPINION ON REGISTRATION AND DOCUMENTATION Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors' report concerning the financial statements, the going concern assumption and proposal for the allocation of the result is consistent with the financial statements and complies with the law and regulations.

Oslo, 24 April 2017
ERNST & YOUNG AS

Finn Ole Edstrøm
State Authorised Public Accountant (Norway)

To the Board of Directors of DNV GL Group AS

We have performed an independent control of DNV GL Group AS's reporting on Sustainability for 2016 (Sustainability Report), which involves an assessment of whether the information presented in the Sustainability Report is based on relevant criteria for sustainability reporting as defined by the Global Reporting Initiative "in accordance" option "comprehensive" (GRi Standards). Externally assured information is indicated in the GRi Standards index in the Sustainability Report for the financial year 2016.

MANAGEMENT'S RESPONSIBILITY. DNV GL Group AS's management is responsible for the selection of the information and collection of the data for presentation and for the preparation of the Sustainability Report in accordance with the GRi Standards criteria.

OUR INDEPENDENCE AND QUALITY CONTROL. We have complied with the independence requirements of the Norwegian Law on Auditors and Auditing and other ethical requirements from the Code of Ethics of the Norwegian Institute of Public Accountants which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

We apply International Standard on Quality Control (ISQC1) "Quality control for firms that perform audits and reviews of financial statements, and other assurance and related services engagements" and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

AUDITOR'S TASKS AND DUTIES. Our task is to issue an independent report to the Baard of Directors on the Sustainability Report based on our work. Our work is conducted in accordance with ISAE 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information". The standard requires that we plan and perform procedures to obtain limited assurance that the information in the Sustainability Report is prepared and presented in accordance with relevant criteria for sustainability reporting in accordance with GRi Standards and does not contain material errors.

Our work has consisted of the following procedures:

- Review of DNV GL Group AS process for the preparation and presentation of the Sustainability Report to provide us with an understanding of how Sustainability is ensured in practice within the business
- Interviewed those in charge of Sustainability reporting to develop an understanding of the process for the preparation of the Sustainability Report
- Verified on a sample basis the information in the Sustainability Report against source data and other information prepared by DNV GL Group AS
- Assessed the overall presentation of the Sustainability Report against the criteria in GRi Standards including a review of the consistency of information

In our opinion the evidence obtained is sufficient and appropriate to provide a basis for our conclusion.

CONCLUSION. Based on our work, nothing has come to our attention that causes us to believe that the Sustainability Report, in all material respects, is not prepared and presented in accordance with the GRi Standards criteria, and that the information in the Sustainability Report contains any material misstatements.

Oslo, 4 April 2017
Ernst & Young AS

Finn Ole Edstrøm
State Authorised Public Accountant (Norway)

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GRI content index

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102-4	Location of operations	> Organization
102-5	Ownership and legal form	> Organization
102-6	Markets served	> Organization > Markets
102-7	Scale of the organization	> Organization
102-8	Information on employees and other workers	> People
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102-10	Significant changes to the organization and its supply chain	> Organization > Sustainable Procurement
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* Disclosure not reported, nor assured. The reason for omissions is lack of consolidated information regarding screening of new suppliers and negative impacts and actions taken in the supply chain

** Disclosure partly reported, partly assured. The reason for partly omission is lack of information.

*** Disclosure partly reported, partly assured. The reason for partly omission is that the disclosure is not applicable.

SAFER, SMARTER, GREENER

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