Taking a broader view
A brief introduction to DNV GL
We are a global classification, certification, technical assurance and advisory company

OUR PURPOSE

TO SAFEGUARD LIFE, PROPERTY AND THE ENVIRONMENT
In a challenging world we make businesses better prepared

- Low carbon energy
- Short-term cost efficiency
- Complexity and lack of global governance
- Efficient and fast
- Reliable and affordable energy
- Long-term competitiveness
- Trust and transparency
- Safe
This takes detailed knowledge and diverse domain competence

- Technical and operational challenges...
- Regulatory processes...
- Value chain interdependencies...
- Stakeholder considerations...
Only by connecting the details can we impact the bigger picture

- We classify, certify, verify and test against regulatory requirements, rules, standards and recommended practices
- We develop new standards and recommended practices
- We qualify new technologies and operational concepts
- We give expert advice to enhance sustainable business performance
We call it the broader view

- Reducing uncertainty, increasing safety
- Improving efficiency
- Enabling sustainability
- Building trust

SAFER, SMARTER, GREENER
Industry consolidation
Global reach – local competence

150 years
400 offices
100 countries
16,000 employees
Committed to innovation

- Investing 5% of our revenue in research and innovation every year
- Collaborating with industry partners and external experts
- Sharing knowledge through standards and recommended practices
- Providing foresight and initiate competence building and innovation
Pursuing innovation initiatives through four means

- Extraordinary innovation projects
- Cutting edge projects
- Core technology leadership disciplines
- Strategic research & innovation programmes
Strategic research and innovation programmes

OIL & GAS AND ENERGY SYSTEMS
- Offshore safety
- Safety and reliability of the subsea factory
- Energy foresight

INFORMATION TECHNOLOGY
- Autonomous systems
- Big data analytics of sensor data

CLIMATE CHANGE
- Adaptation
- Mitigation

ARCTIC TECHNOLOGY
- Arctic offshore structures
- Arctic ship structures
- Arctic oil spill preparedness

POWER SYSTEMS ELECTRIFICATION
- Super grid
- Smart grid
- Storage

HEALTHCARE
- Patient safety

MATERIALS
- Materials in energy storage
- Risk management of corrodirble systems
- Advanced materials and sensors

MARITIME TRANSPORT
- Safer shipping
- Greener shipping
- Smarter shipping

LOW CARBON FUTURE
- Renewable energy
- Green economy
- Transformation process
Organized to maximise customer value

MARITIME

OIL & GAS

ENERGY

BUSINESS ASSURANCE

SOFTWARE

CYBERNETICS

RESEARCH & INNOVATION
Addressing challenges in the maritime industry

- Safety issues
- Regulatory change
- Cost pressures
- New technology
Improving safety and performance

Setting safety standards
For ships and marine structures

Sharing knowledge
Working with the industry and authorities in 130 countries

Enhancing performance
Technology, safety, competence, business and environment

Newcastle

72.7% fuel consumed

Qindao

27.3% fuel saved
Main services to the maritime industry

- Ship and offshore classification
- Statutory services
- Advisory services
- Academy services
- Technology qualification
- Software
The world’s leading ship and offshore classification society

Global reach
Survey stations in 100+ countries and expertise in all ship and offshore segments

13,000
ships and mobile offshore units in DNV GL Class, 270 mill GT

24%
market share (Gross Tonne) of the world’s classed ships and mobile offshore units

Quality
Consistently among the top ranking societies in Port State Control performance
Addressing challenges in the oil and gas industry

- Safety and environmental issues
- Deepwater and harsh environment
- Ageing assets and performance issues
- Technology development
- Cost pressure and standardization
Enabling safety, reliability and enhanced performance

Broad service portfolio
Global operations with tailor made offering covering the entire value chain

Forefront of new technology
Collaborative approach to solve complex challenges by sharing recommended practices and standards

Exceptional people
Operational expertise in numerous segments
Integrated services across the asset lifecycle

- Risk management advisory
- Technical advisory
- Noble Denton marine assurance & advisory
- Technical assurance – verification & inspection
- Software
Setting the benchmark in oil and gas

50 years ago, we helped pioneer the marine warranty market

65% of offshore pipelines are designed and installed to DNV GL standard

170 industry standards and recommended practices and 100 joint industry projects each year

35% of LNG terminals verified or classed by DNV GL
Transition to a safer, smarter and greener energy future

- Increasing global demand for energy
- Integration of energy markets
- Climate change and extreme weather
- Growing share of renewables
- Security and ageing assets
Assisting companies in solving the energy trilemma
Global service portfolio

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

- Smart grids and smart cities
- Energy market and policy design
- Energy management and operations services
- Energy efficiency services
- Software
An energy technology powerhouse

**Largest**
Independent technical advisor on renewable energy and 2,500 energy experts

**>25**
Standards and guidelines published as a leading certification body

**No 1**
In high power and high voltage testing with 10 laboratories incl. our leading lab in Arnhem

**90**
Years experience in the power industry, including 30 years in energy efficiency and wind energy
BUSINESS ASSURANCE
A broader set of business challenges

- Complex supply chains
- Diverse stakeholder expectations
- Trust and transparency expectations
- Brand and reputation management issues
Enabling sustainable business performance

Creating value
While meeting the world’s economic, social and environmental needs.

Bridging today and tomorrow
Manage operational challenges today – building sustainable value over time.

Assuring performance
Along entire supply chains to build sustainable performance and stakeholder trust.
Business assurance services

- Management system certification
- Product assurance
- Supply chain management and assurance
- Certification of people
- Sustainability strategy and reporting
- Food & beverage certification and assessment
- Healthcare accreditation and assessments
A global business assurance partner

**Position**
One of the world’s leading certification bodies

**People**
2,000 highly skilled employees

**6,000**
Food and beverage companies partner with us to ensure safety and sustainability

**Partnership**
with more than 70,000 customers in over 180 countries

**80,000**
Management system (ISO 9001, 14001, 18001, etc.) certificates issued under more than 80 accreditations

**2,400**
Healthcare organizations trust us to help them improve quality and patient safety
SOFTWARE & MARINE CYBERNETICS
Software for a safer, smarter and greener future

Business model
To develop and implement standardized, yet configurable, licensed software products

Focus markets
Oil and gas, process, energy and maritime industries

50 years
50 years of experience in developing software

Serving DNV GL
Strategic technical software to business areas and tools for delivery of classification service
Next generation software solutions

- Design and engineering
- Process safety, risk and reliability
- Asset integrity and performance
- QHSE and enterprise risk
- Ship management and operations
- Ship and offshore class
- Electric grid reliability and performance
- Asset simulation and optimization
Marine Cybernetics

World leader in HIL testing
Marine Cybernetics - a control software testing pioneer in the offshore market

Traditional method of Testing

Control system in normal operations
Control software controlling real vessel

“New” method of Testing

Control system during HIL testing
Control software controlling simulated vessel

- Hardware-in-the-Loop (HIL) the de-facto standard in automotive and aviation industries
- We develop an independent simulator which is a mathematical model of all related dynamic systems of the vessel or drilling rig
- The control software is thoroughly tested by evaluating how it interacts with the simulator
- Enables you to conduct a virtual sea trial already onsite
- Allows testing of software before installation on rig or vessel
Verifying software appliances to the drilling and maritime industry

- Reducing risk for incidents and accidents
- Reducing risk for off-hire and non-productive time
- Securing safe and reliable operations
- Securing flawless startups
Short facts about us
Industry focused organization

- DNV Foundation
- Mayfair

DNV GL Group

Headquarter: Oslo, Norway
Group President & CEO: Henrik O. Madsen

- Cybernetics
- DNV GL Group
- Maritime
  - Headquartered in Hamburg, Germany
- Oil & Gas
  - Headquartered in Høvik, Norway
- Energy
  - Headquartered in Arnhem, Netherlands
- Business Assurance
  - Headquartered in Milan, Italy

Research & Innovation

Global Shared Services
Revenue and people by business area/unit (as of 1.1.2014)

Revenue:
20 000 Mill NOK

- Business Assurance: 2 252
- Energy: 3 116
- Oil & Gas: 6 174
- Maritime: 7 206
- Software: 616

Employees:
16 000

- Business Assurance: 1 863
- Energy: 2 536
- Maritime: 4 898
- Software: 707
- Group functions, Research & Innovation and shared services: 1 584

*Pro forma figures by 1.1.2014*
Highly skilled people all around the world

Level of education

- Master: 42%
- Bachelor: 37%
- Other: 10%
- Doctorate: 6%
- 2-year college: 3%
- Technical / professional: 2%

Sum: Bachelor, Master: 85% or PhD level degree

Nationalities

- Norwegian: 2,160
- German: 1,861
- American: 1,602
- British: 1,336
- Chinese: 1,143
- Dutch: 906
- Indian: 895
- Korean: 468
- Italian: 383
- Brazilian: 376
- Polish: 353
- Malaysian: 265
- Danish: 261
- Singaporean: 237
- Spanish: 205
- Swedish: 205
- French: 173
- Egyptian: 160
- Canadian: 153
- Japanese: 139
- Greek: 132
- Russian: 118
- Mexican: 113
- Australian: 103

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

GLOBAL IMPACT FOR A SAFE AND SUSTAINABLE FUTURE

www.dnvgl.com

SAFER, SMARTER, GREENER