



*The Foundation for Scientific and Industrial Research
at the Norwegian Institute of Technology*

SINTEF - A contract research organization based in Trondheim and Oslo

One of the fourth's largest independent R&D institutes in Europe



SINTEF's vision is "Technology for a better society"

We sell research-based knowledge and related services to Norwegian and international clients

We contribute to the value-adding process of our customers and a sustainable social development

Turnover: EUR 200 million. 15% from clients abroad in 40 countries

Our partners

- The Norwegian University of Science and Technology, NTNU:
 - 20 000 full-time students
 - ca 1 600 scientific employees
- University of Oslo, UiO,
 - Faculty of mathematics and natural sciences:
 - 5 240 full-time students
 - ca 645 scientific man-years

NTNU and The SINTEF Group Collaboration in R & D



The Norwegian University of Science & Technology (NTNU)

- and its Applied Research Foundation SINTEF



Number of employees:

NTNU 3.300
(Scientific 1.600)

SINTEF 1.800
(Scientific 1.100)

Students: 20.000
Around: 8.000
in Engineering & Sciences

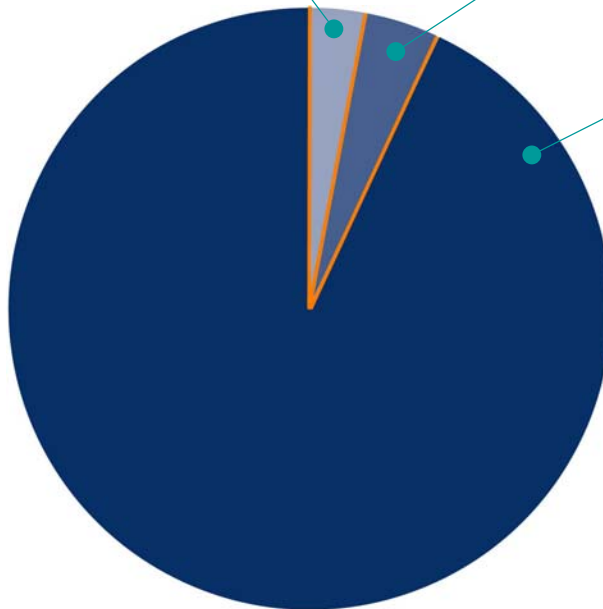
A technological cluster with education, basic & applied research, innovations and business developments of large importance for Norway

SINTEF-Group turnover

Turnover: EUR 200 million

Basic grants from
The Research Council
of Norway 3%

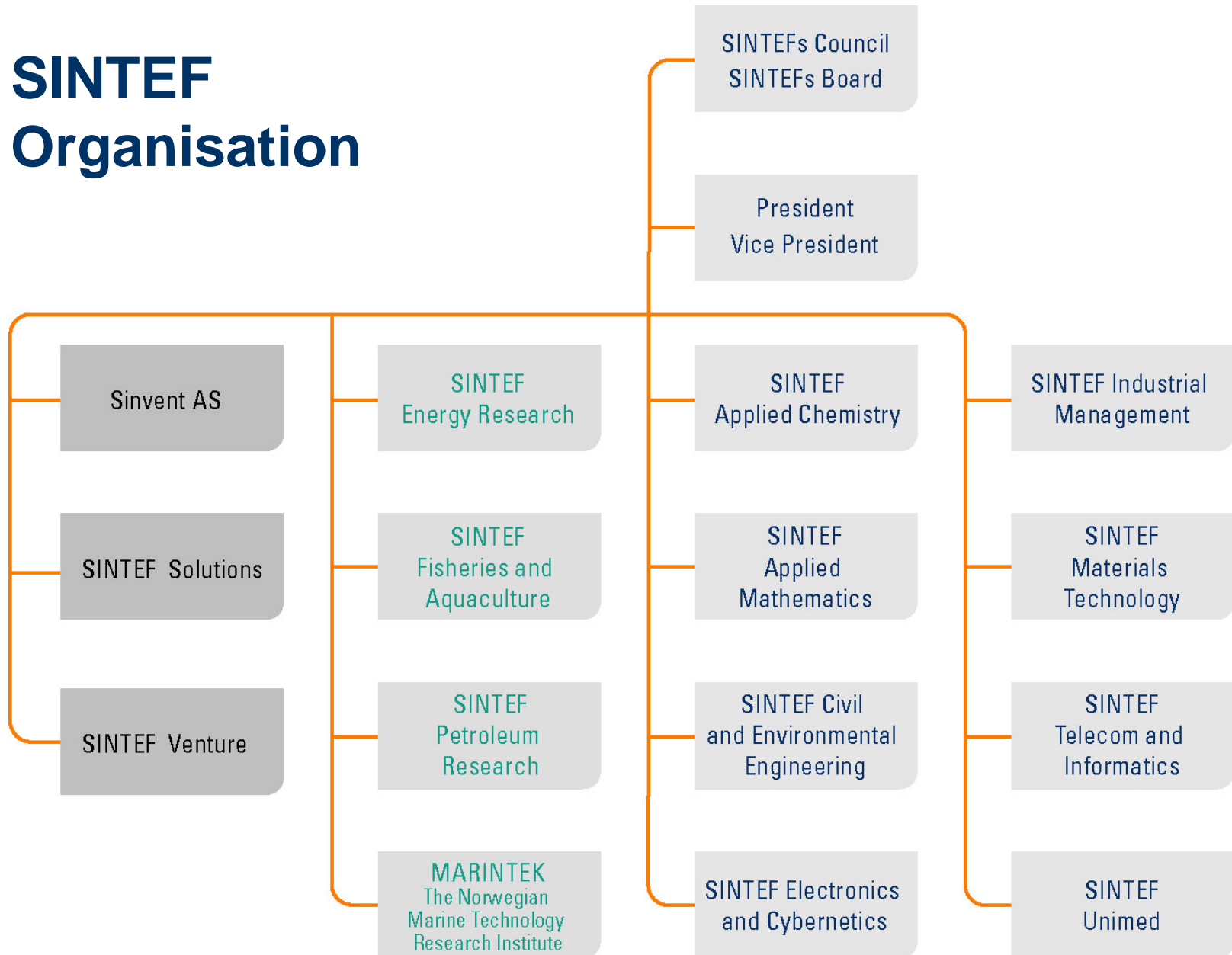
Strategic programs from
The Research Council of Norway 4%



Contracts 93%

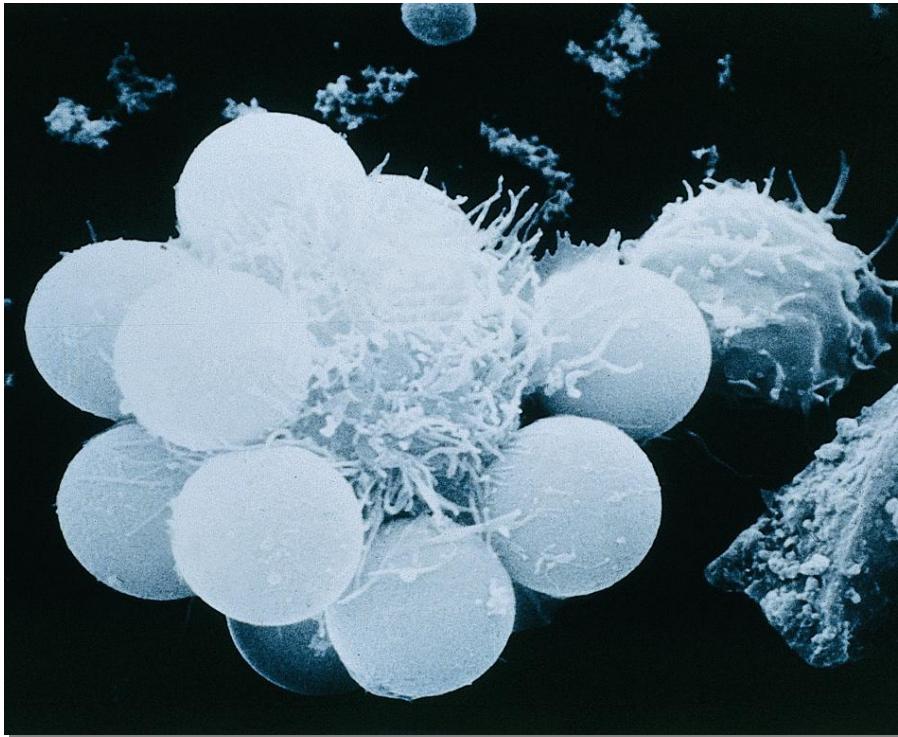
- Industrial and commercial enterprises 47%
- Public sector 12%
- International contracts 14%
- The Research Council of Norway (project grants) 11%
- Other sources 10%

SINTEF Organisation



Tiny magic spheres

”Ugelstad spheres”: identically sized microscopic spheres of plastic



- Norwegian industrial product with a world-wide market
- *Magnetic spheres:* Cancer treatment, HIV research, DNA studies, isolation and identification of bacteria
- *Non-magnetic spheres:* Purification and analysis of proteins, LCD screens
- 150 jobs in Norway

Giant offshore structure

SINTEF helped make the Condeep platform a reality



Our contributions included:

- Concrete technology
- Methods for estimating wave and current loads
- Construction technology
- Numerical models of the foundations

Floating production – in the world of Gulliver

The largest ocean basin in the world



- Tests models of floating production systems
- Creates "scale-model" waves, currents and winds
- Focus on mooring lines, flexible risers and wave motions
- Dimensions: 80 m long, 50 m wide, 10 m deep

Oil and gas in one and the same pipeline

The biggest multiphase flow laboratory in the world



- The most important fundament to the OLGA computer program – a vital tool on the continental shelf

Multiphase transportation:

- Major savings in development projects
- Has made marginal fields profitable

Mobile telephony with a Norwegian twist

The GSM radio system was born at SINTEF



- Selected as "European Champion"
- Reliable in areas with high levels
- of signal reflection

Europe chose SINTEF technology for digital TV

- Transmission system for terrestrial networks
- TV receiver capable of tolerating reflections

3 D ultrasound in the operating theatre

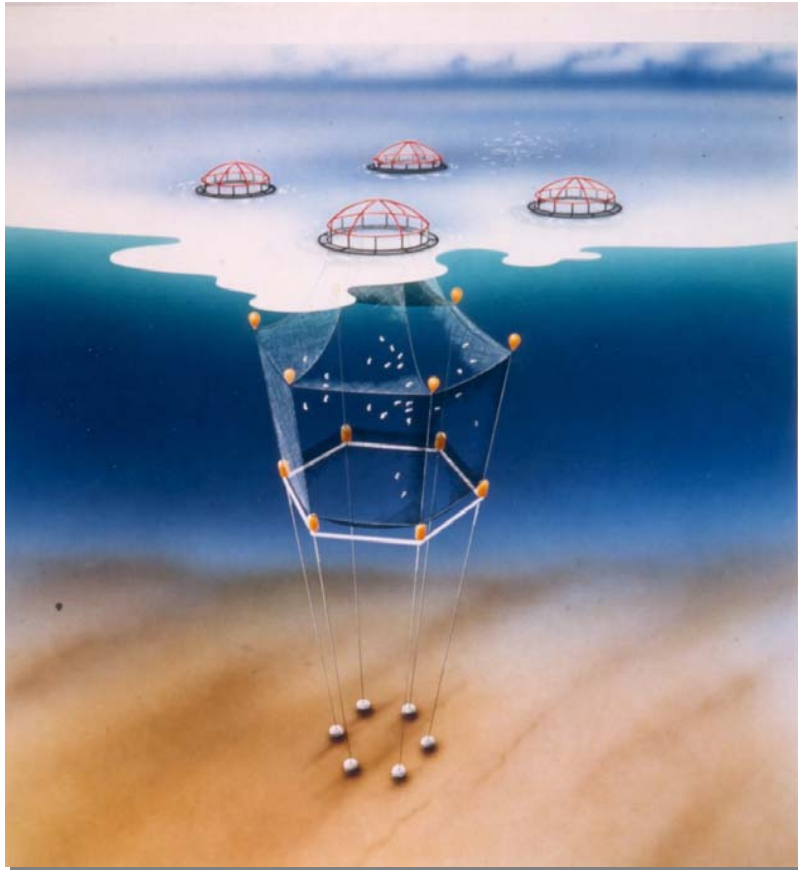
”Gentle” technique for brain operations



- 3 D ultrasound gives the surgeon an updated ”map” by which to navigate
- Tumours are removed via a small hole in the skull
- The surgeon does not have to push healthy tissue aside
- Less risk of damaging normal brain tissue
- Less tumour tissue left in the brain

Quality food from ocean farms

SINTEF's contributions to the Norwegian salmon success story:



- Sea-cage technology
- Adequate fish treatment, both before and after slaughter

SINTEF's contributions to the development of new farmed fish species:

- Methods for intensive industrial-scale production of cod and halibut fry

Summary

- SINTEF offers the comprehensive competence of one of the fourth's largest independent R&D institutes in Europe
- Our competence covers most technologies, and also business development/strategy work
- We deliver
 - Latest technology
 - Innovative solutions
 - Independent advice
 - Qualification and verification
 - Expertise and management partnerships

www.sintef.no