NSC SMART REGIONS AND MARINE RESOURCES
The North Denmark of Opportunities
Strategy for Regional Growth and Development
The Parts of North Denmark and their Characteristics

- Maritime industries; Gate to Scandinavia; Nature and coasts
- Knowledge services, Science and ICT; University and innovation; Coasts and fjords
- Production and Food sector: Fishing; Shellfish; Nature and leisure
- Trade and production; Connections to the South; Forests And Fjords
CLUSTERS BUILDING ON THE STRONG INDUSTRIAL BRANCHES OF THE REGION

- North Denmark has a range of industrial branches with particularly strong potentials for growth. These are branches that have specialised in the course of History creating unique positions compared to other industrial sectors. This goes for the fields of

- foodstuff,
- tourism,
- maritime industries,
- energy,
- Health technology
- information and communication technology (ICT).

- Together these industrial sectors make up 35% of employment and 40% of the economy within the private sector of North Denmark.
Maritime network in North Denmark
The Blue North Denmark

- 400+ maritime companies in North Denmark Region
- Employs 15,211 people
- Growth
Maritime companies in North Denmark

Total: 446
MARITIME COMPANIES IN NORTH DENMARK

Navy base in Frederikshavn (1600)
Alfa Laval Aalborg A/S (500)
MAN Diesel & Turbo (475)
Bladt Industries A/S (460)
Karstensens Skibsværft A/S (300)
DESMI (240)
Orskov Yard A/S (200)
Scanel International A/S (200)
Norisol (150)
Skagen Sandblæseri & Skibs-Service ApS (150)
Wärtsila Danmark A/S (180)
Hydra Tech A/S (169)
Vestergaard Gruppen (150)
Rolls-Royce Marine A/S (55)
Mammoet Wind A/S (50)
Nordelektro A/S (40)
Strong maritime educations
KEY WORDS FOR CENTER

• Coordinate and create synergies across local (faculty / department) initiatives
• Visible entry point for external stakeholders
• Focused vision and clear targets for a period of 5 years
• Organizational setup with leader and support staff in place
• Faculty to include: senior researchers, post docs, ph.d’s
• Advisory board in place with relevant stakeholders
• Office location: in Aalborg with presence in Esbjerg and Copenhagen
• High quality applied research and industry impact
• Industrial partners to be identified for every project
• To become platform for development of new educations
• Should create opportunities for students
• Initiatives to be coordinated with Martec, Marcod, other DK universities
• Center should liaise with other leading international partners
Emission free, Safe and Competitive Ship Operations

- Energy and propulsion technologies and marine fuels
- Diesel electric, LNG vessels and electric ferries
- Port and fuel / electricity infrastructure
- Energy optimization, boilers, pumps, gasses, scrubbers, SFOC and emissions
- Digitalization of the shipping industry, Satellite communication, AIS and Big Data
- Sensors, Vision, Machine Learning / Artificial Intelligence and Autonomous Ships
- Cyber Security
- Shipping Operations and Vessel Performance Monitoring
- Network design, route and voyage planning
- Decision support tools
- Port Operations and Logistics
- Competition, Pricing and Revenue Optimization
- Quality Management
- Risk Management, Health and Safety

Sustainable use of Oceans as a resource

- Sustainable deployment of Oceans
- Offshore energy harvesting (wind, wave, tidal/currents)
- Port and Offshore constructions
- Logistics for offshore wind / energy
- Ocean Governance & Marine Spatial Planning
- Marine life, biodiversity and living resources
- Micro plastics in the oceans
- Environmental regulation and protection
- Drones for monitoring violations of rules and regulations
- Ocean policies on national / international level
- Ocean governance, legal and regulation issues
- Fishery technology
Main ports in North Denmark Region and the transport corridor
Strategic focus
The 5 ports in North Denmark Region

• Ferry transport (Frederikshavn + Hirtshals)
• Maritime industry / service (all)
• Decom (Frederikshavn)
• Freight, transport & logistics (all)
• Fishery (Hirtshals, Hanstholm, Skagen)
• Cruise (Skagen + Aalborg)

Ports expanding!
Potentials

- IMO-regulations
- Retrofit
- Maritimt IT – connectivity
- Service and upgrade
- Decommissioning
- Offshore Windmill parks
- Norway
- Arctic development
- Fisheries, vessels
- Cruise
- Small Ferries
Q & A