



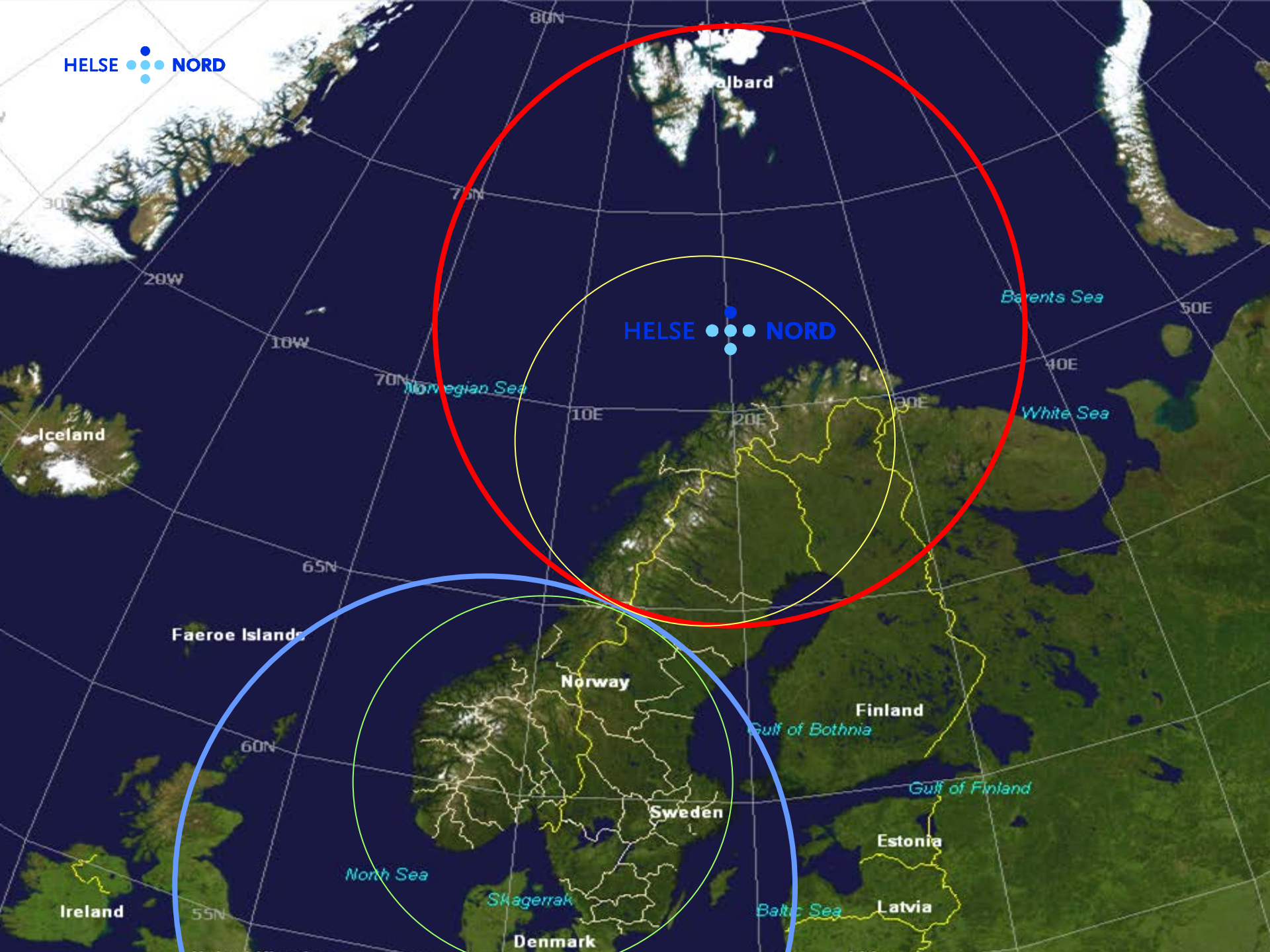
Norwegian Centre for  
Integrated Care and Telemedicine

# Space assets for telemedicine

IAP Applications for the Arctic Workshop  
Copenhagen  
March 12, 2012

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# Arctic characteristics

- Huge distances
- Population structure
- Lack of qualified personnel
- Few hospitals
- Increase of activity
  - Oil, gas, minerals, shipping, tourism
- People expect help...





# eHIR – e-Health in Inaccessible regions

- ESA IAP Ambassador Platform
- Inauguration, november 2010
- Hosted by Norwegian Centre for Integrated Care and Telemedicine (NST)
- Two main themes:
  - Telemedicine
  - eLearning



# E-health and telemedicine

Telemedicine:

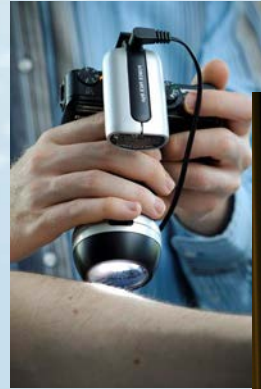
*Providing healthcare services across geographic barriers, enabling exchange of information for diagnosis, treatment and disease prevention.*

*Utilizing modern information technologies for providing health care.*



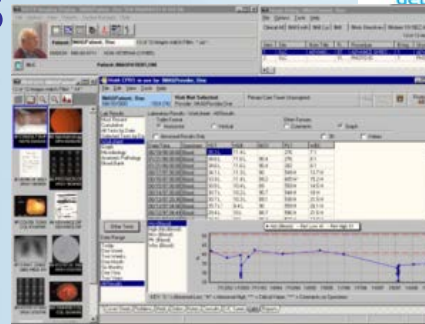
# Telemedicine

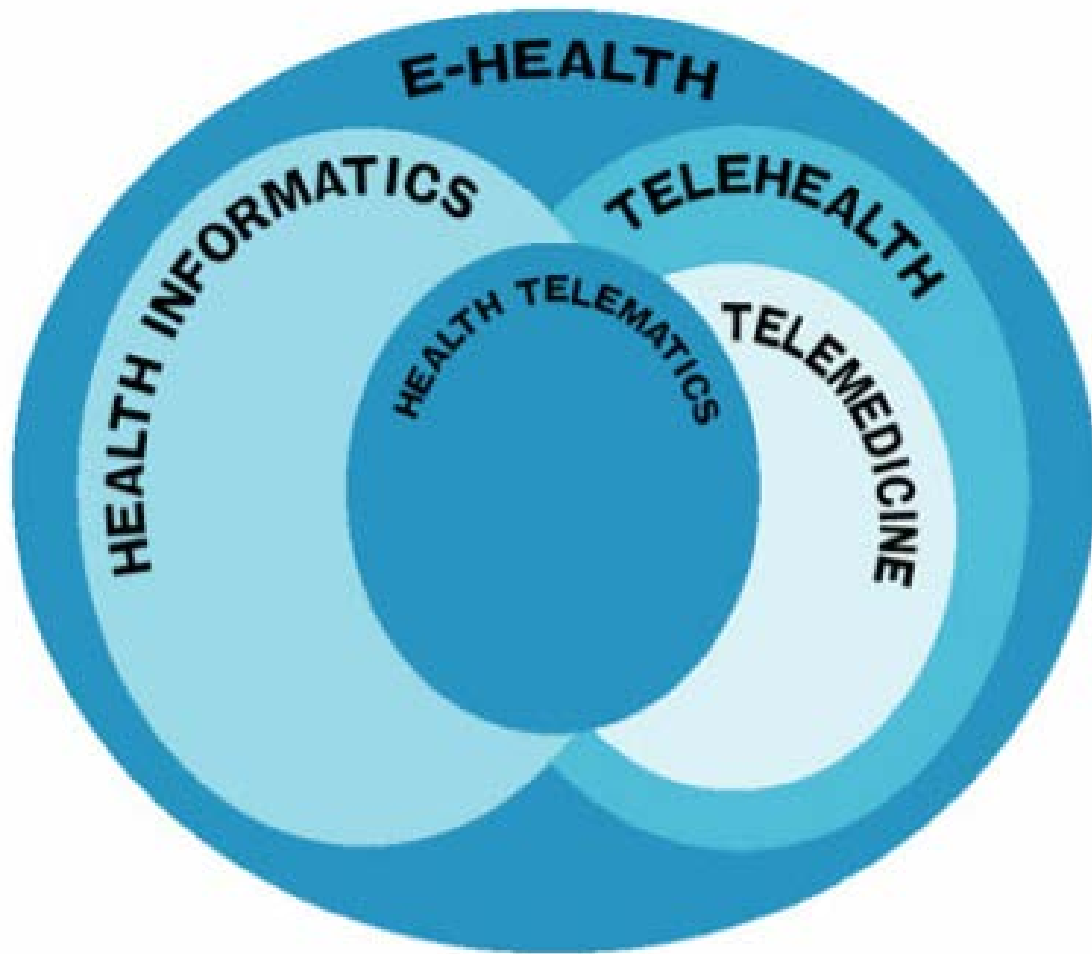
- Teleradiology
- Teledermatology
- Telemonitoring
- Tele-ENT
- Telepsychiatry
- Emergencies
- Etc..



# E-Health

- Electronic communication and cooperation
- Electronic health records
- Electronic messages
- Web-services
- Social media
- Education and empowerment
- Personal health management







# Benefits and possibilities of space assets

- Navigation and positioning
  - Search and rescue.
  - Emergencies
- Satellite coverage
  - Worldwide communication
- Pay per use and use per need
  - Scalability
  - Ad-hoc use (catastrophes, emergencies, etc.)



# Uncertainties..

- Costs
- Coverage
- Reliability
- Technical requirements
  - Ground base, communication tools, soft- and hardware
- Organizational requirements
- Legal frameworks
- For health: Security and safety



eHIR OUTLINE PROJECT PROPOSAL:

## e-Health in Inaccessible Regions at Sea (eHIRS)

**A feasibility study on the potential of utilizing space assets  
for the provision of health care to inaccessible areas at sea**



Draft 2011-08-24 ver 3  
Norwegian Centre for Maritime Medicine



# The eHIRS feasibility study

- Initiated by NST as Ambassador Platform
- Set up by a network of stakeholders from the maritime sector
- Proposal mainly developed by Norwegian Centre for Maritime Medicine, Bergen
- Start-up: Mid 2012



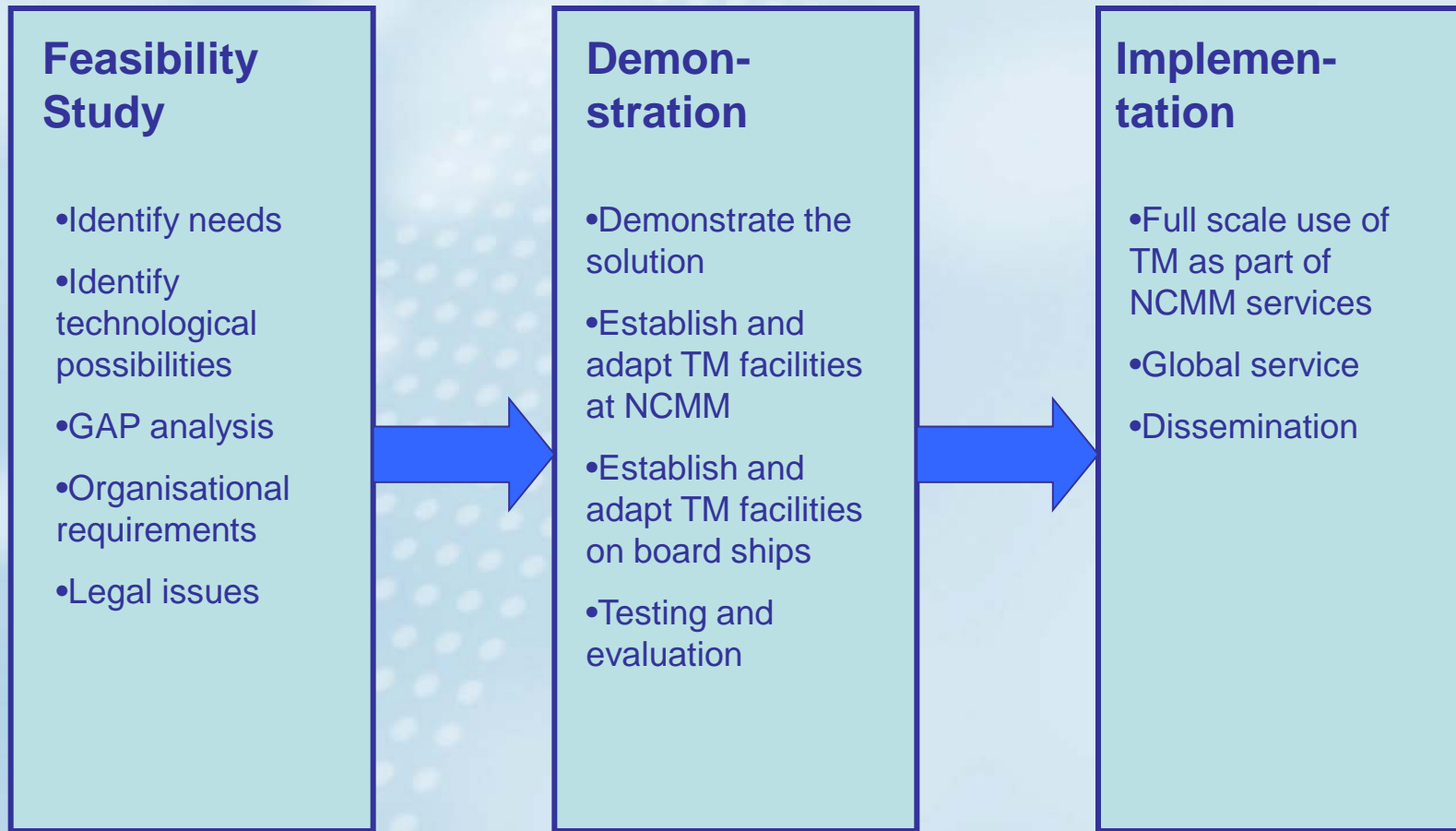


# e-HIRS - objective

- *“The OBJECTIVE of the project is to develop an effective and efficient telemedical maritime assistance service by use of satellite communication, serving ships all over the world.”*



# e-HIRS - steps



# e-HIRS – space assets

- Remote monitoring
- Video conferencing
- Transmission of meteorological data
- Ship positioning
- Interactive services
- Messaging



# e-HIRS - Framework

- Maritime Labour Convention, 2006:  
Regulation 4.1

*“4. The requirements for on-board health protection and medical care set out in the Code include standards for measures aimed at providing seafarers with health protection and medical care as comparable as possible to that which is generally available to workers ashore.”*





# Telemedicine and space – other services

- Emergency situations
- Establish health services to remote, temporary facilities
  - Research stations, oil and gas installations, tourists,
- E-learning
- Provide back-up and fill gaps
- Add and ensure safety





- Limited use of telemedicine in Europe
- Telemedicine in chronic disease management
- Partnership of nine European regions
- Project period: 2010-2012



# The Regional Telemedicine Forum aims to:

- Create new knowledge and skills for all involved stakeholders
- Improve regional policies and strategies
- Successfully transfer telemedicine services between regions

<http://regional-telemedicine.eu/>

Informationsfolder



# More information

- <http://www.esa.int/esaCP/index.html>
- <http://iap.esa.int/c/EHIR/>
- <http://www.ncmm.no/>
- [www.telemet.no](http://www.telemet.no)
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