



# BSHC29: National Report: Denmark

Tallinn, Estonia – 18th September 2024

# National Report: Denmark

- General Update
- Danish Depth Model 2.0
- DGA and new data sources
- S-100 Coordination in DK

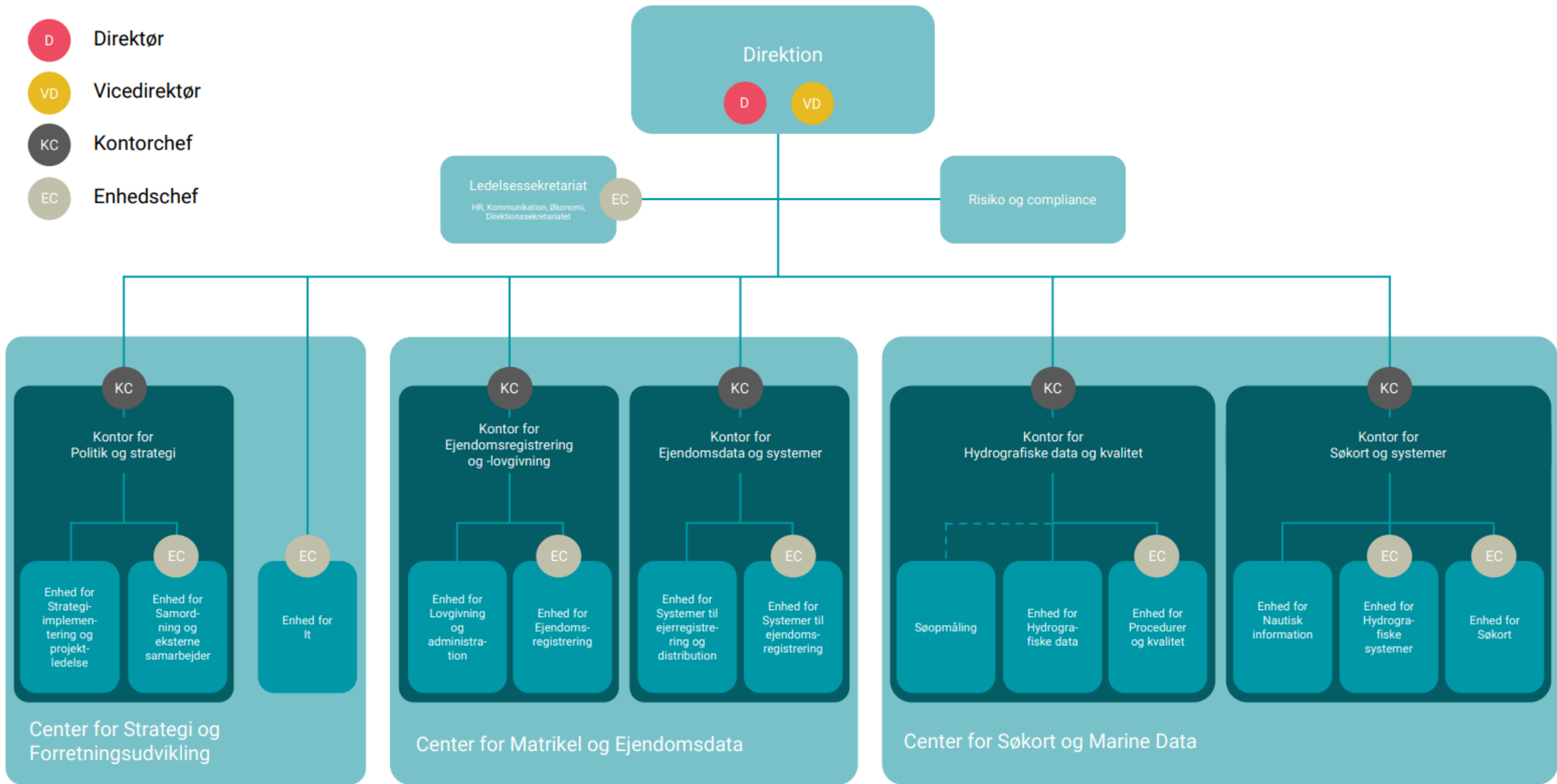
# General Update from DGA

DGA undergoes a rather large organizational restructure, widening the management level and acknowledging for a general increase in employees → Making the agency fit for today's and tomorrow's challenges.

With Lars H. having started his retirement this summer, the Danish Defence Hydrographic Service is now commanded by Cdr. Lars Stange. Lars Stange will attend the BSHC Resurvey Monitoring WG in October in Poland.

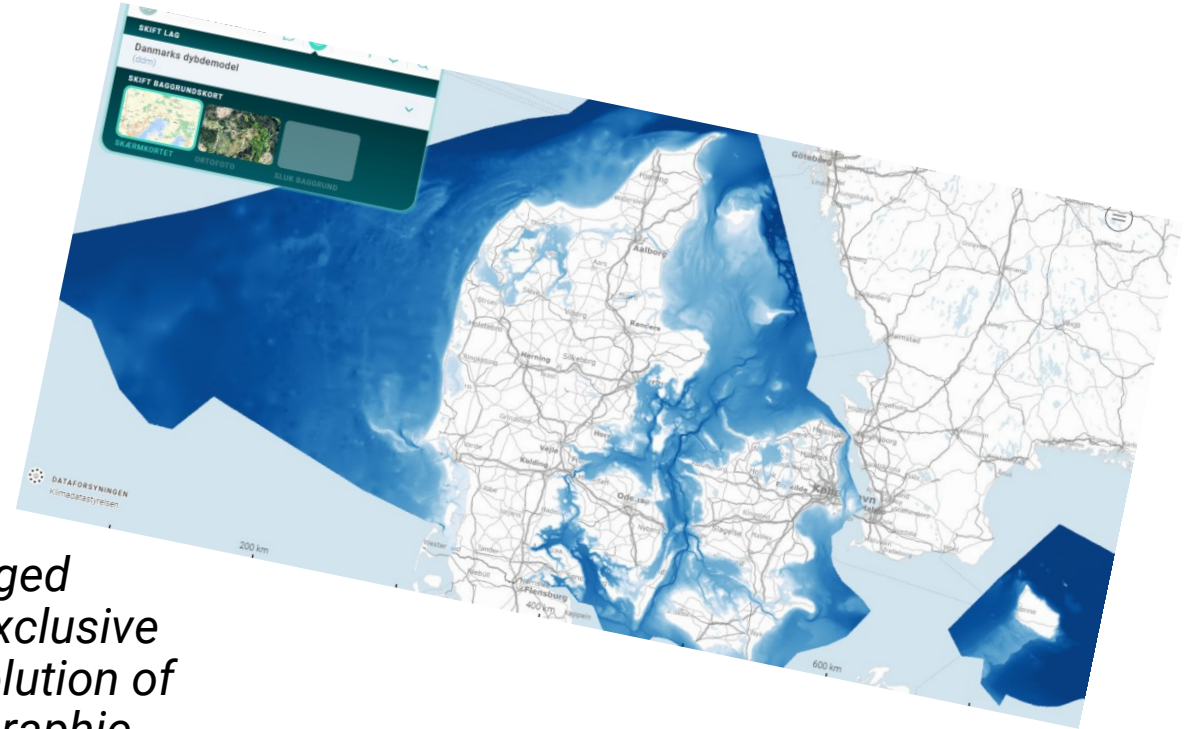


- D Direktør
- VD Vicedirektør
- KC Kontorchef
- EC Enhedschef



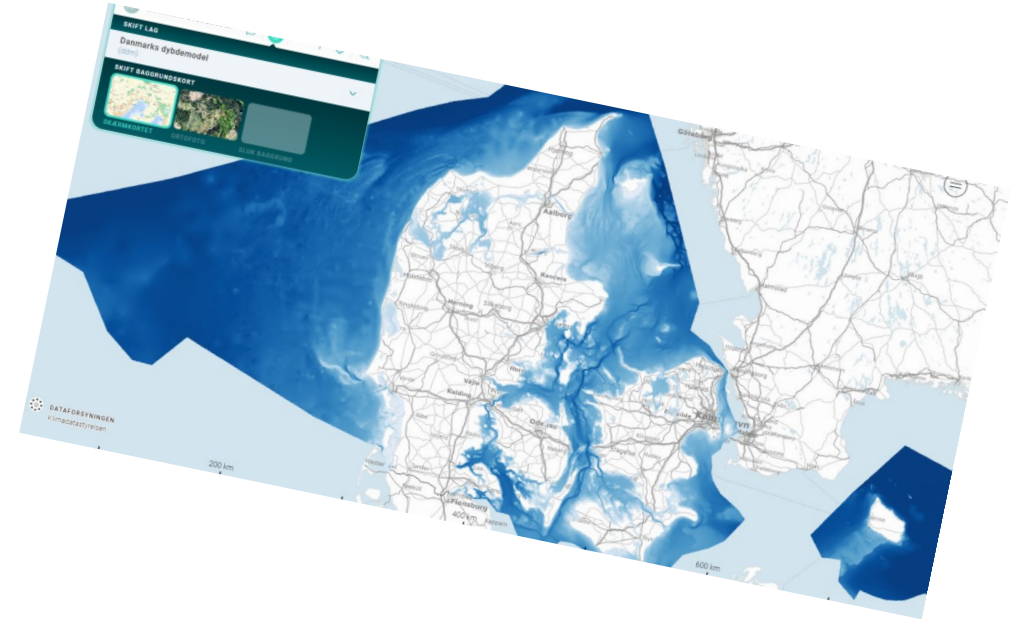
# DDM 2.0: Denmark's Depth Model

- First version published in Nov. 2022
- New version 2 was released on 28th Aug. 2024
  - › Download and description is available on [GST homepage](#)
  - › *“Denmark’s Depth Model (DDM) is a depth-averaged digital bathymetric model, covering Denmark’s Exclusive Economic Zone (EEZ). The model has a grid resolution of 50 meters and is based on a collection of hydrographic survey datasets and other sources.”*



# DDM 2.0: What's new?

- New data source types
  - › ALB, CSB, SDB
  - › SDB provided by EOMAP through EMODnet Bathymetry
- Extended coverage
  - › All of the Danish EEZ is now covered
  - › Aligns well with neighbouring national depth models
  - › Collaboration through EMODnet Bathymetry and neighbouring HO's
- Reduced interpolation
  - › ~5% less interpolation
- One common vertical datum
  - › First release was a mix of different datums, now there is only one



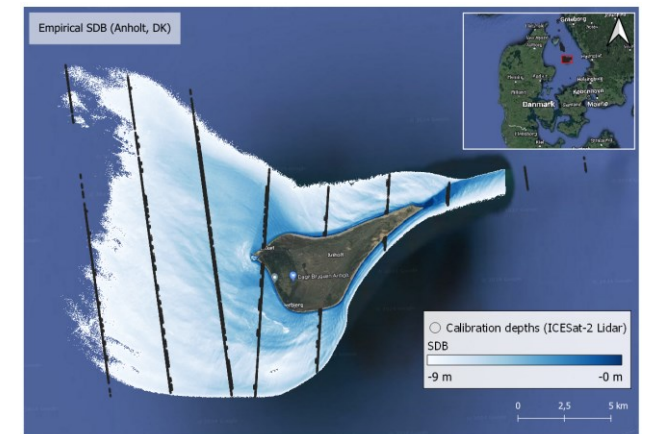
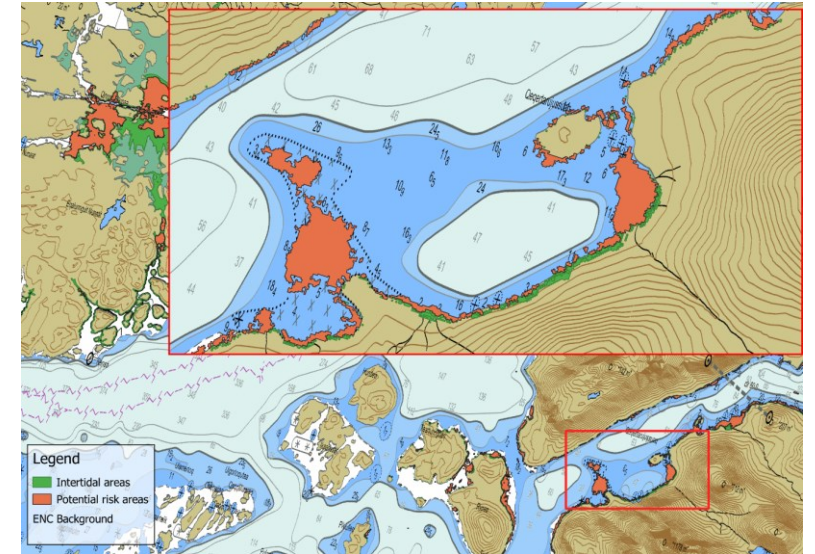
# Satellite-derived data at DGA

In recent years, DGA has steadily expanded its in-house capabilities to process satellite-derived data and other non-traditional hydrographic sources.

Through a collaboration with the Danish Maritime Authority and the Danish Foreign Ministry, DGA has gained valuable experience using satellite-derived data working on the largest lake in Ghana, Lake Volta.

Building on this foundation, and with funding from the Danish government's North Atlantic Budget, DGA is working in collaboration with an external partner to produce satellite-derived products for Greenland. These efforts support local communities by mapping coastlines, rocks, shoals, intertidal zones, and identifying no-go areas.

Additionally, earlier this year, DGA began testing Satellite-Derived Bathymetry (SDB) data around the Danish island of Anholt.



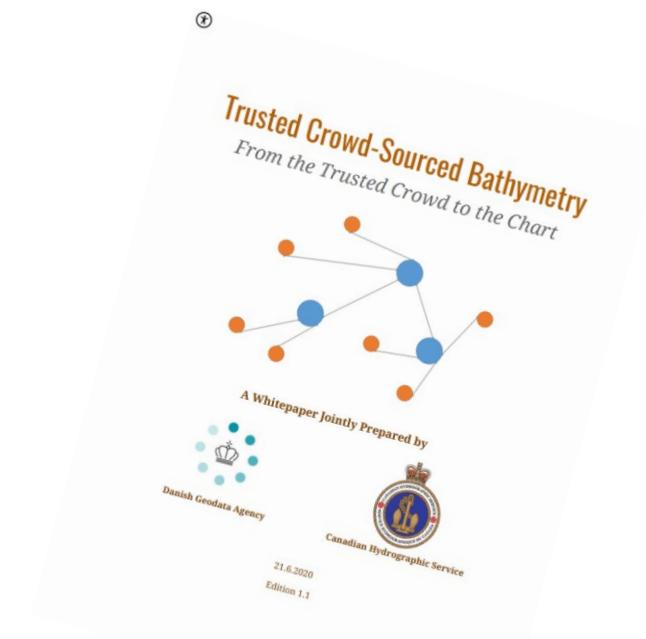
# Trusted-CSB at DGA

DGA has been exploring “Trusted-CSB” in collaboration with relevant partners in Danish and Greenlandic waters, as outlined in the [DGA/CHS White Paper](#) .

Building on this groundwork, and in partnership with external stakeholders through the EU Project MobiSpaces and Canada's CIDCO, DGA is expanding efforts to collect T-CSB data in remote and insufficiently surveyed regions.

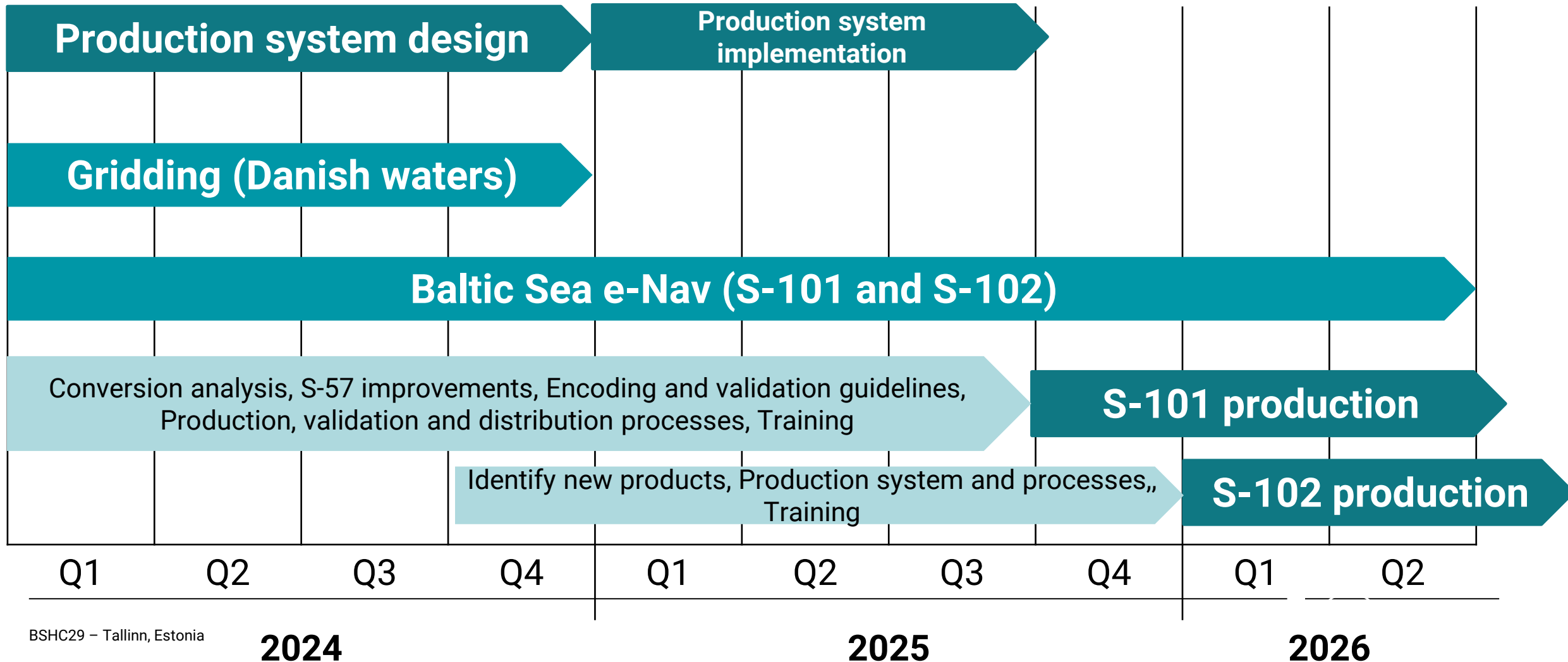
Greenland, with its vast expanse, remote fjords, and towns, is particularly well-suited for T-CSB initiatives, as local vessels frequently transit these areas.

Additionally, DGA is engaged in the DQWG S-68 1.1 Project Team, which is focused on determining how CATZOC (Category Zone of Confidence) values can be assigned to CSB data.





# S-100 timeline



# National coordination:

- Danish authorities holding maritime data (S-100)



# Danish S-100 Coordination

Cooperation with Danish authorities responsible for S-100 data

- Bottom up approach
- Start small – only the four authorities with phase 1 data
- ‘Kick-off’ meeting Dec 2023
- Terms of references in place
- Virtual meetings every 2 months, physical meetings twice a year
- Next step is to formalize the cooperation and engage a steering group on management level



Geodatastyrelsen



**DANISH MARITIME AUTHORITY**



## Phase 1 / Route Monitoring

### Phase 1

#### Route Monitoring Mode

S-101 ENC  
S-102 Bathymetry  
S-104 Water Level  
S-111 Surface Currents  
S-124 Navigational Warnings  
S-129 UKC Management

#### Critical Framework

IHO Geospatial Information Registry  
S-98 Interoperability Specification  
S-100 Universal Hydrographic Data Model  
S-128 Catalogue of Nautical Products  
S-164 Test Data Set for S-100 and ECDIS  
Type Approval

BSHC is invited:

- to note the report

