



# Littoral OpTech-West

## Underwater operations in the Littorals

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CO 1<sup>st</sup> Submarine Flotilla



## SCOPE:

- Environment
- Experiences
- Development



# EVERYTHING IS OK IF I PRETEND THAT IT IS

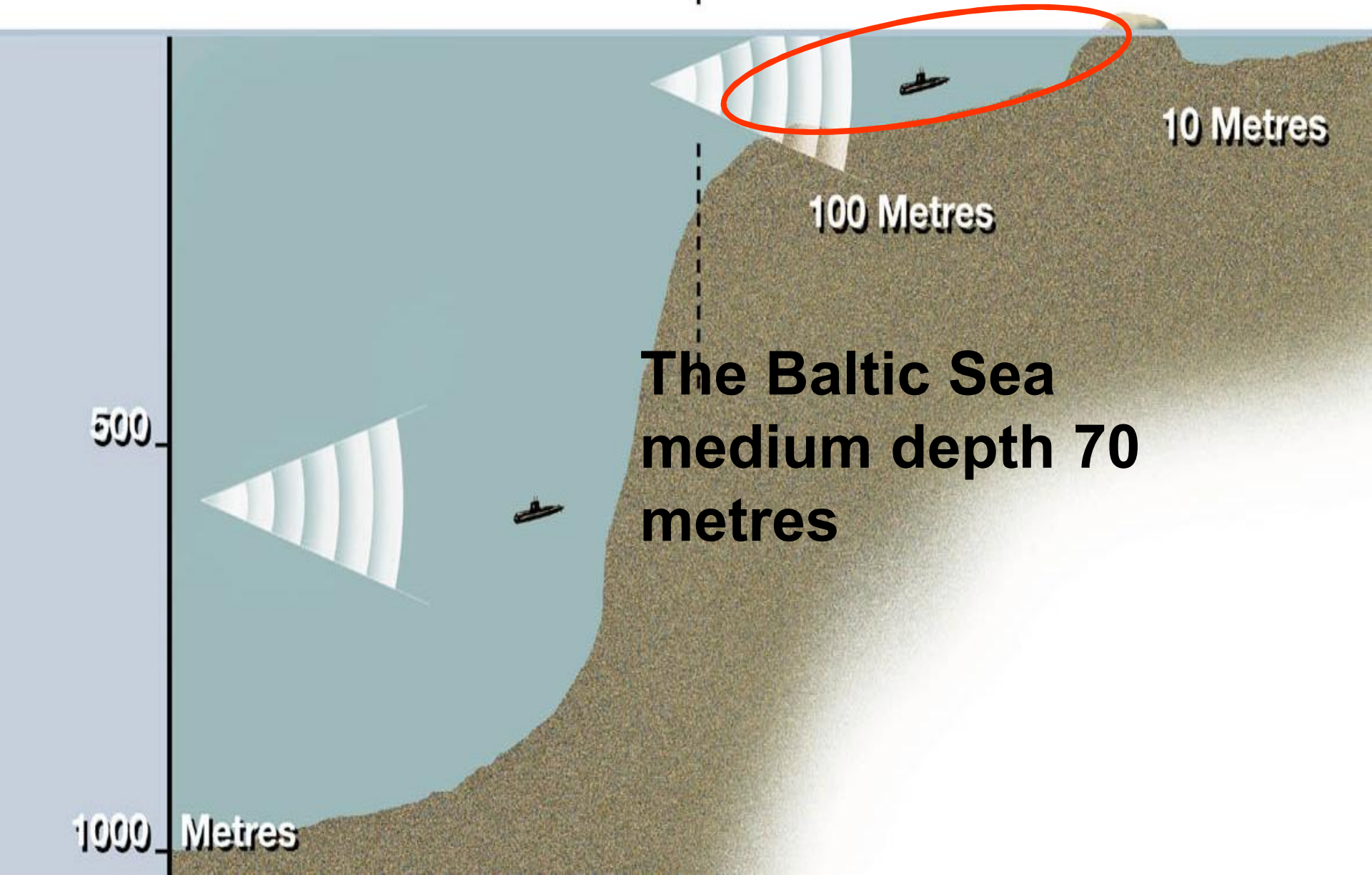
*A problem that cannot be seen, needs no solution...*



**Blue water**



**Shallow water**



**10 Metres**

**100 Metres**

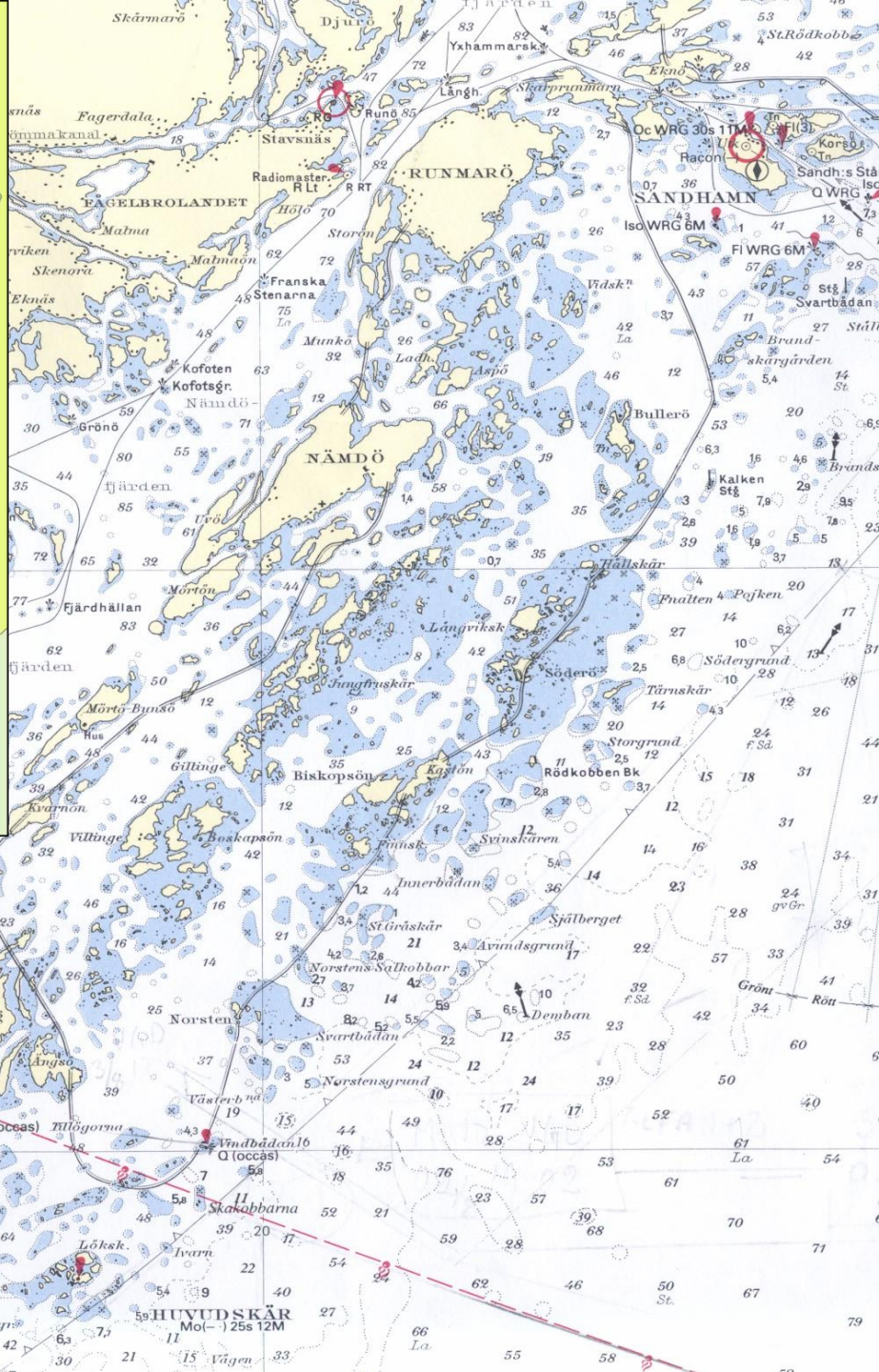
**500**

**The Baltic Sea  
medium depth 70  
metres**

**1000 Metres**

# “Blue Water” meets “the Extreme Littoral”







To act without being seen!

# 1st Submarine Flotilla



**Flexible!**



**Unique!**



**Reliable!**

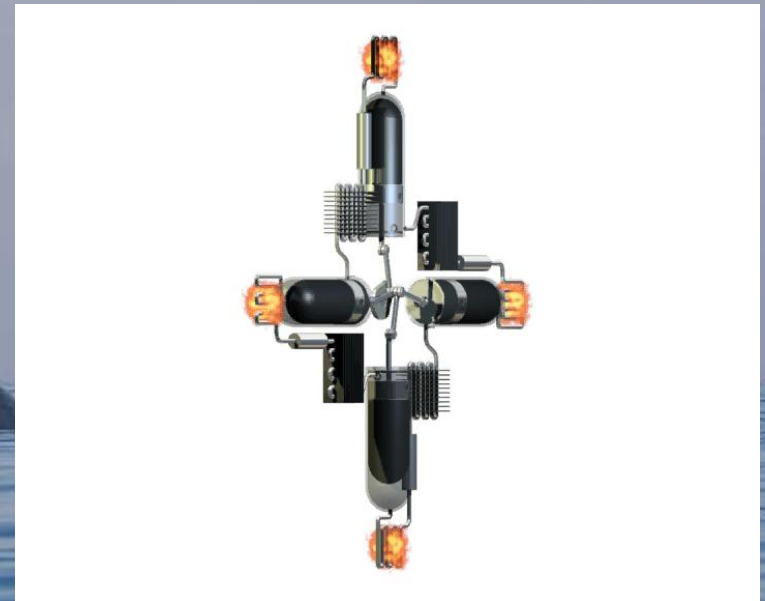
**Quotation from Public Affairs Office at 3<sup>rd</sup> fleet San Diego “Working together, the United States and Sweden are fostering multinational interoperability to combat security threats”**







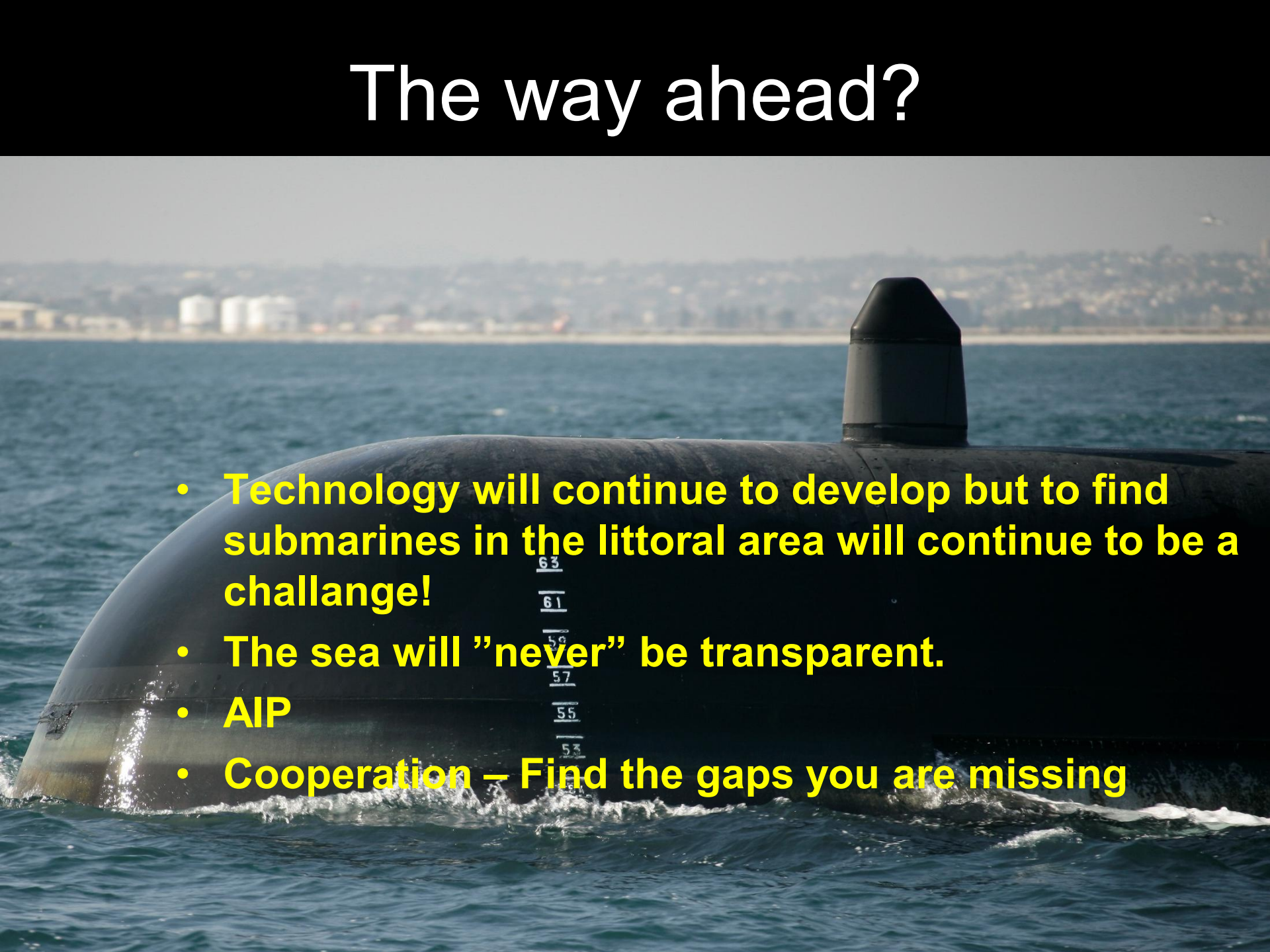
# Sweden has a modern and highly capable all-AIP submarine force



## Some benefits of using an AIP system:

- **An AIP capability improves the submarine discretion ratio significantly.**
- **The submerged endurance compared to an “ordinary” SSK.**
- **The reduced exposure of masts**
- **The increased time inside the AOO**
- **A very cost efficient system compared to Nuclear / Fuel cell AIP systems.**
- **A low maintenance system compared to Nuclear / Fuel cell AIP systems.**
- **The political implications of a non-nuclear submarine.**
- **Nuclear power is sensitive in many countries.**

# The way ahead?

- 
- **Technology will continue to develop but to find submarines in the littoral area will continue to be a challenge!**
  - **The sea will "never" be transparent.**
  - **AIP**
  - **Cooperation – Find the gaps you are missing**

# QUESTIONS?





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