

# Space Infrastructure for Arctic Search and Rescue

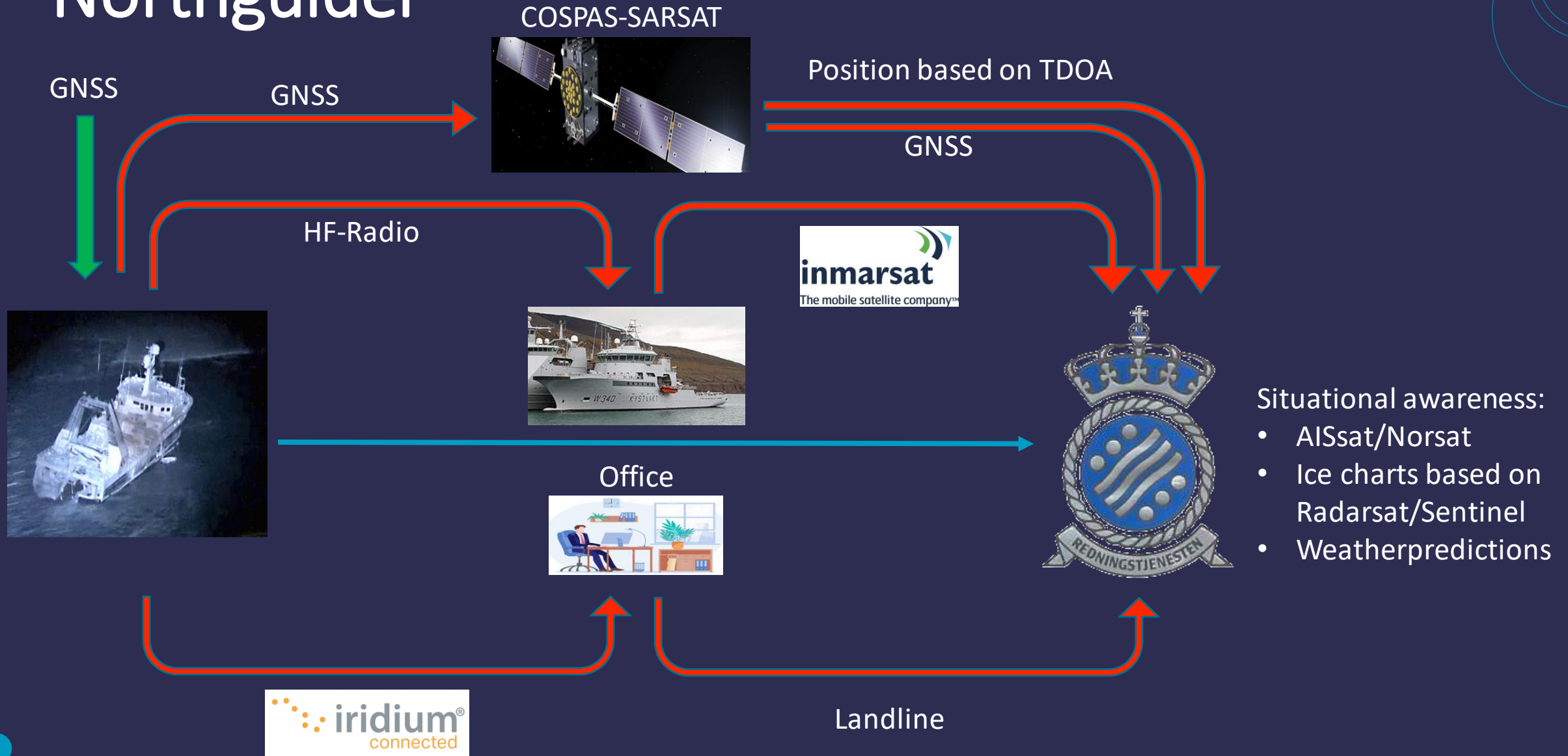
IMO Polar Seminar, London, 2022

# Northguider



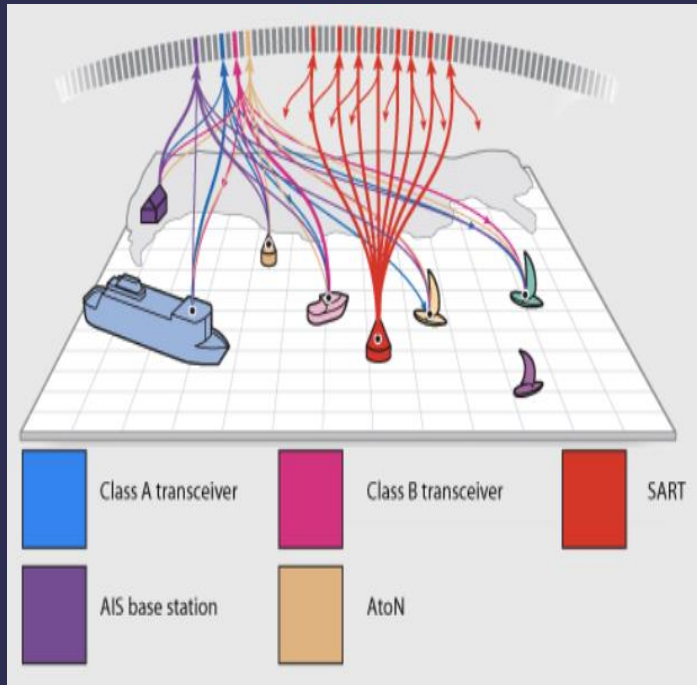
Julie Kolbeinsvik  
**MIN POSISJON**

# Northguider

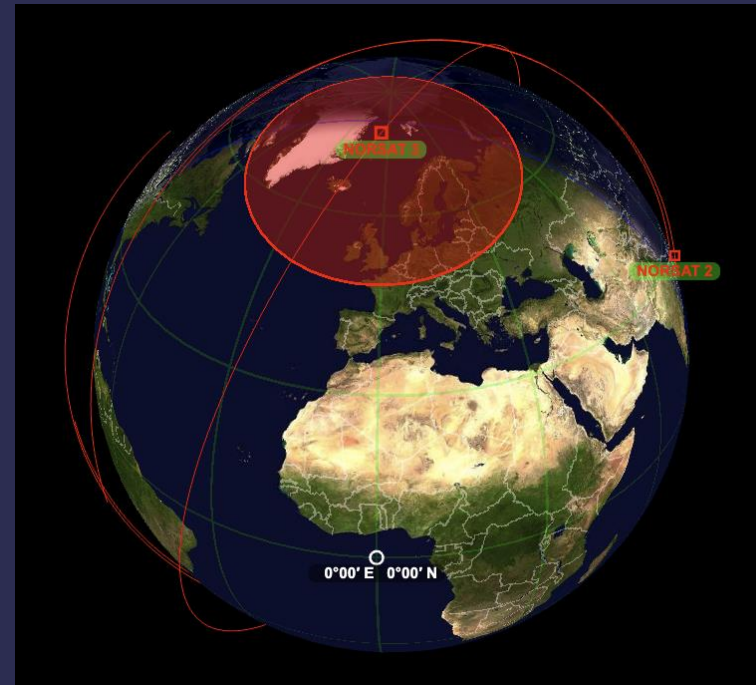


# Common situational awareness - AIS

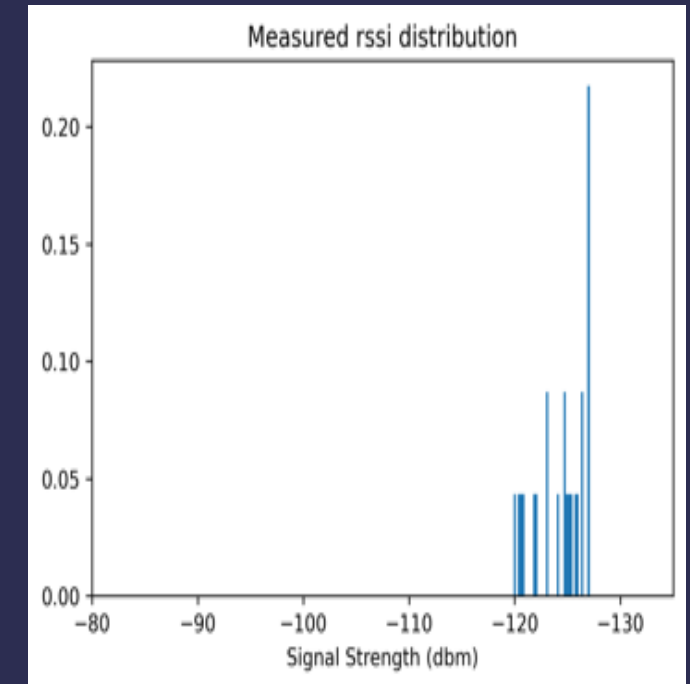
## - The AIS system is not designed for sat. reception



High vessel concentrations reduce the availability of free timeslots.



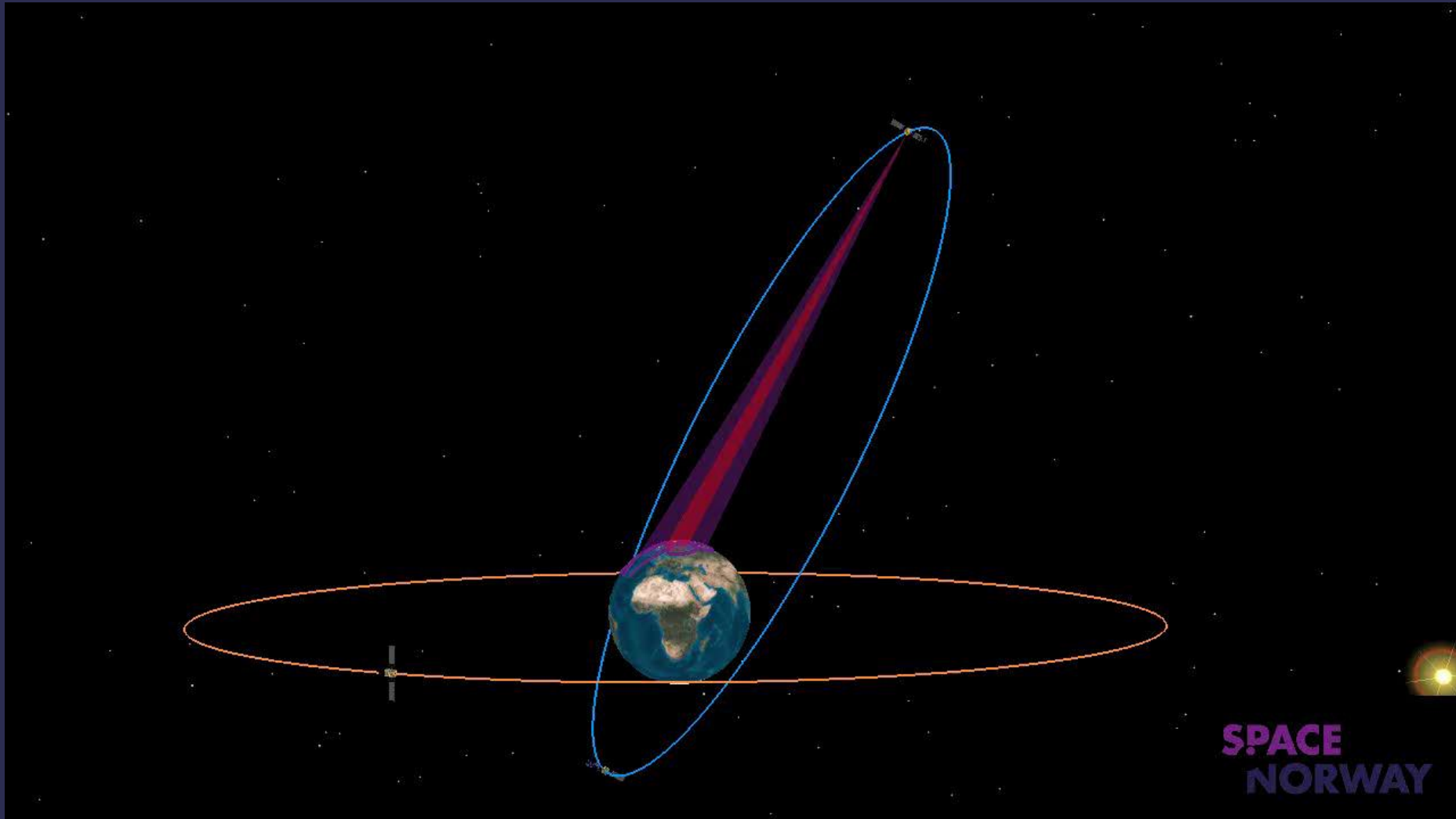
Large coverage area covers many line-of-sight areas simultaneously.



Low signal levels masks the signals, resulting in high package loss.

# Lack of communication

- Expansion of Inmarsat, FOC early 2024



# “New players” are entering the field...



## Broadband suppliers:

- Starlink – FOC polar environments, end of 2022.
- OneWeb – FOC, end of 2023

## Commercial SOS providers:

- SPOT (GlobalStar)
- Garmin inReach (Iridium)
- Sat. based VDES (first const. 2025)
- AMRD

# Future trends - new demands



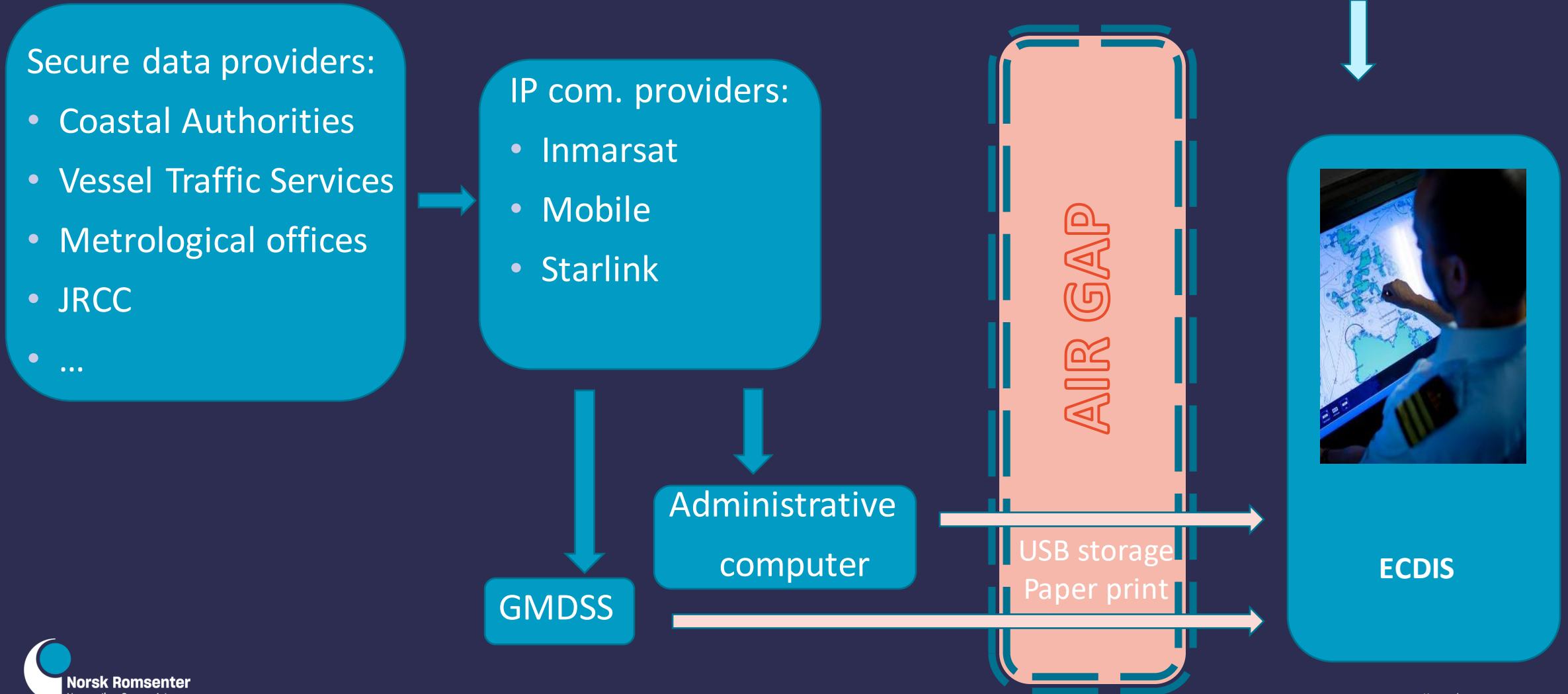
## System trends:

1. Commercial providers
2. Independent systems
3. Integration required
4. Need for standardization

## User trends:

1. Reduced equipment costs
2. Increased equipment volumes
3. High data volume transfers
4. Ability to structure/sort and visualize data

# Development path – current situation





# Development path – near future

## Secure data providers:

- Coastal Authorities
- Vessel Traffic Services
- Metrological offices
- JRCC
- ...

## IP com. providers:

- Inmarsat
- Mobile
- Starlink
- OneWeb

GMDSS

Firewall

AIS  
GNSS

AMRD  
VDES



ECDIS

# Development path – far future

## Secure data providers:

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- ...

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