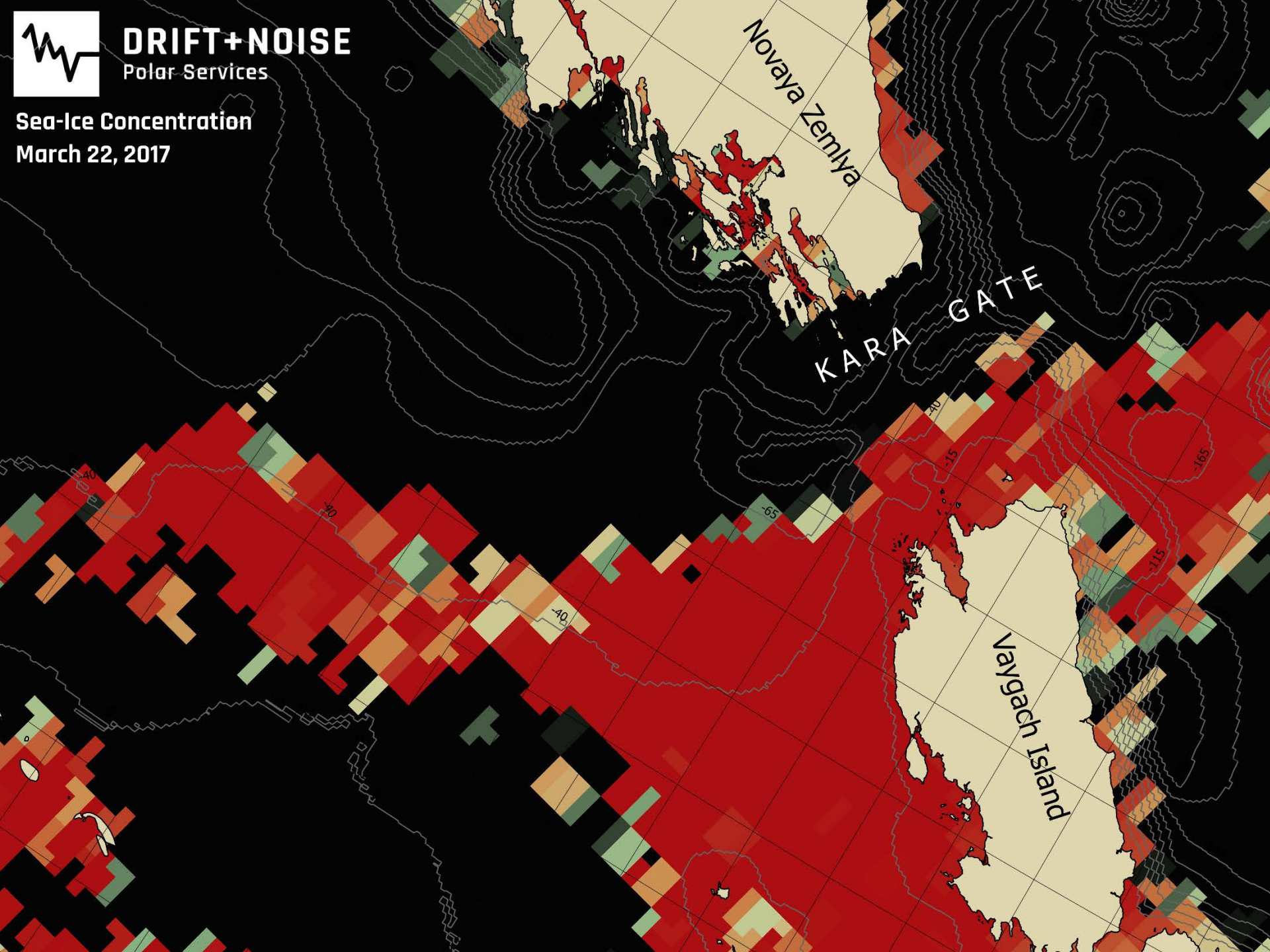
DRIFT+NOISE
Polar Services
Do you know where to go?
Ice Information Products from Space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Polar Services
Sea-Ice Concentration
March 22, 2017
Novaya Zemlya
KARA GATE
Vaygach Island
-40
-40
-40
-65
-15
-40
-115
-165

Company Profile

- Polar Researchers
- Remote Sensing Experts
- Geophysicists
- **Software Engineers**

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Company Profile

- User Needs First
- Technology Driven
- Operational Data
- Consulting

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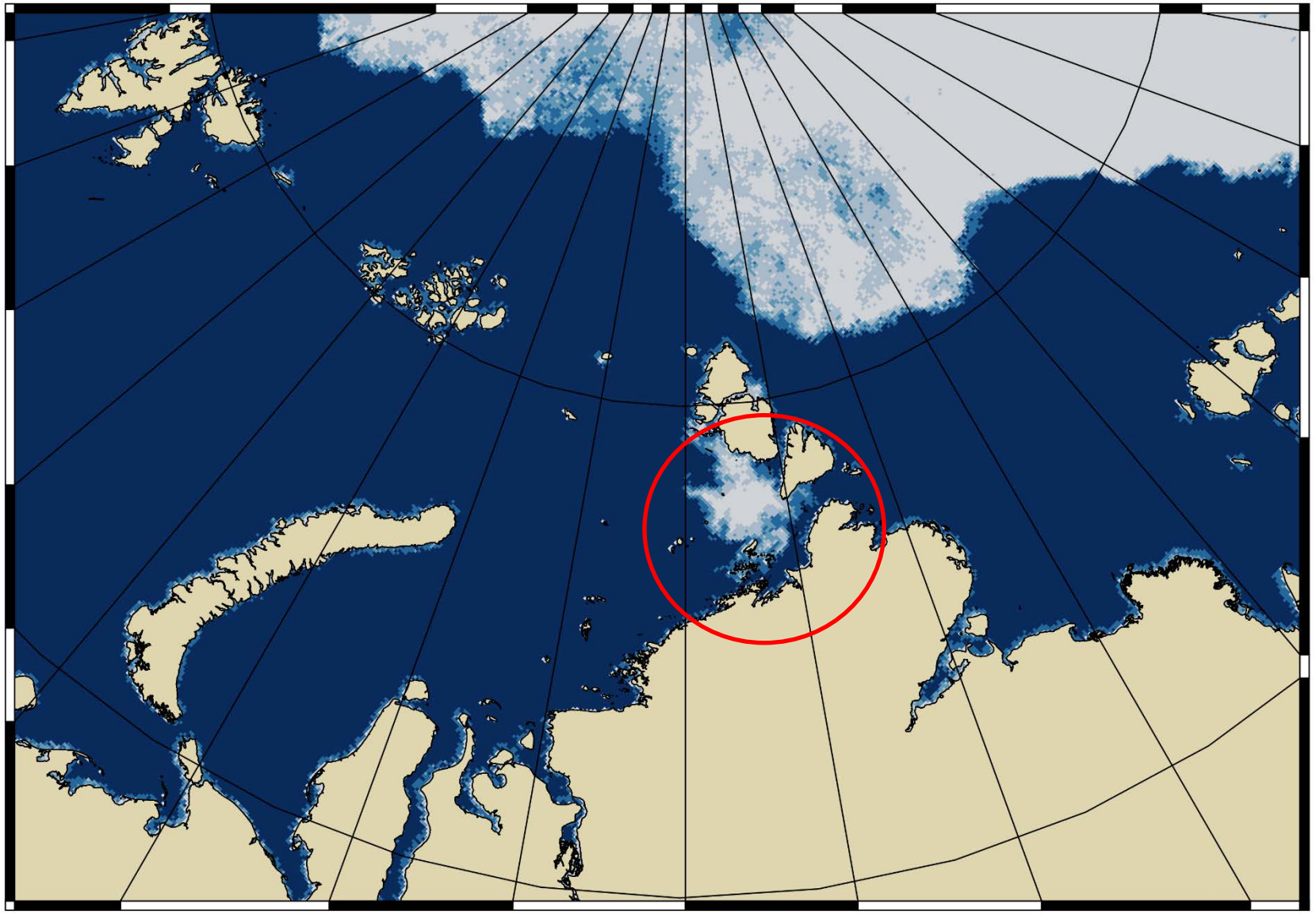
User Need Number 1: SAFETY

PROACTIVE: A central role in your HSE policy, company values

COMPLIANCE: Polar Code

REACTIVE: How to demonstrate company values and compliance with the law in the case of an incident

SAFETY: Ice Floe collision Matisen Strait 2013

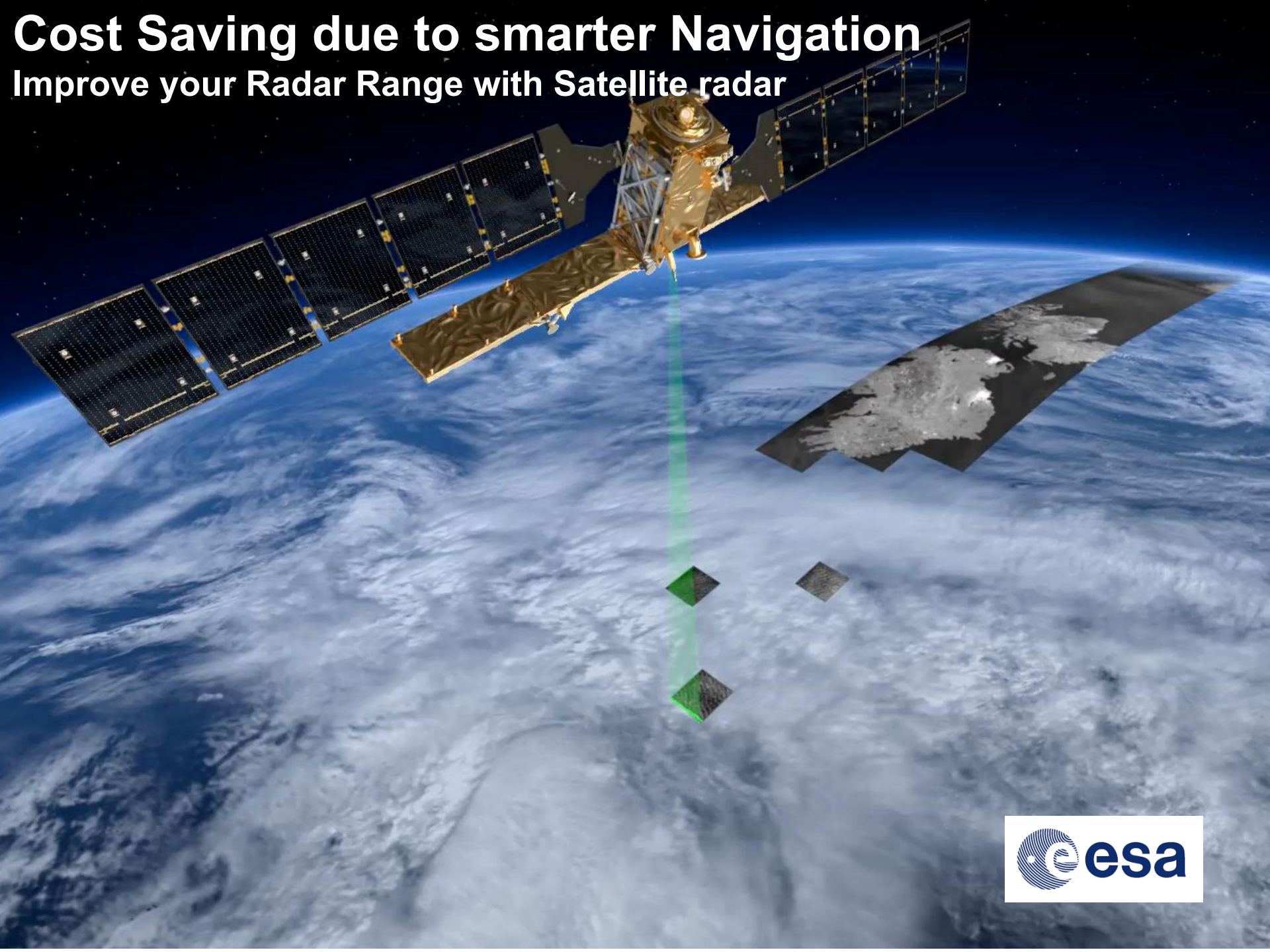


User Need number 2: COST SAVING

- **FUEL**
- **TIME**
- **MAINTENANCE**
- **INSURANCE**

Cost Saving due to smarter Navigation

Improve your Radar Range with Satellite radar



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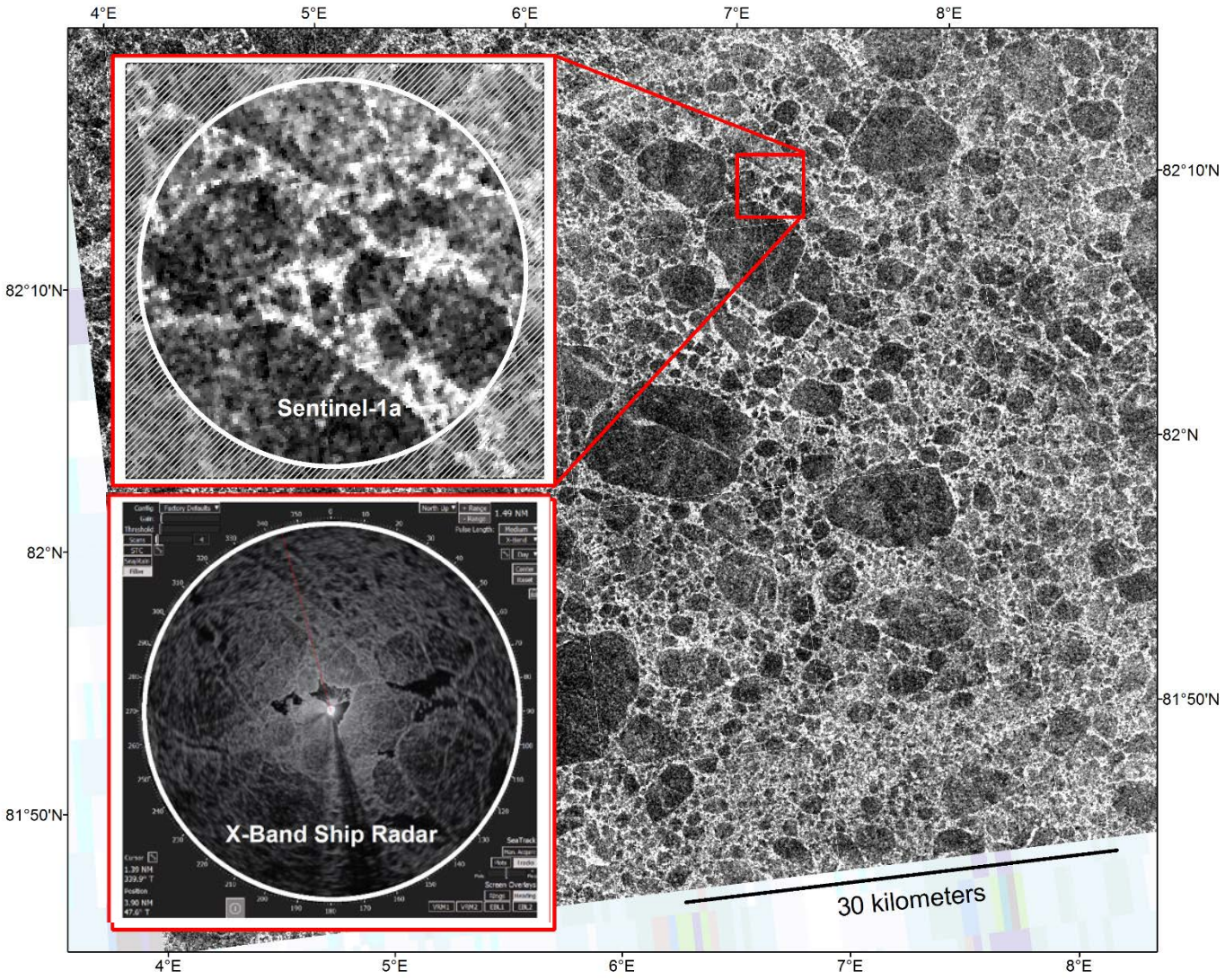

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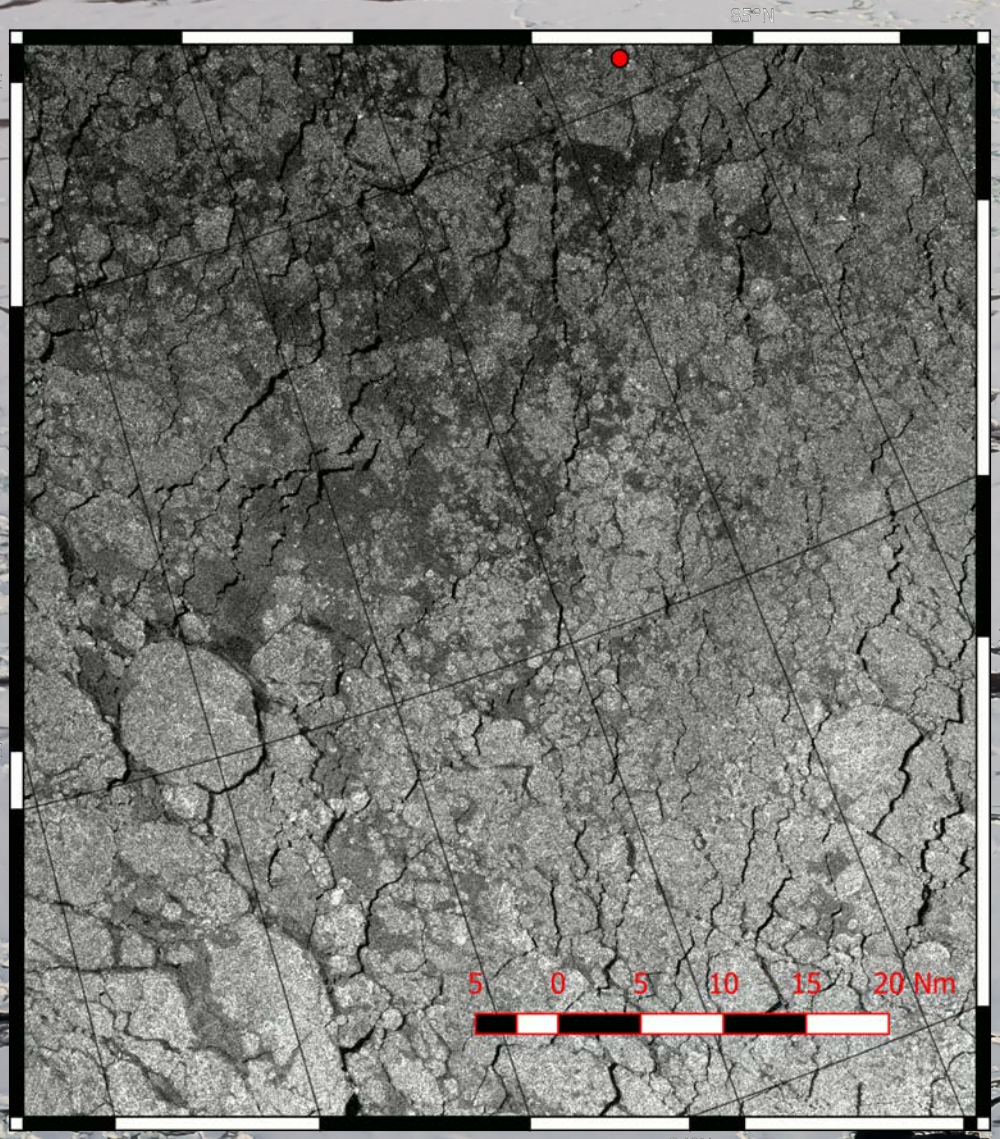
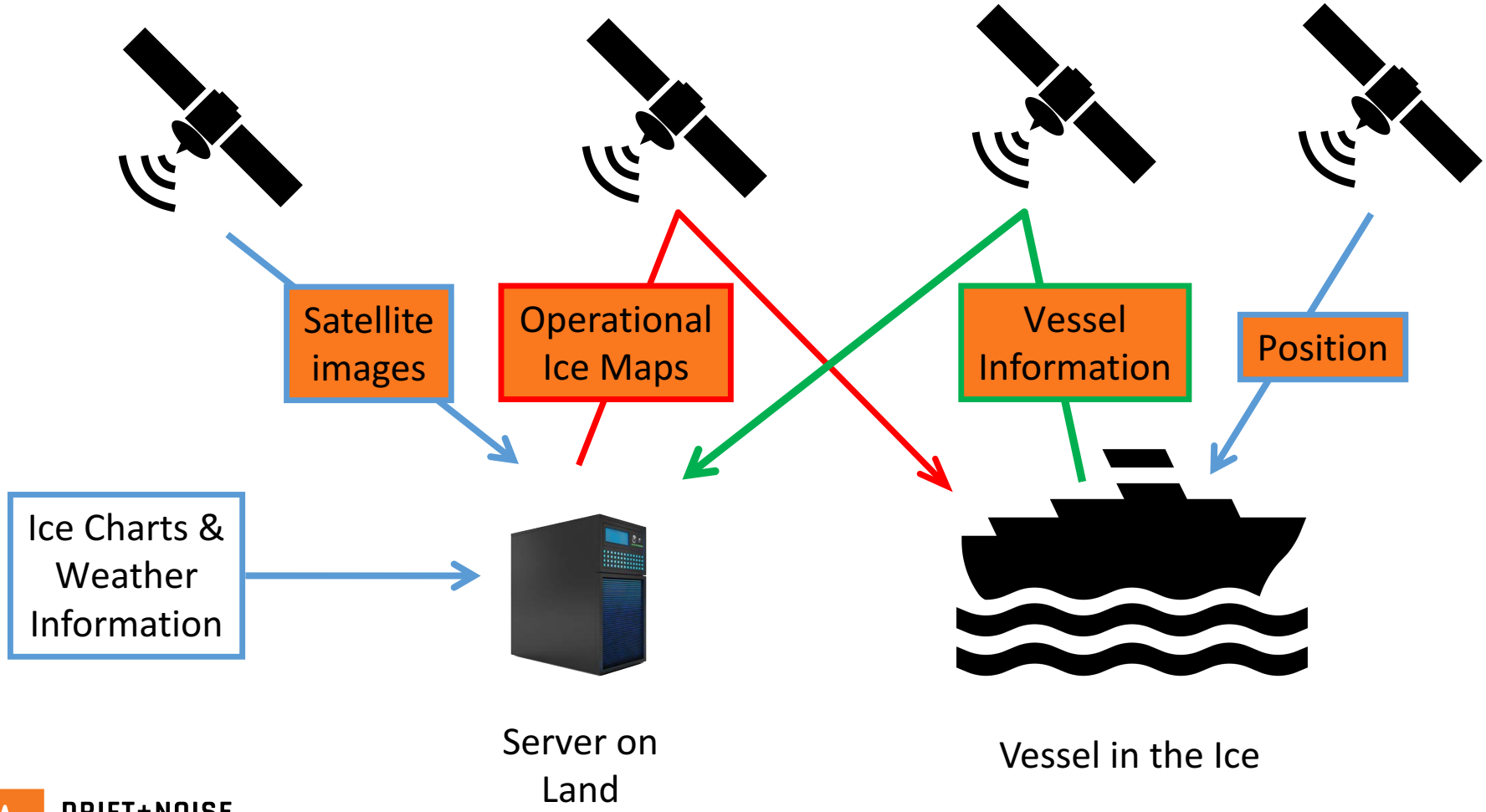
Cost Saving: Navigating in Heavy Ice



Spot „highways“
in the ice
with SAR imagery

4 days anticipated
Arrival after 2 days

Polar Shipping 4.0.
Digital Data from Space on Board - Automated



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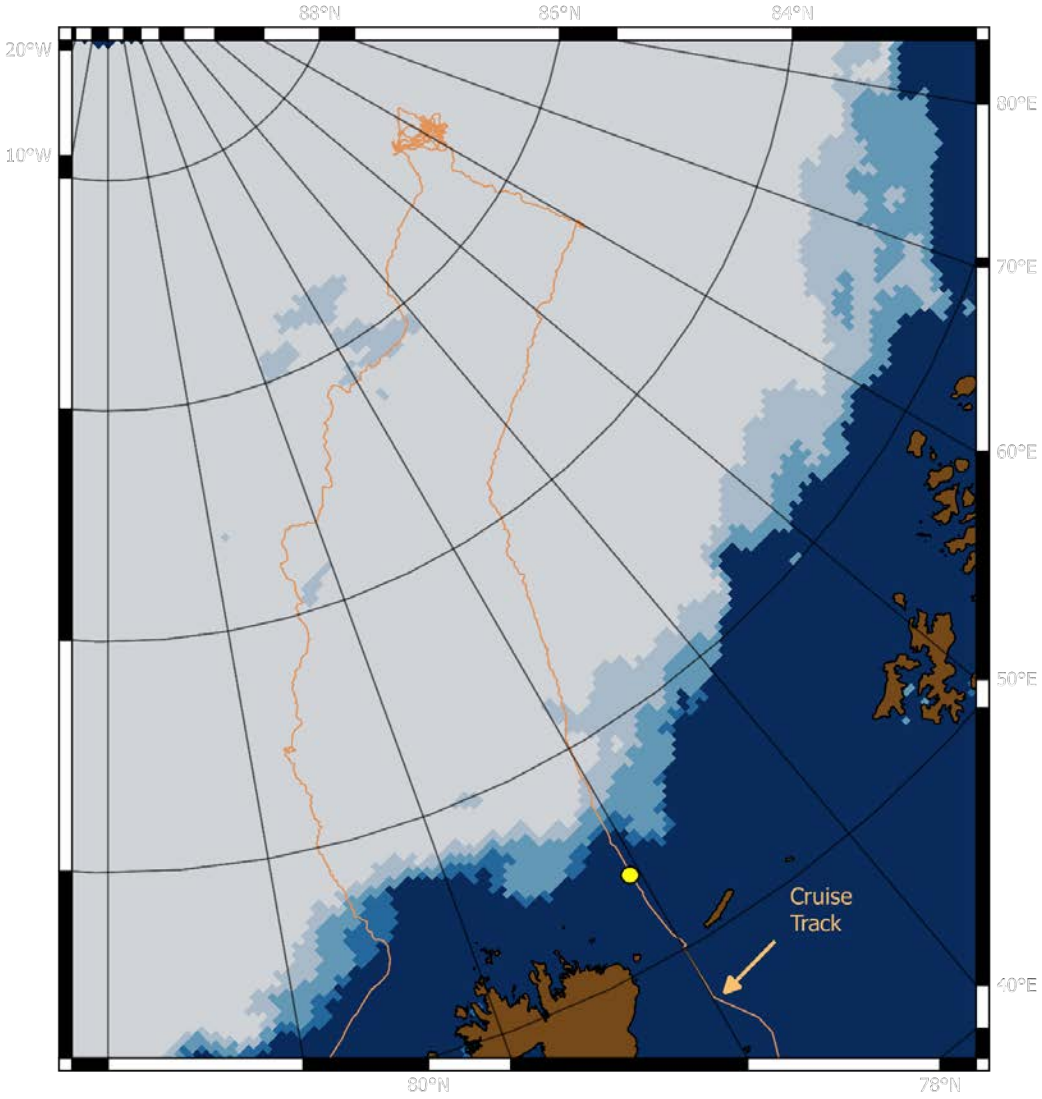
Polar Shipping 4.0.
Digital Data from Space on Board



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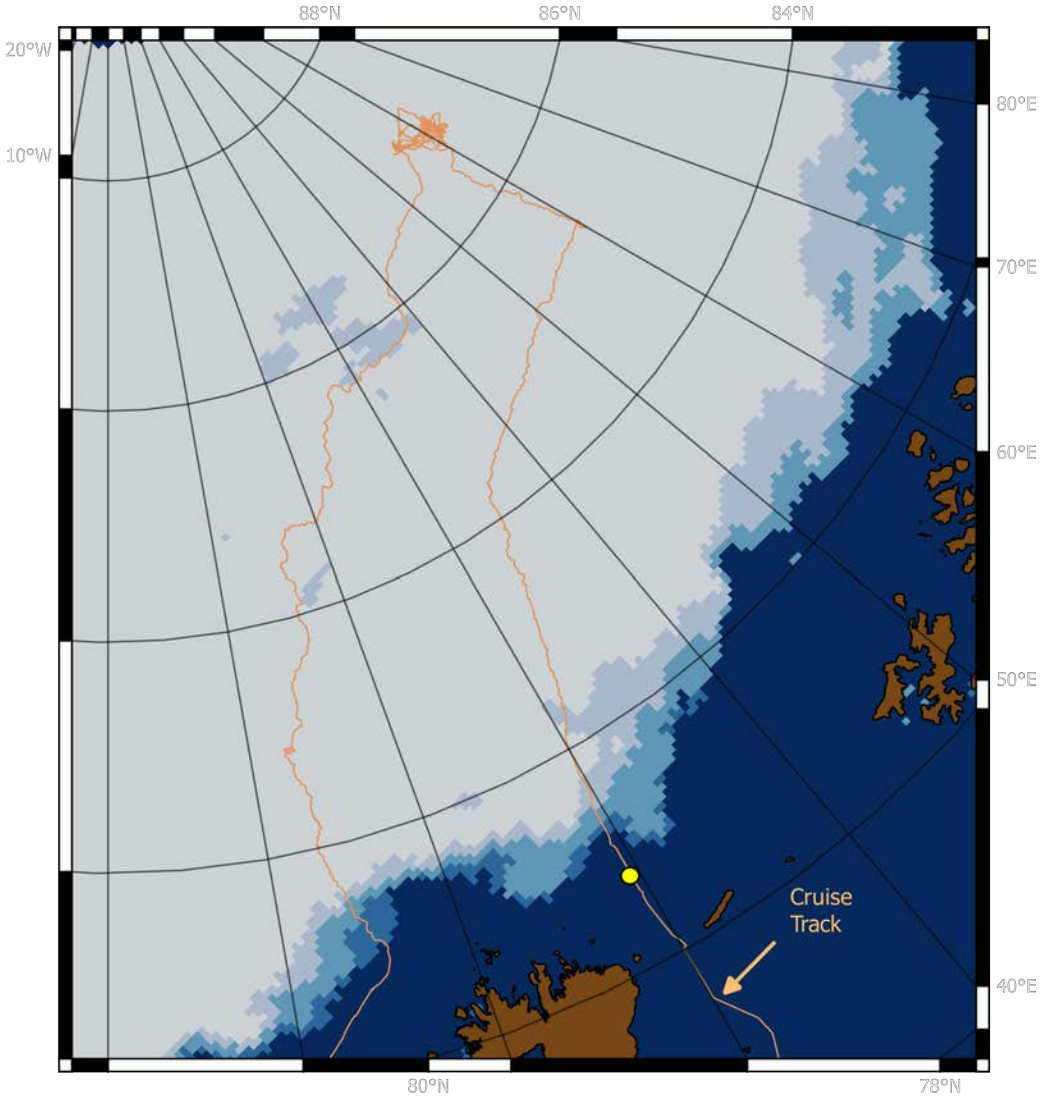
Polar Shipping 4.0.
Digital Data from Space on Board



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Data Integration – How to get data on board ?

How fast is your internet connection? Two examples:

Research Ship Polarstern:
x‘xxx – xx‘xxx EUR per month
Iridium 18 kbyte / s
Inmarsat 54 kbyte / s (not in high latitudes)
Future: Iridium NEXT 175 kbyte / s

Arctic Yacht
xxx EUR for communication per month,
Iridium mobile phone 0.3 kybte / s
Future 2.75 kbyte / s

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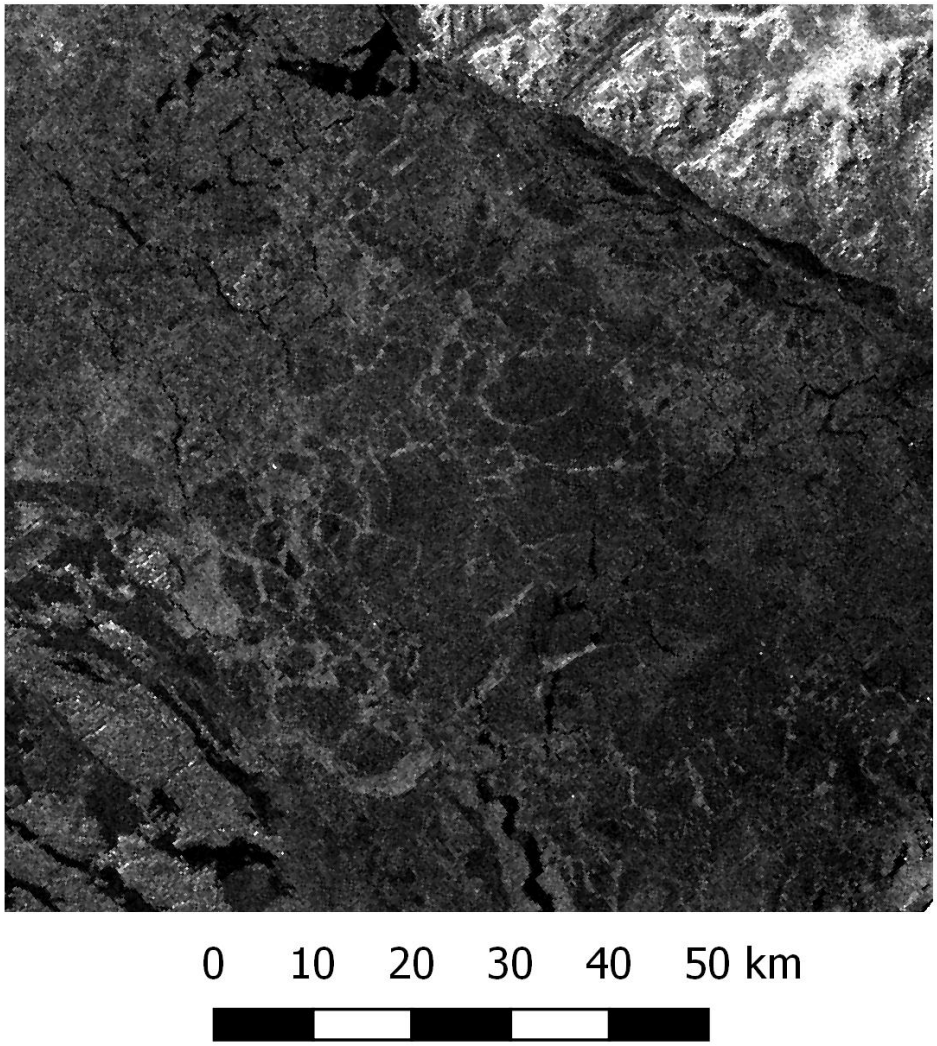
Make data suitable for low bandwidth

250 m



0.5 Mbyte

Data Integration – Visualization

Customized Viewing System

www.kongsberg.com

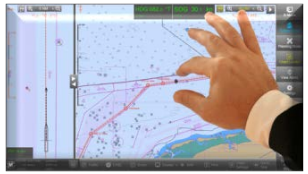
How many systems would you like to have on your bridge?

Server on board?
IT support on board?

The MarSat Network

TRENZAG

SevenCs



ISL

EUROPEAN SPACE IMAGING

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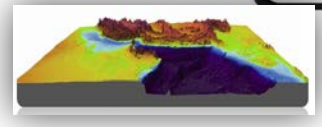
EOMAP



Associated partner:

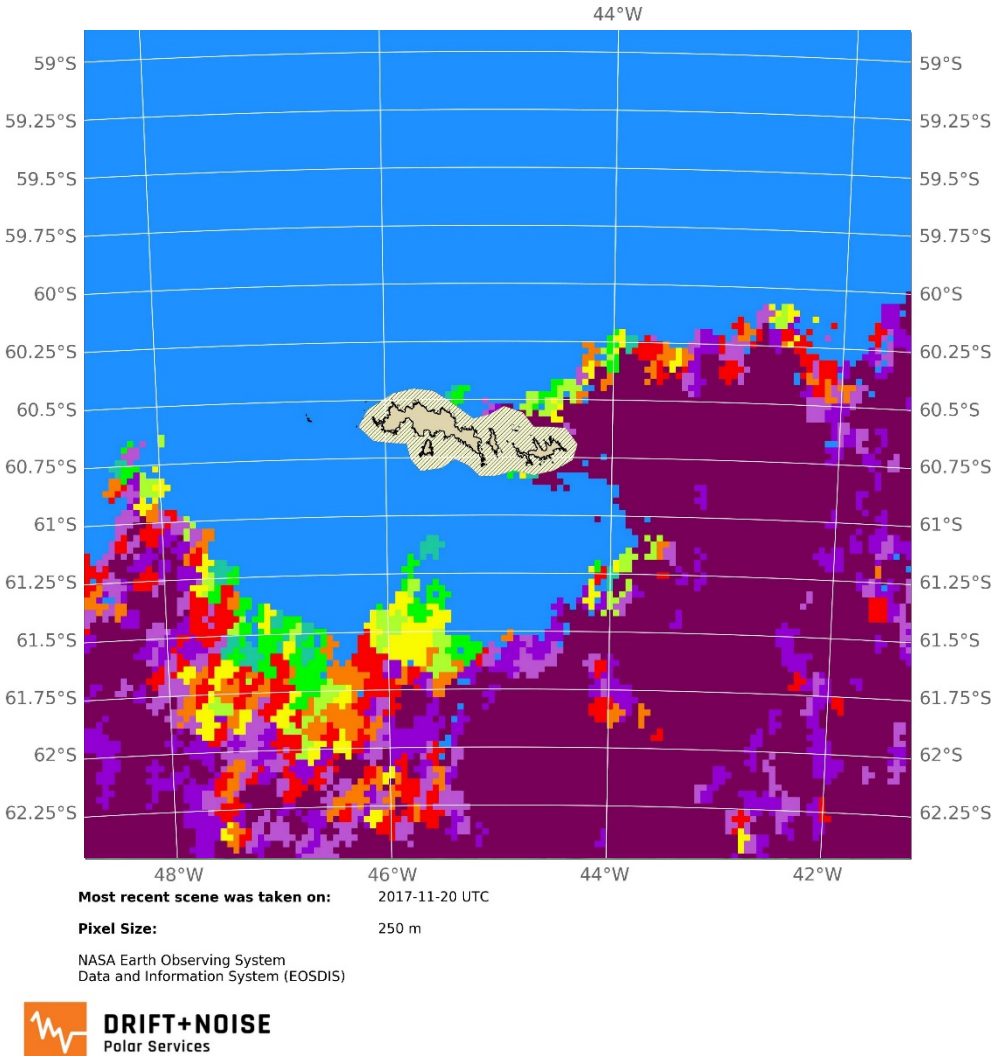
Luxspace (AIS)
DLR: CODE-DE
DLR: Bremen & NS
EUSI
Signalis
NV-Verlag
BSH
Hapag-Lloyd Cruises

CODE DE

DLR

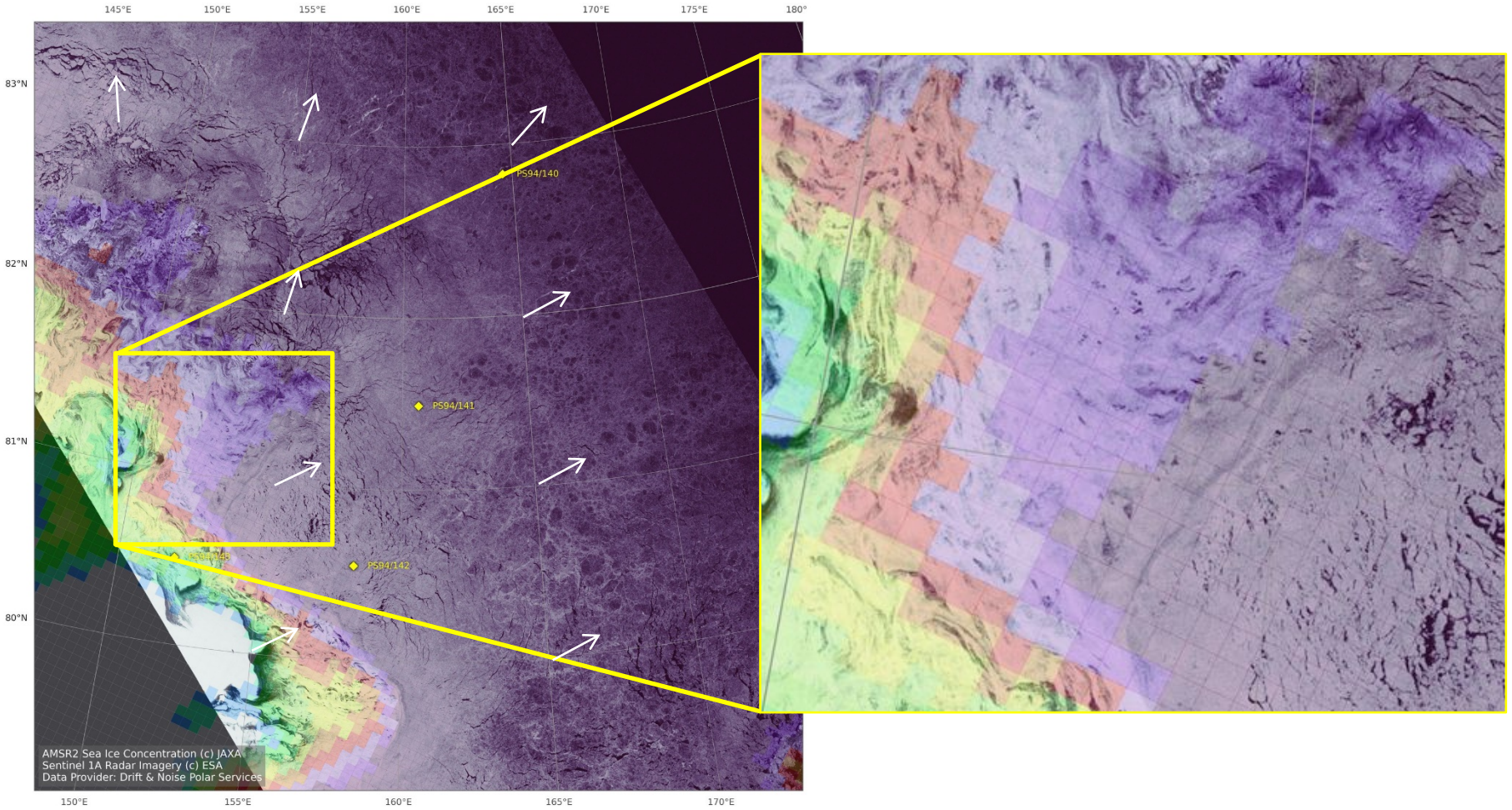
Operational Ice Maps – Arctic and Antarctic

No extra software / hardware needed



Bringing Light into the Data Jungle

Merged Products



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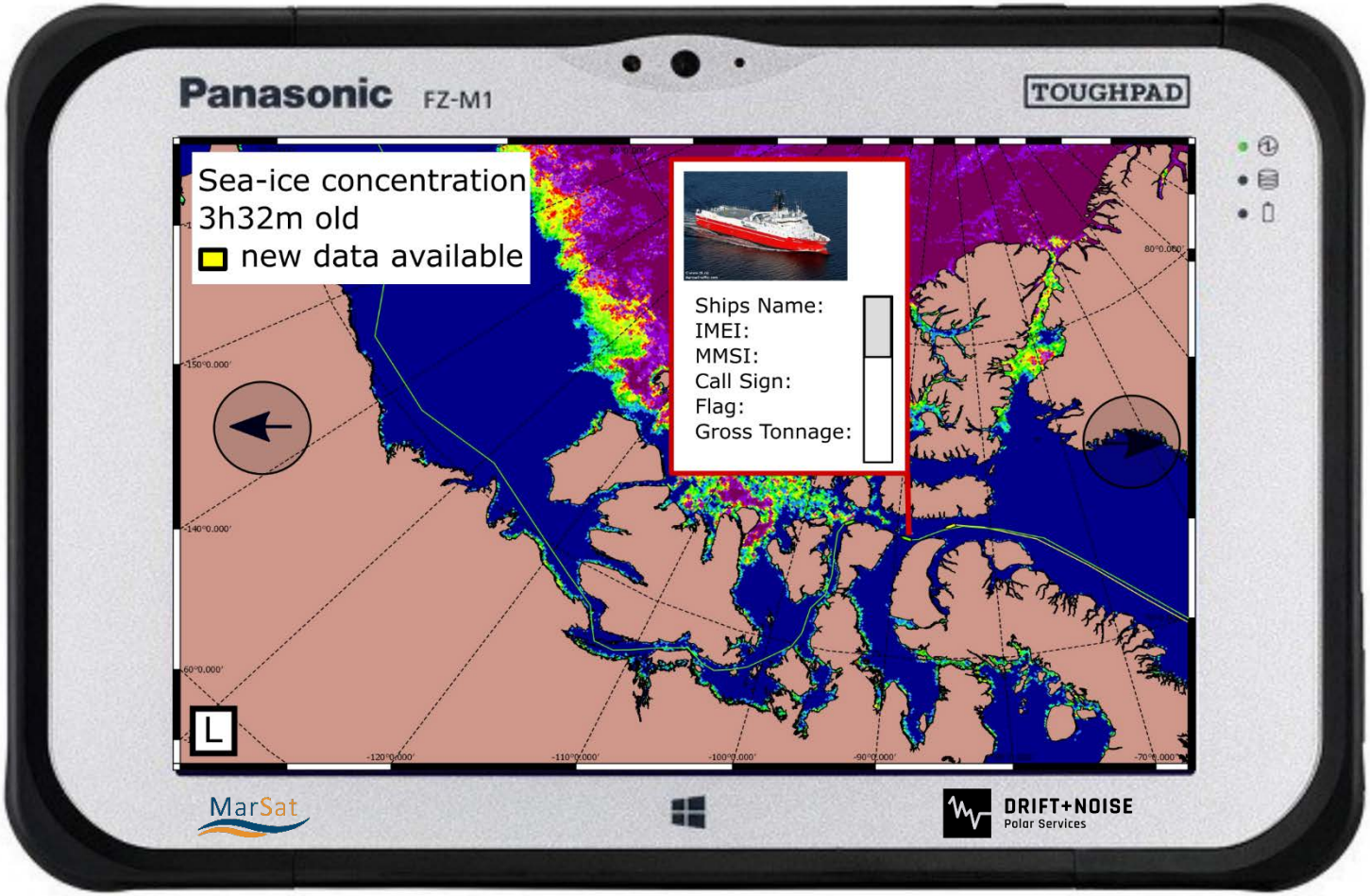
Bringing Light into the Data Jungle

The Ice Pad

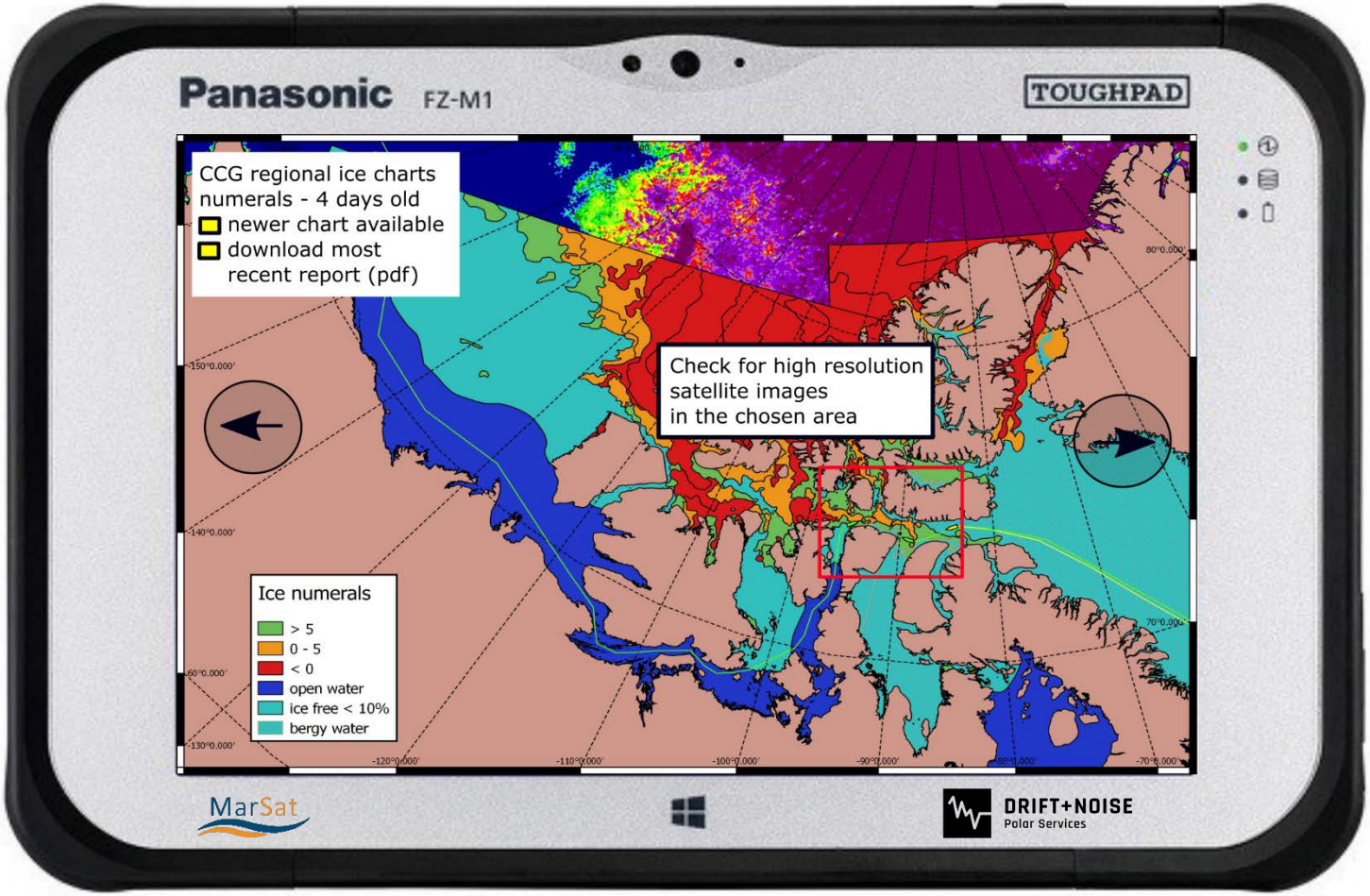
Bringing Light into the Data Jungle

The Ice Pad



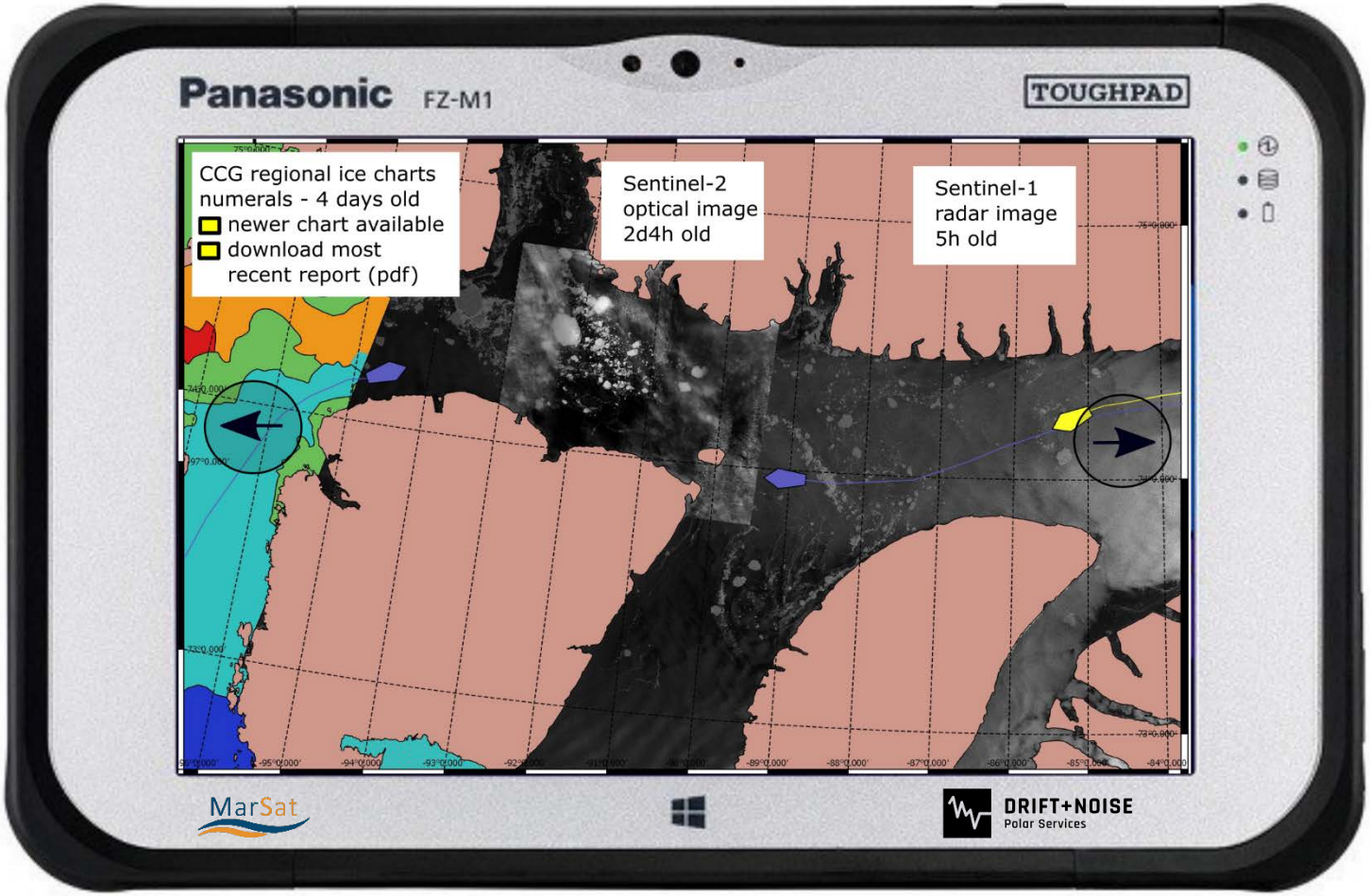
Bringing Light into the Data Jungle

The Ice Pad



Bringing Light into the Data Jungle

The Ice Pad



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Do you know where to go?
To ice-maps.com