EfficienSea2's Road to Impact

19th PA Safe Steering Committee meeting

06/11/2018

Bjørn Borbye Pedersen, Director, e-Navigation, Danish Maritime Authority

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EFFICIENSEA 2.0 GETTING CONNECTED

GETTING CONNECTED FOR EFFICIENT, SAFE AND SUSTAINABLE TRAFFIC AT SEA

Today

EFFICIENSEA 2.0 GETTING CONNECTED

1

Four stepping stones for impact

Standardised end user serices

Communication channels

Platforms for services

Maritime Connectivity Platform

PRESENT

FUTURE

The Background

3 years

€11,5 M

32 partners

Baltic/Arctic

15 digital services

Navigational Warnings - Smart Bouys

Nautical Charts – Weather forecast

VTS reporting - M2M port reporting

SAR - Ice Charts

Under keel clearance - SOx Monitoring

Standardised
end user serices

NX-500
SAR
PAPER
LOCK
POWER
DIM
MENU
ENT
REJECT
ACCEPT

BalticWeb Maps Traffic Satellite Info

20 nm

55° 56.12'N - 013° 16.46'E

Region Nordjylland
Aalborg
Hallands län
Halmstad
Randers
Region Midtjylland
Aarhus
Helsingborg
Horsens
Region Hovedstaden
Skåne lä
Vejle
København
Malmö
Sjælland
BELTREP
Kolding
Region Sjælland
Region Syddanmark
Odense
Fyn
Falsterbohalvöns havsområde

NW-NM 20 | No-Go | Satellite

Navigationel Warnings and Notices to Mariners

- [ ] Danish TEST NW and NM T&P Service
- [x] Danish NW and NM T&P Service

Denmark - The Baltic Sea

- Denmark. The Baltic Sea. EK D 395 Raghammer. Firing exercises. Warning.
- Denmark. The Baltic Sea. Bornholm. Raghammer Odde. Buoy missing.

Denmark - The Waters South of Zealand

- Denmark. The Waters South of Zealand. Boegestroem. Buoy missing.
- NW-018-18 Denmark. The Waters South of Zealand. Omø E. Yellow-black buoy

Denmark - The Great Belt

- NW-090-17 Denmark. The Great Belt. Oesterrenden. Reduced depth.
- NW-092-17 Denmark. The Great Belt. Oesterrenden. Reduced depth.

Denmark - Waters South of Funen

- NW-016-18 Denmark. Waters South of Funen. Højestene Løb. Light unlit.

Denmark - Kattegat

- Denmark. Kattegat. Roskilde Fiord. Frederikssund. Buoy off station.
- Denmark. Kattegat. EK R 18 Jaegerspris. Firing exercises. Warning.
- Denmark. Kattegat. 11 Bredetved. Firing exercises. Warning.
- Denmark. Kattegat. EK R 19 MULTEX. Firing exercises. Warning.

User Platforms

User friendly interfaces – human or machine

Platforms for services

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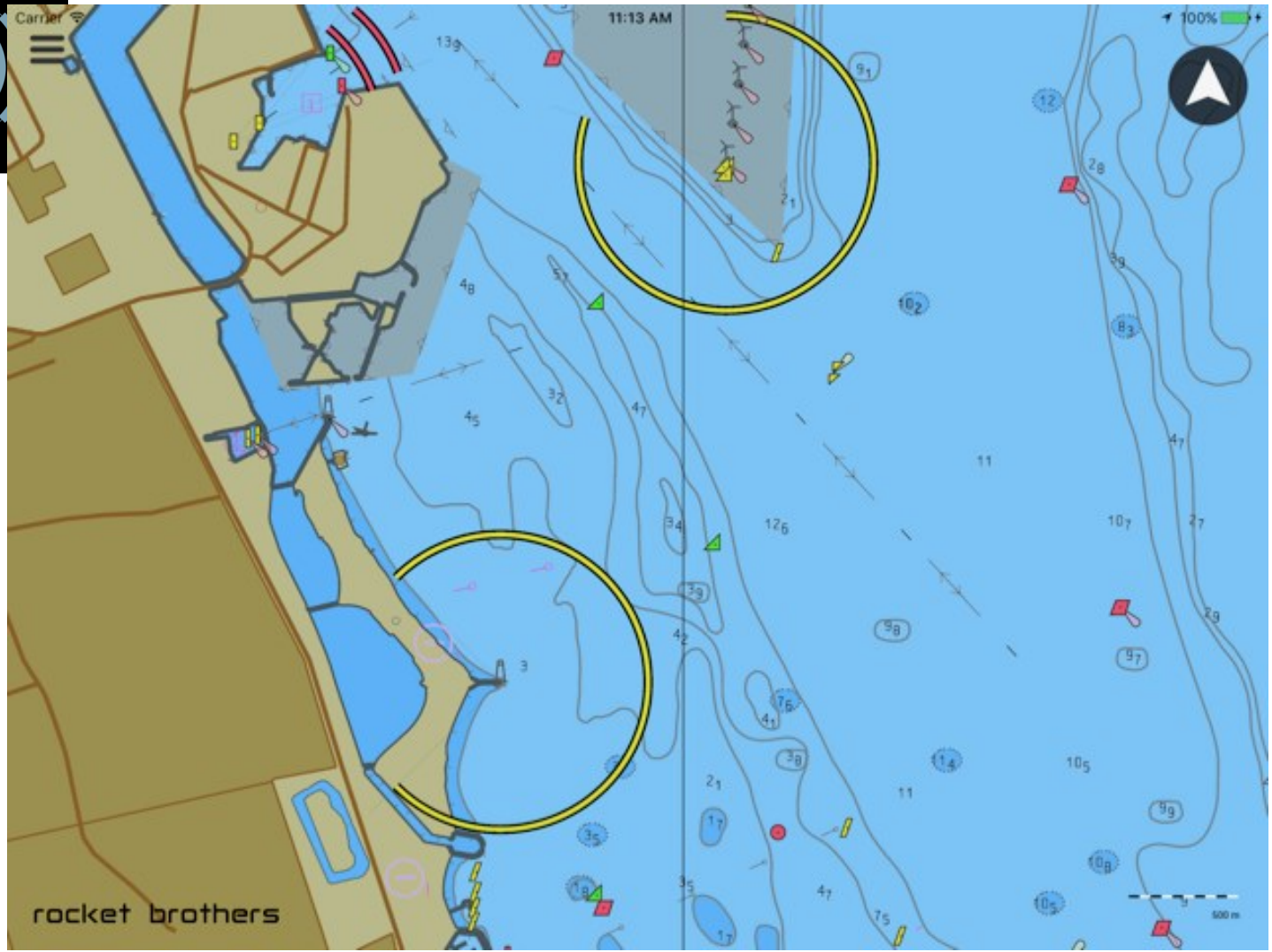
EFFICIENSEA 2.0 GETTING CONNECTED

S-101



EFFICIENSEA 2.0 GETTING CONNECTED

On board equipment

TRANSAS

FURUNO

Distribution and Trust in Data

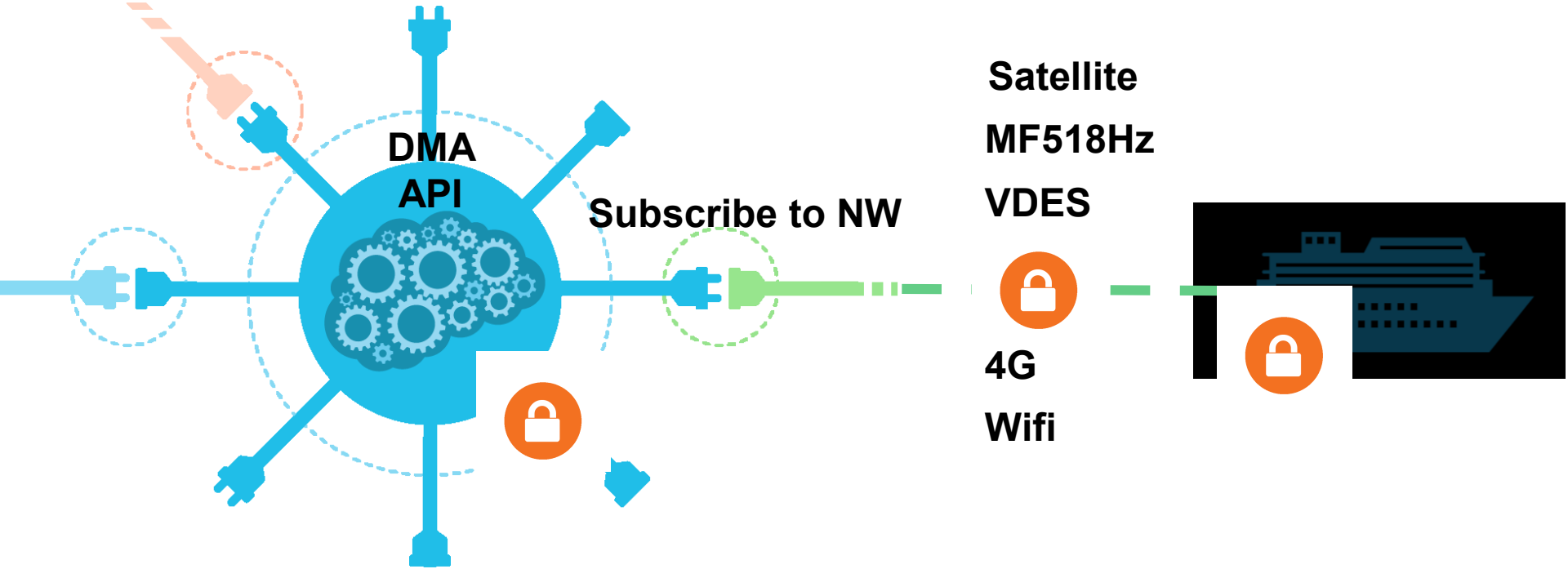
Maritime Connectivity Platform

How do we distribute our data?

How do the users find/discover the data?

How can we trust data?

How can we keep the cost of distribution and use of data low?


DMA
API
Subscribe to NW
Satellite
MF518Hz
VDES
4G
Wifi

Maritime Connectivity Platform

Co-created with

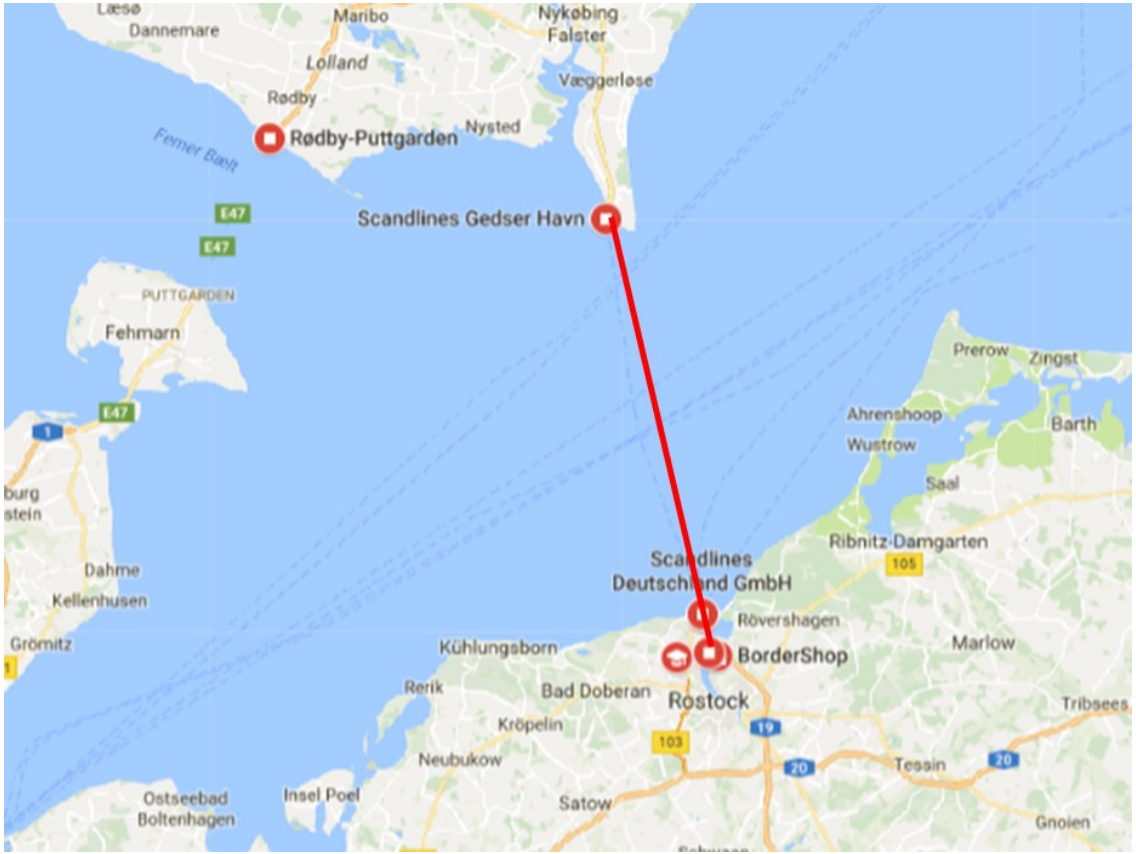
Efficient use of communication channels

Seamless roaming

Onboard Architecture

VDES

VDES sea trial



Drivers on the road to impact

Technology demonstrated

Standards and regulation

Standards key to global impact

1921
IHB MONACO BHI

WORLD CUSTOMS ORGANIZATION
ORGANISATION MONDIALE DES DOUANES

ISO

IMO

IALA

IEC

WORLD
METEOROLOGICAL
ORGANIZATION

ITU International Telecommunication Union

International Telecommunication Union

X.509 Open Systems Interconnection

OpenID Connect

Drivers on the road to impact

Technology demonstrated

Standards and regulation

Adoption of tech and standards

Adoption of tech and standards

32 individual plans for exploitation

Operation and business benefits

Open source code

Drivers on the r

Technology demonstrated

Standards and regulation

Adoption of tech and standards

Continued collaboration

Invitation to further discussion

international

e-Navigation

underway 2019

Efficiensea2.org