

Национальная
технологическая инициатива

Пространство возможного

3G / 4G mobile communication and broadband access technology in sea-based conditions

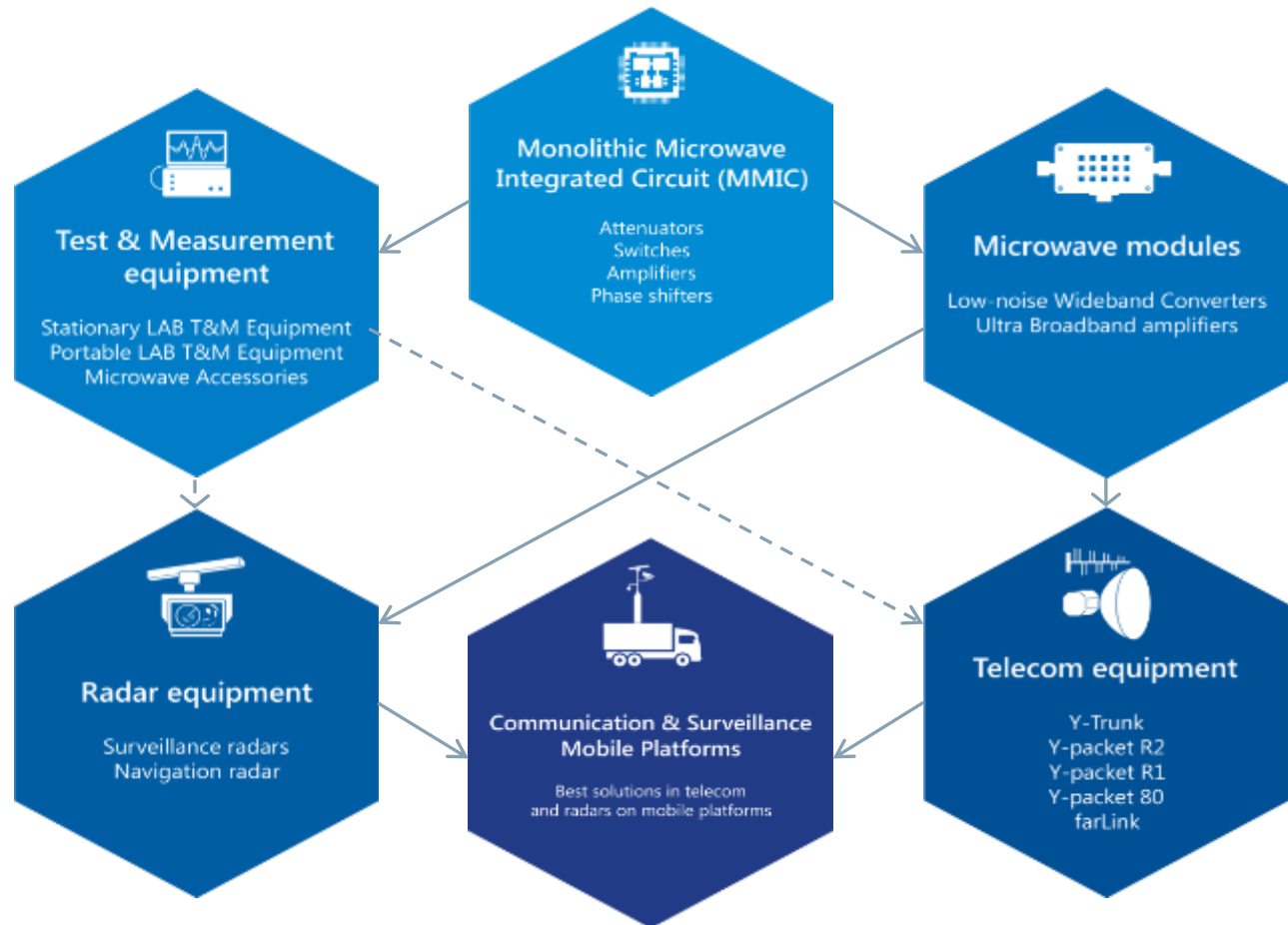
Dmitry Galkin

Micran JSC

Micran – leader of Russian radio electronics market since 1991

- Full private company
- Employees: 1600+ (R&D engineers: 350+)
- Production area 28 000+ sq. m.

- ✓ **Microelectronics**
(GaAs and GaN MMIC, Design center)
- ✓ **Telecommunications**
(Radio-relay equipment, broadband access)
- ✓ **Radar**
(navigation radars, surveillance and security systems)
- ✓ **Microwave devices**
(Microwave modules up to 60 GHz)
- ✓ **Test and measurement equipment**
(Lab equip up to 50 GHz, MW accessories)
- ✓ **Communication and surveillance mobile platforms**



Micran is №1 in Russia in radio-relay equipment R&D and production



**Low-channel radio
(150 & 400 MHz)**



**High-speed trunk (All-indoor / split mode) radio
(4-15 GHz)**



**Ultrahigh-speed radio Y-packet
(6-38 GHz)**

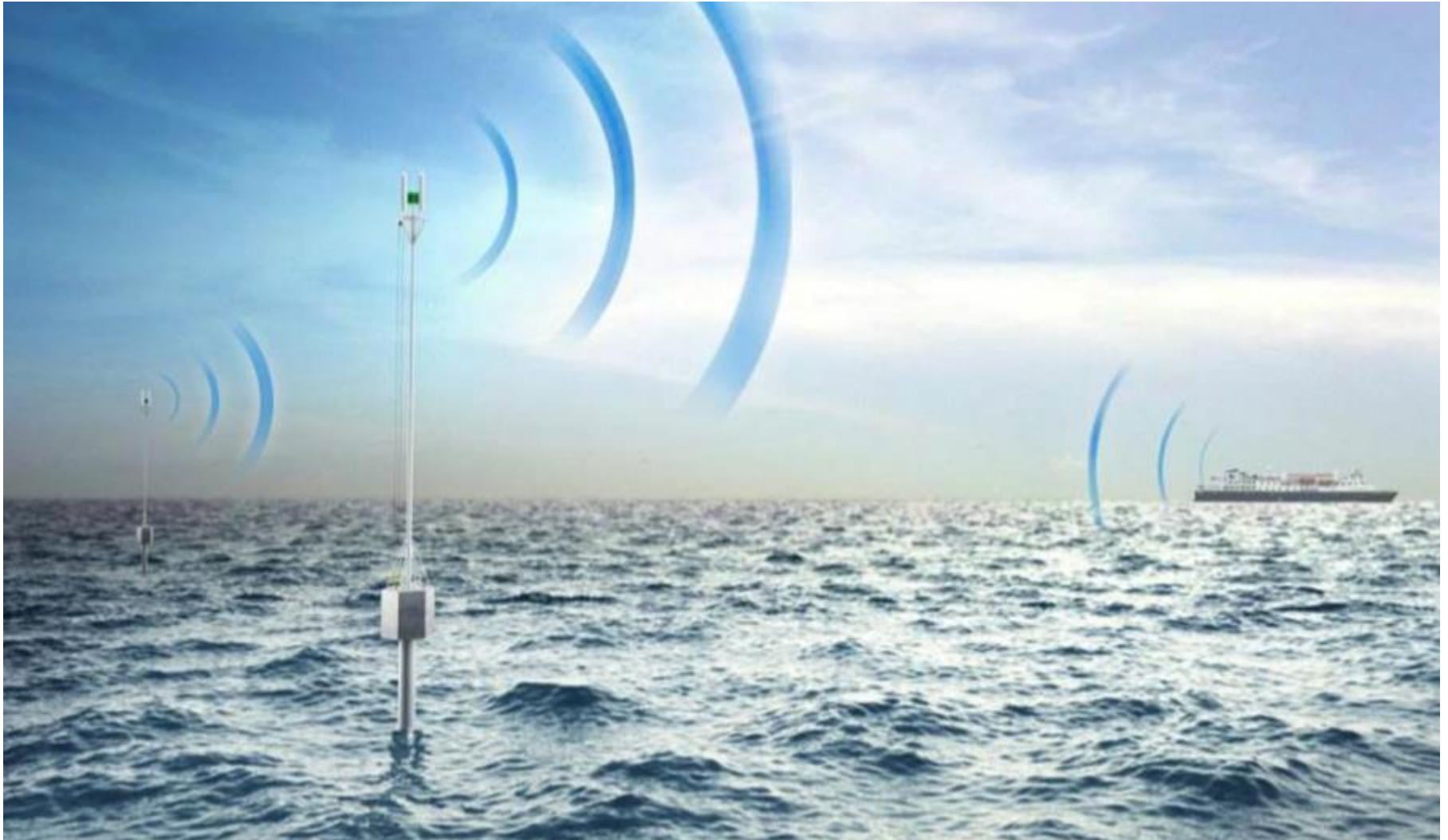


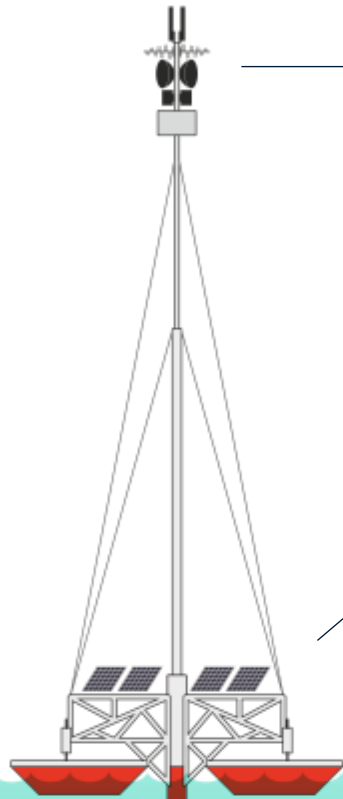
**Wireless broadband access
WiMIC-6000 (5,9 - 6,4 GHz)**



Special-purpose equipment

Creation of an accurate model of the future information and communication network, capable of satisfying the need of MariNET market participants to use 3G / 4G traffic on the high seas.





Telecommunication complex
(4G / broadband, transport network,
communications with UAV / boeboat)

Autonomous power supply
(Solar panels, wave generator, UPS)

Measuring equipment
(Weather station, sensors, wavegraph,
thermistor chain, seismic station)

45 meters

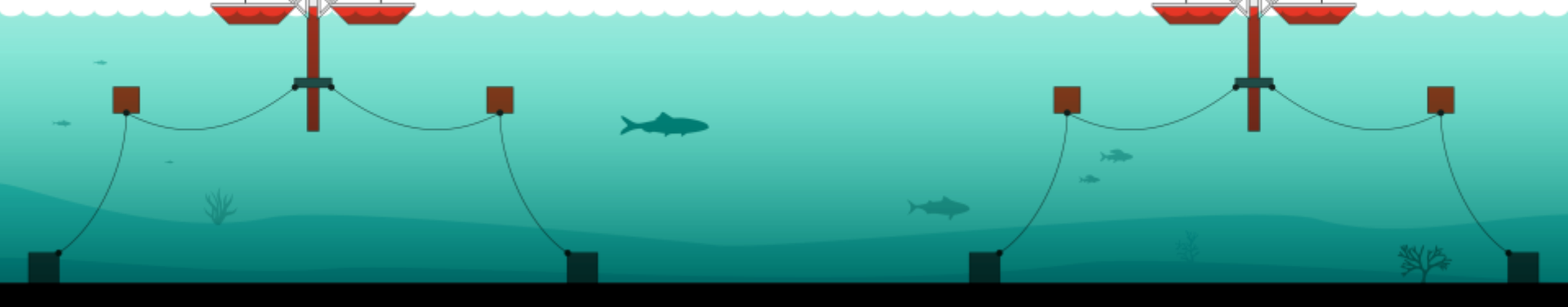
height of the complex

100+ tons

mass of the complex

up to 100 Mbps

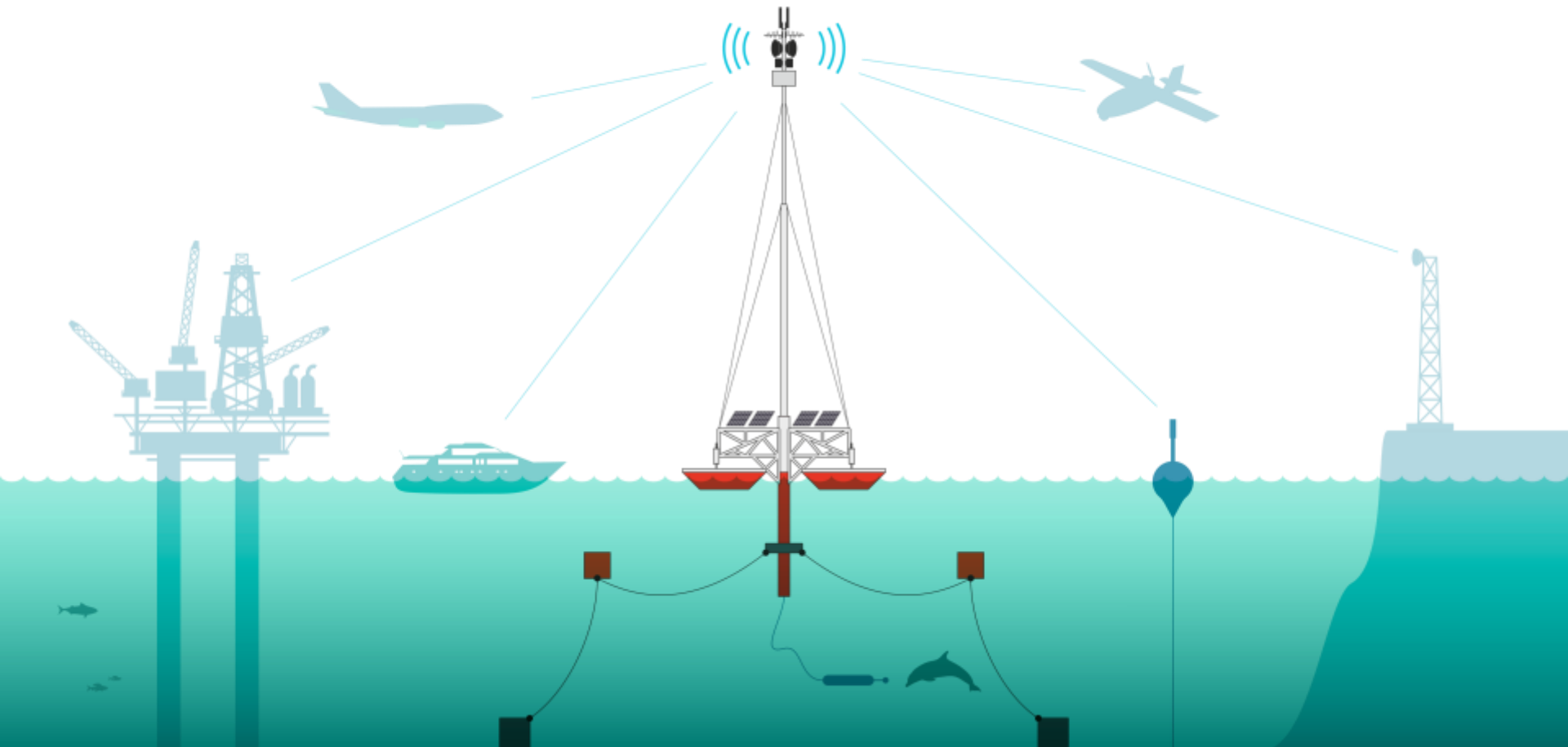
capacity



Integration

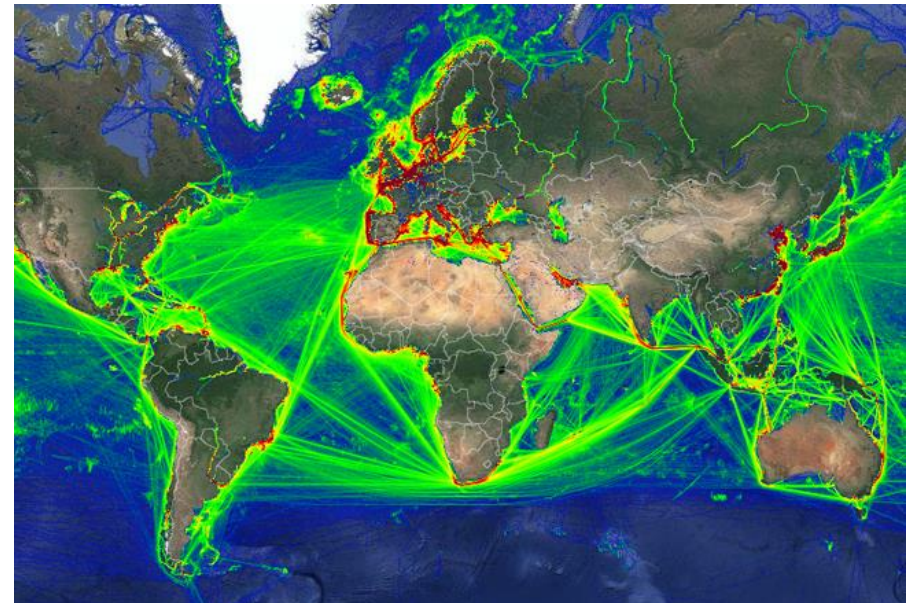
Big Data traffic

Platform project

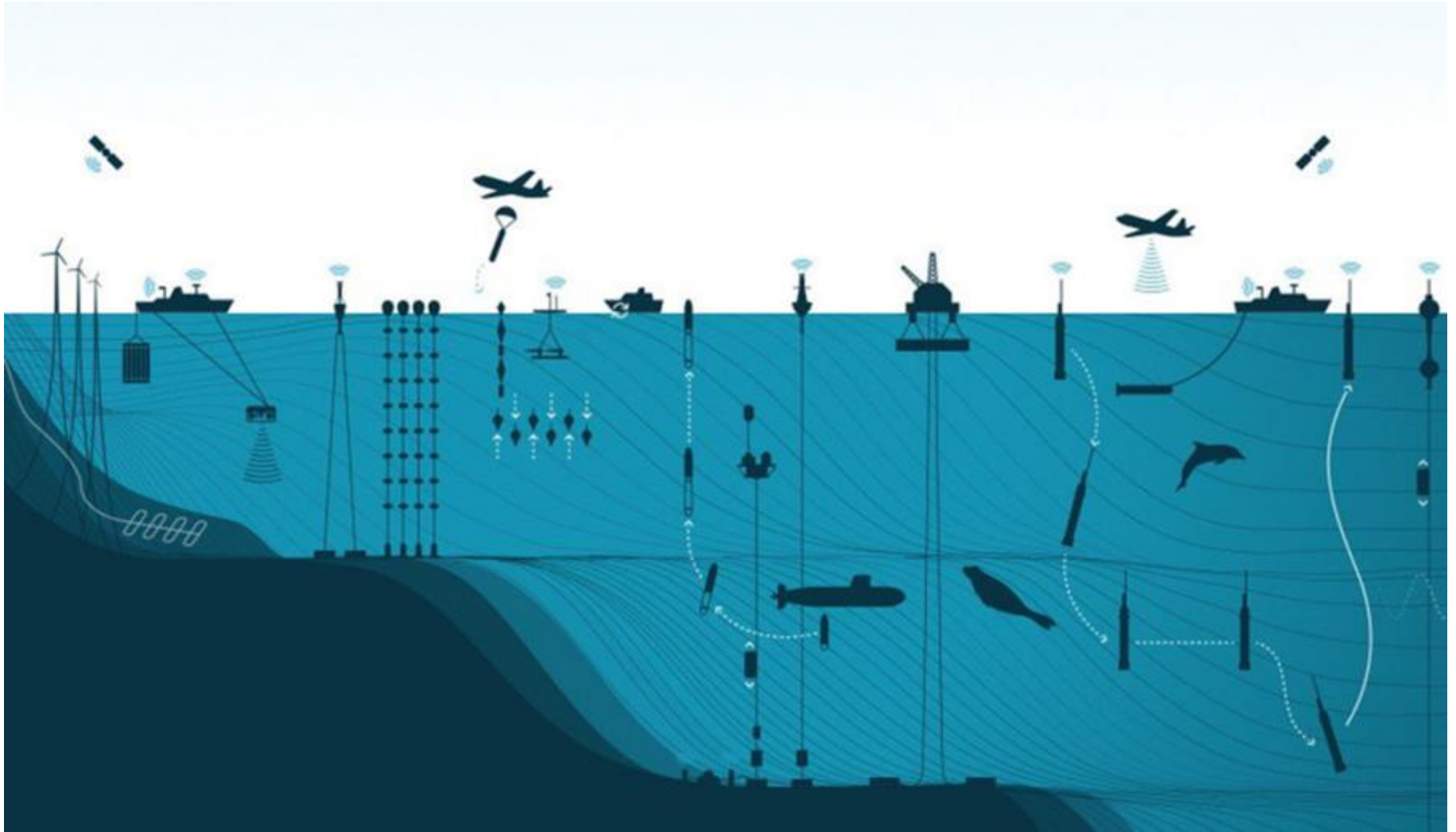


Real MariNET

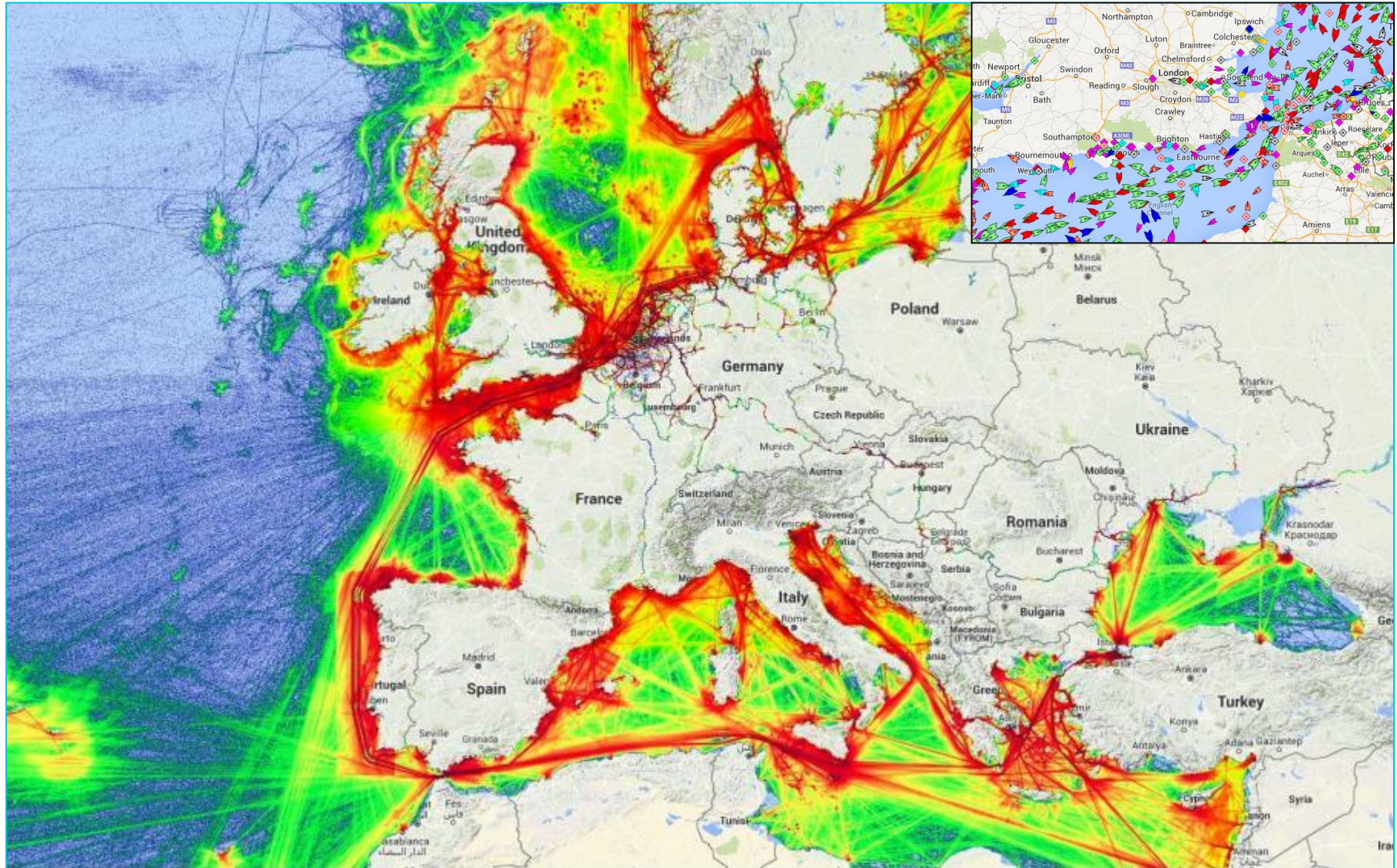
- Owners of information and communication infrastructure of sea basing (operators of communication, departments)
- Users of mobile communication networks, broadband Internet access, located within the range of communication complexes and broadband access (residents and non-residents of states)
- Shipping companies
- Oil and gas companies
- The Navy
- Corporations and departments



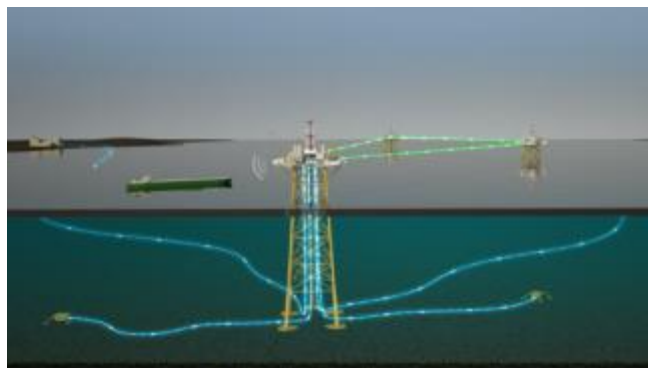
Big data of the world ocean



The main sea passenger and cargo traffic is carried out in the coastal zone



Since 2013, the provider of offshore communication services Tampnet (Norway) provides 4G wireless communication in the open sea with its network of base stations located on offshore fixed platforms in the North Sea.



Autonomy of energy supply



Projects on renewable energy sources of ocean and offshore energy

Instability and swinging mast



Competencies in the field of design of stabilized platforms.

Loss of signal in conditions of rolling, humidity, precipitation



Competence in the development of wireless communication systems and broadband access

MariNet



Thank you!

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