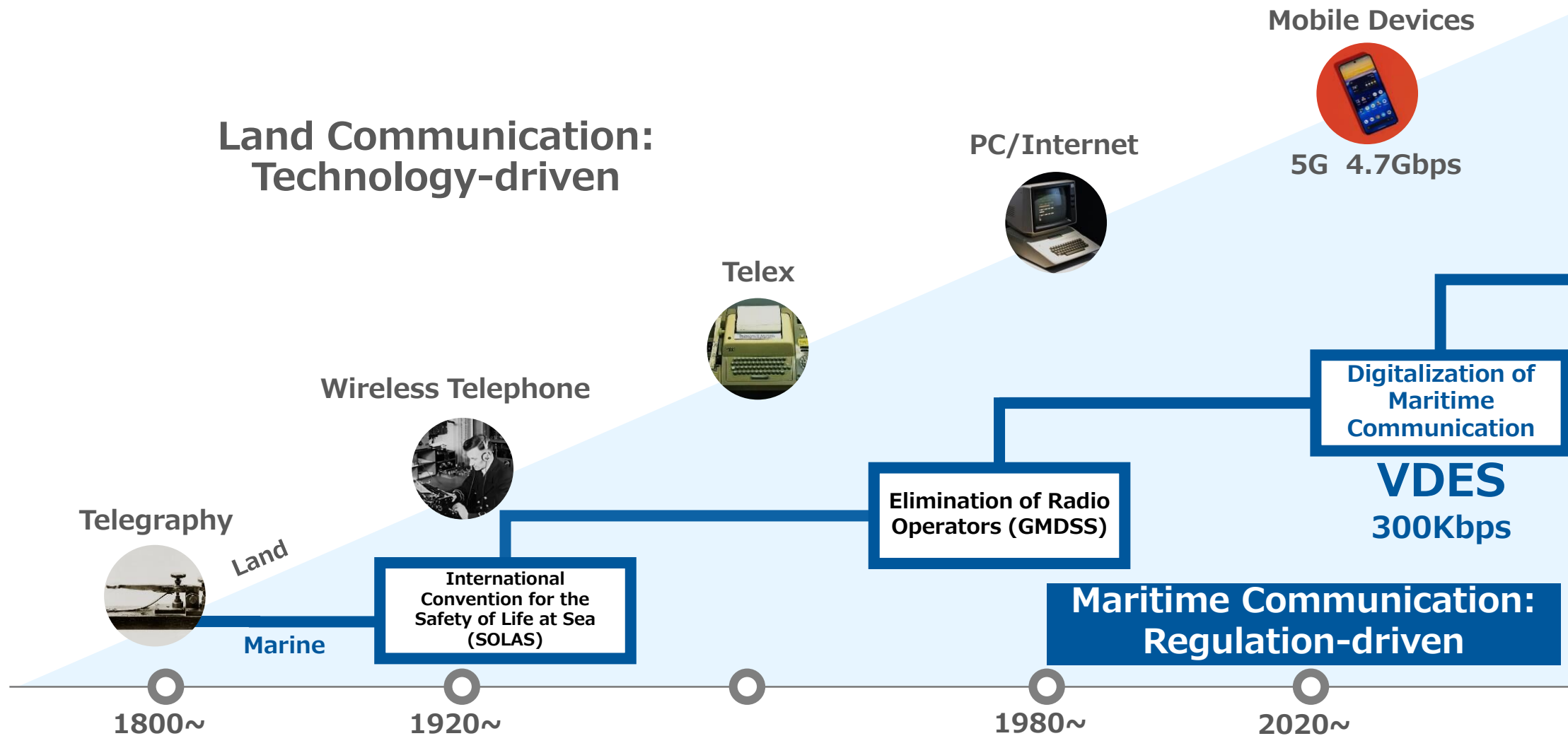


Emergence of VDES



After more than 40 years of regulatory delays, a new maritime communication standard has emerged.



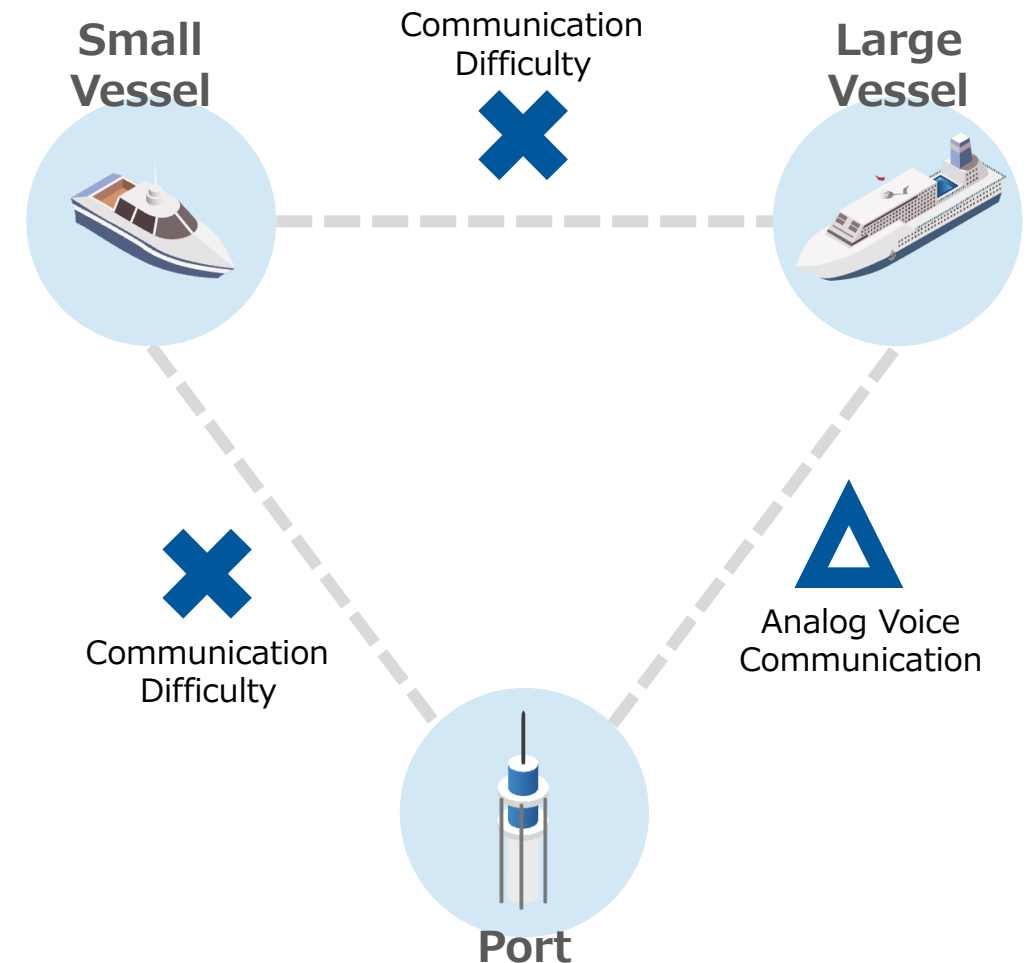


▼ Issue:

Absence of Common Communication Platform

- ✓ Small ships and large ships cannot communicate.
- ✓ The port is unable to monitor the movement of small vessels.
- ✓ Large vessels and ports still communicate via analogue voice, and a human error occurs.

Establishing digital communication infrastructure and services suitable for maritime use is essential.

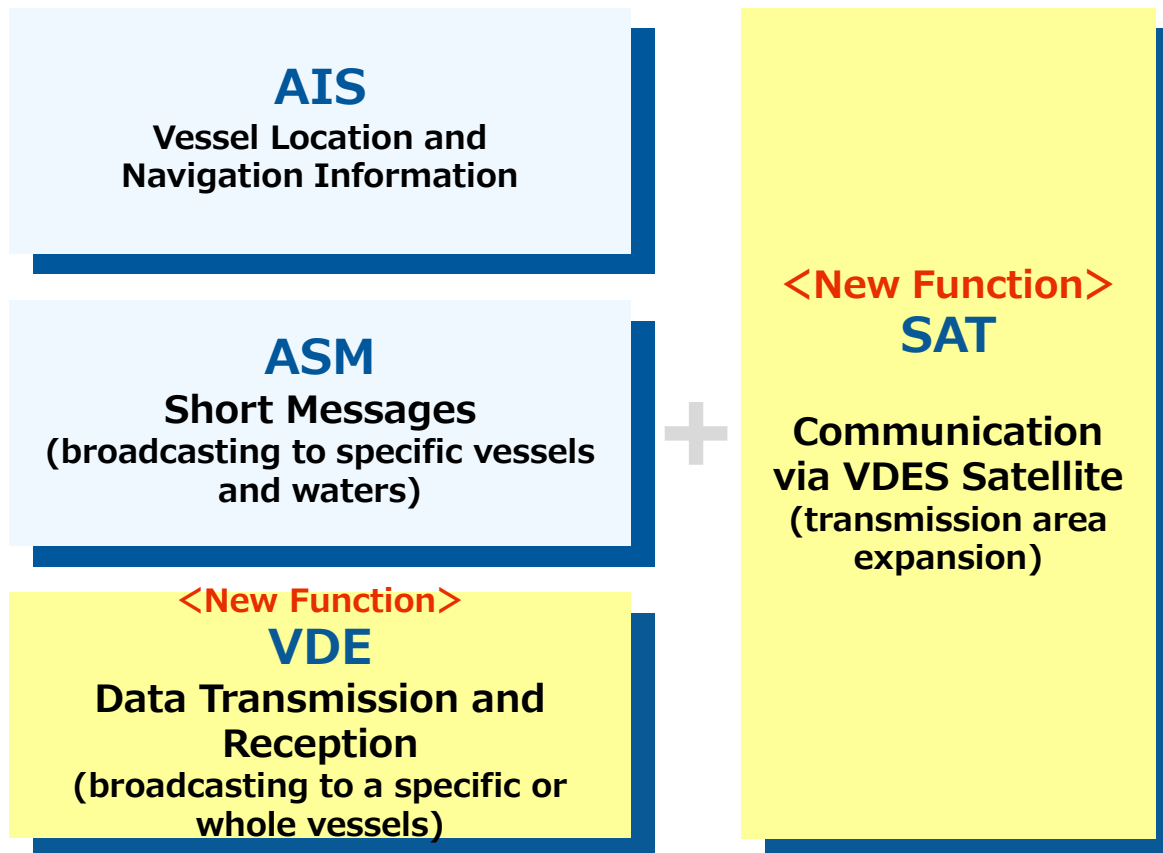


Next-Generation Maritime Communication and its Challenges



VDES (VHF Data Exchange System) is a **legitimate communication system** for marine mobility. It is the world's first standardized **digital communication system** for maritime transport, an **extension of the AIS transponder** used by ships. VDES allows the transmission of location information as well as sending and receiving SMS and data.

▼VDESの機能



▼ Issue:

Barriers to Introduction

- ✓ VDES equipment (34-41 thousand USD/unit) and SAT function (10 thousand USD/month) are expensive.
- ✓ Installation and use of radio equipment requires permits and approvals.
- ✓ Standard functions only allow sending and receiving messages.

It is crucial to minimize obstacles for the implementation.



Realization of **Smart Ocean** by integrating VDES and IP

CoastaLink[®]

