

PortNet 2

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Background

- | The first PortNet version came into production in 1993 – technically rather different than now
- | The present PortNet system has been in every day production since the beginning of year 2000
- | The use is “mandatory” by Custom decree
- | Temporary system failures cause massive user response, indicating a high dependence level
- | PortNet handles over 99% of the traffic/cargo from/to Finland
- | More than 1500 registered users and about 1000 daily users

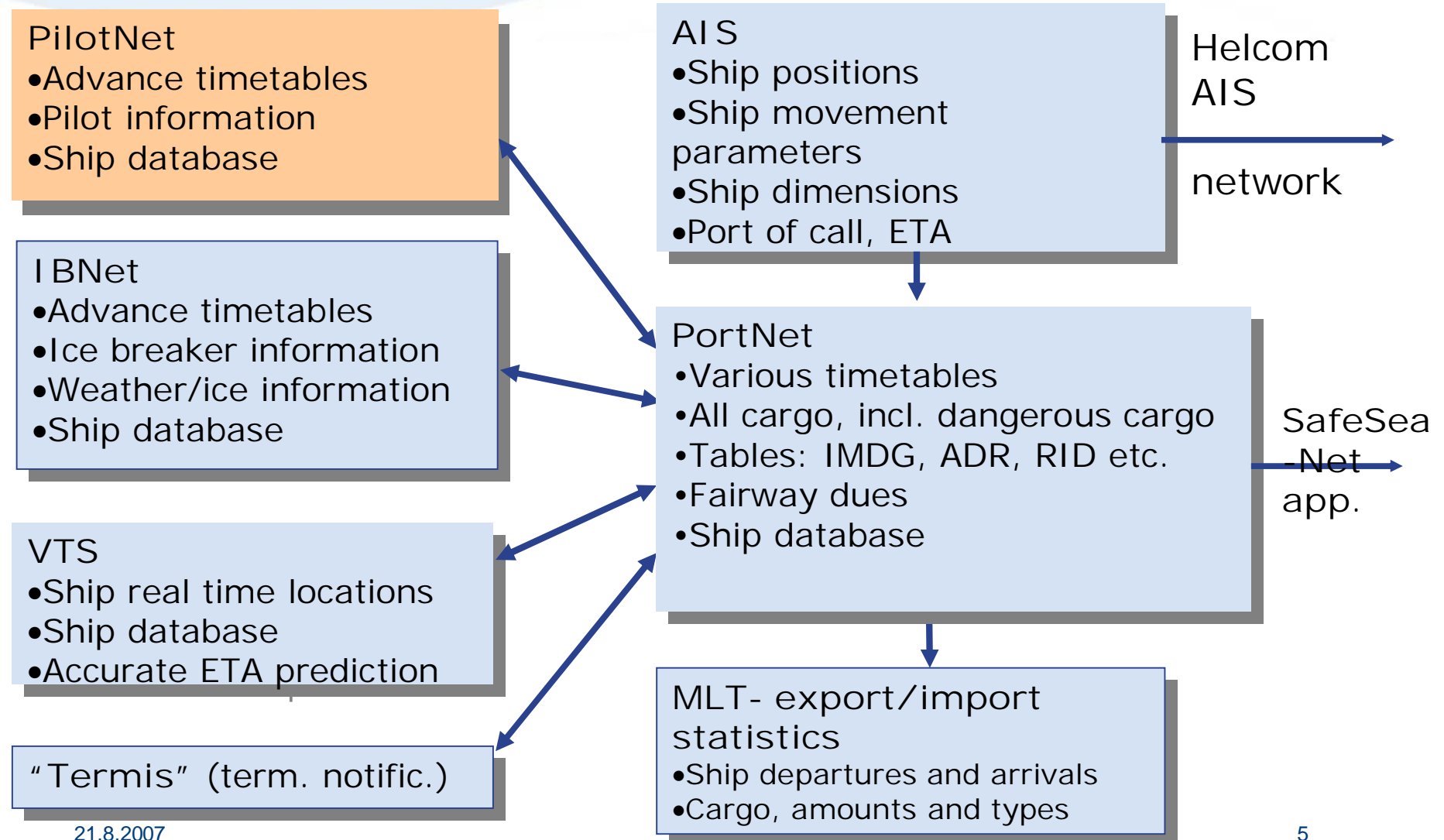
Visions

- | Acquire, identify and track all ships in Finnish waters
- | Set a standard high quality level of interaction between ships and authorities
- | Create a merged maritime traffic image for all authority requirements
- | Create a **single window** application for all maritime authority notices from ships/ship agents supporting one stop shop applications
- | Create supporting services to traffic and logistic customers
- | Support **maritime safety, security, efficiency and environmental protection - simultaneously**

PortNet – strategy

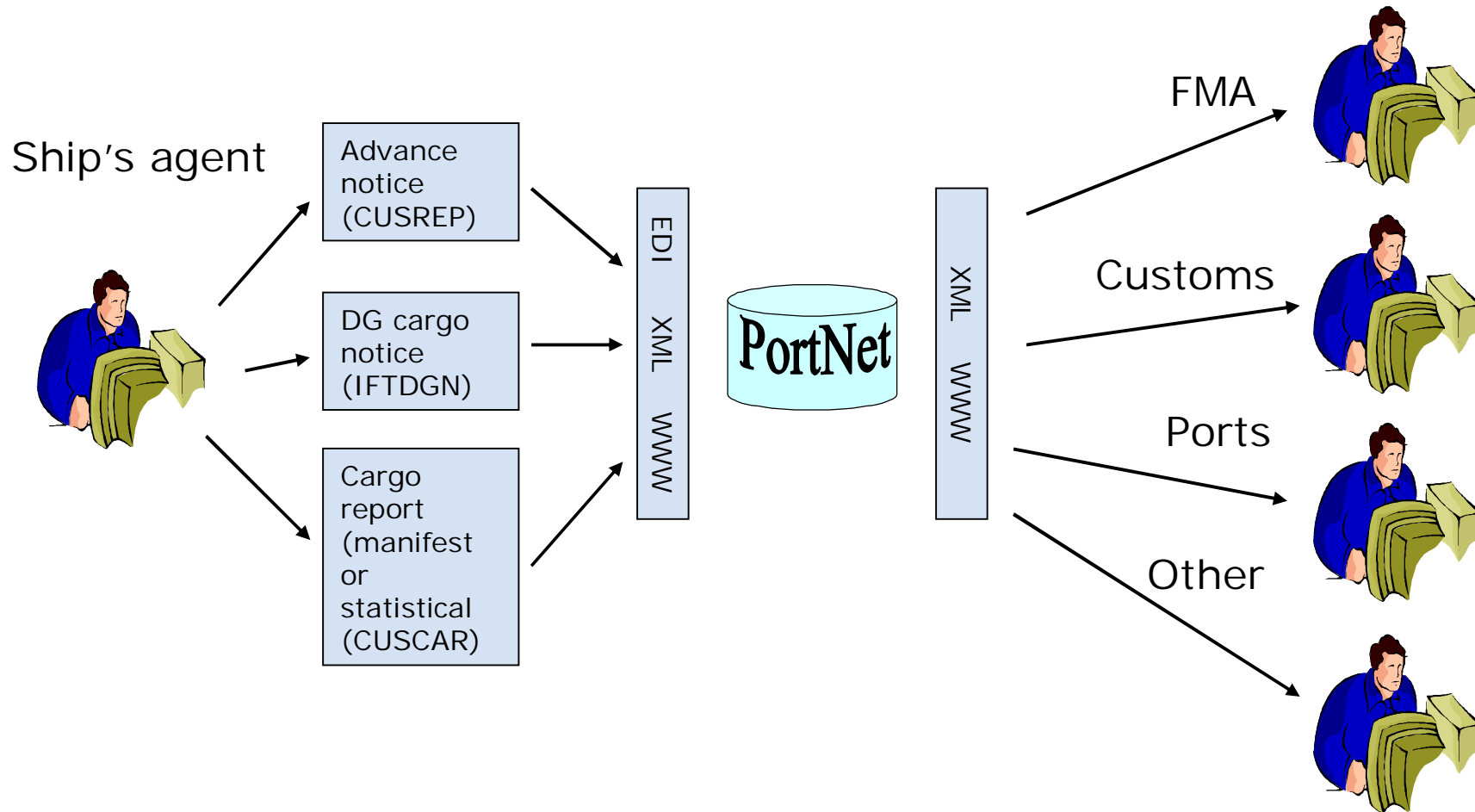
- | Collect all authority notices required at arrival and departure of ships: information in IMO FAL 1-6 forms, custom cargo manifest, ISPS notification – pre-arrival/pre-departure, ETA/ATA, ETD/ATD, DG, nr of passengers, dangerous waste
- | Share data with authorities: FMA, Customs, Environmental Authorities, Coast Guard, Police, Defence Forces
- | Share data with ship agents
- | Share data with SafeSeaNet
- | Design supporting telematic architecture

PortNet Status



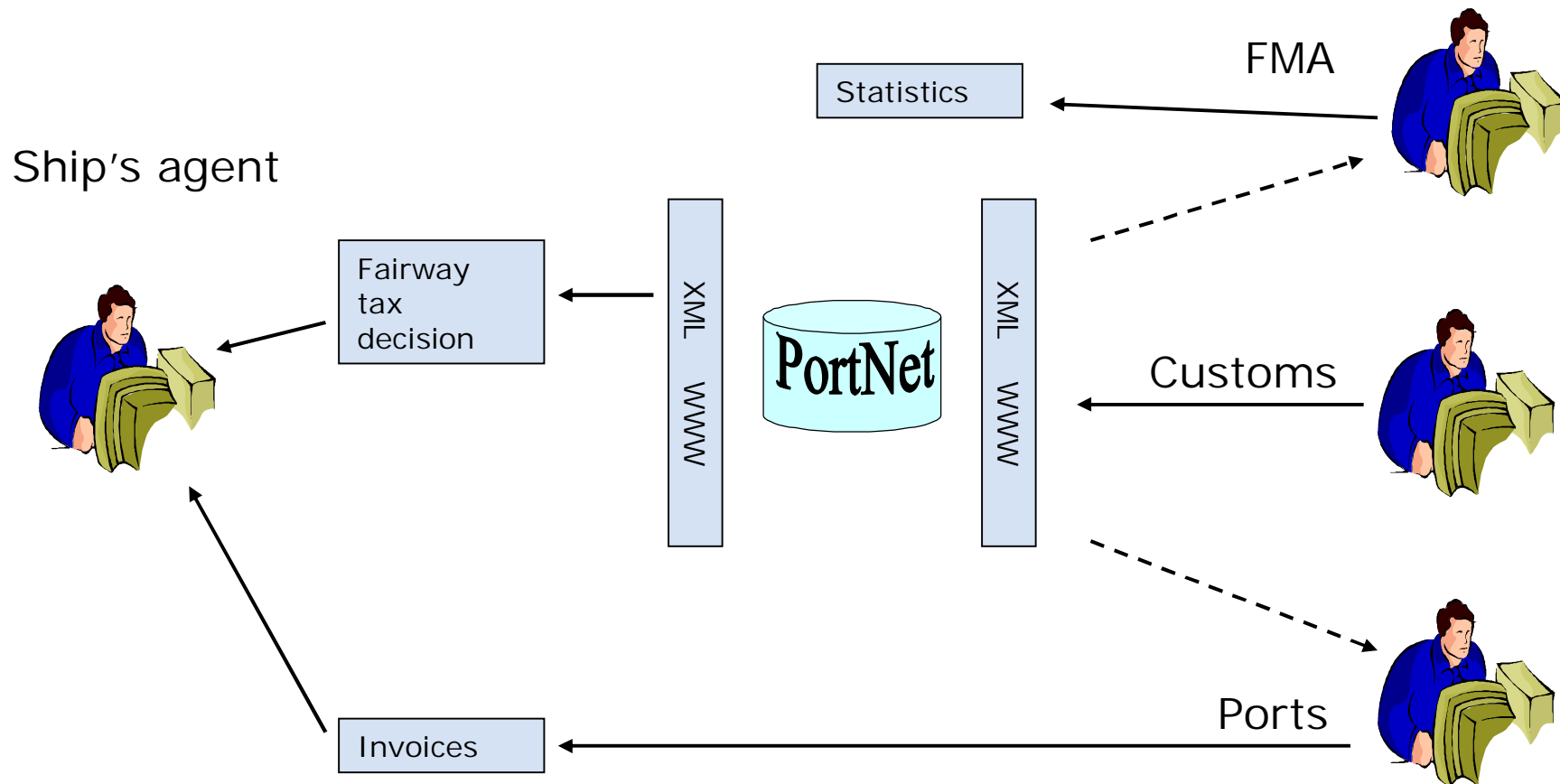
PortNet working principle 1 (2)

Data collection and distribution



PortNet working principle 2(2)

Distribution of decisions and invoicing



PortNet prime success factors

- | Seamless cooperation between authorities, both regarding operational aims as well as financing
- | Supporting legislation
- | No user charges applied
- | High customer satisfaction level
- | Telematic architecture, including incident management
- | And remember:
 - | Success is often the result of taking a misstep in the right direction.
- Al Bernstein

Structure and services 1(4)

- | Advance notice on the arrival of a ship given 24 h before the arrival: EU ship monitoring directive 93/75/EEC, Custom's decree (national) THT 194/2003,
- | Security notice given by the ship before arrival (ISPS): IMO, Finnish law 1.6.2004/485
- | IMO general declaration regarding the arrival of a ship into port (IMO/FAL Form 1): EU Directive 2002/6/EU

Structure and services 2(4)

- | Fairway tax notice as a consequence of the port call: Finnish law on fairway taxes, 2006
- | Cargo declaration notice for arriving or departing cargo attached to the port call (cargo manifest that meets regulations issued by the Custom's concerning the presentation of the cargo to the Customs): EU Customs code (EU) Nr 2913/92

Structure and services 3(4)

- | Notice on the arrival and the departure of dangerous cargo: Regulations from IMO as well as the EU directive 2002/59/EC.
- | Cargo information for official import and export statistics: Finnish law regarding the Maritime Administration, 939/2003
- | PortNet issues a Custom's reference ID code to be carried along throughout the port call

Structure and services 4(4)

- | Terminal notices regarding imports and exports. The notice regarding exports is based upon the Custom's decree THT 182/2004
- | DG notification to the port, enabling the port to issue an official dangerous goods reception permission into that particular port
- | Waste notification regarding ship generated waste: EU Directive 2000/59/EC
- | Many other services available

Reasons for PortNet update

- | Present system was designed for 200 simultaneous users – present usage is about 1000
- | XML file transfer initially played a minor role, now it is the prevalent mode of data transfer
- | System has been updated considerably every year since year 2000, now it is the time to wipe the slate clean and start all over
- | SafeSeaNet has grown into an important issue

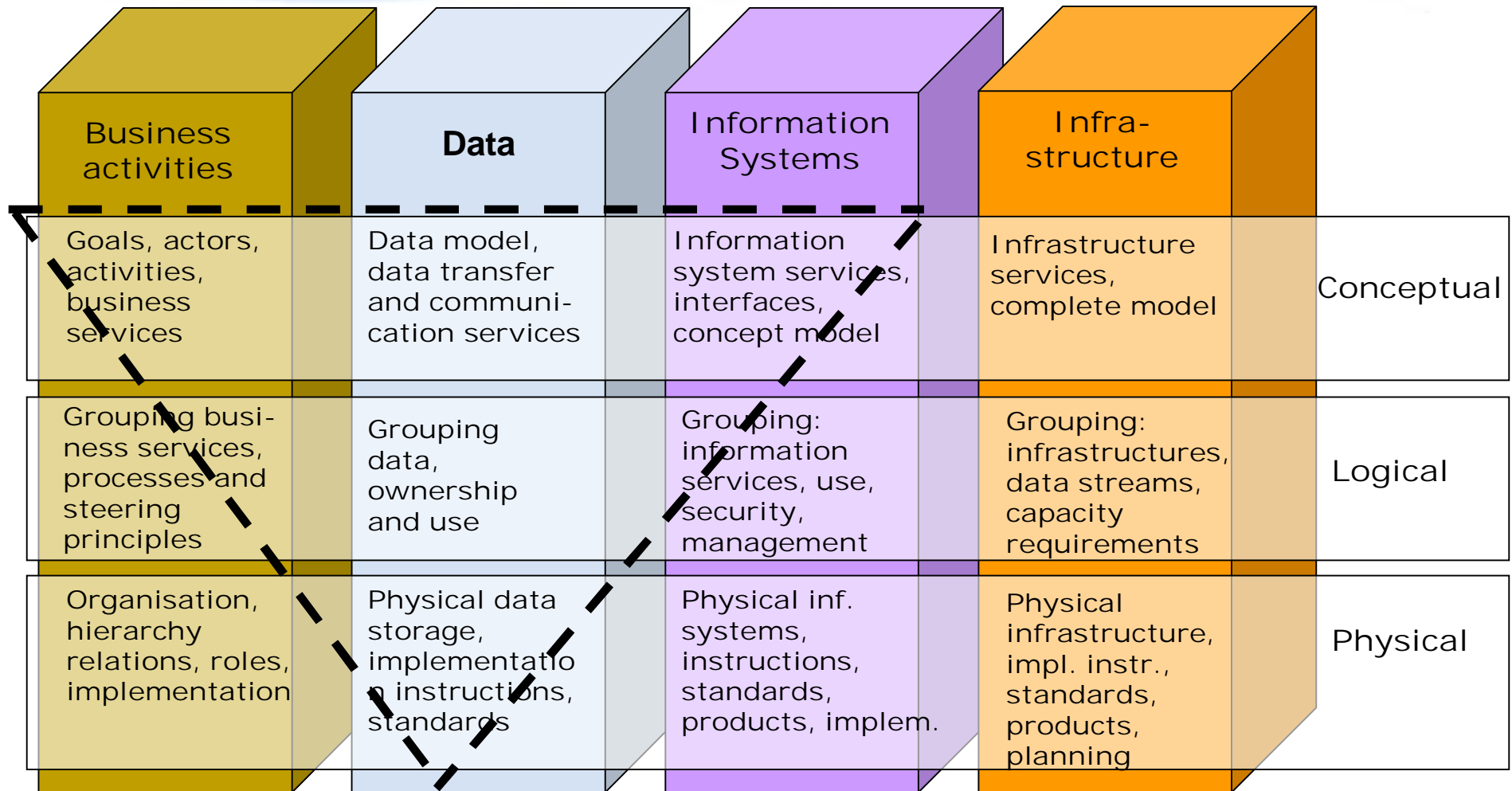
Hot issues

- | The PortNet 2 contract to be signed shortly
- | New features are:
 - | Improved ETA calculation with real time inputs from ship arrival list, real time AIS/VTS data, fairway database
 - | 24 h/365 d support
 - | All required SafeSeaNet features to be introduced
 - | Increased robustness
 - | Terminal notice to be introduced
- | BaSIM Collaboration projects to be implemented with at least Lübeck and Stockholm

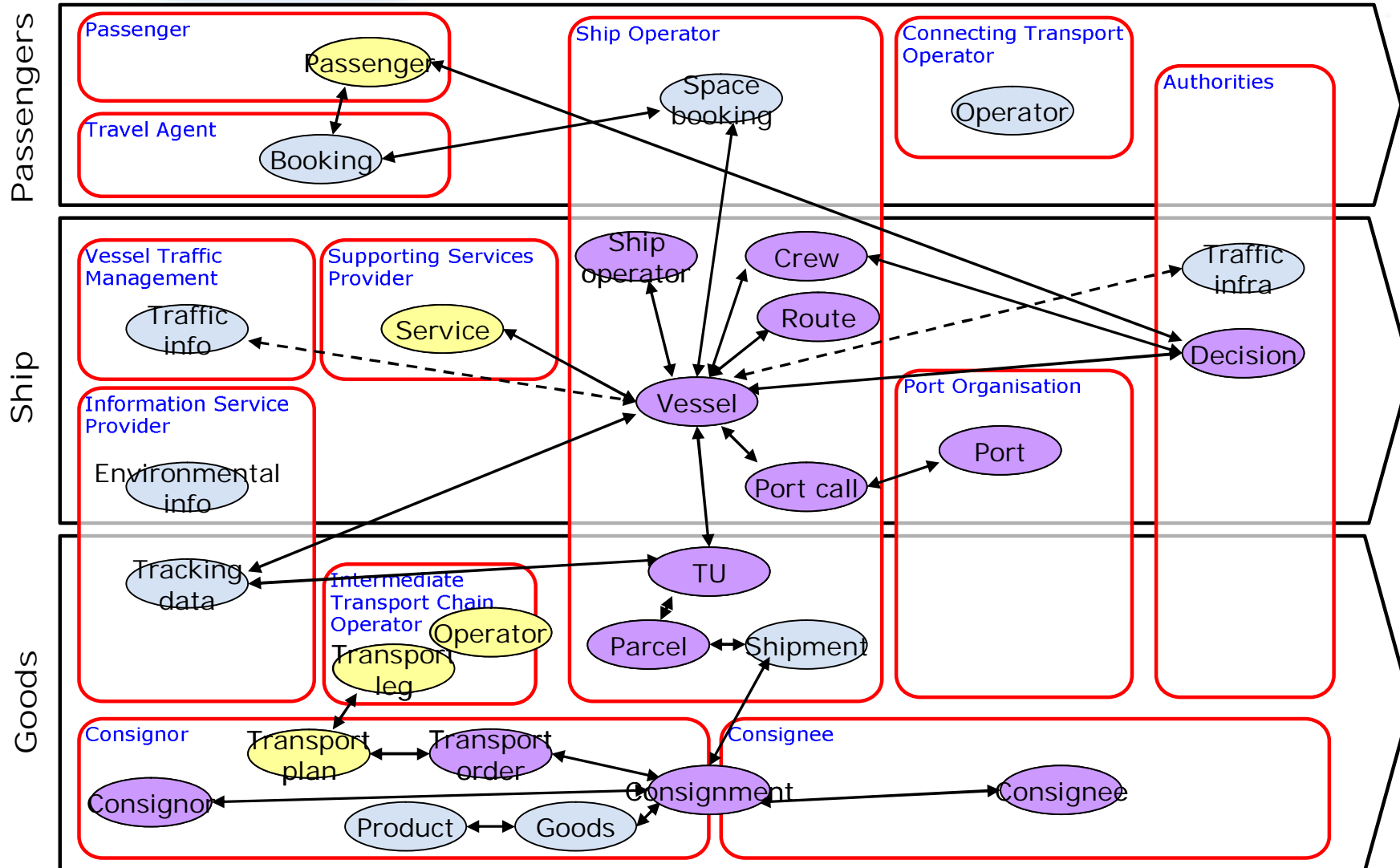
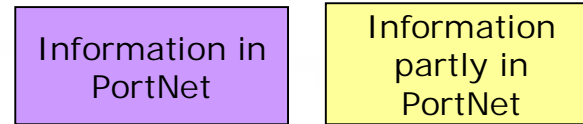
MeriArkki – the Finnish maritime telematic architecture

- | The benefits of using telematic architectures as a basis for system development have generally not been realised
- | FMA has developed a national maritime telematic architecture to support all telematic development
- | Contains all actors, functions, interactions, parameters etc.
- | An incident management architecture has been added later
- | A collaboration architecture for use *between* BS countries is under development developed within the EU BaSIM project

Architecture description level



Information covered by PortNet

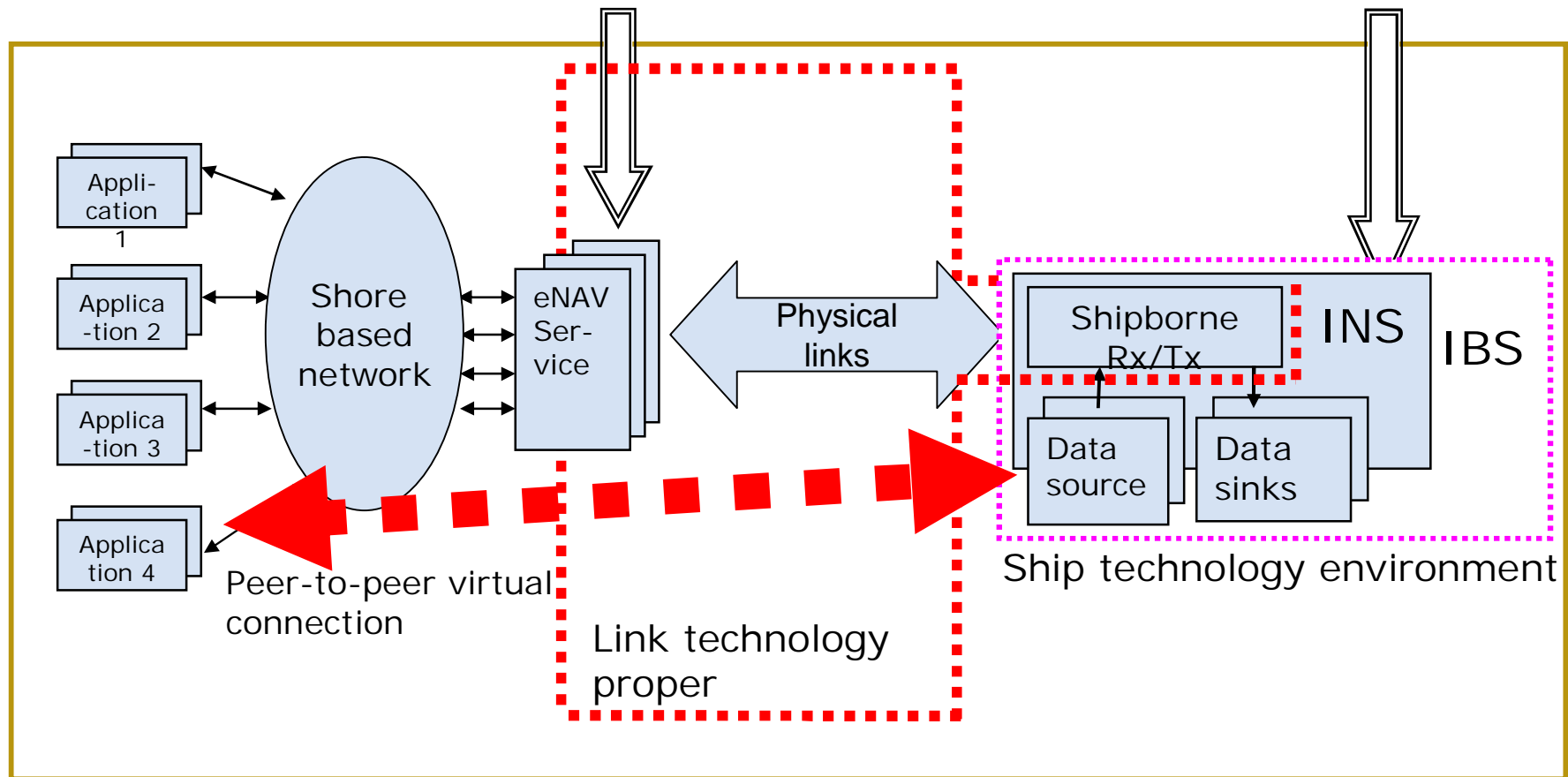


New challenges

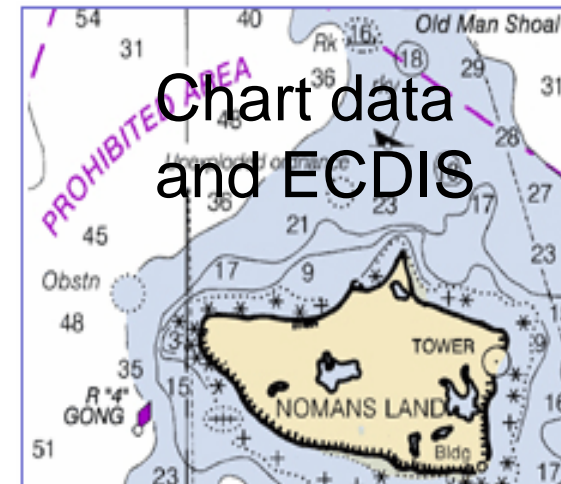
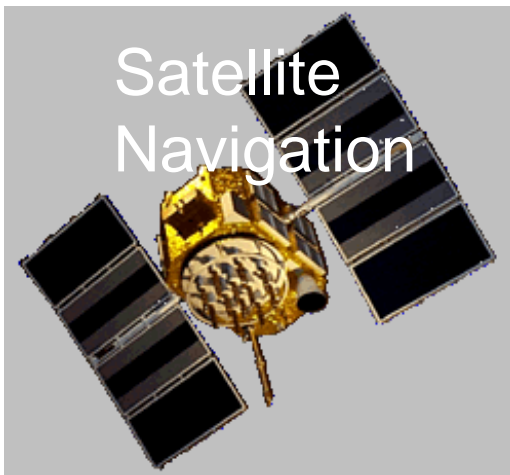
- | eNavigation
 - | IALA Definition: E-Navigation is the **harmonised collection, integration, exchange** and **presentation** of maritime information onboard and ashore by electronic means to enhance berth to berth navigation and related services, for safety and security at sea and protection of the marine environment
- | Long Range Identification and Tracking System - LRIT

Scope of eNavigation concept

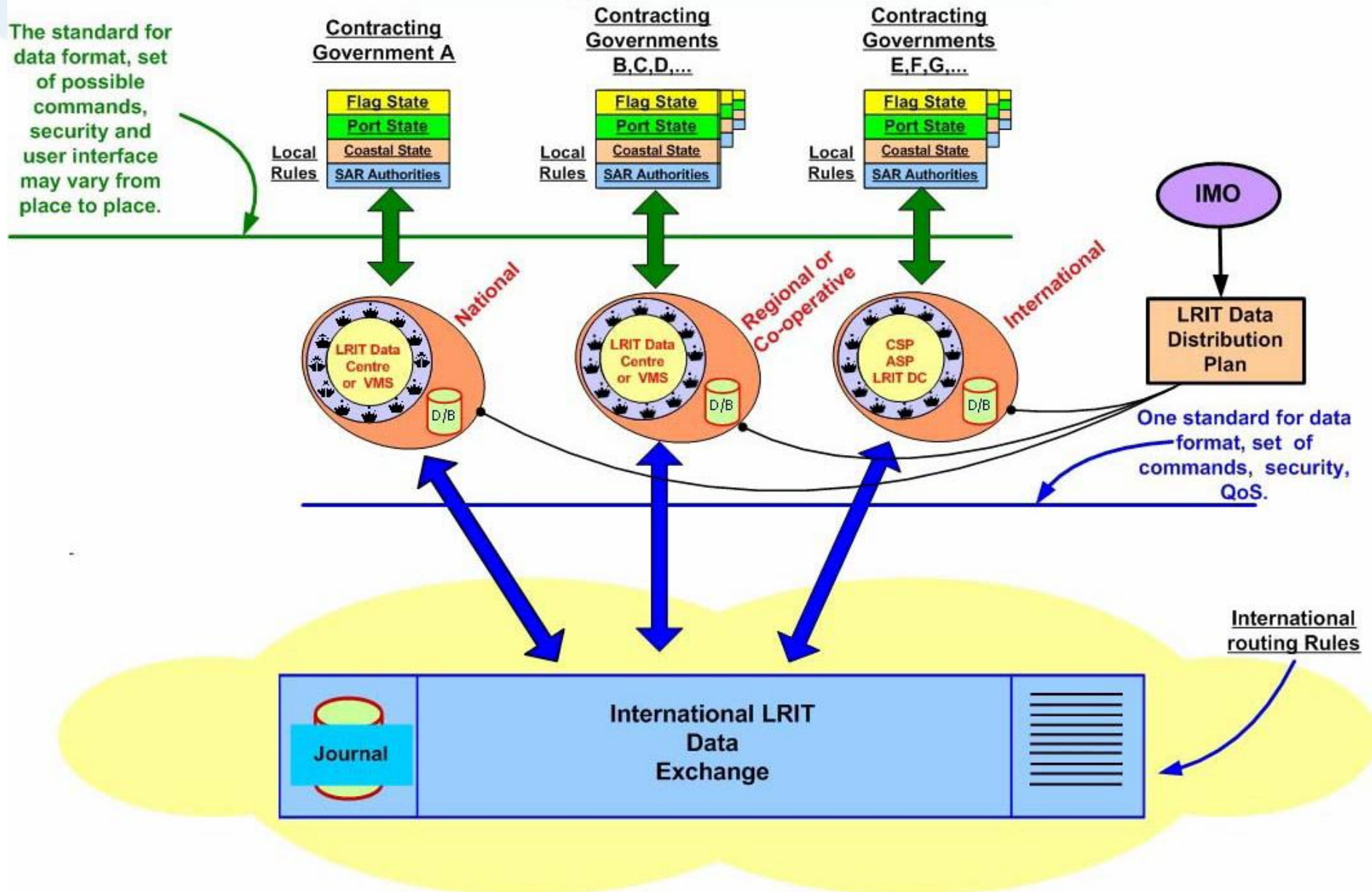
"External" systems, such as GNSS and/or terrestrial radionavigation systems



Fundamental elements needed for e-Nav



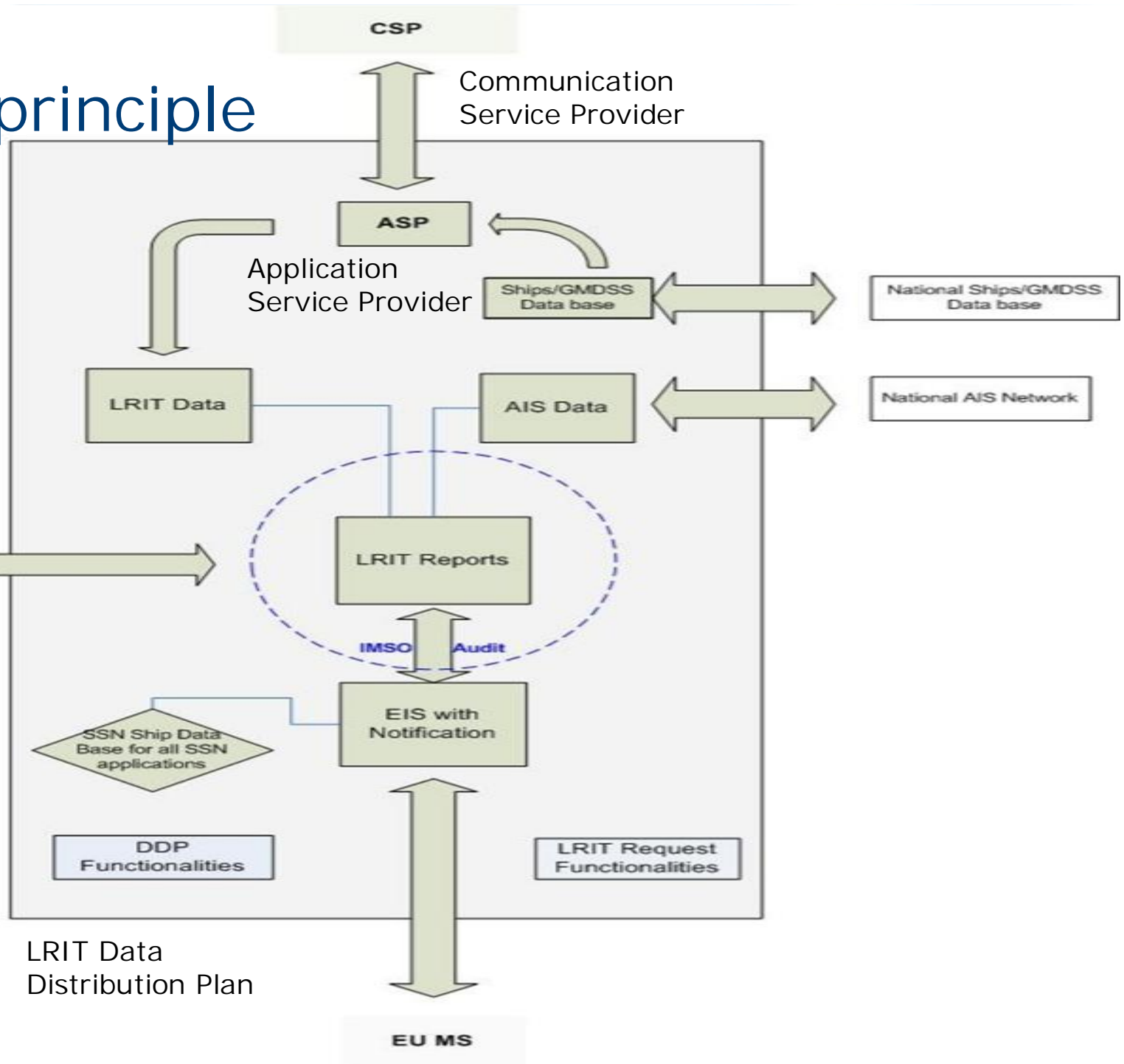
LRIT – general principle



LRIT principle in EU

International LRIT Data Exchange

IDE



Summary of LRIT messages

| Message Type | Message Name | Message Description |
|---|---|--|
| LRIT Positional Data (position report) Messages | | |
| 1 | Periodic Position Report | Regular periodic ship position report. |
| 2 | Polled Position Report | Ship position report as a result of a poll request. |
| 3 | SAR Position Report | Ship position report as a result of a SAR request. |
| LRIT Request Messages | | |
| 4 | Ship Position Request | Request for polled ship position report. |
| 5 | SAR Poll Request | SAR request for poll of specific ship's position. |
| 6 | SAR SURPIC Request | SAR request for poll of ships in specific area. |
| Other Messages | | |
| 7 | Receipt | Receipt message relaying inability to respond to a LRIT request or report message (e.g. Time Stamp). |
| 8 | DDP Notification | Notification that an updated version of the DDP file is available. |
| 9 | DDP request | Request for current copy of the DDP or incremental copy. |
| 10 | DDP Update | Information used to update the DDP. |
| 11 | System Status | Routine 30 minute status message from the International LRIT Data Exchange to each Data Centre (or vice versa), advising that the system is "healthy." |
| 12 | RDC issued Billing and transaction Report | Routine monthly report generated by a RDC or the IDC and sent to the IDE. |

Questions?



Thank you for your attention!



**Finnish Maritime
Administration**