

MCP MARITIME MESSAGING SERVICE SEMINAR



Saturday September 30, 2023 (09:00 ~ 12:00)
IALA HQ 10 rue des Gaudines, 78100, St Germain en Laye, France



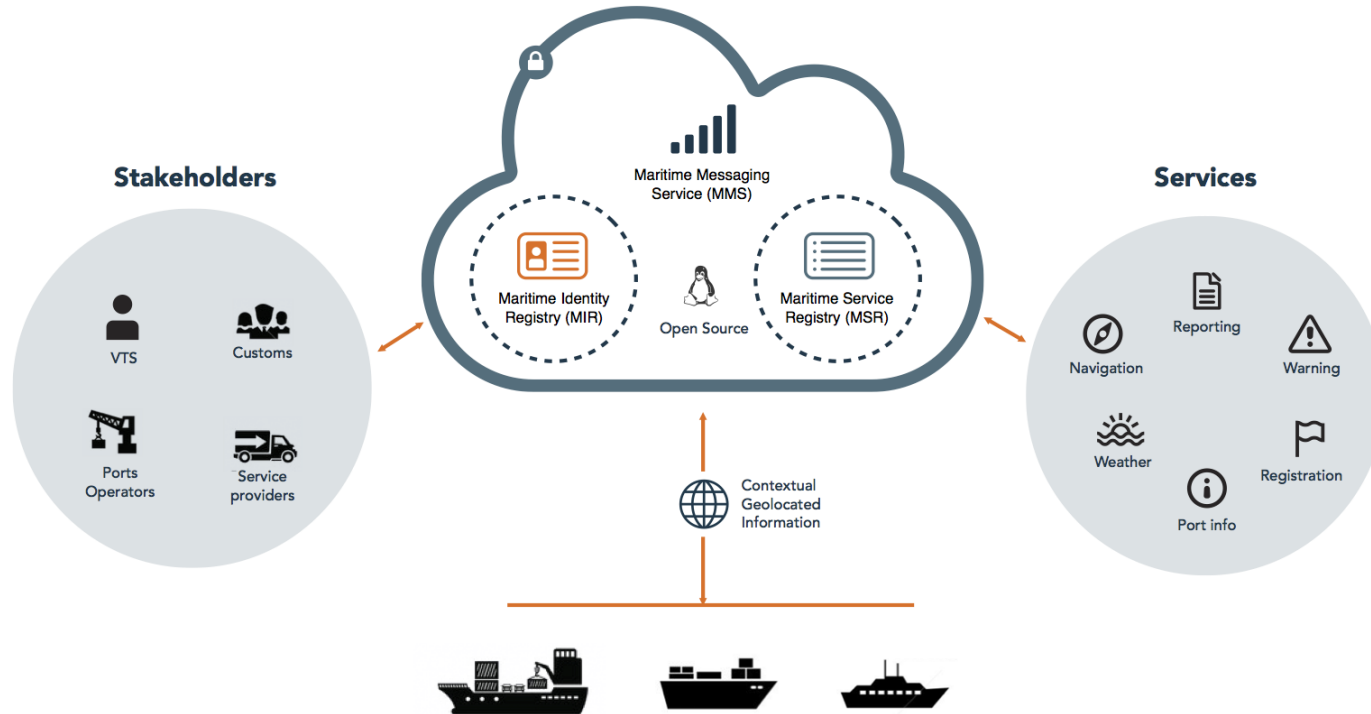
The Maritime Connectivity Platform

The core components and their usage
The governance and the standards

Thomas Christensen
MCP consortium



THE MARITIME CONNECTIVITY PLATFORM





MIR - Maritime Identity Registry

Contains identities for users, ships, devices...

Using unique identifiers (MRN - Maritime Resource Name)

Facilitates standardised single login to access services (OpenID Connect)

Facilitates standardised secure machine to machine communication (X.509 certificates)

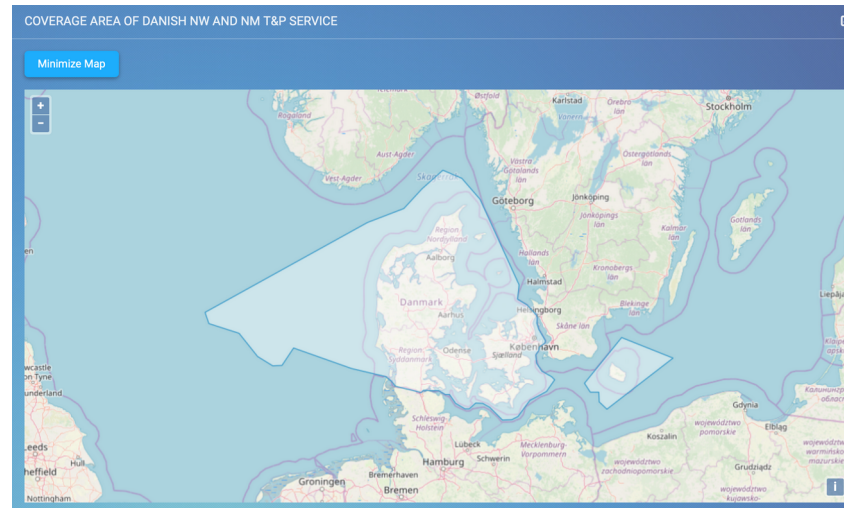
Facilitates security; confidentiality, integrity & authenticity



MSR; Maritime Service Registry

Contains endpoint to (harmonised) services
as well as keywords, geographical coverage, etc.

(Maritime yellow pages...)



MMS; Maritime Messaging Service



Seamless communication using different physical channels
IP & non-IP

Logical roaming for point-to-point communication

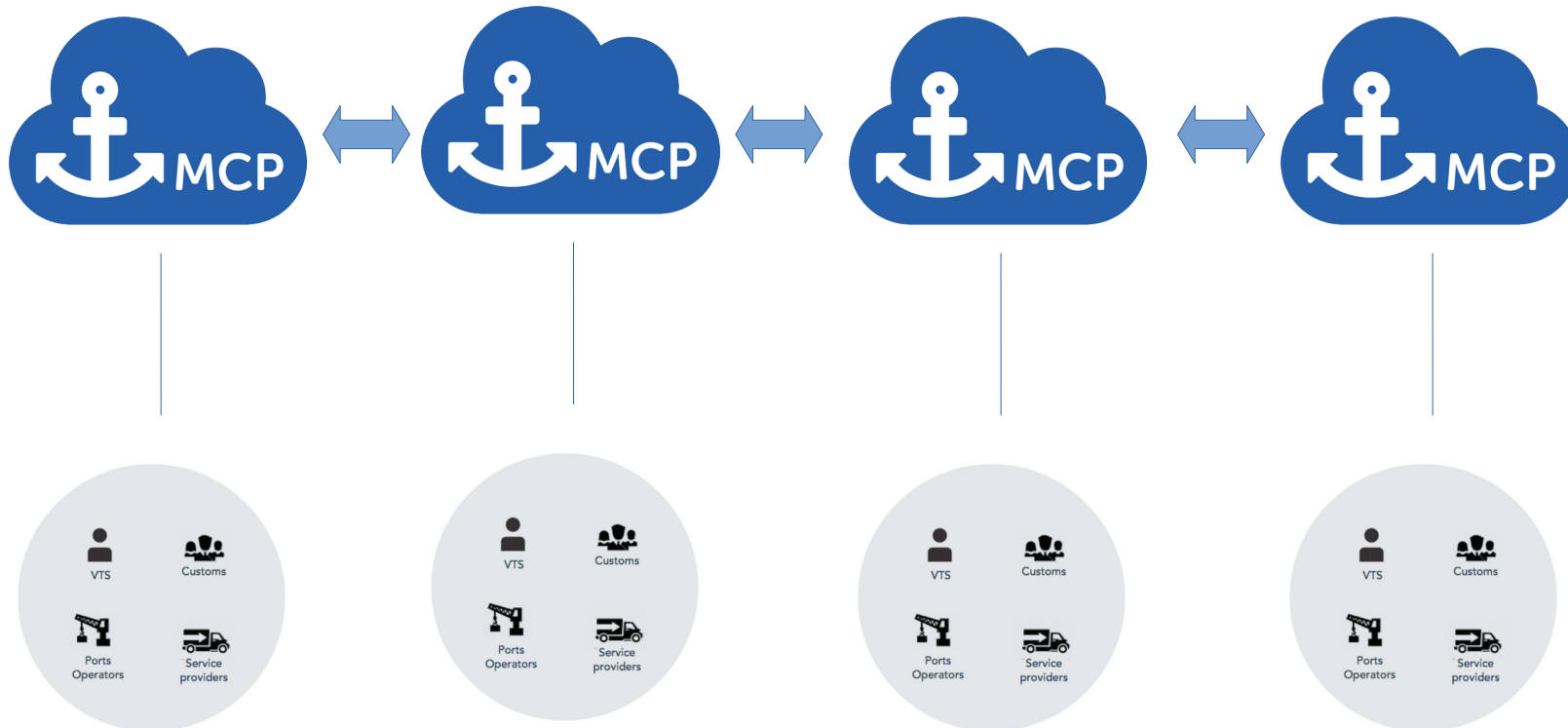
Store-and-forward functionality

Geo- and groupcasting

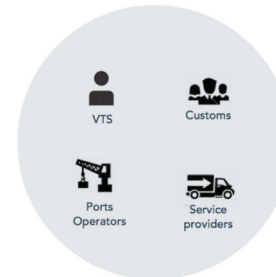
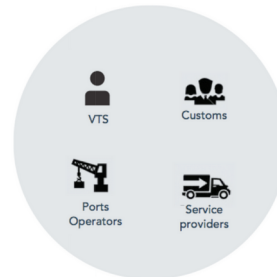
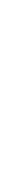
Providing single data stream from several services



Multiple MCP instance providers

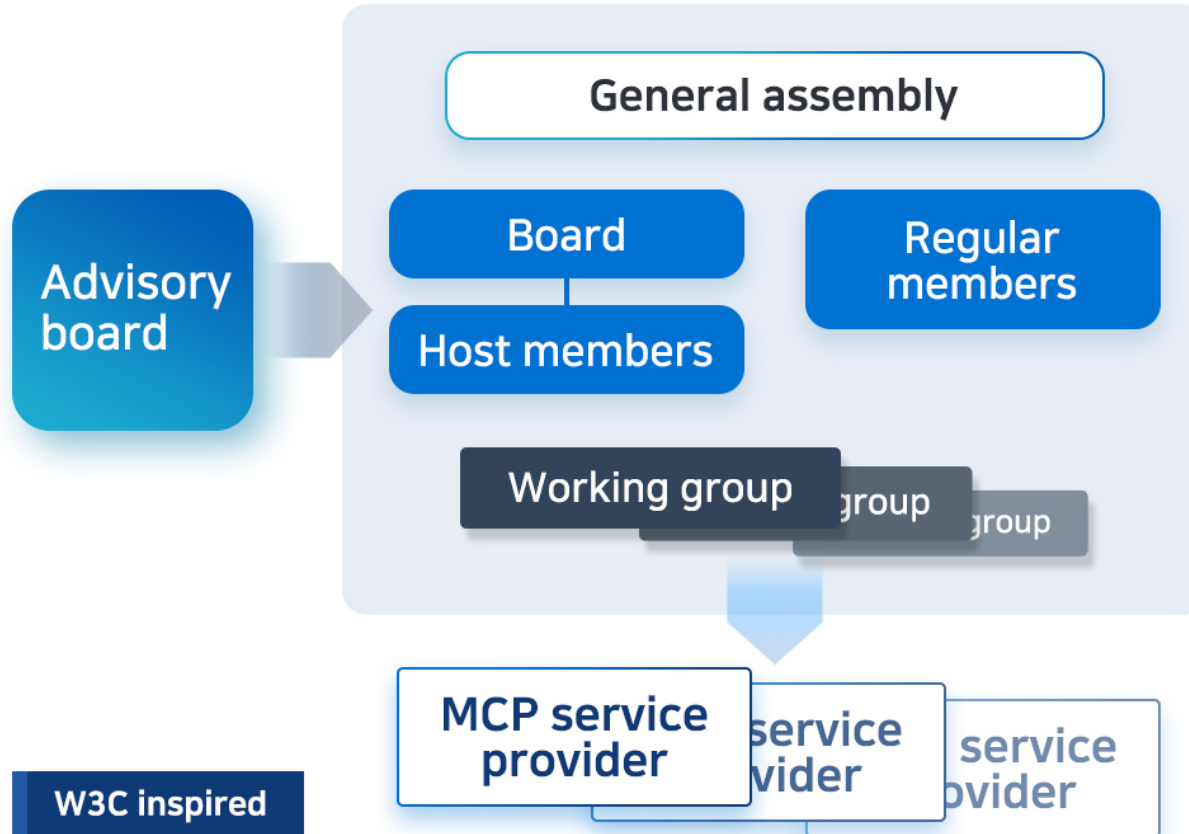


Multiple MCP instance providers



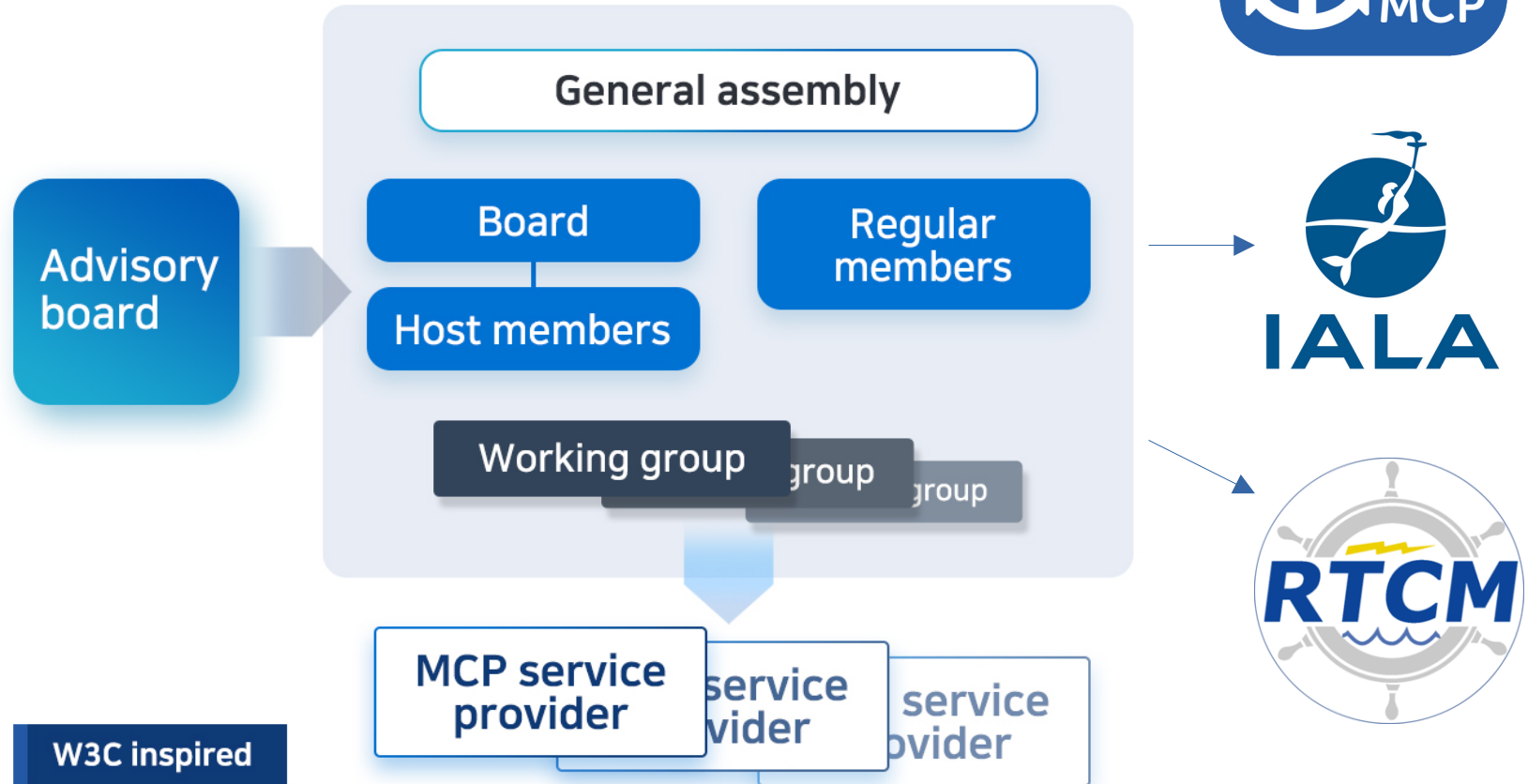
Governance

Maritime Connectivity platform Consortium



Governance

Maritime Connectivity platform Consortium





The MCP consortium

- Maintain procedures for endorsing MCP service provider using the IALA guideline containing MCP specifications.
- Endorse MCP identity service providers and maintain a signed list of their root certificates.
- Control access to the distributed ledger, which will hold globally discoverable information from all endorsed MCP service registry service providers (facilitating global service discoverability).
- Develop open-source reference implementations of the different MCP components.
- Operate a free (non-operational) public MCP demonstrator that all stakeholders can use for assessment and testing purposes.



The Open Digital Incubator





Testing and validation



Draft specification
(V. 1.0)



Implementation in
incubator

Reference
implementation?



Testing (lab / sea
trials)



Release
specification (2.0)



Collaborating

parties Services

PS

Who



DLR, Germany
GLA, UK & Ireland
KRISO, Korea
SMA, Sweden
CCG, Canada
AMSA, Australia
Navelink, Sweden
Fintraffic, Finland
Wärtsilä, Finland
Sternula, DK
AlVeNautics, Korea
DMA, Denmark

Navigational Warnings

S-124

IHO S-124PT

AtoN information

S-125

IALA ARM/ENAV TG

S-201

/ IHO NIPWG

Traffic clearance (VTS)

S-212

IALA VTS/ENAV TG

Route exchange (VTS)

S-421

VTS information service

(S-212)

All open source

Guidelines for specifications of technical services



IALA G1128 – The Specification of e-Navigation technical services



Three levels:

IALA G1143 – Unique identifiers for maritime resources (MRN)

Service specification
Technical design
Service instance

IALA G1157 – Web Service Based S-100 Data Exchange

IALA G1161 – Evaluation of Platforms for the Provision of Maritime Services



IEC 63173-2 SECOM – Secure exchange and communication of S-100 based products

IALA G1107 – Planning Testbeds and Reporting of Testbed Results