



VTS-ENAV1-9

VISION FOR E-NAVIGATION COMMUNICATIONS AND ITS POSSIBLE IMPACT ON VTS

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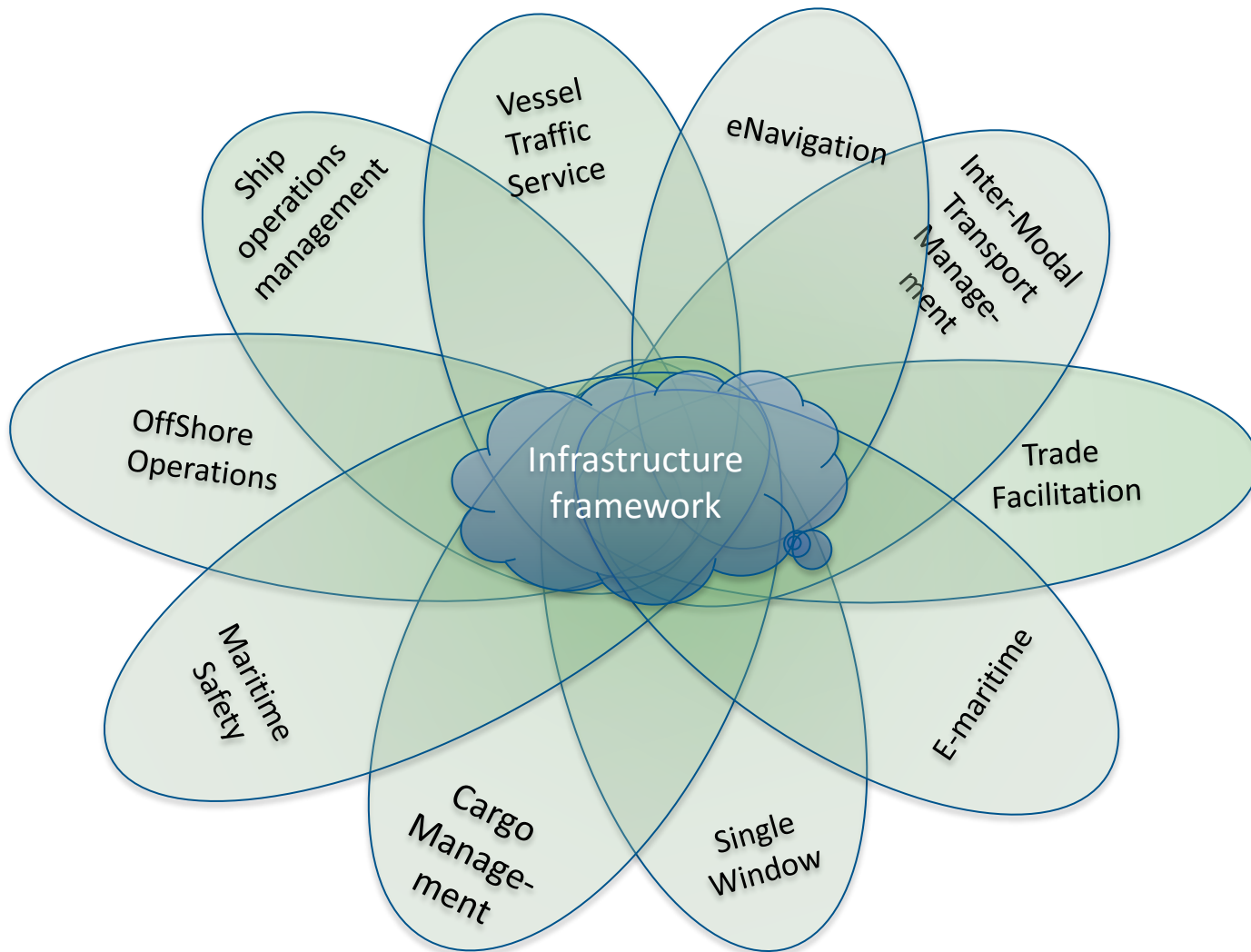
e-Navigation

The harmonized collection, integration, exchange,
presentation and analysis

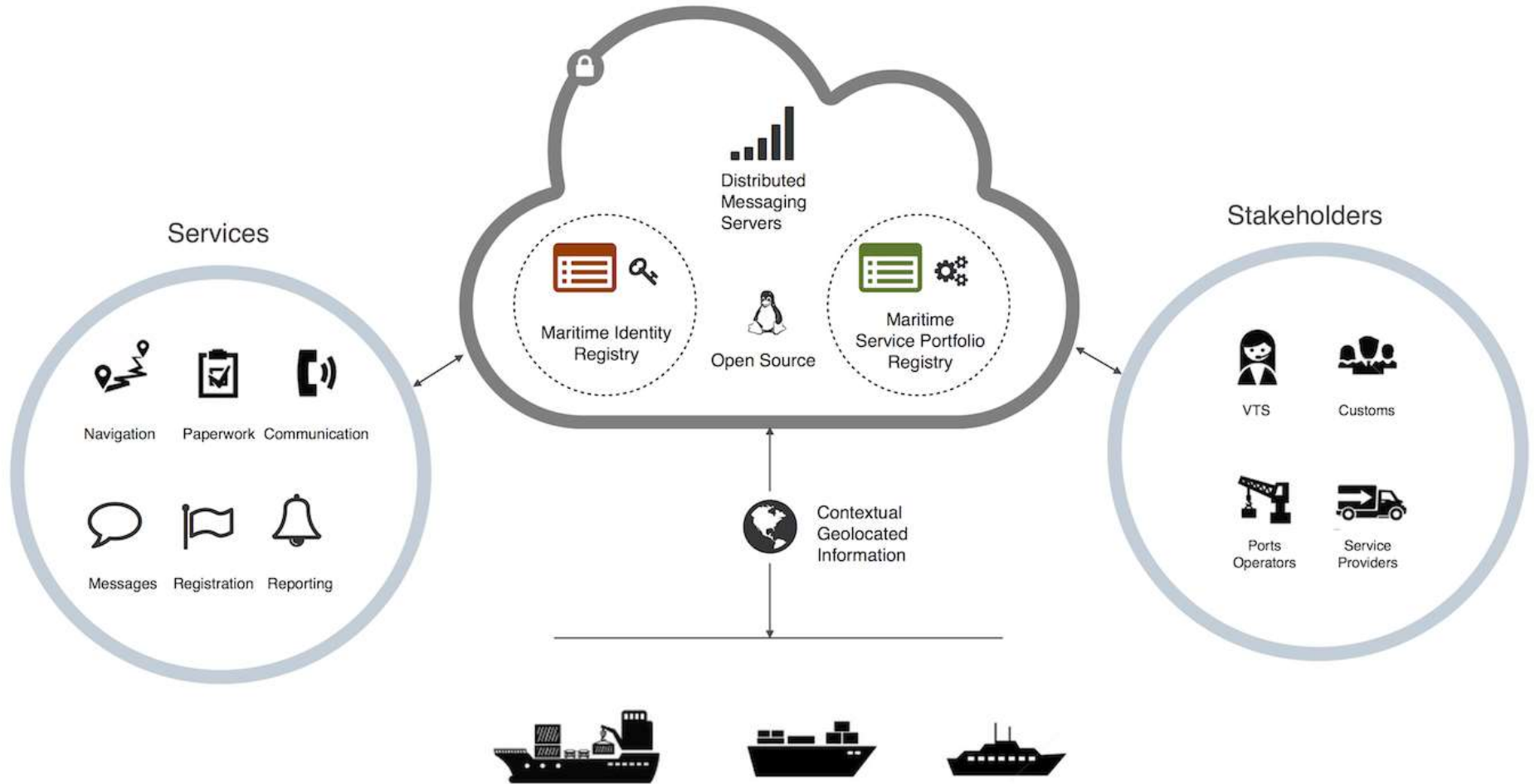
of marine information onboard and ashore

by electronic means

to enhance berth to berth navigation and related
services for safety and security at sea and protection of
the marine environment.



The Maritime Cloud



Logical Infrastructure framework based on Internet Technology

Identity and Service Registry – Geographical Awareness

Utilizes existing Communication Technologies - allows Roaming



Maritime Identifiers



IMO number

Callsign
MMSI number

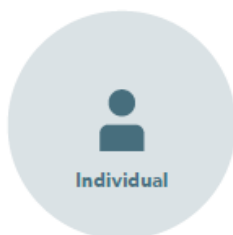
Digital indentity
Ability to
Authenticate!



Maritime
Identity
Registry

IDENTITY AND AUTHENTICATION

THIS IS WHO I AM



Individual



Group



System



Low trust

High trust



Maritime
Identity
Registry

AUTHORISATION

THESE ARE MY RIGHTS



Weather



Warning



Port info



Navigation



Weather



Warning



Registration



Certificate



Port info



Navigation



Weather



Warning



Maritime
Service Portfolio
Registry

CATALOG

MY SERVICES

Authorised





APPROVED
BY IMO

Certificate

Registration



APPROVED
BY EMSA

Reporting



APPROVED
BY IHO

Chart update

Commercial





RECOMMENDED
BY CIRM

Reporting

Weather



RECOMMENDED
BY BIMCO

Port info



OPEN

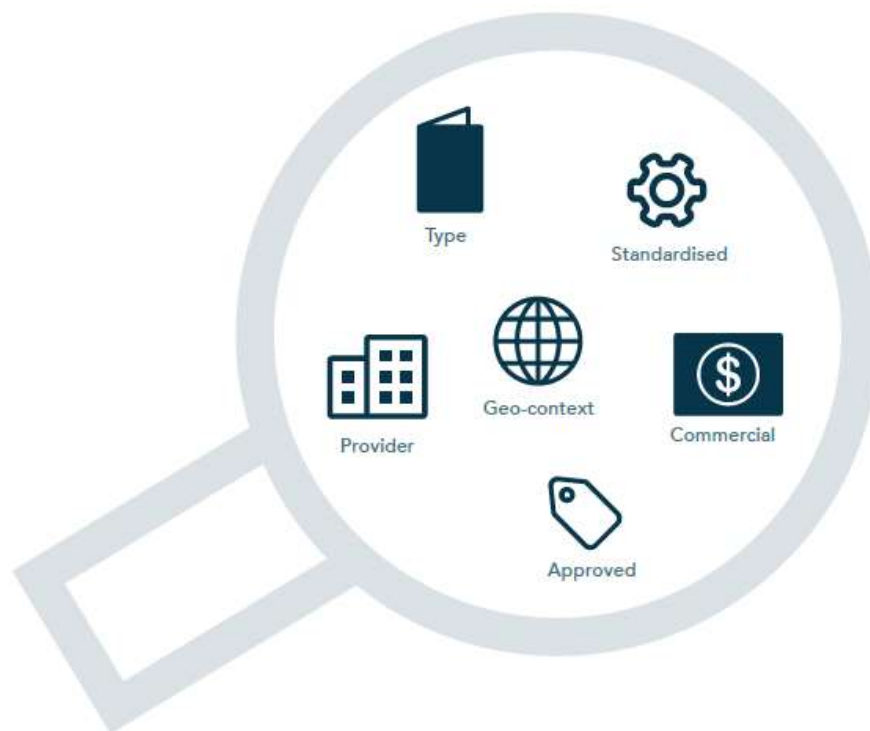
Marina info



Maritime
Service Portfolio
Registry

DISCOVERY

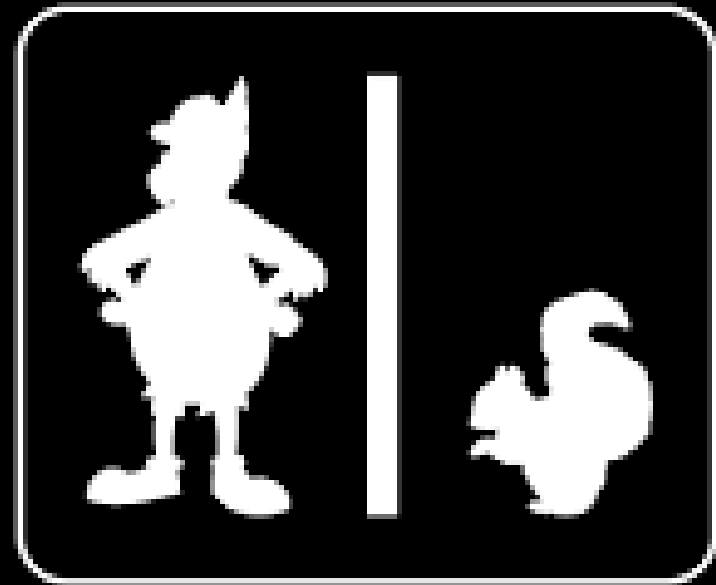
LOCATING MY SERVICES





VTIS is the Front Office of e-Nav !

#The
Front
Office





VTs includes:

Real time human Interaction with Mariners

Harmonized concepts – global

Technologies – interoperability (IVEF)

Provision of important information to Mariners



2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020



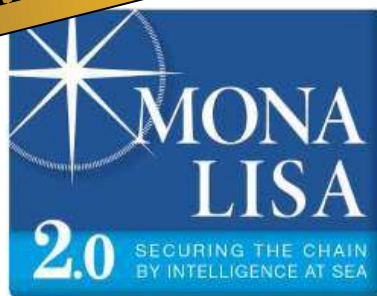
EfficienSea



ACCSEAS

Safety, security, efficiency

Supply chain & business efficiency





2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020



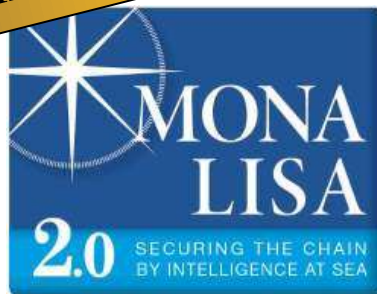
EfficienSea



ACCSEAS

Safety, security, efficiency

Supply chain & business efficiency



Korea's Strategy for e-Navigation
SMART-Navigation



Presented by
Ba Young, Kim

28 May 2018



EFFICIEN**SEA**
2.0 GETTING CONNECTED





Standards and harmonization for Interoperability

Identity management & Authentication, Access management

Standardized datamodels and service interfaces for global shipping – as well as competitive solutions

Service publication and discoverability

Ship <-> Shore communication require robust and secure solutions





So What?

- Automatic Communication Framework
 - All Information Streams available as eNav services
 - Bidirectional flow (Shore-ship / ship-Shore)
 - Increased Automated Reporting
 - Harmonized Concepts and Standards
-



THANK YOU

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