



EFFECTIVE AND HARMONIZED MARINE AIDS TO NAVIGATION IN THE SOMS

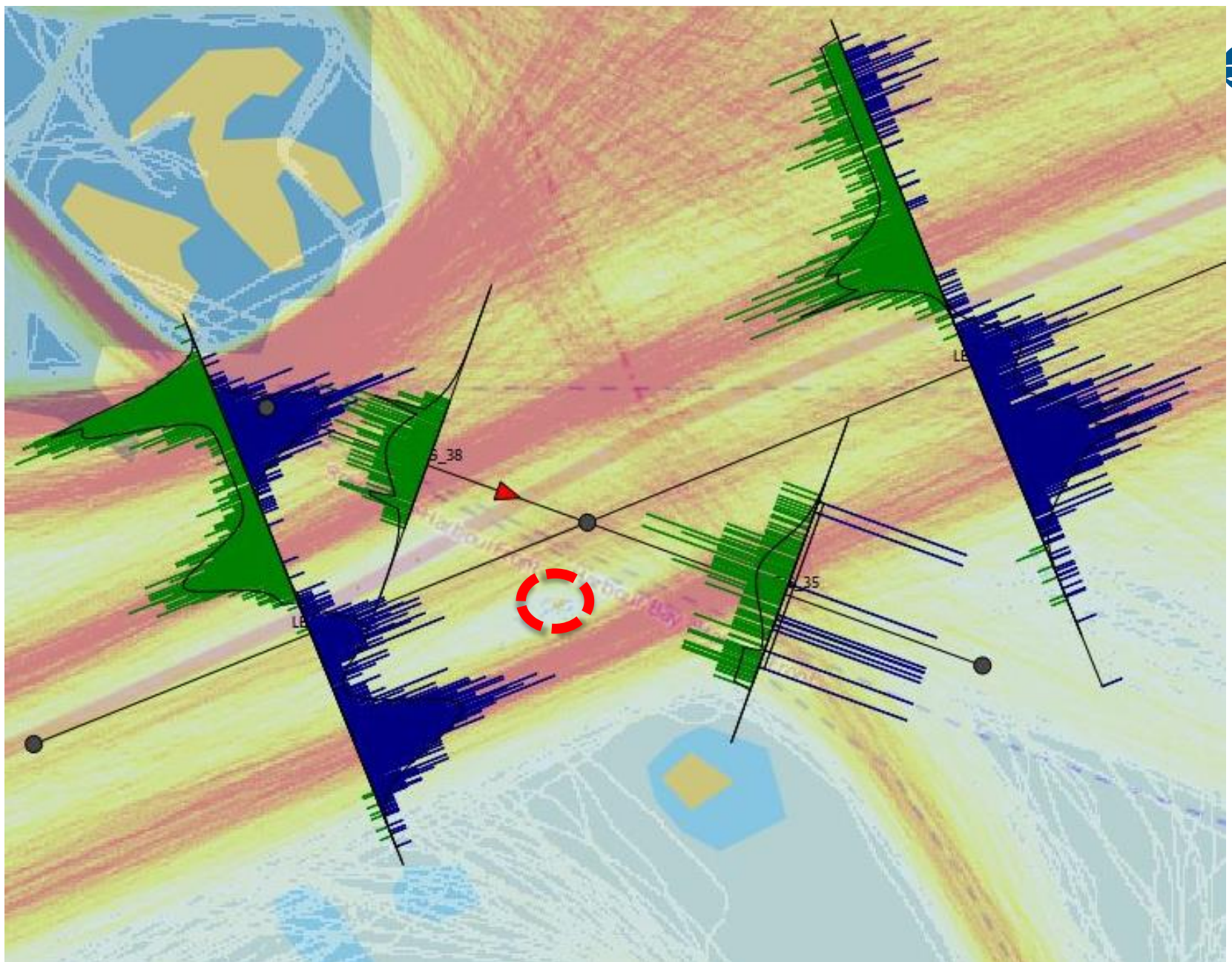
Tripartite Technical Expert Group and Cooperative Mechanism on Safety of Navigation and Environmental Protection in The Straits of Malacca and Singapore, 26-30 SEPTEMBER 2016, Yogyakarta, Indonesia

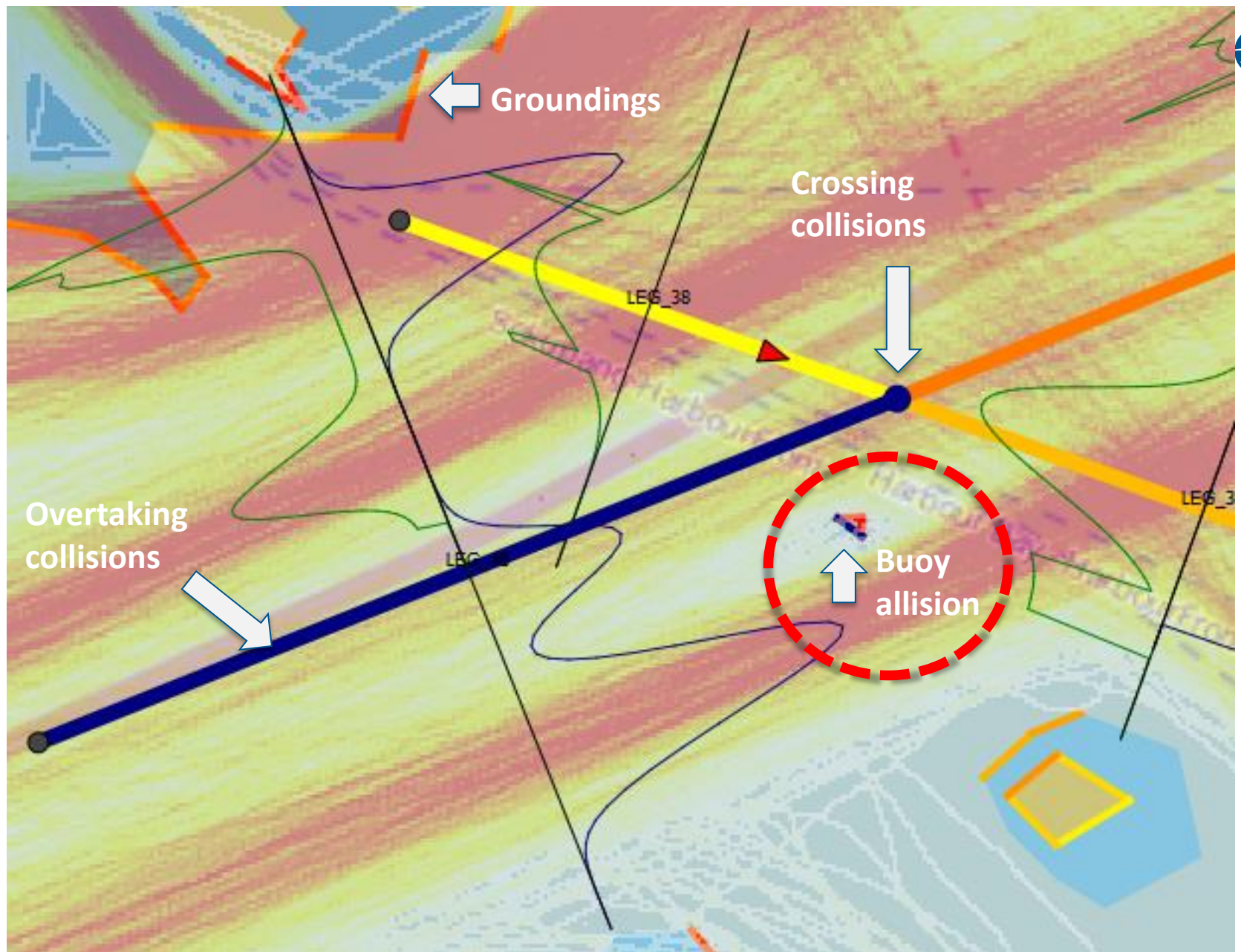
Omar Frits Eriksson, Dean IALA World-Wide Academy



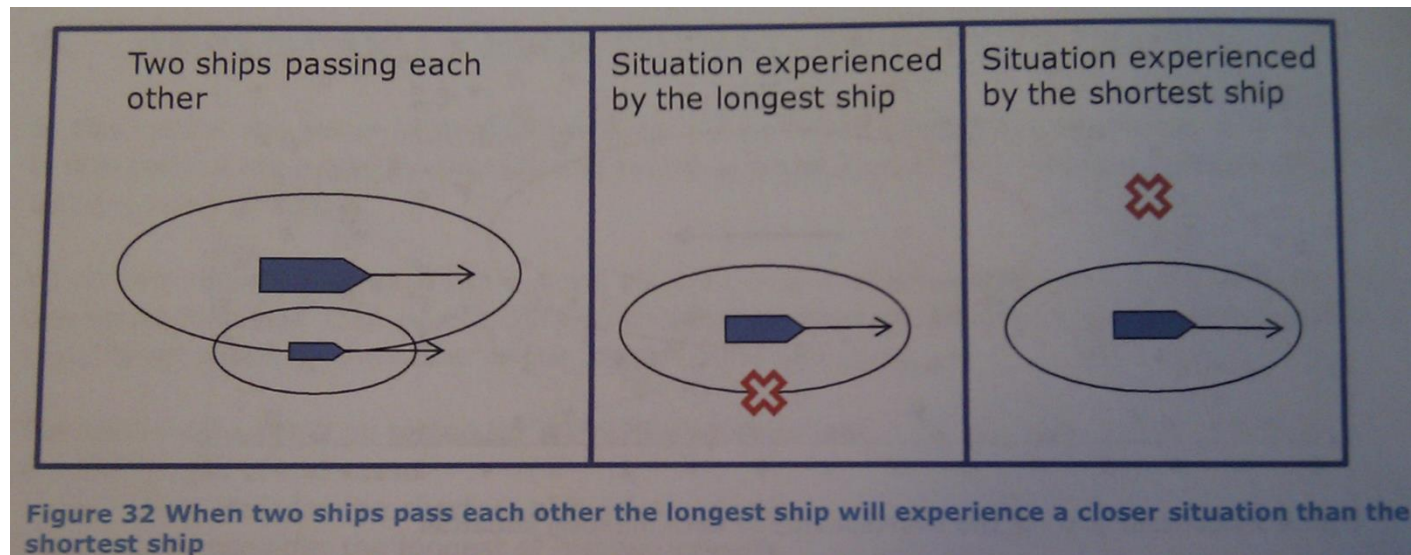
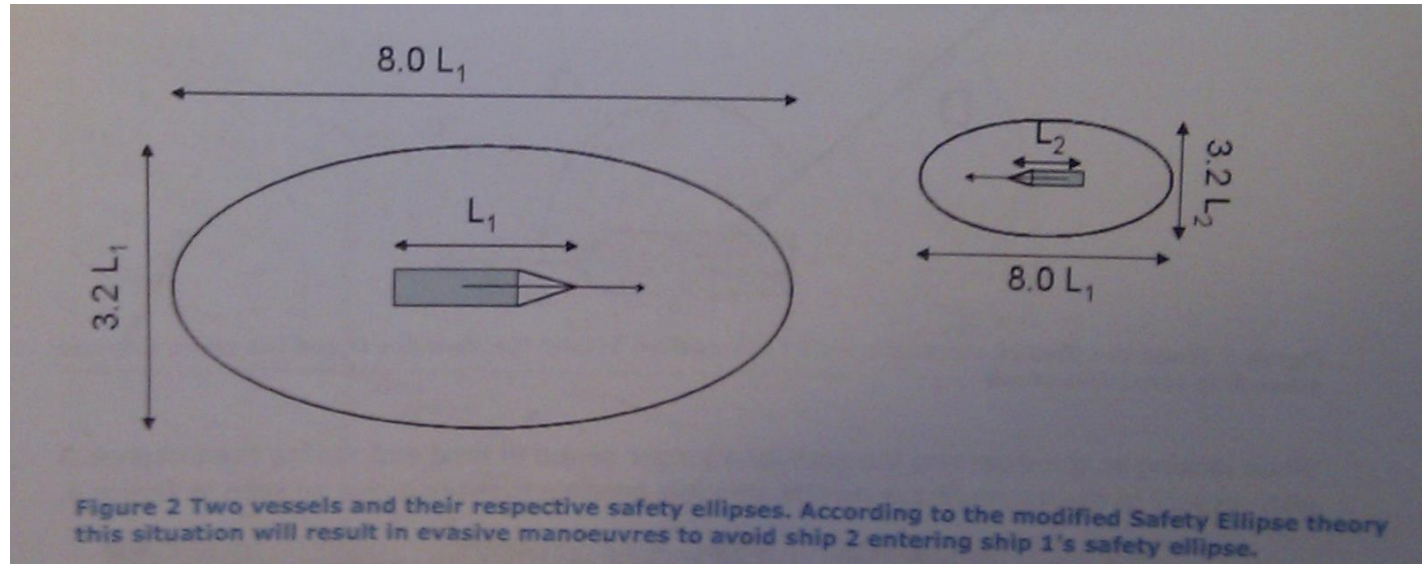
IWRAP case study Batu Berhenti area







Ship Domains / Safety Ellipses (Fujii 1970's)





Harmonized Aids to Navigation

Same Buoyage System (shapes and colours)





Effective Aids to Navigation

- Are all the hazards marked?
- Are the charts updated?
- Does the mariner get his Maritime Safety Information?
- **Availability and reliability (AtoN operational quality)**



IALA Availability Objectives:

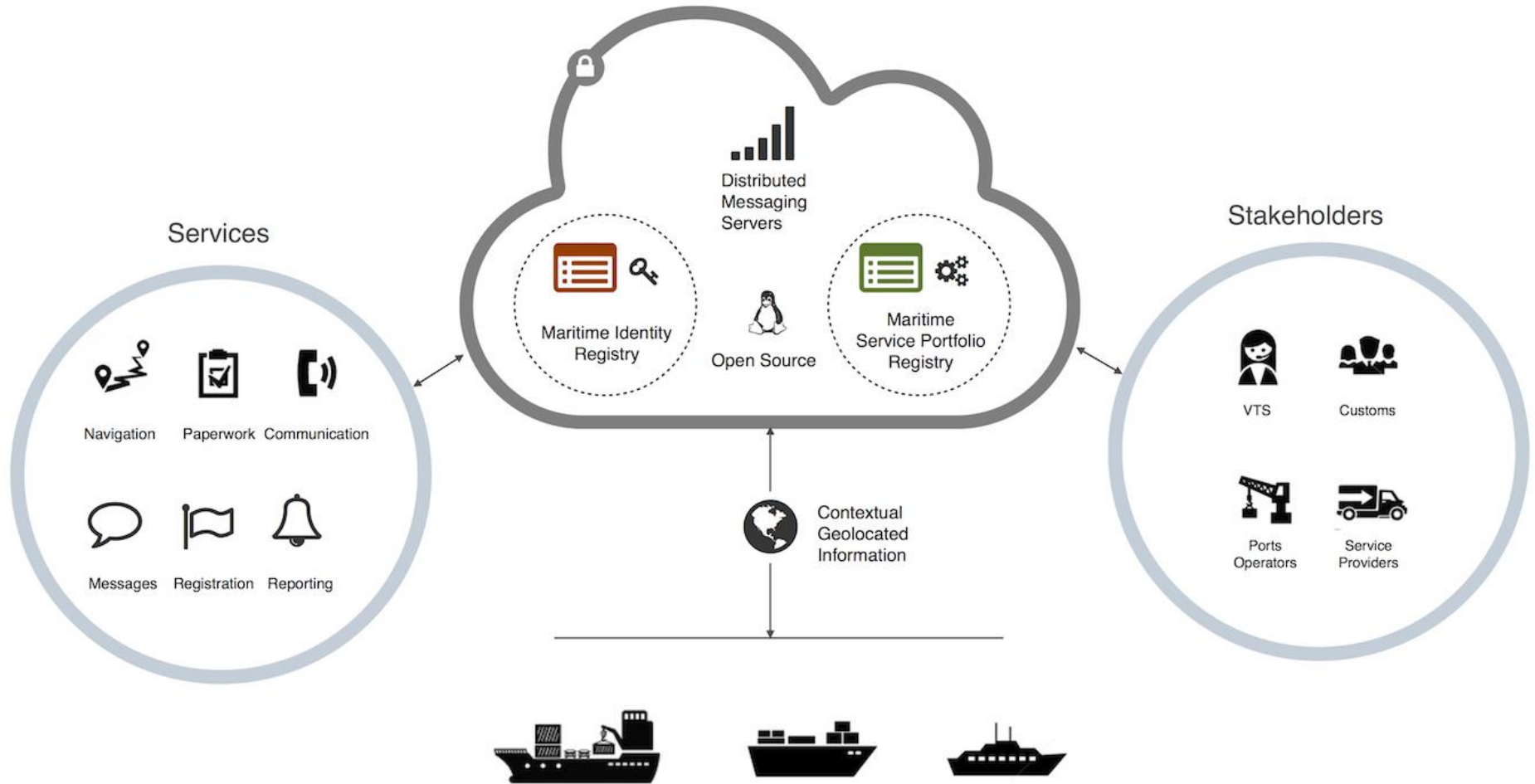
AtoN Category	Availability Objective	Allowable downtime
1. Vital for navigation	99.8%	1 day pr. year
2. Significant for navigation	99.0%	4 days pr. year
3. Necessary for navigation	97.0%	11 days pr. year

Availability objectives are calculated over a continuous three year period, unless otherwise specified.

The minimum availability of any individual AtoN should be 95% (18 days pr. year).

Where the availability of an individual AtoN consistently falls below 95%, consideration should be given to the discontinuation or replacement of that AtoN.

The Maritime Cloud



Logical Infrastructure framework based on Internet Technology

Identity and Service Registry – Geographical Awareness

Utilizes existing Communication Technologies - allows Roaming

Future harmonized and effective **e-Navigation Services**



Establish Infrastructure for the Maritime Internet in SOMS

Replace AIS stations with VDES stations once they become available

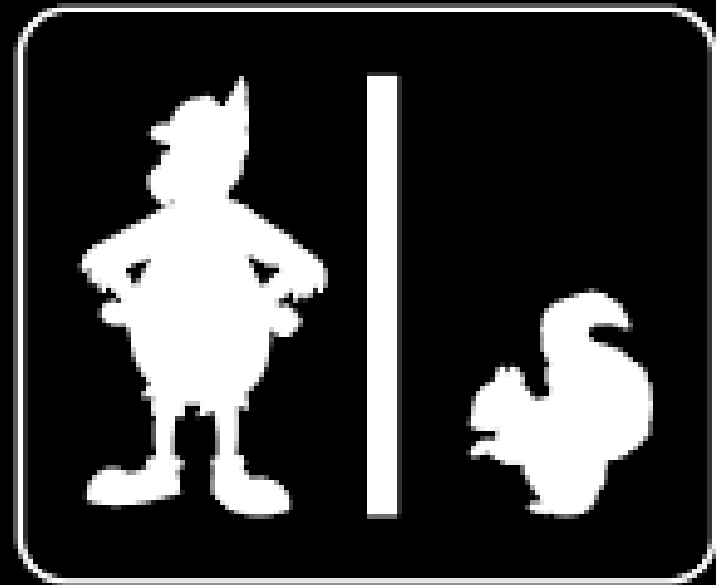
Retain DGPS maritime beacon system for future R-Mode and general digital broadcasts

Establish digital streams of e-Navigation services
(make all digital information available as webservices)



VTIS is the Front Office of e-Navigation !

#The
Front
Office





The IALA World-Wide Academy

Training and capacity building



The IALA World-Wide Academy

The vehicle by which IALA delivers training and capacity building

- Started in January 2012
- Independently funded
- Facilitates both AtoN and VTS training
- Conducts Capacity Building World-Wide





Role of the IALA World-Wide Academy

1. Bring IALA Standards, Recommendations, Guidelines to the knowledge of those in charge of AtoN and VTS, primarily in developing countries,
2. Assist the Authorities to implement these in their own countries.

The Academy does normally not deliver training itself, but facilitates AtoN and VTS training through a harmonized curriculum, and systematic accreditation of training organizations.



Types of IALA WWA training

- Obligations of Senior Management in National Competent Authorities (raising awareness)
- AtoN Manager training (L1)
- AtoN Technicians training (L2)
- AtoN Risk Management Seminars – Next in Panama Nov. 2016
- GNSS and e-Navigation training course
- VTS training

Delivered by Accredited Training Organizations or by the IALA WWA



WWA Activity

Over the last 4 years, the IALA WWA has managed to organize a substantial number of awareness seminars and visits:

- 20 Awareness seminars for AtoN and/or VTS all over the world (100 participating countries)
- 7 High-level visits

Some of these have been organized jointly with IMO and IHO.

Furthermore the IALA WWA has conducted 16 Need Assessment missions to developing countries, for Capacity Building.



THANK YOU

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