



KYSTVERKET
NORWEGIAN COASTAL ADMINISTRATION

e-navigation – a global concept for
safer, more secure, efficient and environmentally
friendly maritime transport

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Chairman of the IMO Correspondence Group and Working Groups on e-navigation

Participants in the global work of e-navigation (IMO CG)

- Australia, Bahamas, Belgium, Brazil, Bulgaria, Canada, Chile, Republic of China, Cote d'Ivoire, Denmark, Finland, France, Germany, Ghana, Greece, Ireland, Italy, Japan, Republic of Korea, Marshall Islands, the Netherlands, Nigeria, Poland, Portugal, Russian Federation, Senegal, Singapore, Spain, South Africa, Sweden, Turkey, Ukraine, United Kingdom, the United States, European Commission, BIMCO, CIRM, IALA, ICS, IFSMA, IHMA, IHO, IMPA, IMRF, IMSO, Nautical Institute, OCIMF, WHO and WMO.

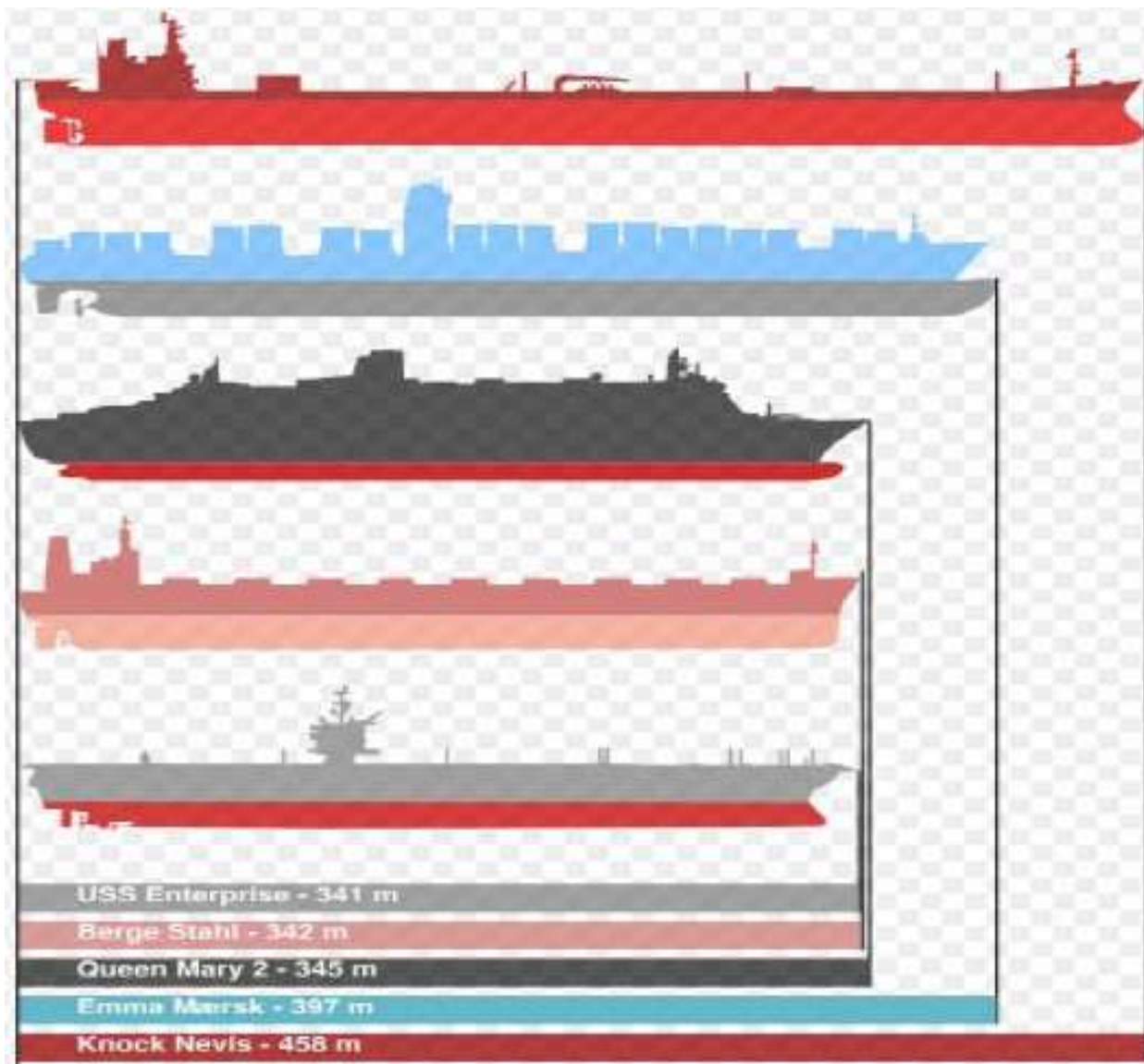


The overall goal of e-navigation

- The overall goal is to improve safety of navigation and to reduce errors.
- Research indicates that around 60 percent of collisions and groundings are caused by human error.

(source: Nautical Institute)

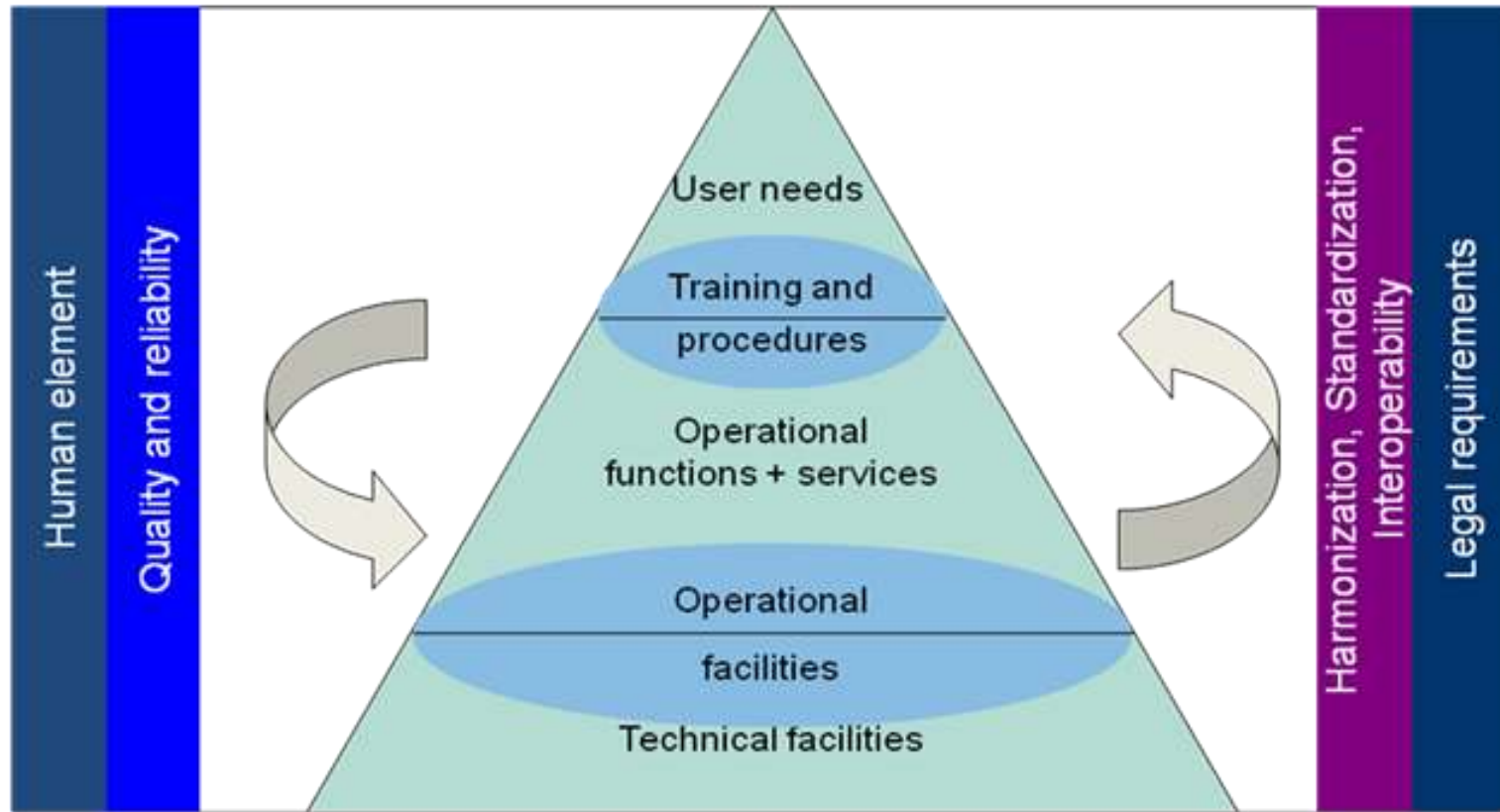




The International Maritime Organization



e-navigation process



Structure of the conceptual process

Ship environment

Communication

Shore environment



Workload for the navigator





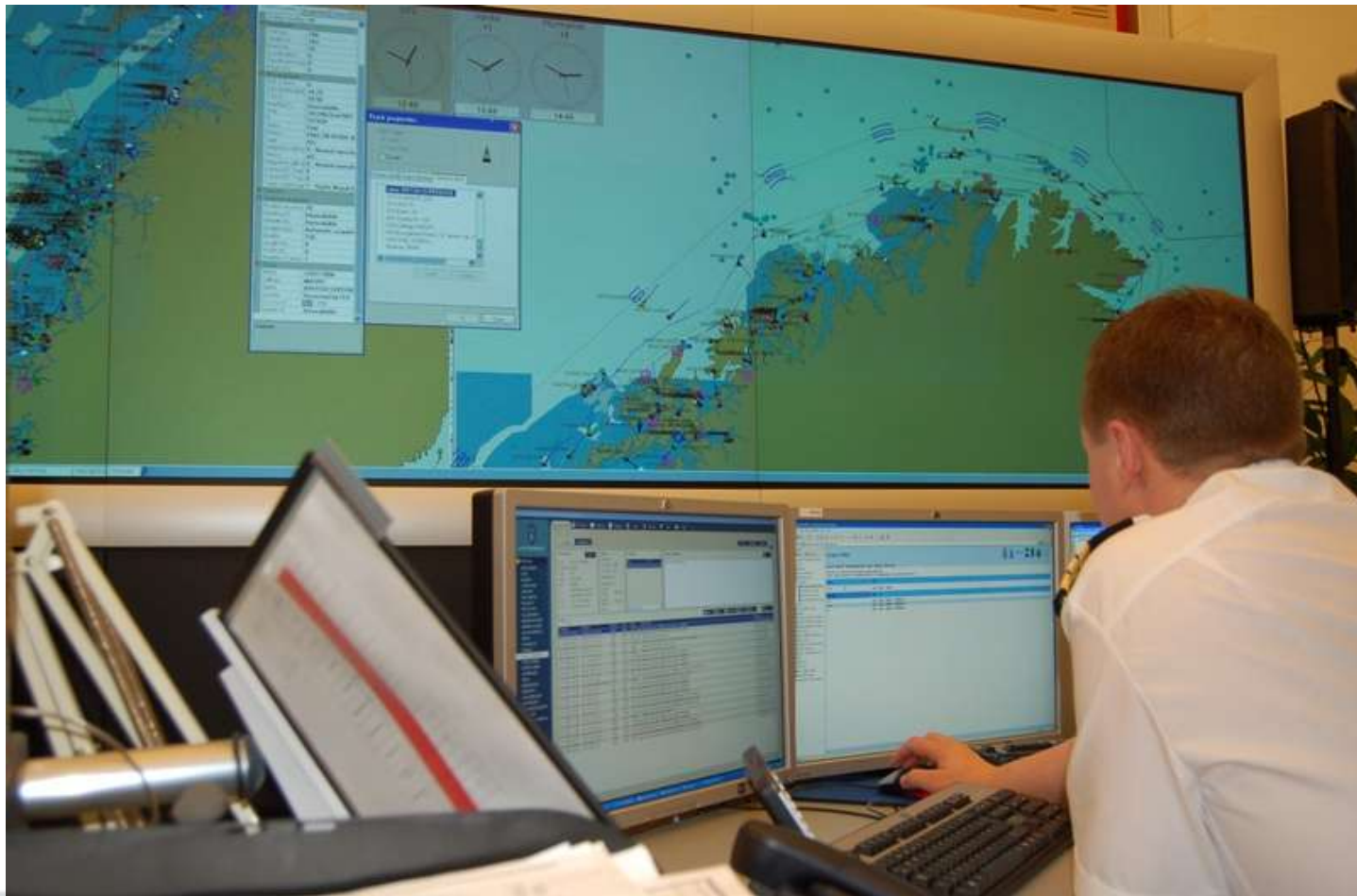
A great variation of ships



Risk of pollution



The human-machine interface



e-navigation and IMO

- On the ship-borne side, the development of e-navigation could have an impact on:
 - SOLAS chapter V (navigation)
 - SOLAS chapter IV (radiocommunications)
 - SOLAS chapter III Radio life-saving appliances, regulation 6
 - STCW-convention and Code (training)
 - ITU (frequency allocation)



A Holistic Approach

- Human centralized User Needs
- Operational Functions and Procedures – Clarify ‘Best Practice’, Standardize, Harmonize, Implement.
- Training – Improve, Standardize, Assess, Promote, Maintain.
- Technology – Improve, Refine, Harmonize, Standardize.



Work programme

**A COORDINATED APPROACH TO THE IMPLEMENTATION OF IMO'S E-NAVIGATION STRATEGY
OVERALL PLANNING 2009-2012 BY STRATEGY ELEMENT**

	2009		2010				2011				2012					
Meetings	MSC 86	NAV 55	COMSAR 14	STW 41	MSC 87	NAV 56	MSC 88	COMSAR 15	STW 42	MSC 89	NAV 57	COMSAR 16	STW 43	MSC 90	NAV 58	MSC 91
User needs		final														
Architecture		Correspondence Group				final		Correspondence Group								
Gap analysis					initial					final						
C-B and risk analysis					initial					final						
Strategy Implementation Plan	joint plan of work										outline	2012: Intersessional WG?			final	adoption



Implementation Plan



e-navigation and e-Maritime



Thank you for your attention!

