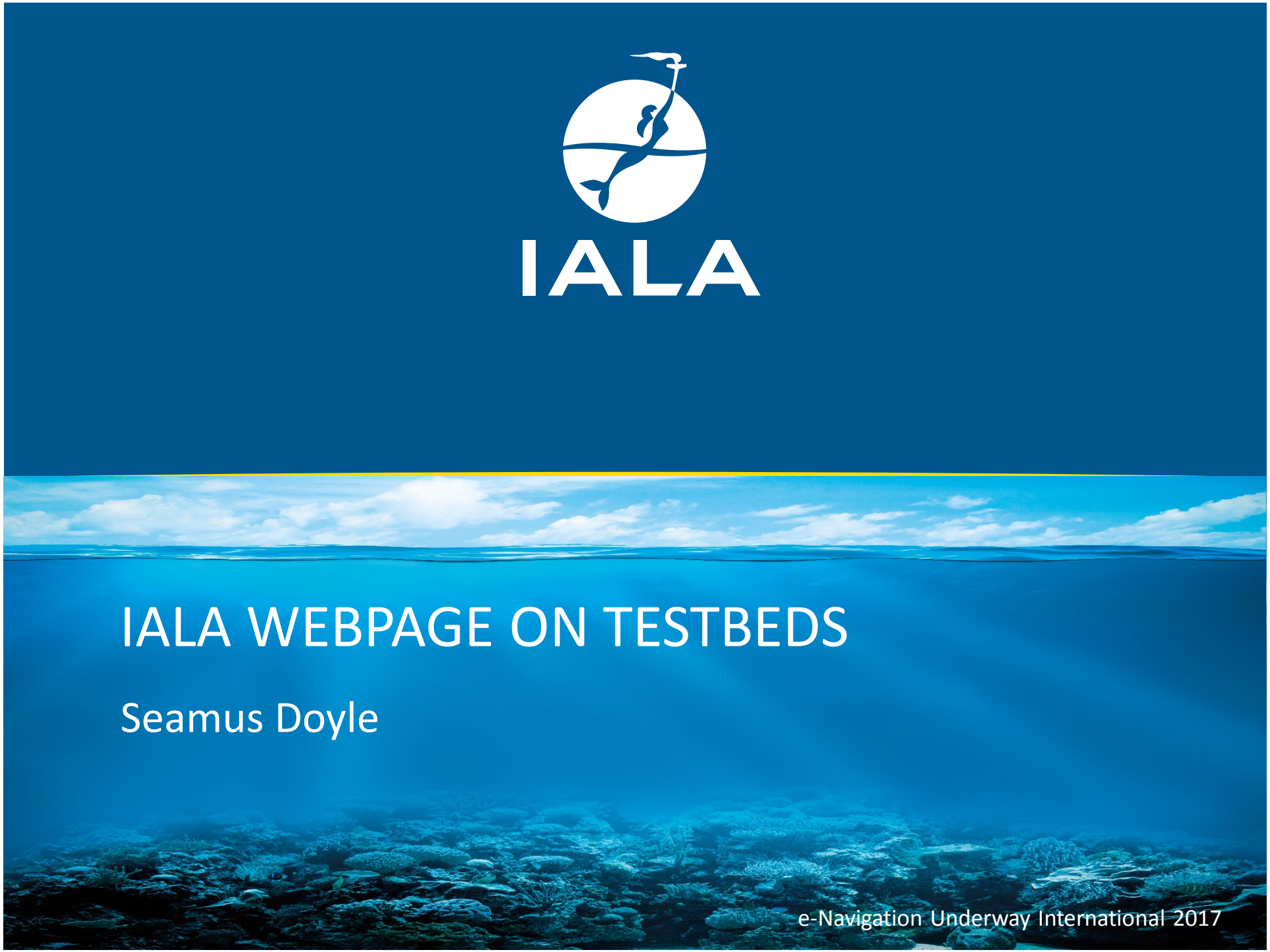


IALA WEBPAGE ON TESTBEDS

Seamus Doyle

e-Navigation Underway International 2017

Testbeds - A definition

A testbed is a platform for trialling development projects.

Testbeds generally involve rigorous, transparent and replicable testing of scientific theories, innovative solutions, computational tools and new technologies.

IALA Guideline 1107

Testbed function

- e-Navigation testbeds allow for early identification and assessment of new system functionality, operational usability, areas of enhancements, identification of weaknesses and socio-technical impact.
- Testbeds should not be limited or restricted by current architecture, data structures or procedures.
- There are testbeds that, while being not directly identified as e-navigation testbeds, are nevertheless relevant to e-navigation.

IALA Guideline 1107

Sharing of information

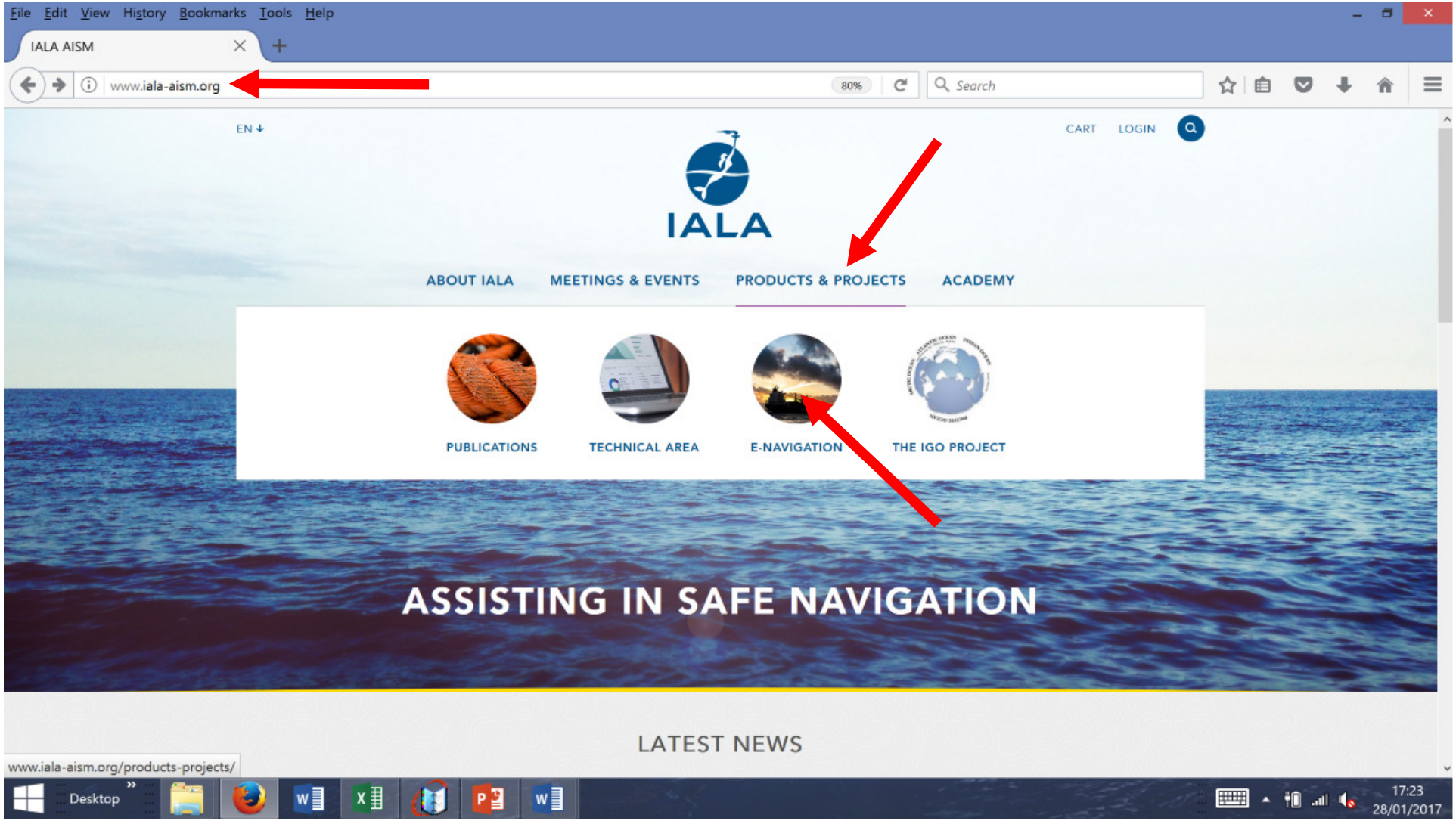
- As e-navigation evolves from concept to operational reality, the importance of testbeds continues to grow.

- Testbed managers are encouraged to share results (including interim and final reports) of testbeds with the maritime community through IALA.

IALA Guideline 1107

Sharing of information

- IALA will post testbed findings, including an executive summary and description as provided by the testbed manager at http://www.iala-aism.org/products-projects/e-navigation/test-bedsprojects/.
- This information can be used to inform on ongoing and prospective testbeds.
- Sharing benefits everyone.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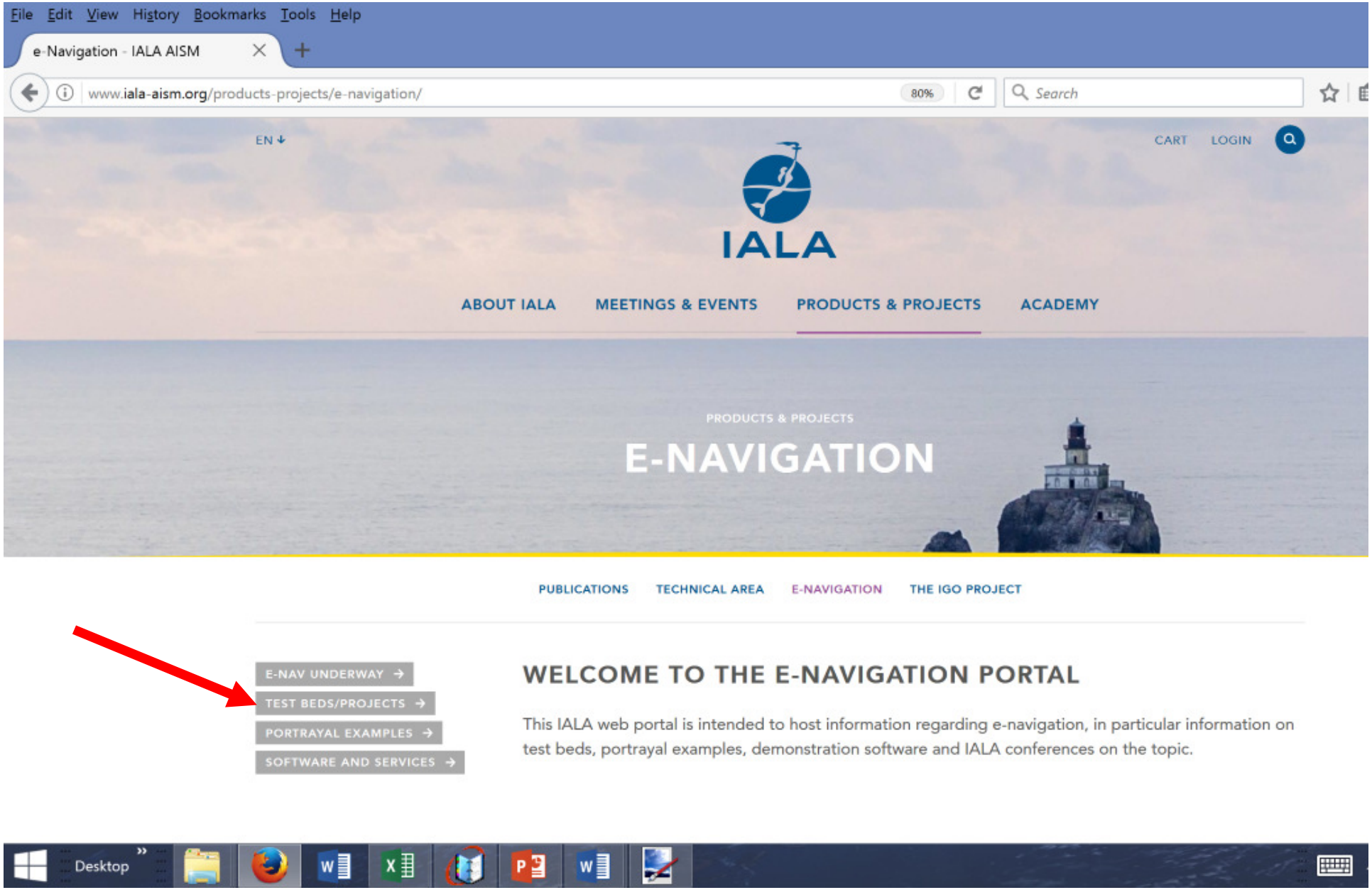
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WELCOME TO THE E-NAVIGATION PORTAL
This IALA web portal is intended to host information regarding e-navigation, in particular information on test beds, portrayal examples, demonstration software and IALA conferences on the topic.
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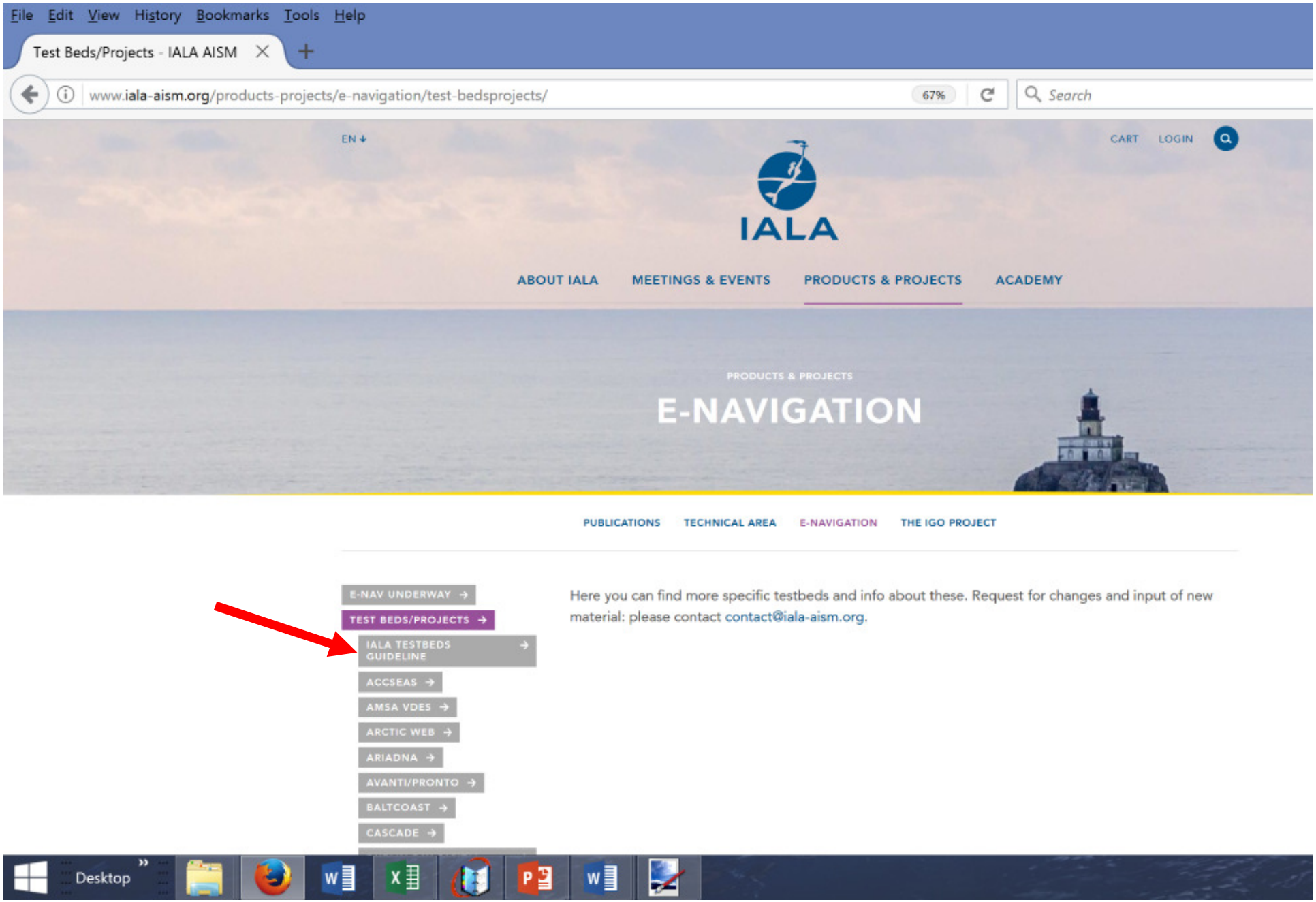
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Here you can find more specific testbeds and info about these. Request for changes and input of new material: please contact contact@iala-aism.org.
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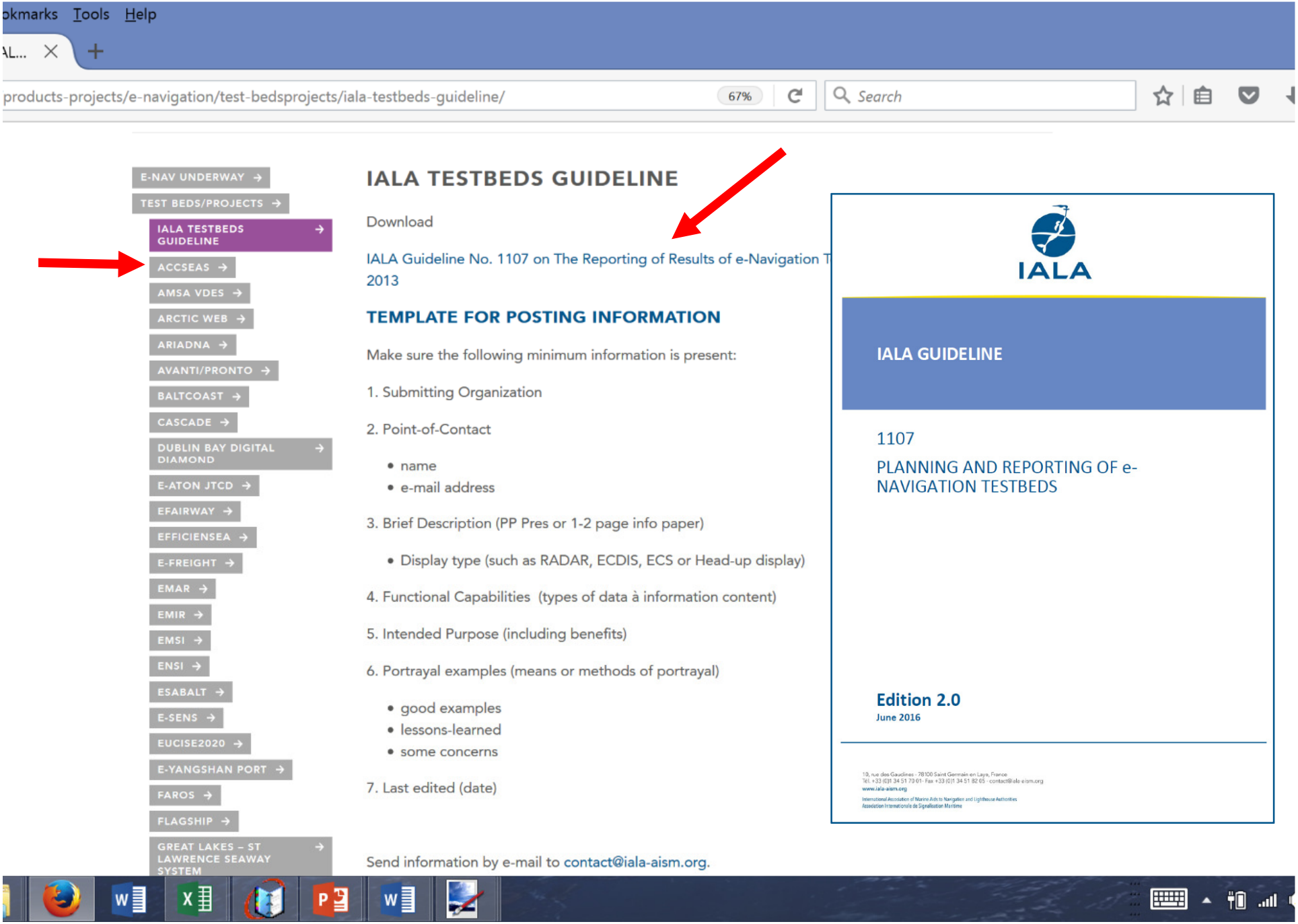
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2013
TEMPLATE FOR POSTING INFORMATION
Make sure the following minimum information is present:
1. Submitting Organization
2. Point-of-Contact
• name
• e-mail address
3. Brief Description (PP Pres or 1-2 page info paper)
• Display type (such as RADAR, ECDIS, ECS or Head-up display)
4. Functional Capabilities (types of data à information content)
5. Intended Purpose (including benefits)
6. Portrayal examples (means or methods of portrayal)
• good examples
• lessons-learned
• some concerns
7. Last edited (date)
Send information by e-mail to contact@iala-aism.org.
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1107
PLANNING AND REPORTING OF e-NAVIGATION TESTBEDS
Edition 2.0
June 2016

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FAROS →
FLAGSHIP →

ACCSEAS

- Name of testbed: ACCSEAS – Accessibility for Shipping, Efficiency Advantages and Sustainability
- Location of testbed: North Sea Region, Europe
- Time period: April 2012 – February 2015
- Status: Completed
- Contact person(s): Alwyn Williams Alwyn.Williams@gla-rrnav.org (Project coordinator)
- Web site: http://www.accseas.eu/
- Organisation(s):
  - General Lighthouse Authorities of UK and Ireland;
  - Chalmers University of Technology, Sweden;
  - Danish Maritime Authority;
  - Federal Waterways and Shipping Administration, Germany;
  - Rijkswaterstaat , Ministerie Infrastructuur en Milieu, The Netherlands;
  - Swedish Maritime Administration;
  - Norwegian Coastal Administration;
  - SSPA Sweden AB;
  - Flensburg University of Applied Sciences, Gemany;
  - NHL Hogeschool Leeuwarden, Maritiem Instituut Willem Barentsz, The Netherlands
  - World Maritime University.
- Research Program: EU INTERREG IVb North Sea Region Programme

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The ACCSEAS project started by looking at the challenges to maritime accessibility in the North Sea Region. In particular, the impact of increasing traffic density and larger ships in reduced sea-space was considered and explored. As a result of this work, the solutions detailed earlier in this report were proposed in the ACCSEAS Baseline and Priorities Report, first published end of 2013. Now in its third edition, it covers the IMO's work on the Sustainable Maritime Transport System and the Strategic Implementation Plan (SIP) for the e-Navigation concept that underpins all the solutions in ACCSEAS.

As shown in the previous chapters, each solution has been able to demonstrate its ability to improve spatial awareness or information integrity for both the mariner and shore-based authorities.

Improved Spatial Awareness

Improving the spatial awareness of the mariner and shore-based authorities will allow those users to get a better understanding of the current situation around them. The Baseline and Priorities Report highlighted the potential issue of increased traffic in tighter shipping lanes created by windfarms, particularly in the southern North Sea. There will be an increased reliance on ship systems to navigating through these areas to ensure that the risk of collision and grounding remain low.

Through demonstrating e-Navigation services such as the Tactical Route Exchange, No-go Areas and the Augmented Reality Head-up Display, ACCSEAS has shown that solutions can be developed that will allow users either to receive information they cannot yet get or is more difficult to obtain. This information will enable the mariner, and shore-based authorities, to understand their immediate and near future environment in a more clear and intuitive way. The demonstrations have shown that users are enthusiastic about the improved view of the environment that the ACCSEAS solutions provide.

By improving the spatial awareness, the users of the Region will gain a better understanding of how to traverse the Region with more confidence, efficiency and safety. This can only serve to gradually increase accessibility in the North Sea Region.

Improved Information Integrity

PUBLICATIONS

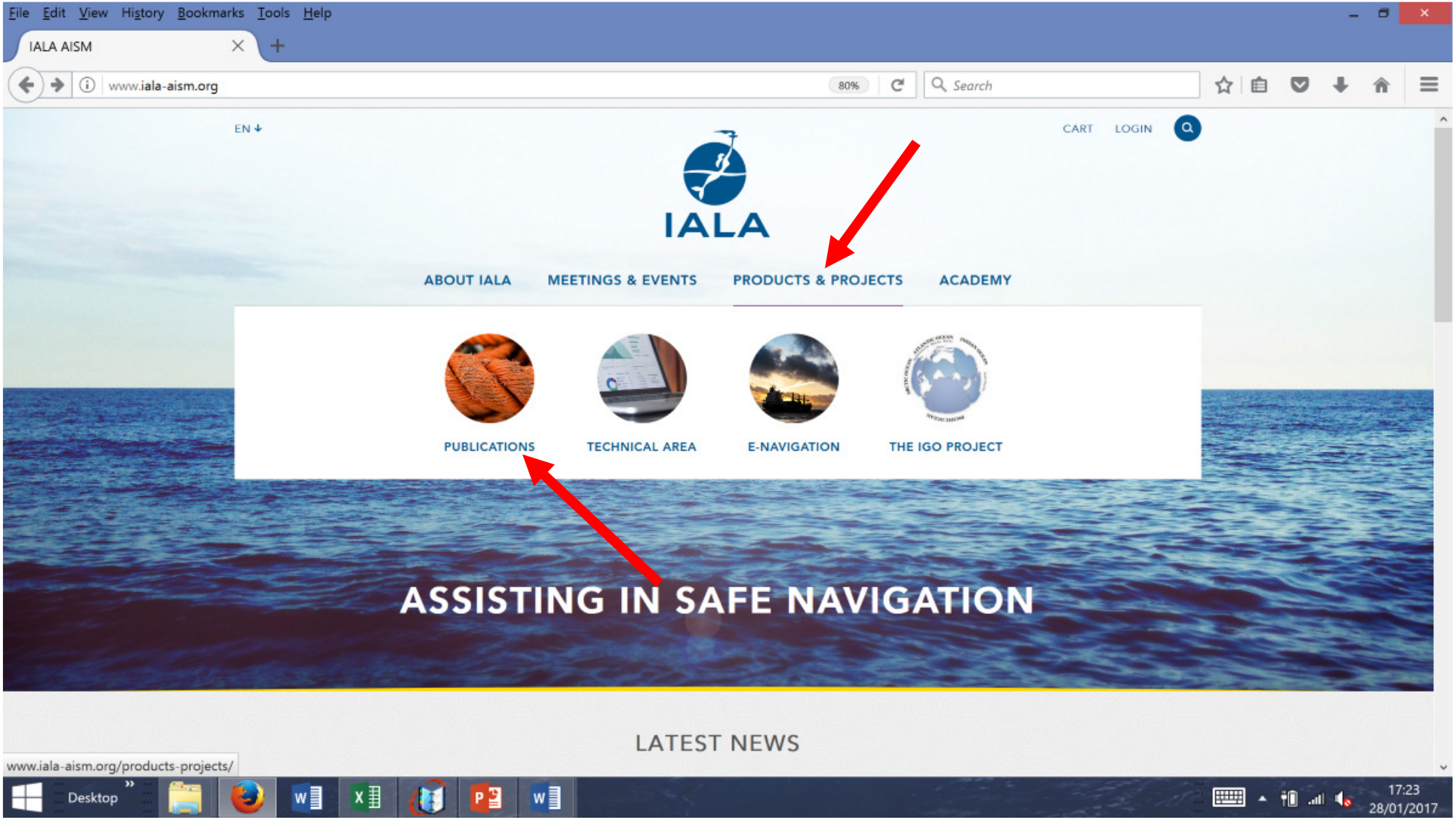
REPORTS

- ACCSEAS Baseline and Priorities Report v3
- ACCSEAS e-Navigation Architecture Report
- ACCSEAS Final Report
- ACCSEAS Legacy Report
- ACCSEAS Route Topology Model
- ACCSEAS Training Needs Analysis Report
- Use of Simulators in e-Navigation Training and Demonstrations Report
- Service Description: Maritime Cloud
- Service Description: Maritime Safety Information/Notice to Mariners Service
- Service Description: Multi-Source Positioning Service
- Service Description: No-Go Area Service
- Service Description: Tactical Exchange of Intended Routes
- Service Description: Tactical Route Suggestion
- Service Description: Vessel Operations Co-ordination Tool
- Service Description: Inter-VTS Exchange Format
- S-100 Product Description on Maritime Safety Information/Notice to Mariners Service
- R-Mode Feasibility Study: MF DGPS Transmissions
- R-Mode Feasibility Study: AIS Transmissions (Part 1)
- R-Mode Feasibility Study: AIS Transmissions (Part 2)
- R-Mode Feasibility Study: Combined DGNSS, AIS and eLoran
- ACCSEAS First Conference Report
- ACCSEAS Second Conference Report
- ACCSEAS Final Conference Report

COMMUNICATION MATERIAL (VIDEOS ON YOUTUBE)

- ACCSEAS GPS Jamming Trial: https://youtu.be/CNAr8eQQ_9E

Information made easy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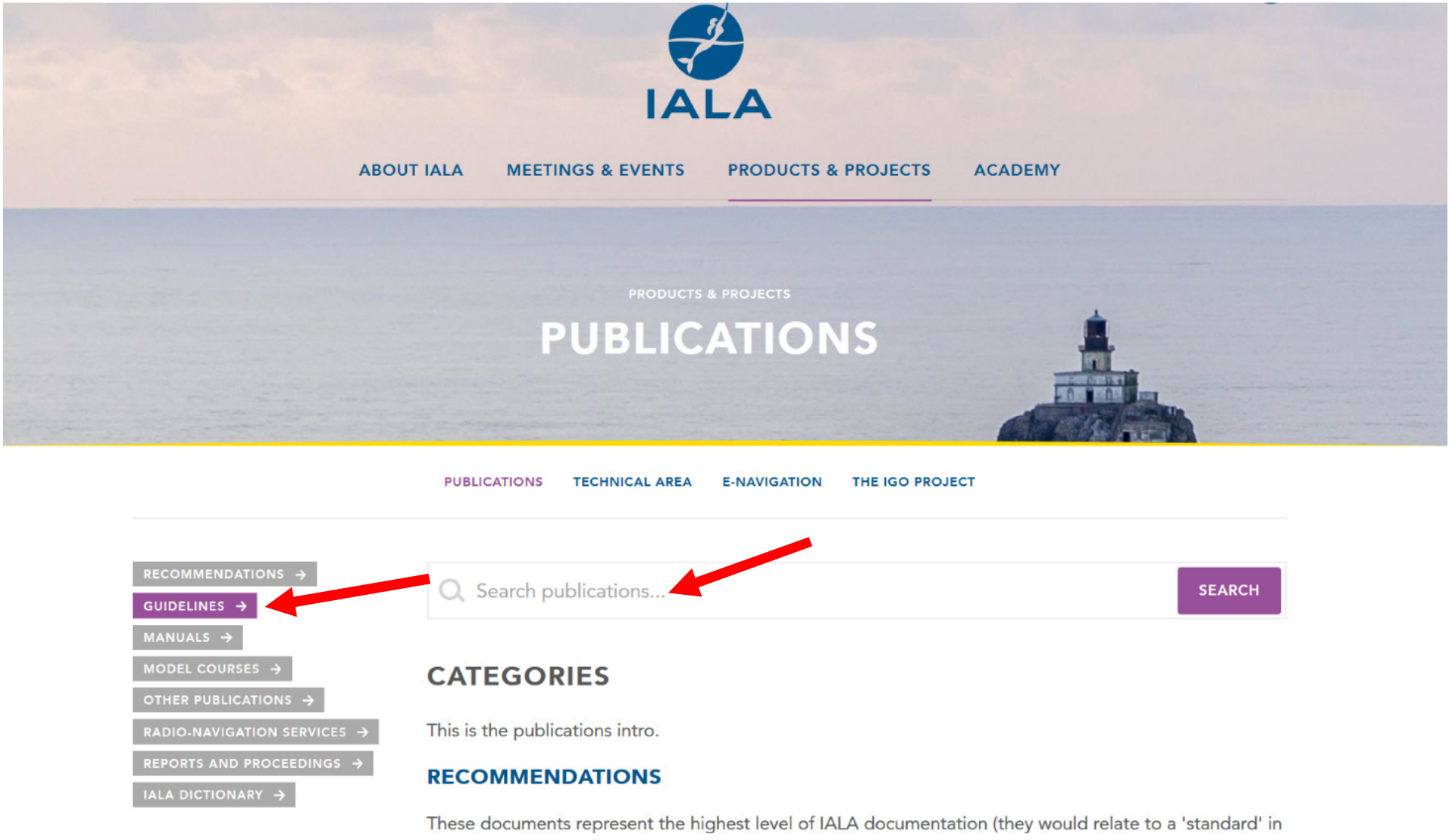
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RECOMMENDATIONS
These documents represent the highest level of IALA documentation (they would relate to a 'standard' in

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5. HARMONISATION OF REPORTING OF TESTBED RESULTS .....
6. ACRONYMS .....
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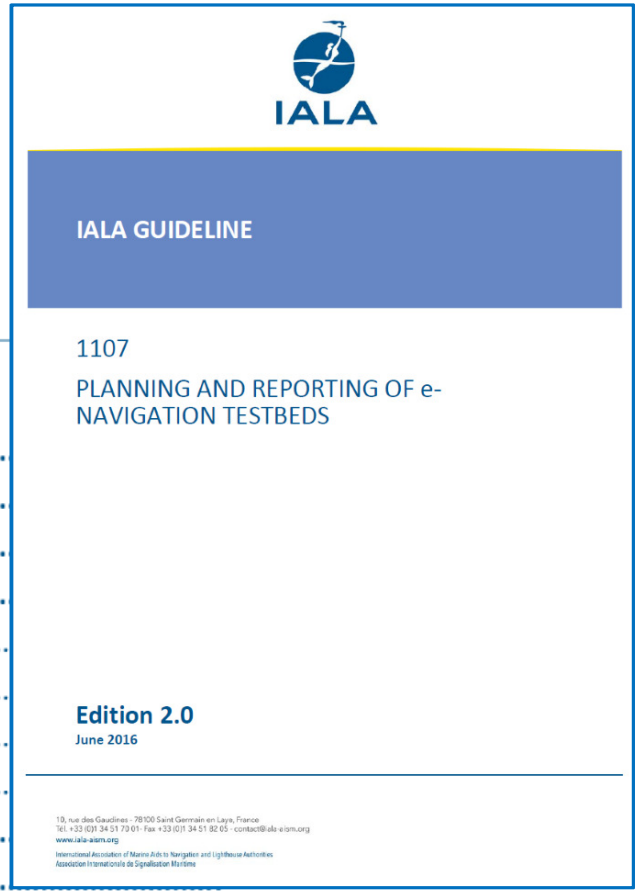

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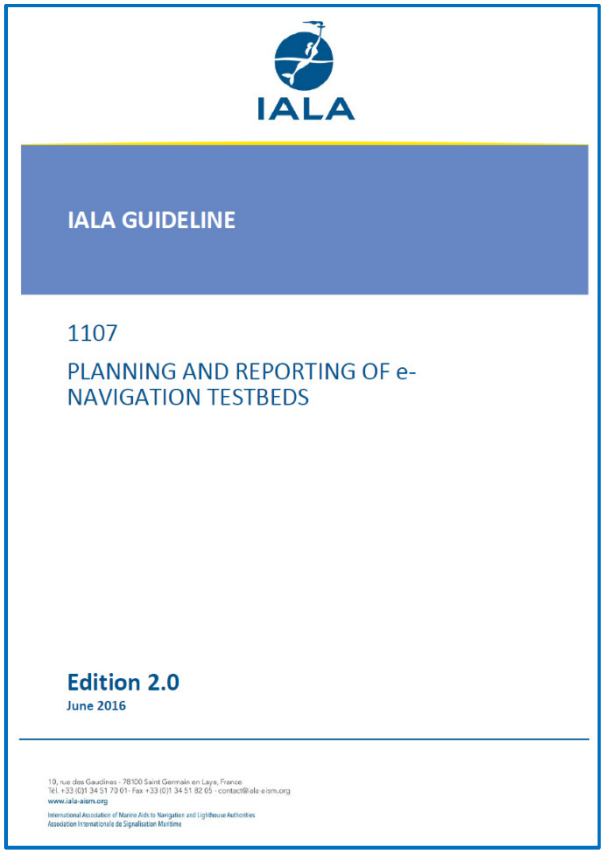

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Edition 2.0
June 2016

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International Association of Marine Aids to Navigation and Lighthouse Authorities
Association Internationale de Signalisation Maritime

Email to Audrey at:
Contact @iala-aism.org

ANNEX B REPORTING TEMPLATE

The purpose of this reporting template is to serve as a harmonised framework for reporting results from e-navigation testbeds. In order to assist with the reporting of testbed results and to ensure these are valuable to the e-navigation development community, it is advisable that all headings are completed - even those for which there is no information.

Testbed information will assist other organizations to learn more about the solution being tested. It may also offer other ideas to expand and further develop the solution.

Note: Symbols used in the Reporting Template have the following meanings:

Sub-section / Sub-heading

- o *Tick box (choose one or more)*
- ➢ *Free text field*

B 1. CONTENTS OF THE REPORTING TEMPLATE

B 1.1. GENERAL INFORMATION

Name of testbed

Location of testbed

Time and duration of testbed

Contact person(s)

Testbed website

Organisation(s) involved

Funding programme and budget

B 1.2. EXECUTIVE SUMMARY

➢

B 1.3. TESTBED INFORMATION

The type of user group(s) involved in the test

- o Shipboard users
- o Shore-based users
- o SAR users

Details of e-navigation gap/s considered for the testbed (some examples are given below. For a complete list, please refer to the IMO MSC 91 report)

- o Information/data management
- o Effective and robust voice communication and data transfer
- o Systems and equipment
- o Ship reporting
- o Traffic monitoring; and/or

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