IALA GUIDELINE

G1153
TEMPLATE FOR THE REVIEW OF EMERGING TECHNOLOGIES FOR POSSIBLE USE BY IALA MEMBERS

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DOCUMENT REVISION

Revisions to this document are to be noted in the table prior to the issue of a revised document.

Date	Details	Approval
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CONTENTS

1. INTRODUCTION

The development of digital technologies continues to be rapid and it impacts on almost all aspects of the maritime industry, including maritime communications, Marine Aids to Navigation and vessel traffic services (VTS). Digital technologies deal with the creation and practical use of digital or computerized information using devices, methods or systems. (Source http://www.dictionary.com)

Therefore, it is important to evaluate emerging digital technologies in consideration of user requirements and the needs of IALA membership. Such an evaluation will be a preliminary, high level, desktop study. It will identify the key features and capabilities advantages/disadvantages, limitations and application to aids to navigation, VTS and other services and systems within the remit of IALA.

For this purpose, a simplified set of assessment criteria has been established to provide a consistent review approach. However, it is recognised that innovation and new technologies cannot always be easily measured by extant processes. Accordingly, the review process is to be considered an initial step in determining further steps that may be taken to confirm that technology is appropriate and feasible for the use of IALA members. When providing information on a new technology the organisation which provides the information should also identify how the technology may be used by IALA members.

2. STAGED APPROACH

While the template provided in this Guideline can be used in isolation, there is benefit in sharing the results of an initial review with IALA for consideration in the appropriate IALA technical committee. The staged approach is identified within the context of a review within the IALA ENAV Committee.

2.1. STAGE 1: PROPOSE TECHNOLOGY

The proposers of a new candidate technology are requested to answer the questions in “Technology Candidate Response” column within the table in annex A. The proposal, along with any supporting input paper and presentation on the technology, should be provided as input to the appropriate IALA technical committee.

2.2. STAGE 2: REVIEW

Once the table has been completed, if submitted, IALA will review the findings and identify next steps, including providing indication if the candidate technology appears to be suitable for further, more detailed, analysis.

Each element provided in the table will be reviewed and marked as red, amber or green, depending on the expert opinion as to the suitability of the technology to address that criteria.

3. OUTCOME OF REVIEW

When a review is completed, a rating of red, amber or green will be identified. Technologies rated as red are not considered suitable for use within a given context; technologies rated amber could be considered for use with possible changes or developments; technologies rated green could be considered suitable for use within a given context.

4. DEFINITIONS

The definitions of terms used in this Guideline can be found in the *International Dictionary of Marine Aids to Navigation* (IALA Dictionary) at http://www.iala-aism.org/wiki/dictionary and were checked as correct at the time of going to print. Where conflict arises, the IALA Dictionary should be considered as the authoritative source of definitions used in IALA documents.

ANNEX A EMERGING TECHNOLOGIES – REVIEW TABLE

	Question	Technology Candidate Response		Working Group Response	Green Amber Red
		Infrastructure	User		Status
1.	Where has the referral come from?				
2.	Name of technology and product name				
3.	Functional description				
4.	Proposed user group				
5.	What are its Key limitations?				
6.	Where is it currently used (geographic and/or industry)?				
7.	How is it currently used?				
8.	How could it be used within the maritime sector?				
9.	Who developed it?				

	Question	Technology Candidate Response		Working Group Response	Green Amber Red
		Infrastructure	User		Status
10.	Is it commercial, non-commercial or military?				
11.	Is there an existing technology that meets the same requirements? If so, what make this different?				
12.	Ease of implementation?				
13.	What are the constraints for implementation?				
14.	what is the capability of the technology? (i.e. nominal range; data throughput; support for audio / video?)				
15.	What is the scalability of the technology?				
16.	Is the technology backward compatible?				
17.	Is the technology dependant on another technology?				

	Question	Technology Candidate Response		Working Group Response	Green Amber Red
		Infrastructure	User		Status
18.	Can the technology be demonstrated?				
19.	Are there any results and test bed? Please List				
20.	Is there a compliance summary?				
21.	Are there legal issues associated with the implementation of the technology?				
22.	Are there any intellectual property rights (essential patents) associated with the technology?				
23.	Is the technology safe to use?				
24.	Does the use of the technology require extra training?				
25.	Are there environmental considerations with the technology?				

	Question	Technology Candidate Response		Working Group Response	Green Amber Red
		Infrastructure	User		Status
26.	What are the financial considerations for implementation and use?				
27.	Is the technology secure (i.e. protected against hacking; privacy of data)?				
28.	Readiness (EU Technology Readiness level - TRL) (level of maturity of technology)				
29.	Can you provide independent references?				