

## ANNEX 13

### DRAFT FRAMEWORK FOR THE IMPLEMENTATION PROCESS FOR THE E-NAVIGATION STRATEGY

#### Introduction

1 In order to implement e-navigation several steps are required. This would include a number of elements such as developing an architecture, gap analysis, cost benefit analysis and the creation of a detailed implementation plan.

2 In order to capture evolving user needs, it is important that the implementation strategy elements remain constantly under review. A structured and a phased approach would be required to capture evolving user needs, making use of the existing agreed methodology, to incorporate any ensuing changes into the strategy and implementation plan.

#### Strategy implementation plan

3 A strategy implementation plan for e-navigation should include priorities for deliverables and a schedule for implementation and the continual assessment of user needs. The deployment of new technologies should be based on a systematic assessment of how the technology can best meet defined and evolving user needs within the e-navigation concept.

#### User needs

4 The first step in the implementation process, i.e. identifying the initial user needs<sup>\*</sup>, has been completed and includes the groups of functions/services needed to meet primary navigational needs based on a structured, systematic and traceable methodology that leads to tangible operational benefits. More detailed user needs, in particular scaled solutions, may need to be developed as a part of the overall implementation plan. The initial user needs should be further reviewed and prioritized by 2009.

#### Architecture

5 The architecture should include the hardware, data, information, communications technology and software needed to meet the user needs. The system architecture should be based on a modular and scalable concept. The system hardware and software should be based on open architectures to allow scalability of functions according to the needs of different users and to cater to continued development and enhancement. This initial architecture should be ready for a coordinated review by 2009 and should be completed by 2010.

#### Gap analysis

6 Preliminary gap analysis has already been started by the Sub-Committee. Taking into account the human element throughout the process, further gap analyses should focus on technical, regulatory, operational and training aspects. It is recognized that these aspects are inter-related and need to be considered in a coordinated manner. The initial gap analyses needs to be completed by 2010.

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<sup>\*</sup> See NAV 54/13, annex 5.

### **Cost-benefit and risk analyses**

7 Cost-benefit and risk analyses should be an integral part of the plan. They should be used to support strategic decisions as and when certain functions need to be enabled. The analyses should address financial and economic aspects as well as assess the impact on safety, security and the environment. This should be completed by 2011.

### **Implementation plan**

8 On completion of the aforementioned steps, implementation of the e-navigation plan could begin in 2012 and should include:

- .1 identification of responsibilities to the appropriate organizations/parties;
- .2 transition planning; and
- .3 a phased implementation schedule along with possible roadmaps\* to clarify common understanding necessary for the implementation.

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\* The example provided by Japan in document NAV 54/13/4 could be used as a template.