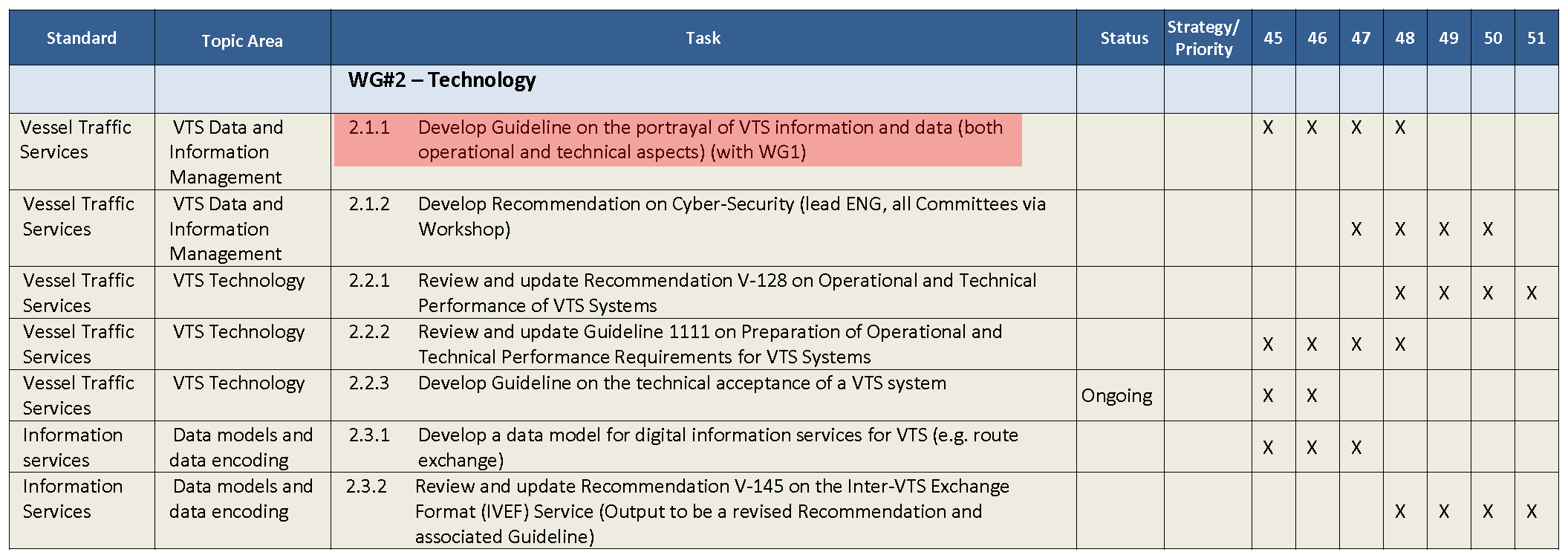
**Worksheet for Guideline on the Portrayal of VTS Information and Data   
(both operational and technical aspects)**

**Contents**

This document represents the start of a “worksheet” for task “2.1.1 Develop Guideline on the portrayal of VTS information and data (both operational and technical aspects)”. The information contained in this worksheet is based upon discussion and works from previous IALA VTS meetings including VTS-40 and VTS-41 which resulted in IALA Recommendation “R1014 PORTRAYAL OF VTS INFORMATION AND DATA”. It is expected that the work for developing this guideline will continue throughout VTS-46, VTS-47, and VTS-48.

(From VTS-45: “Preliminary VTS Committee Work Programme 2018 – 2022 (Task list)”)

1. **Introduction** (Draft)

The items proposed in this guideline serve as a follow-up to recommendation “R1014 PORTRAYAL OF VTS INFORMATION AND DATA”. Each recommendation item is expanded upon considering the various aspects and key points discussed in previous IALA VTS meetings and documents. This guideline intends to assist the providers of Vessel Traffic Services to implement the provisions set forth in the recommendation.



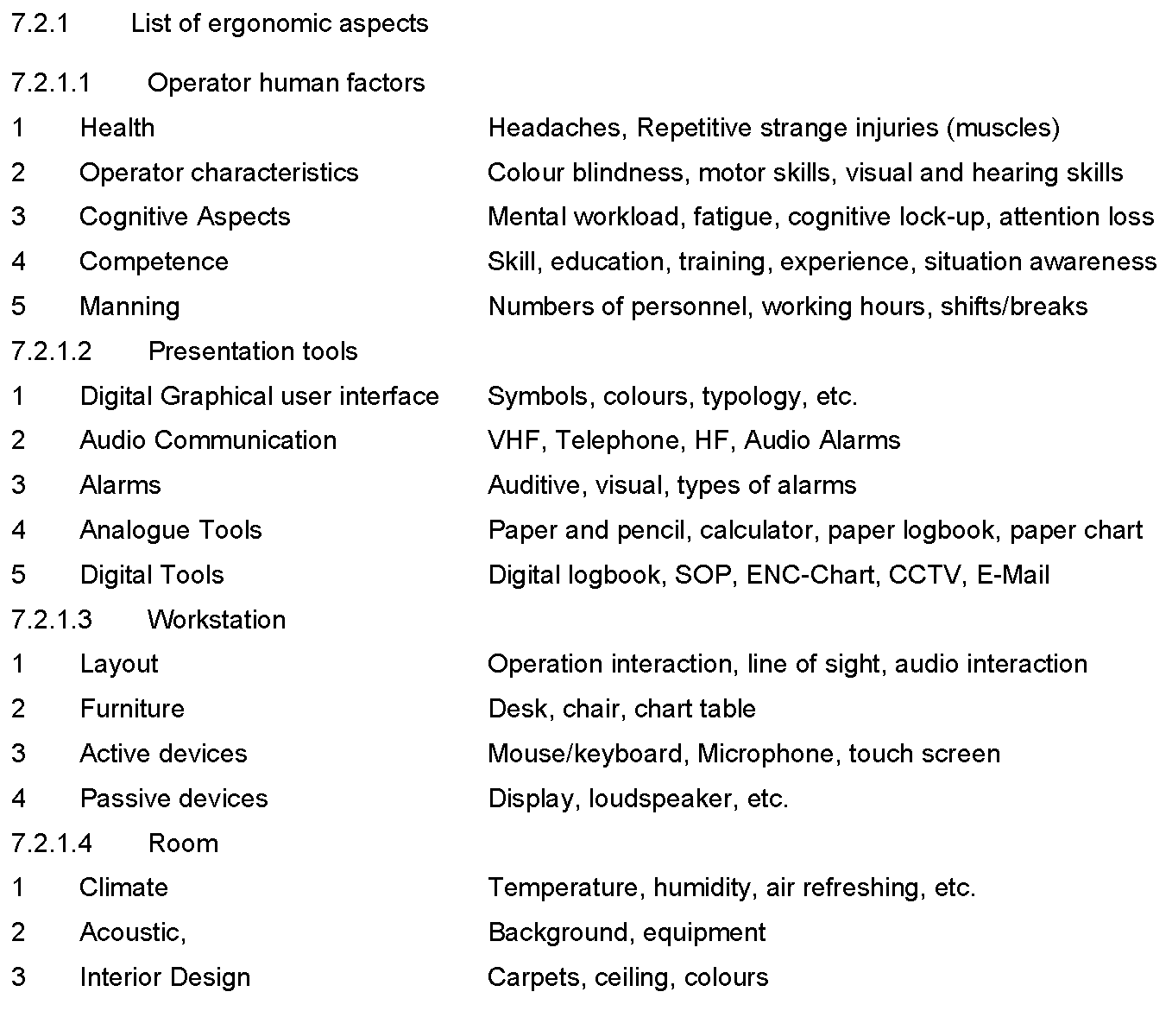
1. **Aims and Objectives** (for realizing the recommended items)
2. To identify what types of VTS tasks (examples) that should be portrayed.
3. To provide a list of possible Human factors and ergonomics to consider when designing a portrayal.
4. To provide guidance on what to consider when trying to fulfill certain portrayal characteristics as outlined in “R1014 PORTRAYAL OF VTS INFORMATION AND DATA”.
5. **Reference**
6. To identify what types of VTS tasks (examples) that should be portrayed.

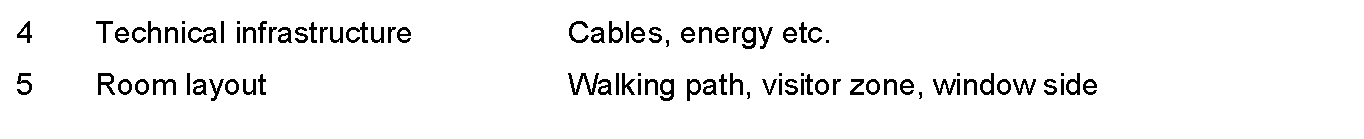
* Do a command
* Radar acquire target
* Modify data
* Create or modify a vessel trip
* Manage the portrayal
* Chart pan, zoom in, zoom out, etc.
* Filtering of information
* VTS support tasks
* Recent information playback
* VTS auxiliary tasks
* Shift on and shift off operators
* Maintenance tasks and diagnostics
* Sensor controls
* Housekeeping tasks

\*As next step: Indicate which tasks are mandatory or optional.

1. To provide a list of possible Human factors and ergonomics to consider when designing a portrayal.

* ergonomics - the study of people's efficiency in their working environment.
* Factors to consider:

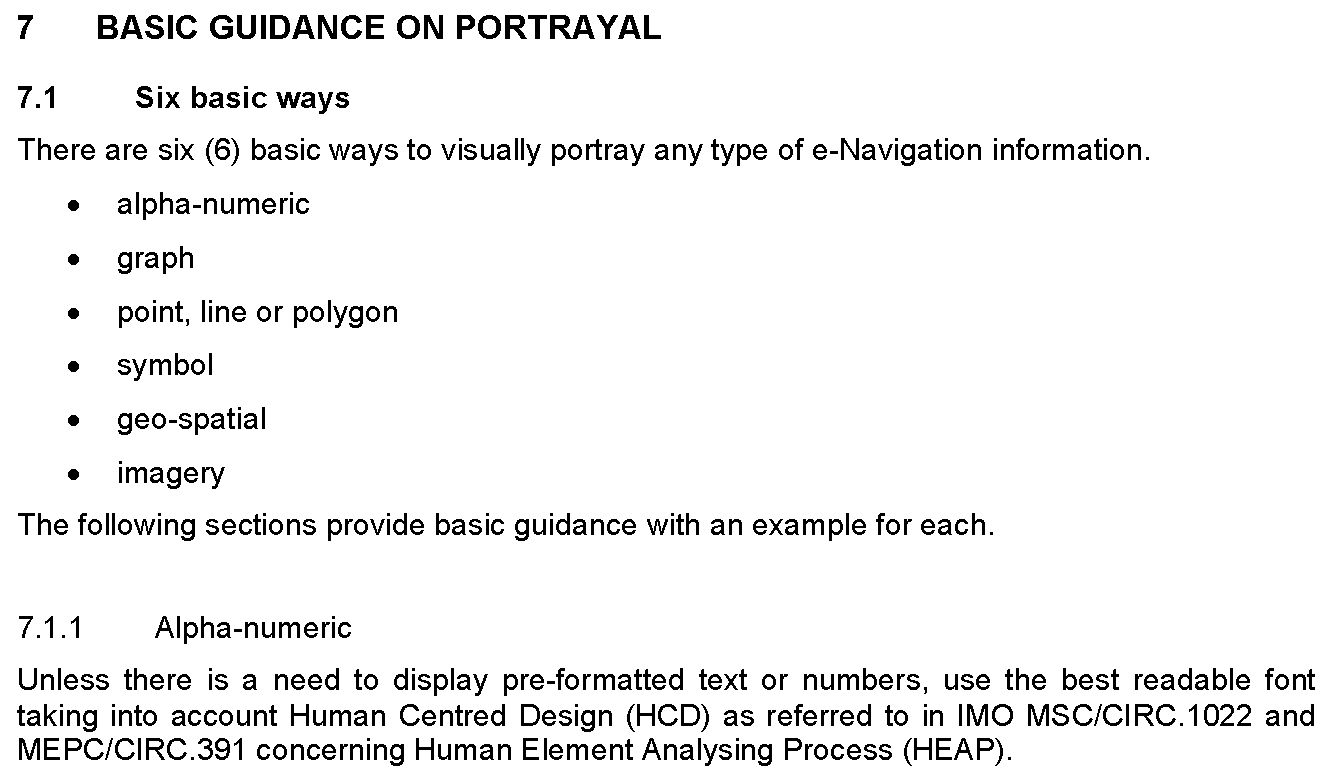


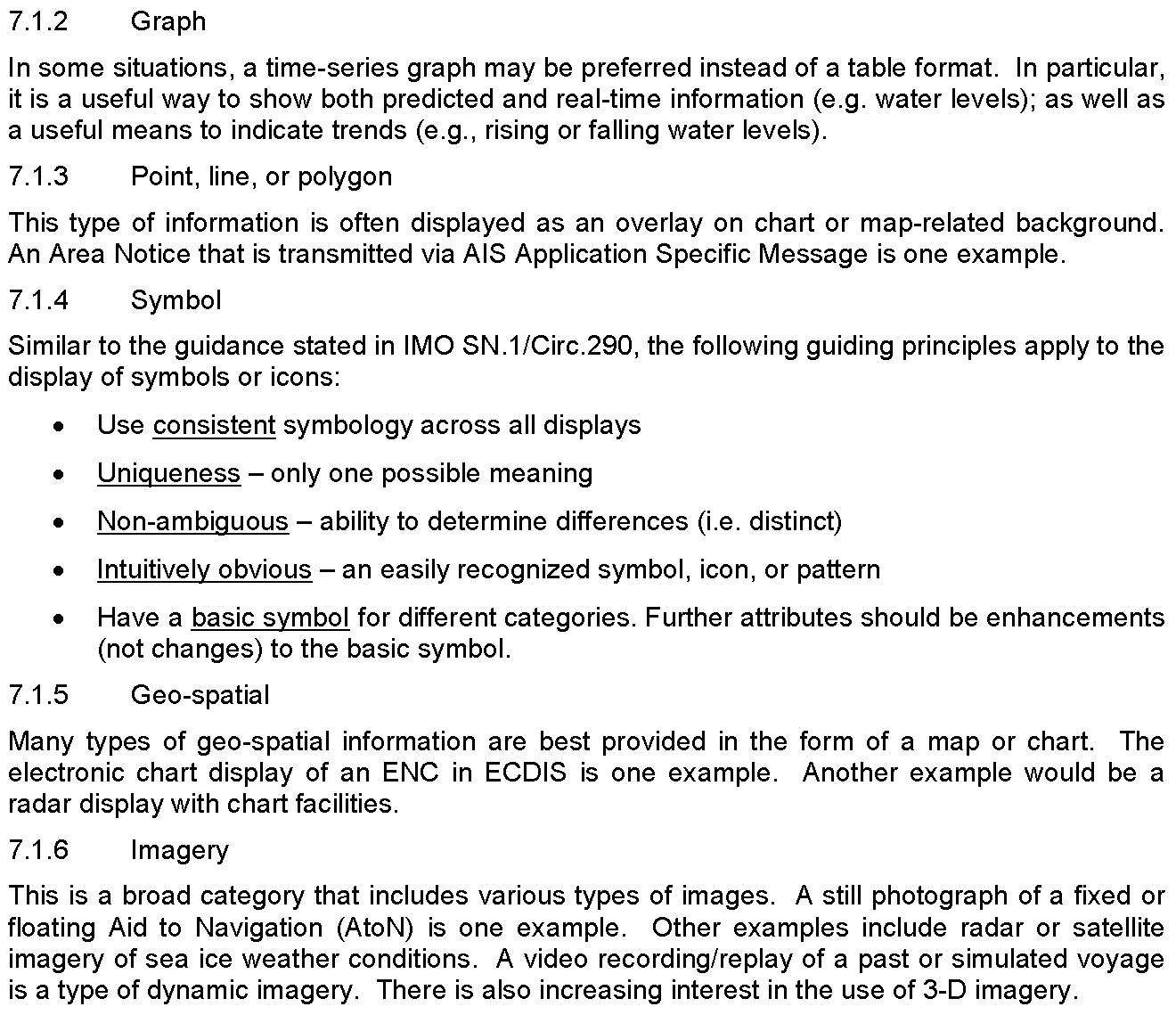
  
From “Report of the IALA Workshop on the Portrayal of Data and Information at a VTS” [Bremen, 2013]

* Some conclusions from Bremen workshop:
* Operator Workload to be considered.
* Portrayal needs to optimize technology-based workflow and mitigate the risks of VTS Operator fatigue and distraction.
* Consideration of traffic image orientation needs to be considered to ensure that VTS Operators can maintain full situational awareness without the risk of confusion when interacting with vessel traffic .

1. To provide guidance on what to consider when trying to fulfill certain portrayal characteristics as outlined in “R1014 PORTRAYAL OF VTS INFORMATION AND DATA”.

* should allow a user to control the system, input data, and take action efficiently
* should be (as far as possible) harmonized with Portrayal on-board
* should indicate (where possible) invalid and erroneous user input
* should be able to display and log significant events
* should support the playback of recorded data
* should indicate data quality (where possible)
* should be configurable to satisfy operational tasks and needs
* should be configurable to handle local regulations and conditions
* design should be independent of specific data processing, sensor hardware, and software



From IALA Guideline No. 1105 on Shore-side portrayal ensuring harmonisation with e-Navigation related information [Edition 1, December 2013]

\*\*Review and discussion at VTS-46/47 with WG1 (Operations) and WG3 (VTS Training) for more detail on the operational and technical side should be necessary.

*Helpful documents to be reviewed further:*

* *“Report of the IALA Workshop on the Portrayal of Data and Information at a VTS” [Bremen, 2013]*
* *Report on the IALA Workshop on Human Factor and Ergonomic in VTS [Gothenburg 2015]*
* *VTS41 input paper 10.3.2 Human Factor and Ergonomic*
* *IALA Recommendation V-127 Operational Procedures for Vessel Traffic Services [Edition 2, June 2011]*
* *IALA Recommendation V-125 On The use and presentation of symbology at a VTS Centre [Edition 3, June 2012]*
* *IALA Recommendation V-119 On The Implementation of Vessel Traffic Services [Edition 2, December 2009]*
* *IALA Guideline No. 1111 Preparation of Operational and Technical Performance Requirements for VTS Systems [Edition 1.0, May 2015] (Chapter10: VTS Human/Machine Interface and Chapter 11: Decision Support)*
* *IALA Guideline No. 1105 on Shore-side portrayal ensuring harmonisation with e-Navigation related information [Edition 1, December 2013]*
* *IALA Guideline G1106 Producing an IALA S-200 Series Product Specification [Edition 2.0, June 2017]*