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# Maritime and Inland Waterways Requirements (Focusing on IWW)

User Consultation Platform 2020

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Organised by:



European  
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# New Requirements Identified

- less than *5 m horizontal positioning accuracy* with detection on errors  $> 3 \sigma$  within 30 seconds integrity (*iECDIS navigation mode*)
- time to alarm smaller *than 6 s* (*LAESSI IWW applications*)
- integrity risk smaller *than  $10^{-5}$  per 2 minutes* (*LAESSI bridge warning*)
- integrity risk smaller *than  $10^{-5}$  per 10 minutes* (*LAESSI mooring assistance*)
- integrity risk smaller *than  $10^{-5}$  per 1 hour* (*LAESSI conning display*)
- *0.1 m horizontal* positioning accuracy (*H2H project, LAESSI project*)

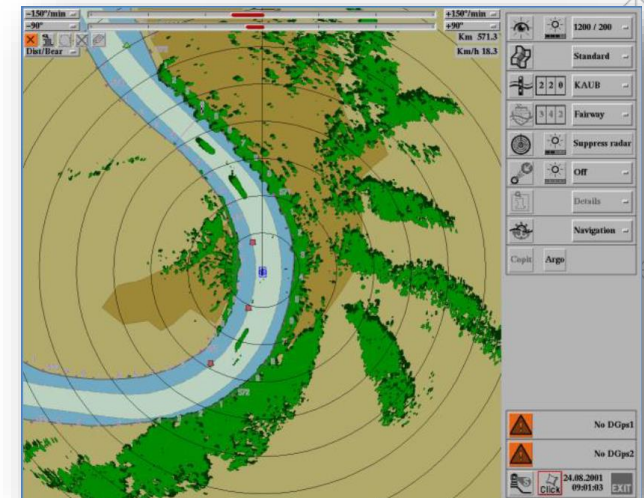
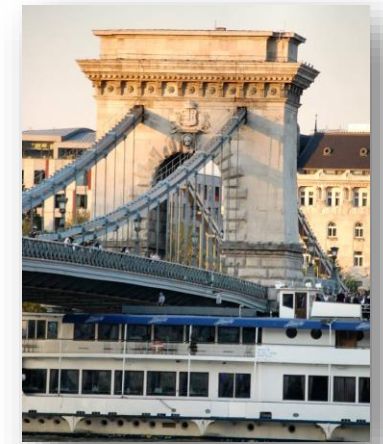


# Source

## LAESSI project (DE) requirements

	Bridge collision warning	Automatic guidance	Mooring assistance	Conning display
Position accuracy [cm]	20	30	10	20
Height accuracy [cm]	10	not relevant	not relevant	not relevant
Heading accuracy [°]	0,3	0,17	0,07	0,1
Integrity risk	10 10 <sup>-5</sup> / 2 min 30 10 <sup>-5</sup> / 8 min	0,55 10 <sup>-5</sup> / 3 h	18 10 <sup>-5</sup> / 10 min	18 10 <sup>-5</sup> / 1 h
Time to alarm [s]	4 6	2	6	6

Table 3: Accuracy and integrity requirements of assistance functions (Sandler et al 2016)



# Linking space to user needs



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