



ECS PT

PT1

Introduction/Overview

18 July 2023



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Introductions



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1. Review ECS PT TORs



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2.UKHO Introduction and UK ECS user research



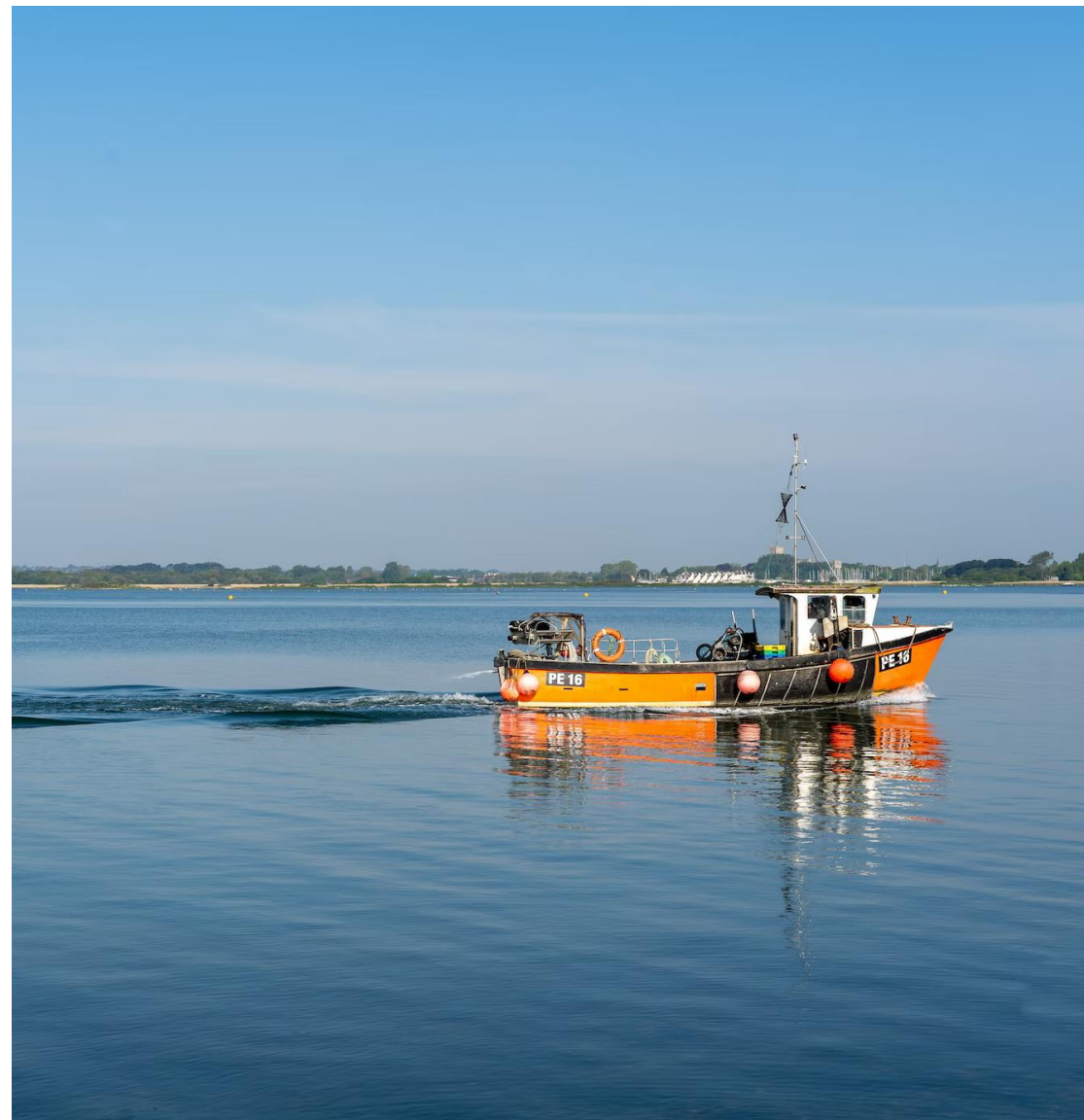
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INTRODUCTION

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• Why ECS?

- ECS (SubECDIS) is used to describe any user group that does not use ECDIS for both primary and back up navigation.
- In response to the market trend toward digital navigation, we are looking at how we can support safe navigation for the ECS market.
- ECS is not looking to force all users onto ECDIS
- ECS is not looking to remove compliance for paper charts – it adds to the mariners' options





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• Why use ECS?

Maritime Risk

- Mariners increasingly using unofficial data and non-compliant digital hardware for navigation.
- Paper charts increasingly carried solely for compliance
- Growing gap in regulations with ECS mariners wanting the efficiency and feature rich digital products but who don't want or can't have ECDIS.
- An alternative to paper for official navigation is required both now and for the future when paper chart coverage is reduced.





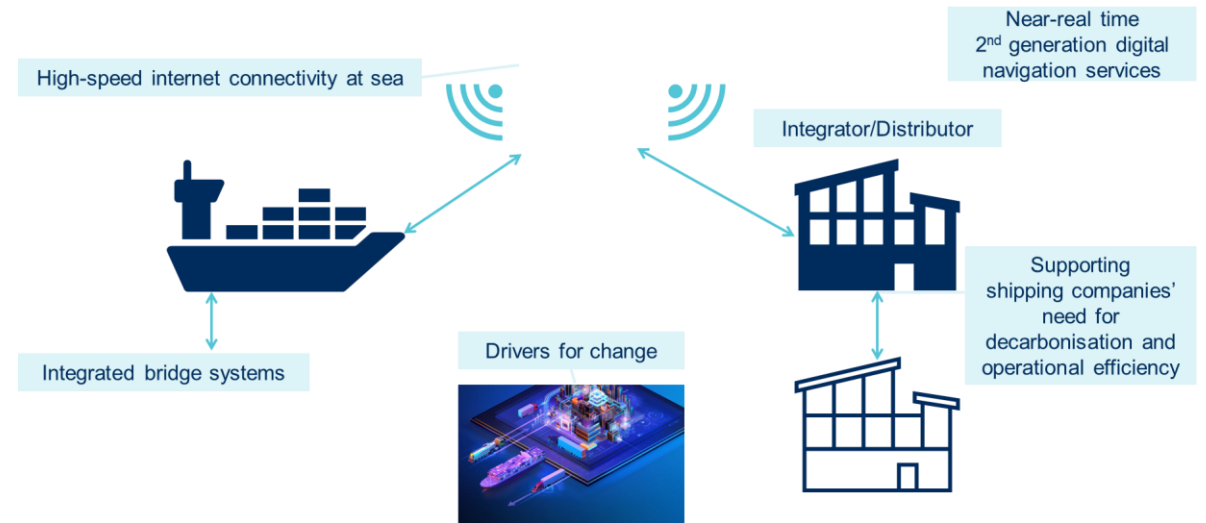
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Future Resource Capability

Hydrographic Office Capacity

- Hydrographic Offices will be challenged to provide products and data for paper, S-57 and S-100
- The future mariner will need and demand the data which will support their automation and regulatory challenges





Segmentation – UK waters

Segment	Categories	Requirements	Regulation/s
1	Commercial: <ul style="list-style-type: none"> • ≥500GT Passenger Ships (PAX) Date of Build (DoB) ≥1/7/2012; • ≥3,000GT Tanker DoB ≥1/7/2012; • ≥10,000GT Cargo DoB ≥1/7/2013; • ≥3,000GT Cargo DoB ≥1/7/2014. • Fishing Vessels ≥24m 	Paper or ECDIS	SOLAS / The Merchant Shipping (Safety of Navigation) Regulations 2020 FV ≥24m: MSN 1873 A1(F)
2	Any (commercial or pleasure) over 150GT but less than category 1	Paper, ECDIS or 'official ECS'	The Merchant Shipping (Safety of Navigation) Regulations 2020
3	Non-cargo but vessels for sport or pleasure in commercial use		Ref. para 1 of the Code of Practice for Intended Pleasure Vessels in Temporary Commercial Use at Sea (IPV Code), which differentiates the commercial use (outside of the pleasure vessel definition). Further relevant references in MGN 597, 598, 599 etc.
4	Fishing vessels ≥15 to <24m		FV ≥15 to <24m: MGN 628; MSN 1872 A1(F); and
5	Fishing vessels <15m		FV <15m: MGN 268; MSN 1871 A2(F); MGN 293; MGN 319;
6	Pleasure vessels under 150GT	No charting requirements	MGN 599 (Pleasure vessels - Regulations and exemptions - Guidance and best practice advice)



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Current Activity



UKHOs current activities:

- › Gap analysis of standards, regulations and user requirements
- › Assessment of standards, including security schemes
- › Market research of the UK ECS market.
- › Delivery of findings and outputs of this PT to the IMO.



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UKHO – UK SUB-ECDIS MARKET RESEARCH

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• Methodology

- Conducted market research in Jan & Feb 2023 on the sub-ECDIS market in UK coastal waters.
- Three key segments were identified to research in more detail – Commercial vessels below 3000 GT, Small commercial craft and Fishing vessels.
- Manufacturers & Distributors: Conducted 20 in-depth interviews with some manufacturers and distributors. These interviews were cloaked so we receive honest feedback.
- End users: Partnered with 6 trade associations to conduct an online survey to its members. Received c300 responses. Included End-users (onboard and ashore) in the segments identified above.

Manufacturers & Distributors findings

- The market wants leadership.
- There's customer anxiety - What are the new regulations? What will the alternative solution be?
- Common concerns about install an ECDIS – cost, lack of space, appetite, training, satisfying different users.
- Customers are not resistant to digital. Some said that the software isn't the issue, it's the hardware. They don't want to re-learn things. Feel electronic navigation today isn't far off from what we need.
- Mixed opinions on having a standardised vs. bespoke product.
- Need entry level solution – software that can be used on as regular PC/laptop, possibly tablet and smartphone.
- Any future regulation 'must look forward', able to evolve and adapt, and satisfy different end users.
- Concerns that more regulation will increase prices and make the solution less appealing and accessible.

End-users findings

- Most use a mix of paper and electronic charts. A sizable volume only use electronic.
- Over two-thirds had one ENC installed. A quarter had two. Chart plotters dominated, followed by ECDIS or ECDIS-like systems.
- In terms of updating systems, over half said they update weekly (less for fishing segment). Updated either by internet access onboard within the chart system, or an internet download and a manual transfer to the ECS.
- What's important when considering an ECS? Integration with other sensors/systems, reliable, compatible, chart updates published frequently and easy to update, rich functionality
- Tidal and port information appears frequently in current chart data packages. The following scored highly on the 'wish list' - navigational warnings, notice to mariners, radio service information and weather.
- GPS, AIS and compass/heading device are components that are frequently connected to the chart system. Approx 50% have radar and echo sounder connected to the chart system.



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Any questions ?



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3 & 4. Establish work item deliverables and timelines



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WORK PLAN AND TASK LIST

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3. DRAFT - ECS PT WORK PLAN 2023-2024

Tasks

A	Review and analyse any historical user research, studies or trials and their corresponding findings within the ECS sector to date.
B	International regulatory requirements spreadsheet bellow 3000gt if any ? Determine what information we need back/format (template)
C	Agreed segmentation of a proposed solution. Should this be segmented by vessel types/size/gt for requirements ?
D	S-57, S-100 or dual fuel concept for ECS solution.
E	Future requirements for data and coverage for all vessel types outside of SOLAS shipping lanes. Where are ECS craft navigating? (AIS type B?)
F	Create list of expert contributors to support work activities.
G	Plan engagement activities around where, how and what we want to engage with expert contributors on.
H	Gap analysis of current data provided under regulation against unofficial ECS data and paper chart coverage (chart coverage requirements - Regional Hydrographic Commissions input needed)
I	Mapping between the RTCM spec (IEC 62376), the mini ECDIS spec, and 61174 focusing on the data related aspects.



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Review Expert Contributor Participation

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UKHO Derived Chart Producer Licenses	IC-ENC Electronic Chart Data Service Distribution Partners (appointed and reporting sales)
Garmin Italy Technologies S.r.l. /Navionics	ChartWorld
Navico Inc.	Siitech
ChartWorld / Raymarine	O-charts
Lloyds Register Voyage AS	
Wartsila Voyage Ltd	
Imrays	
Magic Instinct	
Mapmedia S.A	

Are we happy to allow other IMO Flag States into the group as Observers?



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Stakeholders:

- Regulators
- OEMs
- HO's
- End users
- Trade Associations

Excel Questions for Stakeholder Engagement

Home Insert Draw Page Layout Formulas Data Review View Automate Help

A	B	C	D	E
sole decision maker?		yes/no/joint in country/taken from MCA/MCA & deviation		
decision maker for others?		Describe changes from MCA regs if changed - free text		
relationship with NHO?				
Member of IMO?		Yes active/ Yes inactive / No		
Member of red ensign group		Yes/No		
CA country (don't need to ask - we can't)		Yes/No		
appetite for change		thoughts on speed of transition 0/10		
		overall transition to digital 0/10		
		indicative time needed for national waters for transition		
		Free text - split out between user type e.g. leisure, S&R etc		
		Non navigational uses of paper charts in your waters?		
		Key blockers to transition (survey monkey) & prioritise		
		do you envision blockers being resolved and on what timescale and how		
		if internet connectivity is a major blocker, can you quantify the problem, land, offshore (distance offshore), local/national,		
		size of national fleet		
		do you envision blockers being resolved and on what timescale and how		
		How do your regulations change according to different vessel types/sizes etc		
		Where is the cut-off for your regulations - what do you classify as non-regulated?		
		what are the top 3 market segments in your national waters? Leisure/cargo/offshore energy/		
		Drop down list		
		By volume?		
		By size - tonnage, length, keel depth?		
		By concern?		
		By operation/type - e.g. cargo/LPG/passenger/cruise/ferry/RORO/fishing/workboat etc/type -		
		e.g. panamax/suezmax/post malaca max?		
		Cargo type?		
		Passenger/cruise?		
		Leisure - unregulated		
		Leisure - regulated, e.g SuperYatch		
		Defence		
		Offshore operations		
		are you aware of any incidents due to the use of unregulated data/unofficial digital navigation?		

End Users Regulators OEMs HO's Trade Associations

Sub ECDIS Engagement

The IHO aims to better understand the Sub ECDIS market and continue to provide the leading products and services for safe navigation as it moves towards a digital future.

Sub ECDIS describes any vessels not using ECDIS for both primary and secondary navigation.

* Required

General Information

1. Name *

Enter your answer

2. Organisation *

Enter your answer

3. Role *

Enter your answer

4. Geographic area(s) of operation (tick all that apply)

UK

Europe

Africa

Middle East

Asia

North America

South America

Australasia

Polar regions

Other

5. Select User Category *

End user of charting products

Hydrographic Office / National Charting Authority

Regulatory body

OEM

Trade association representative

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6. Plan Stakeholder Engagement Activities



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7. Election of PT Chair/Vice-chair/Secretary



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8. Any other buisness



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9. Next Meeting

VTC Week Commencing 23rd
October, exact date tbc