# Are you ready for the new ECDIS regulations?

Your nine stage guide to meeting the revised SOLAS requirements

ADMIRALTY

The revised SOLAS regulations requiring the carriage of ECDIS on most large ships are a significant landmark in changing the way ships navigate.

With the regulations effective on a rolling timetable from July 2012, owners and operators urgently need to assess the implications for their fleets and make plans to integrate digital navigation into bridge procedures. Shipping companies and crews must be ready to meet the new requirements if they are to remain SOLAS compliant.

With Admiralty, you can introduce digital navigation onto your ships with confidence. The Admiralty Vector Chart Service maintains our global reputation for quality. It contains only SOLAS compliant ENCs, and is proving to be very popular with the early adopters of digital navigation.

Rear Admiral Nick Lambert
UK National Hydrographer

# What steps are you taking towards ECDIS compliance?

This booklet explains the ECDIS transition process in nine clear stages – to assist the planning process as you integrate digital navigation into your fleet.

For more detailed information on ECDIS compliance visit www.admiralty.co.uk

## Stage 1.
## Identify key SOLAS compliance dates for your fleet

ECDIS carriage is mandatory on a rolling timetable from July 2012. The legislation will be phased by ship type and size to apply eventually to almost all large merchant and passenger vessels. Use the diagram over the page to identify ECDIS installation deadlines for your ship or fleet.

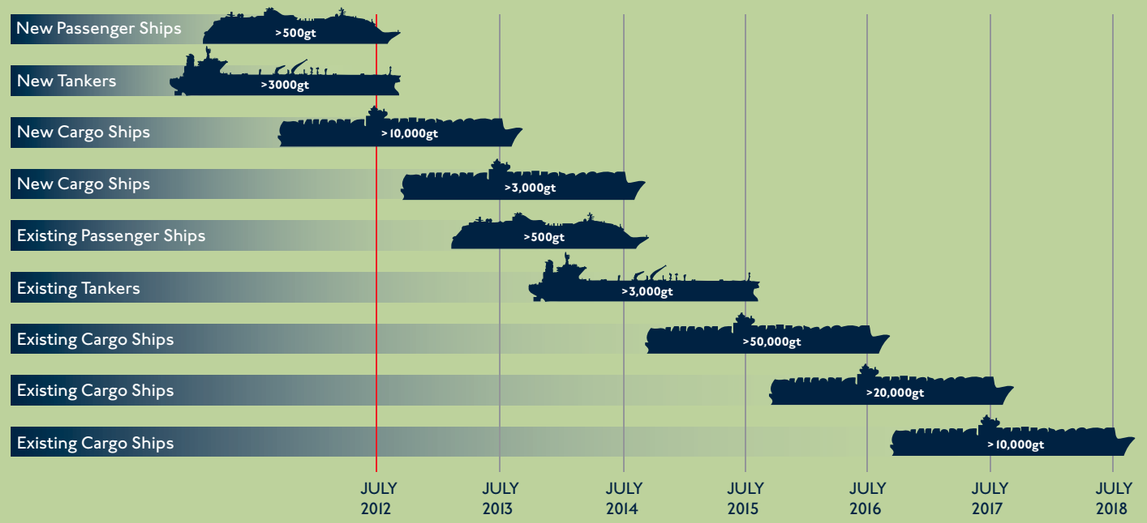
Existing ships will have to fit ECDIS before the first survey following the implementation date. If you're acquiring new ships, remember that the timetable for new builds is based on when the keel is laid.

There are two important exceptions. Existing cargo ships of fewer than 10,000 gross tons won't require ECDIS. And some flag states may also exempt ships due to be taken out of service within two years of the implementation date.

Action list:

- Confirm mandatory ECDIS carriage dates for each ship
- Review ECDIS carriage requirements for each flag state in the fleet
- Plan installation schedules around refit periods

**ECDIS compliance dates by ship type and size**
This chart shows when the regulations come into force for each vessel type.




Based on IMO Circular letter issued December 2008
Please check www.admiralty.co.uk for the latest updates and news

(Intertidal tint)

## Stage 2.
## Conduct an initial ECDIS risk assessment

The integration of digital navigation marks a fundamental shift in the way ship navigation is conducted. It goes beyond simply fitting new hardware to ensure compliance.

A risk-based strategy is therefore important. This should start with an initial ECDIS risk assessment to identify general hazards – such as a lack of ECDIS training and procedures, and the risk implications for ECDIS procurement, installation and redundancy. Ship-specific risk assessments should follow, once installation is complete.

Action list:

- Gather general concerns from ship and shore staff about ECDIS adoption
- Identify potential ECDIS hazards for the whole fleet
- Assess inherent risk levels and consider control measures

## Stage 3.
## Plan for ECDIS training

International regulations require that the master and all watchkeepers on ECDIS-fitted ships are trained in both generic and type-specific ECDIS operation. This may be a flag state requirement by 2012 for ships fitted with ECDIS but still using paper charts as the primary means of navigation.

Flexible training options are available including shore, web and computer-based programmes. It's important to make sure that any course is approved by the flag state of the country where the training took place – and that it's accepted by the flag state of the ship on which the trained officer will serve.

Action list:

- Review officers' generic and type-specific ECDIS training certificates for flag state compliance
- Establish generic and type-specific ECDIS training needs
- Identify appropriate training provider – and ensure training approval and acceptance by respective flag states

## Stage 4.
## Ensure correct ECDIS installation

A correctly installed ECDIS will result in a stable system that will build your watchkeeping officers' confidence.

Once you've chosen an ECDIS manufacturer, first review its Type Approval certificate – checking its acceptability to the flag state. The actual installation will also require surveying, either by the flag state or a classification society acting on its behalf. Anticipating survey requirements before installation will save time later.

Back-up systems, redundancy processes, maintenance and the full involvement of your shipping company's technical department are other important considerations.

Action list:

- Verify that ECDIS Type Approval certificates are acceptable to flag state
- Identify flag state and/or classification society ECDIS installation requirements
- Conduct technical audit and plan for surveys and maintenance

## Stage 5.
## Establish safe, efficient ECDIS operating procedures

Initial risk assessment and training will identify the procedures you need to operate the ECDIS safely and efficiently.

These should be appropriate to the ship and shipping company's policies, the area of operation and type of trade. Procedures can take the form of a checklist or a more detailed written ECDIS procedures document. Areas to cover range from departure and arrival checks, passage planning and watchkeeping, to watch handover, sensor failures and black out planning.

Fully involving ships' officers in establishing ECDIS procedures will ensure their successful adoption onboard.

Action list:

- Identify required ECDIS procedures in consultation with ship staff
- Incorporate ECDIS implications into bridge and International Safety Management Code procedures
- Review ISM auditing process and procedural training needs

In my experience of navigation assessments, the majority of errors using ECDIS can be avoided. Comprehensive training and effective procedures are essential to ensure that ECDIS is used safely, efficiently – and to its full capacity.

**Captain Paul Hailwood** MSc
Director, Hailwood Consultancy Ltd

## Stage 6.
## Ensure you're using up-to-date ENCs

When operating an ECDIS you need up-to-date and appropriate scale ENCs. However, if they're not available for a particular area, ships may use raster navigational charts (RNCs), together with appropriately maintained official paper charts.

Two Admiralty products and services offer 'smart' extra support. Our e-Navigator PC application makes it easy to organise, maintain and display Admiralty charts, both paper and digital. The Admiralty Information Overlay provides additional navigationally significant information, accurately plotted and laid over relevant ENCs.

Shore-based monitoring using e-Navigator also helps make sure a ship's ENCs and other nautical publications are correct – facilitating chartering processes, as well as external audit.

Action list:

- Identify monitoring system for ENC/RNC coverage, updates and edition numbers
- Ensure ships are able to monitor, maintain and record installed charts and corrections – supported by shore-based monitoring
- Incorporate Temporary & Preliminary Notice corrections and value-added products such as Admiralty Information Overlay

## Stage 7.
## Conduct individual ship ECDIS risk assessment

This stage identifies the specific hazards of ECDIS operation onboard a particular ship leading to procedures applicable both to the ship and its installed ECDIS. A Failure Mode Effect Analysis (FMEA) by the ECDIS manufacturer will assist the process.

Again, depending on ship type, trade and area of operation, hazards will vary – for example ranging from failure of ECDIS hardware, computer viruses and sensor failure, to blackout, incorrect chart installation and misinterpretation of information.

Once risks are identified, you'll need to establish appropriate control measures in consultation with ship staff.

Action list:

- Carry out risk assessment on each ship following ECDIS installation – fully involving the ship's officers
- Review and refine company ECDIS procedures
- Incorporate ECDIS procedures and risk assessment into Safety Management System – advising flag state of risk assessment results

## Stage 8.
## Make the transition from paper charts to ECDIS

Once ECDIS training, procedures and installation are completed, the flag state will need to approve the ECDIS as the primary means of navigation on each individual ship.

There then follows a transition period from paper chart navigation to ECDIS – its duration reflecting the experience and confidence of the ship's officers. Gradual transition can be over several months – beneficial in allowing time for tests and review.

Action list:

- Confirm flag state ECDIS carriage requirements are completed and approved
- Ensure ECDIS training and familiarisation is in place, and ECDIS procedures are implemented onboard
- Consult captain to confirm implementation date and establish transition duration

## Stage 9.
## Implement ECDIS onboard

Onboard implementation is the final and most important stage of ECDIS transition. This is when the shipping company must effectively support safe and effective ECDIS training, procedures and equipment.

Placing an ECDIS-experienced senior officer onboard for a short period is a good way to develop common standards. Any bridge or navigation audits should feed into future reviews of the company ECDIS procedures and policies.

Action list:

- Consolidate company support for ECDIS implementation
- Appoint ECDIS mentor officer to visit ships and assist with implementation
- Review auditing to include ECDIS, training and post-audit procedures

# Because you're constantly checking, so are we.

UKHO Data Assessment, Regional Team 2

## Additional information laid over ENCs

The Admiralty Information Overlay is the only service to include the worldwide Temporary and Preliminary Notices to Mariners to support your ships sailing compliantly with ECDIS and ENCs. The Overlay is also the only service to include the results of the comprehensive reviews of the world's ENCs undertaken by UKHO in order to identify and resolve navigationally significant differences with existing paper charts.

## 200,000+

That's how many individual pieces of new information Admiralty rigorously checks every year – making sure the safest level of navigational information is available.

## Latest updates – just a mouse click away

Receive instant, regular updates of Notices to Mariners, as well as Temporary & Preliminary Notices – online, via CD or email.

## Quality assurance that's second to none

Know that you're using world-class navigational information, thanks to our industry-leading combination of expertise, meticulous processes and close working relationships with national hydrographic offices worldwide.

# www.admiralty.co.uk

For more information and advice, contact Admiralty's global network of distributors.
Or call our in-house customer service team, 24/7.


**Admiralty – United Kingdom**
The United Kingdom Hydrographic Office
Admiralty Way, Taunton
Somerset TA1 2DN
United Kingdom
Tel: +44 (0) 1823 723366 (24 hour)
Fax: +44 (0) 1823 330561
customerservices@ukho.gov.uk

**Admiralty – Singapore**
Admiralty Hydrographic Asia Pacific PTE Ltd
1 Fullerton Road
#02-01 One Fullerton
Singapore 049213
Tel: +65 6832 5102 (office hours)
Fax: +65 6408 3801


ADMIRALTY