



# Electronic Navigation Questionnaire

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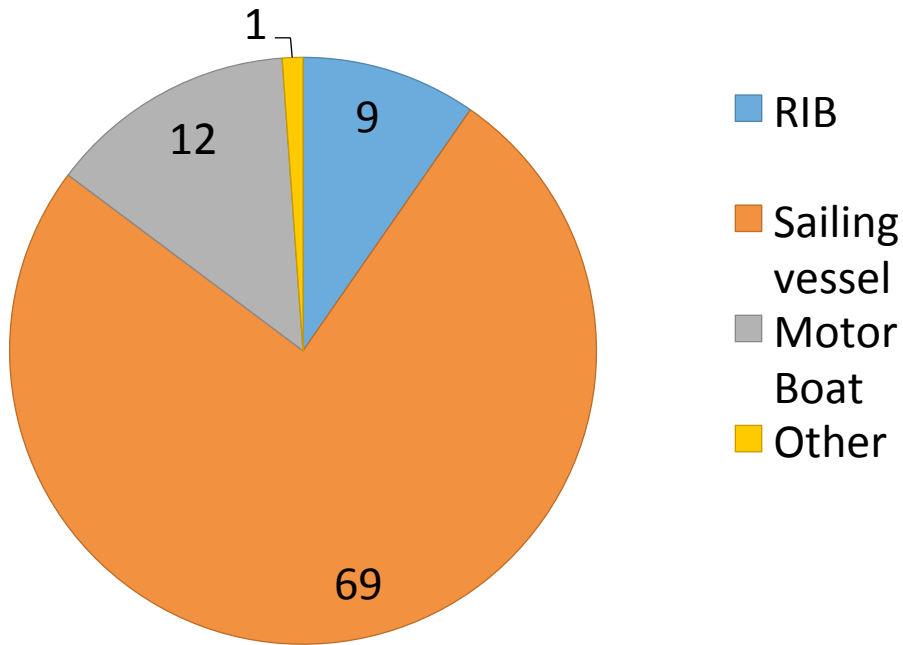
# Results Analysis

- Survey period: September 2017 to January 2018
- Southampton Boat Show to RYA Yachtmaster Instructors Conference
- 193 Questionnaires analysed
- 4 questions on users, vessel and passages undertaken
- 8 questions on equipment carriage and use



# Vessels used

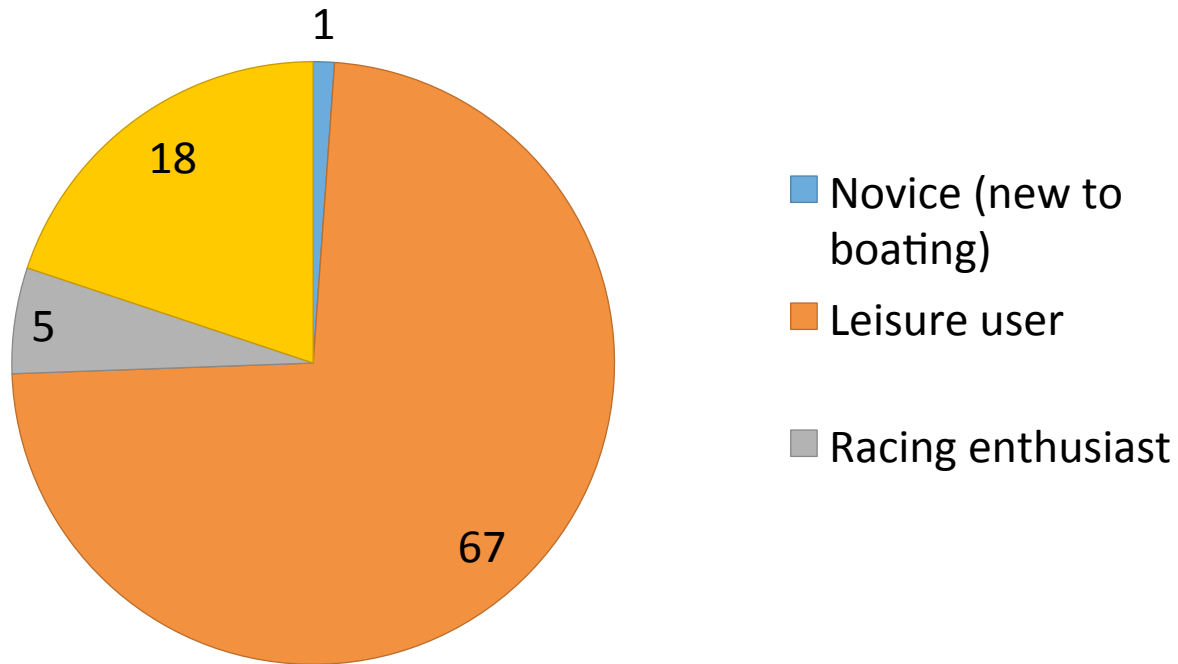
**Question 1 - What type of boat do you use most often? (Please tick one)**





# User analysis

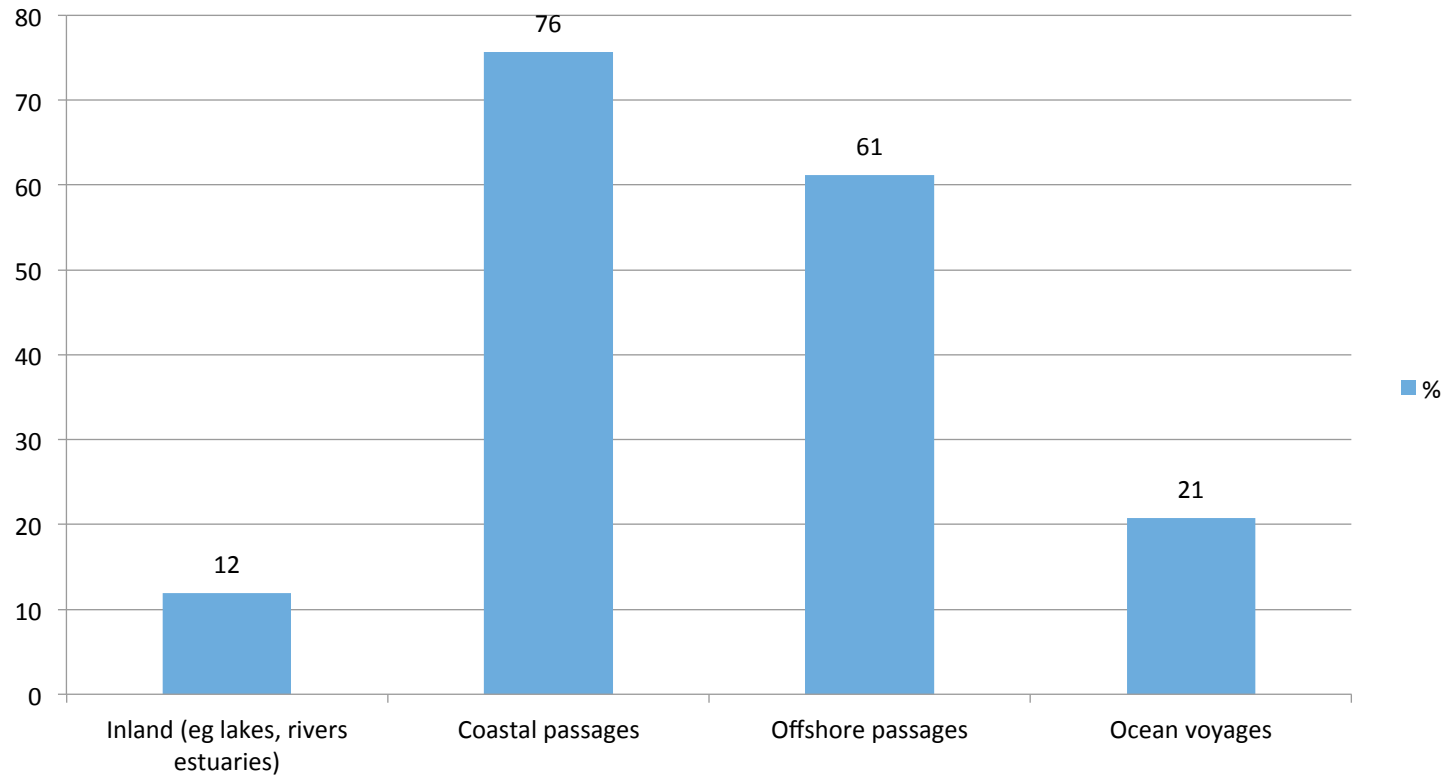
**Question 2 - How would you describe yourself?  
(Please tick one)**





# Voyages undertaken

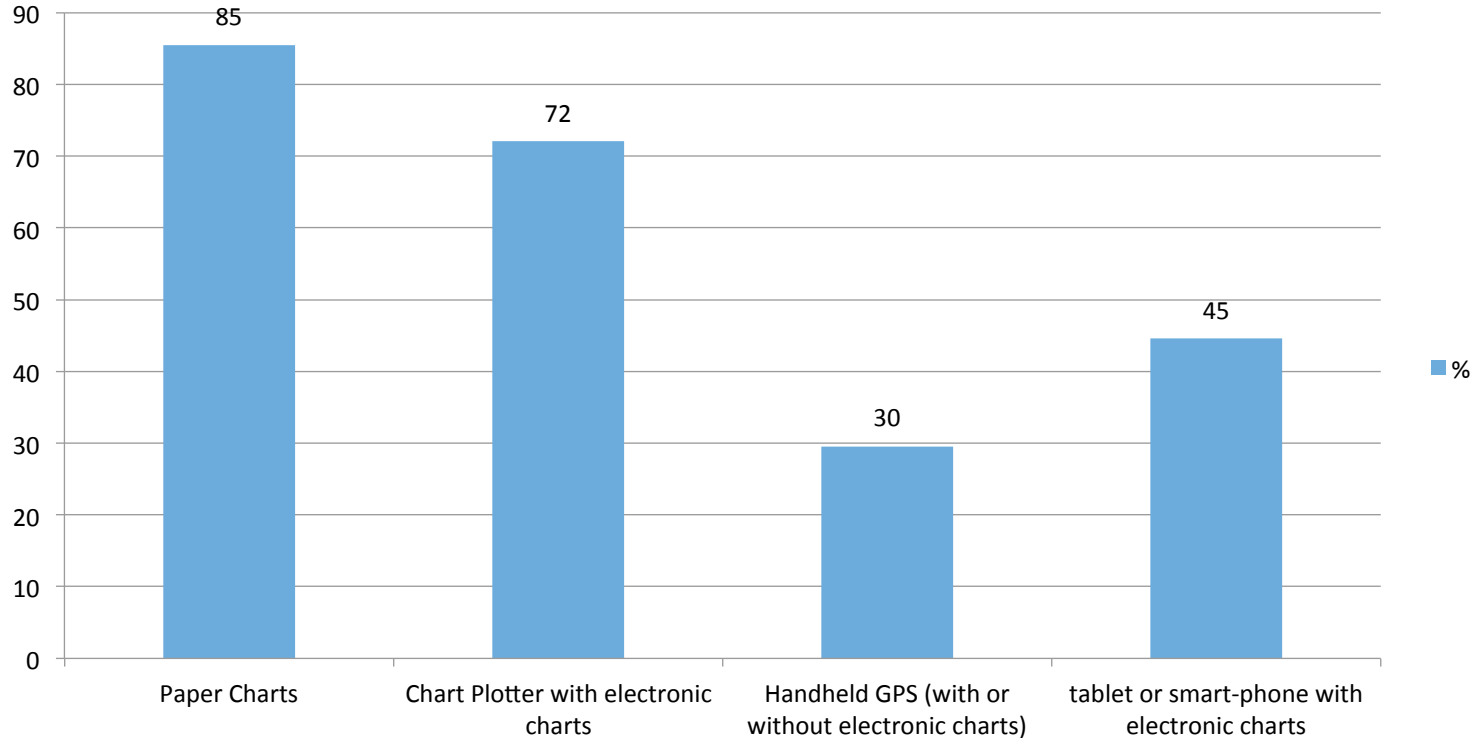
**Question 3 - What type of voyages do you undertake? (Please tick those applicable)**





# Chart carriage analysis

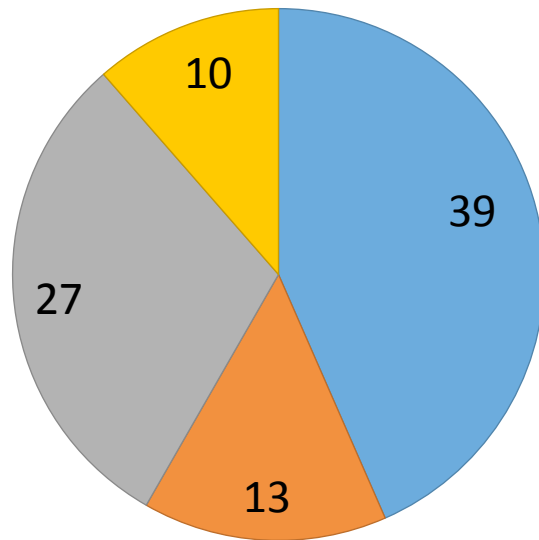
**Question 4 - What charts do you carry on board? (Please tick those applicable)**





# Chart updating - paper

**Question 5 - If you carry paper charts, how often do you update them by either incorporating NTMs or buying replacements? (Please tick one)**

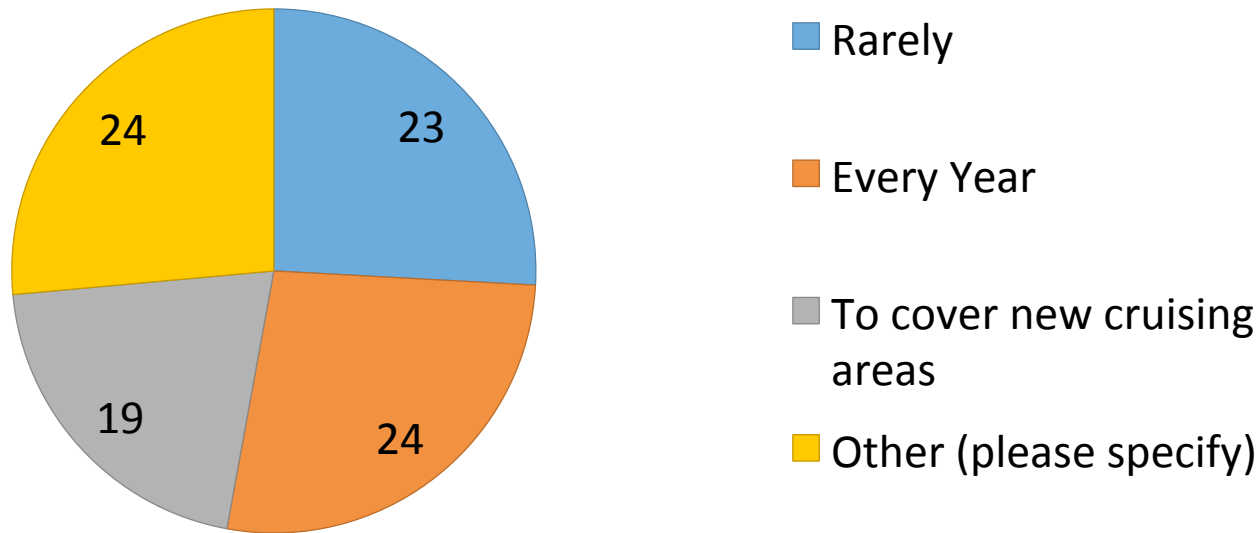


- Rarely
- Every Year
- Periodically by reviewing NTMs
- Other (please specify)



# Chart updating - electronic

**Question 6 - If you have a chart plotter, how frequently do you update the charts or replace the chip? (Please tick one)**

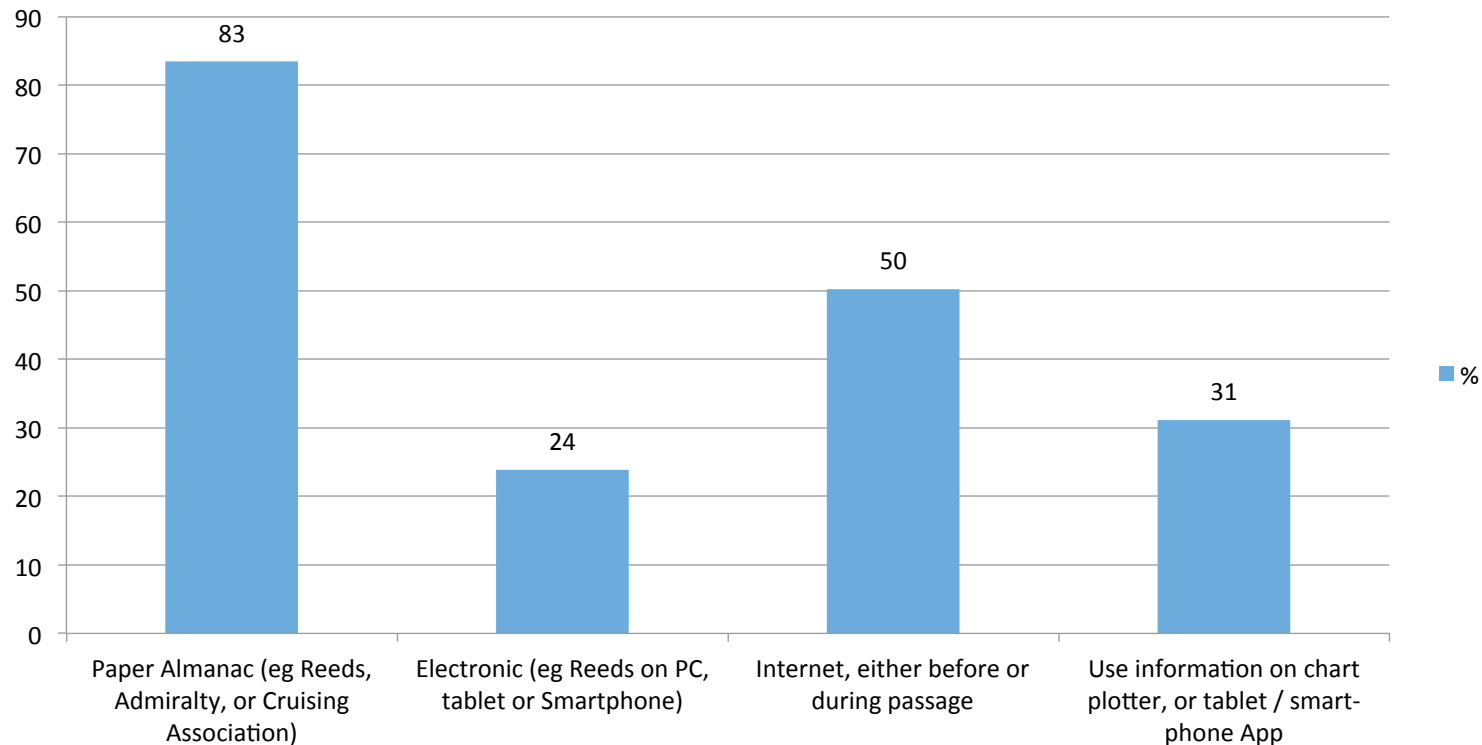






# Almanac carriage or access

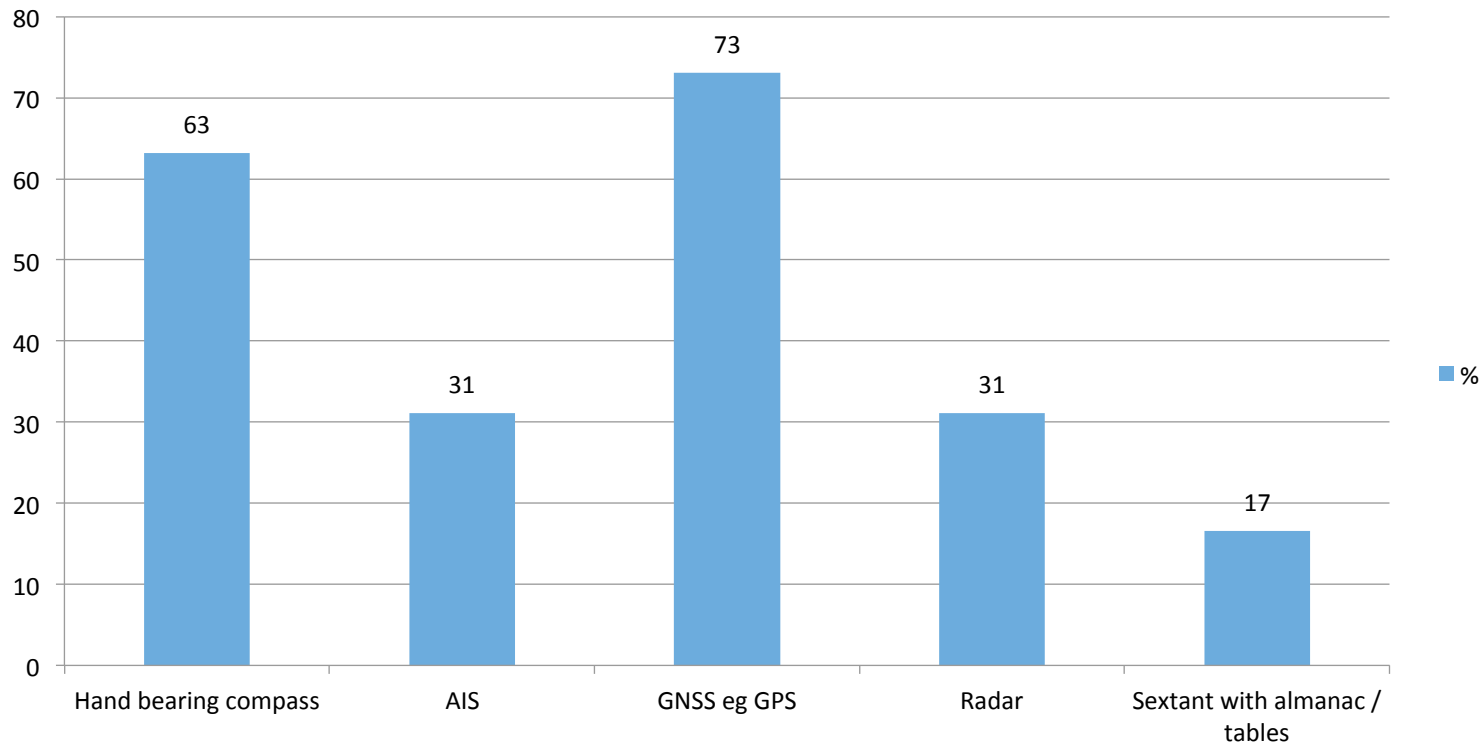
**Question 7 - What Almanac do you carry on your boat? (Please tick those applicable)**





# Position confirmation means

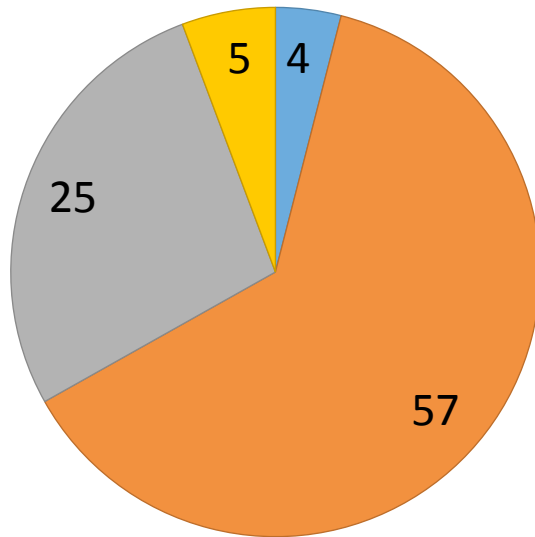
**Question 8 - If you navigate electronically, what items do you use to confirm your position? (Please tick those applicable)**





# Position checking frequency

**Question 9 - If you navigate electronically, how often do you check your position using another source of position? (Please tick one)**

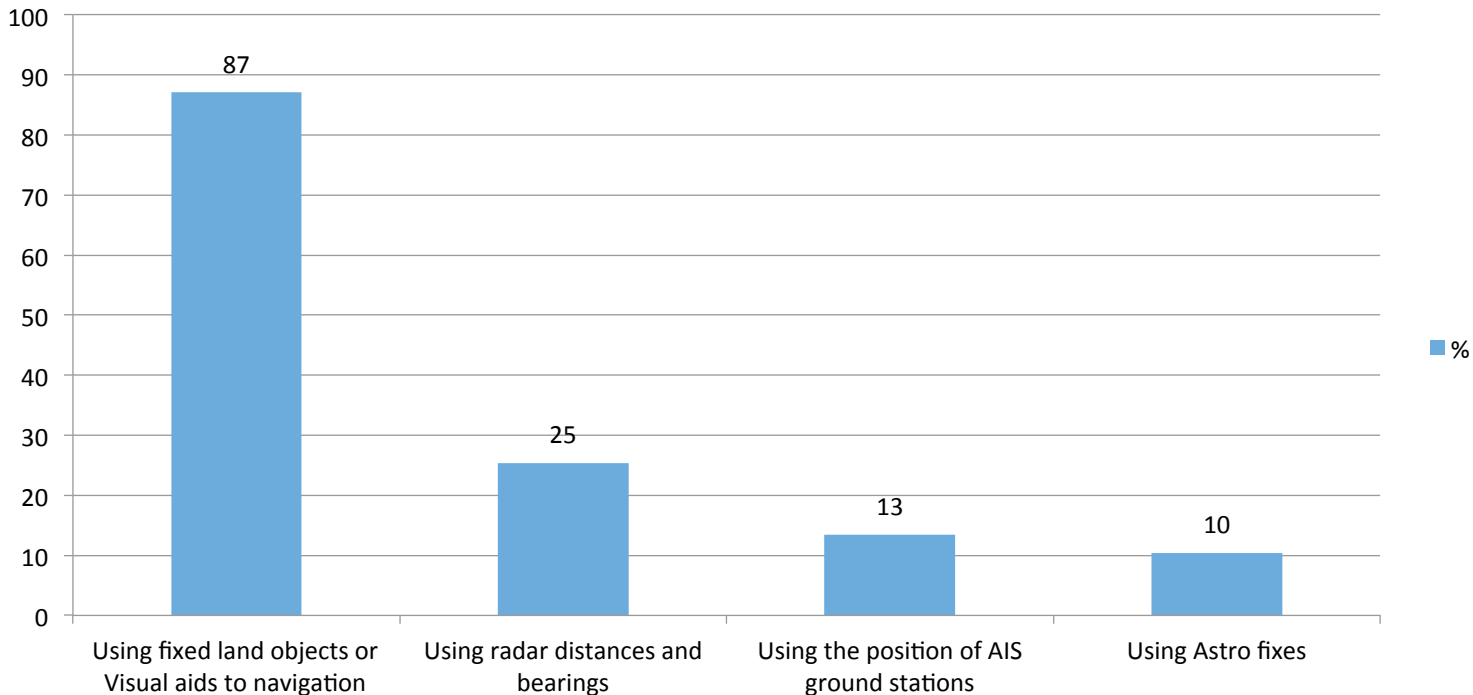


- Never
- Regularly during every passage
- When approaching land
- Other (please specify)



# Position checking methods

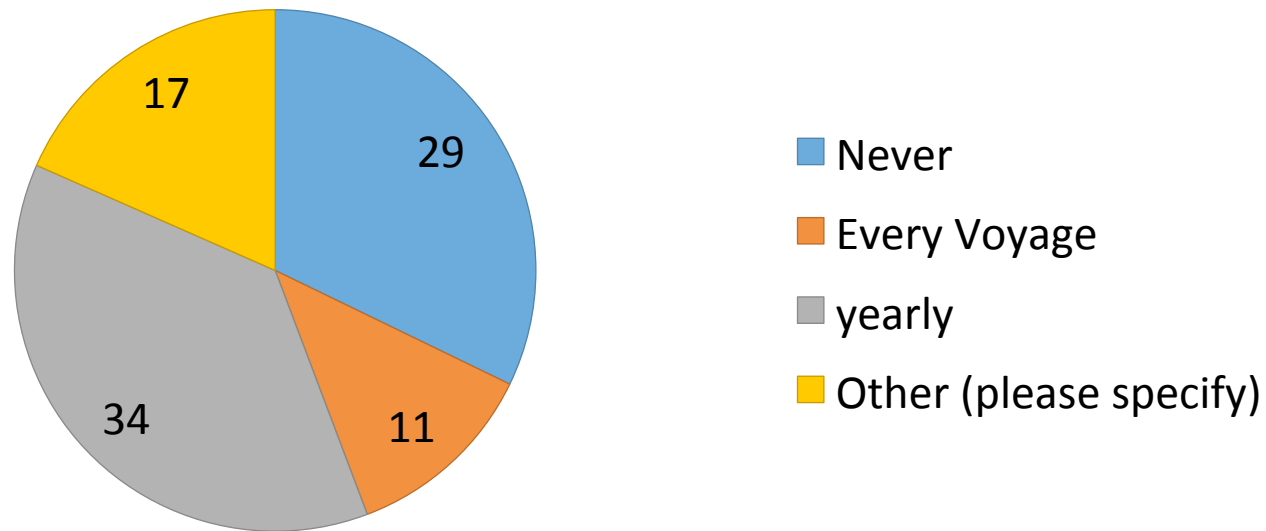
**Question 10 - If you regularly check your electronic position using another source of position, what methods do you use? (Please tick those applicable)**





# Equipment calibration

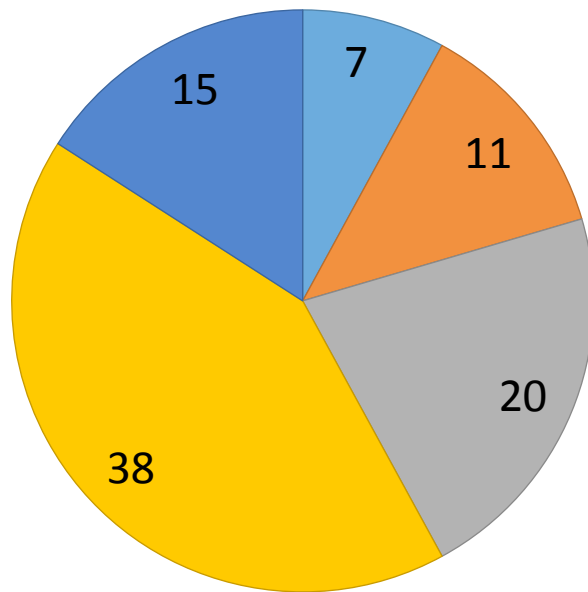
**Question 11 - How often do you check the calibration of your log, magnetic and electronic compasses, and radar azimuth? (Please tick one)**





# Qualifications held

**Question 12 - What practical sailing qualifications do you hold? (Please tick one)**



■ None

■ International Certificate of Competence

■ RYA Day Skipper or Coastal Skipper

■ RYA/MCA Yachtmaster (Offshore)



# Plotter improvements responses

- Longest responses came from most experienced sailors
- Many gave very thoughtful views based on experience
- Some concern about leisure chart quality (and raster v vector)
- Concern over crowd-sourced charts information
- Instructors, in particular, sail on a variety of boats
- .... and have to explain a variety of equipment
- Leisure users are looking for access to more information
- But features which add little or no real benefit are not liked



# Plotter improvements requested

## *Most frequent sailors' requests:*

- Buttons rather than touch screens
- Standardisation of displays and controls
- Easier means of updating charts – especially via downloads
- Split screen with two chart scales available
- Better facility to add visual fix lines and laylines (using wind and tide)
- Better tidal and weather information input and display
- Better connectivity – especially to tablets and smart phones
- Better passage planning features & waypoint management





# Further improvements requested

## *Additional sailors' requests and comments:*

- Radar and AIS overlay as standard
- Standard data format (NMEA) so different kit can be connected
- Collision warning using cameras
- Lower power consumption
- Charts need to mark dangers at all zoom levels
- Bigger screens and better displays: better colours/larger typeface
- Lower power consumption
- Additional features are often: distracting/irritating/source of errors



# Tablet and smart phone Apps used

*In type terms the most popular were (in approx. order):*

- Charting Apps
- Weather
- Tides
- AIS
- General boating/almanac Apps
- RYA SAFETRX
- Anchor watch Apps
- Star/planet chart Apps



# Popular Apps

- Navionics charts by far the most popular
- Imray charts the next most popular
- Various weather Apps used including GRIB file viewers: Windfinder, Windy, Meteo Consult, Passage Weather, BBC, iHurricane
- Various tide planning Apps: Neptune, Imray, Tides Planner, Tidesplotter, anyTides
- General boating Apps or ones which combine or augment info: SailTimer, Boatie, CAptains Mate, Active Captain, Reeds (now defunct)
- Apps to link into yacht navigation systems (e.g. Raymarine, B&G)



# Summary

- Users generally satisfied by products available
- More experienced users are more critical
- Users have views on features that would be useful
- Concern about lack of uniform controls and distracting features
- Some concern about chart quality and crowd sources data
- Large range of weather and tidal Apps being used
- Some users listed many different Apps which they use