

# VOS Quick Reference Guide

## Annex 1: Port Meteorological Officers

The purpose of this "Quick Reference Guide" is to:

1. Help newly appointed personnel become familiar with the [functions of a PMO](#);
2. Reacquaint experienced personnel with these functions; and
3. Promote the resources available to fulfil these functions.

**Note:** This guide is presented in point form and should be used in conjunction with the Quick Reference Guide for VOS Program Managers, as the separation of responsibilities and tasks expressed here might not be representative of all countries. The two guides when combined should cover the basic requirements of operating and maintaining a national VOS Program. Many of the functions of the PMO described in this guide are summarised in the VOS Work Flow Diagram at appendix 1.

### Monitor Ship Movements

- Identify new ships that are arriving in port, i.e. as a potential VOS recruitment.
- Identify ships in the national VOS Fleet (VOF) that are arriving in port.
- Identify ships in a foreign VOF that are arriving in port
- Prioritise and plan ship visits accordingly.
- Obtain the necessary port and ship security passes in advance of a planned visit in accordance with prescribed local arrangements or specific port/ship requirements.
- Monitor the movement of ships in the national VOF and, if necessary, make arrangements for individual ships to be inspected or visited by an [international PMO](#).

### Recruitment Preliminaries

- Select potential ships for the national VOF and or [VOSClim](#). Depending on your location, some recruitment factors to consider might include:
  - The trading pattern or route of the ship – target data-sparse areas;
  - The percentage of the time sailing in desired areas;
  - Length of charter on the route;

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- Ability to regularly inspect and service the ship;
  - The availability of certified NMS instruments for installation on the ship;
  - The suitability of the ship to carry and care for the loaned NMS instruments;
  - The availability of a suitable communication system on the ship to send the observations; and
  - The availability of a computer on the Bridge on which to install electronic logbook software.
- Check the [WMO List of Selected, Supplementary and Auxiliary Ships](#) (WMO-No. 47) to ensure that a ship under consideration for recruitment is not already a member of another national VOF.
  - Confirm the participation of the ship in the national VOF with the Master and the Shipping Company.
  - Use the following recruitment aids as necessary to solicit new ships:
    - [SOT flyer](#) (PDF, 95 kb);
    - [VOS brochure](#) (PDF, 910 kb);
    - [VOSclim brochure](#) (PDF, 1090 kb) and
    - [SOT Recruitment Presentation](#) (PPT, 6145 kb).

## Recruitment Visit

- Determine, in consultation with the Master, the most appropriate meteorological reporting class (selected, supplementary or auxiliary) of the vessel.
- Install calibrated NMS instruments ensuring the best possible exposure.
- Provide nationally prescribed marine observing stationery and reference material as appropriate, e.g. marine meteorological handbooks, sea-state and cloud charts/booklets, coding card/book.
- Provide initial training in:
  - General observing requirements, i.e. observing and reporting times, recording and coding of observations;

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- Observing/estimating visual elements;
- Reading, use and care of meteorological instruments;
- Use of electronic logbook software, e.g. TurboWin, SEAS, ObsJMA; and
- Manual coding and recording of an observation in a paper logbook (if appropriate).
- Advise on the preferred method of transmitting the observation and, where appropriate, the use of [Special Access Code 41](#) (SAC41) for Inmarsat transmissions.
- Collect the required [metadata for WMO-No. 47](#), including photographs.
- Document the required recruitment details and metadata:
  - **VOS recruitment:** use a nationally prescribed recruitment form (if applicable).
  - **VOSClim recruitment:** use the [VOSClim Recruitment/Update/Derecruitment Form](#).

The recruitment process, including the both recruitment preliminaries and recruitment visit described above, are summarised in the VOS Recruitment Flow Diagram at appendix 2.

## Post Recruitment Monitoring

- After the ship leaves, check the GTS for BBXX messages received during the first 7 days.
- If BBXX were received, contact the ship to:
  - Provide feedback on the quantity, quality, frequency and timeliness of the observations;
  - Provide feedback on any coding problems or observational issues; and
  - Thank the Master and Observing Officers for their efforts.
- If BBXX have not been received, contact the ship and ascertain if the observing program has started.
  - **Yes the observing program has started:**
    - Enquire about the method (e.g. SAC41) used to send the BBXX; and
    - If using SAC41, to which [Land Earth Station](#) (LES) the BBXX were sent to.

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- **No the observing program has not started:**
  - Enquire when the program will start; and
  - Provide the Observing Officers with additional instructions, training and encouragement as necessary.

## Routine VOF Monitoring

- Regularly review the quantity, quality and timeliness of data provided by ships in the national VOF. Several global VOS monitoring tools are available for this purpose, including:
  - [Météo France VOS monitoring tools](#); and
  - [RSMC monthly monitoring statistics](#).
- Investigate ships in the national VOF that, based on these global VOS monitoring tools, are suspected of producing erroneous data.
- Follow up on any ship showing consistent coding errors.
- Follow up on any ship if their observations cease, to:
  - Determine the reason for the lack of BBXX on the GTS; and
  - Restart the observing program if considered appropriate to do so.

## Routine Inspection Visits

- Schedule inspection visits at the intervals or frequency recommended by the NMS.
- Check the performance and accuracy of the meteorological instruments, including AWS sensors, and adjust, repair or replace as necessary.
- Provide feedback on the quantity, quality, frequency and timeliness of observations sent on the GTS.
- Collect completed paper logbooks where applicable.
- Download log files and delayed-mode observation data from electronic logbooks (e.g. TurboWin, SEAS etc) to floppy disk or USB memory stick.

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- Download delayed-mode observation data from an AWS in accordance with NMS instructions.
- Check and update as necessary, all previously collected [metadata for WMO-No. 47](#).
- Confirm that agent/owner/manager details have not changed.
- Check if any there are expected changes in the trading pattern of the ship.
- Document the ship visit :
  - **National VOS:** use a nationally prescribed VOS Inspection Form (if applicable); or
  - **Foreign VOS:** use the [Foreign Inspection Form](#) and email the completed form to the [VOS Focal Point](#) of the ship's country of recruitment.
- Collect feedback from ship's officers about the quality of marine forecasts and warnings, and reception quality of meteorological charts received via radio-facsimile or other means. Relay the feedback, both negative and positive, through the VOS Program Manager to the responsible person in the NMS.
- Return all faulty instruments to the NMS for repair and re-calibration.

### Encouragement & Rewards

- Present ships with a [SOT Certificate of Appreciation](#). The criteria for issuing the certificate are included in the downloaded ZIP file.
- Present ships participating in VOSCLim with a [VOSCLim Certificate of Participation](#) ([view sample certificate](#)).
- Take digital photographs at VOSCLim Certificate of Participation presentations. Send the photographs with captions to the national [VOSCLim Focal Point](#).
- If a national award scheme for the VOS exists, confer awards on suitably qualified ships in accordance with national directives.
- Distribute relevant national newsletters or publications to ships in the national VOF.
- Distribute international newsletters or publications to ships in the national VOS or VOSCLim fleet as appropriate.
- In accordance with national customs or practices and on behalf of the NMS:
  - Send a welcome letter or email to each newly recruited ship;

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- Send a thank you letter or email to each good reporting ship upon leaving the national VOF;
- Distribute items of goodwill in recognition of the voluntary work undertaken by the crew to provide weather observations, e.g. Christmas cards, calendars, caps, etc.

## De-recruitment

- The PMO should use discretion in deciding whether to de-recruit a ship from their national VOF. Possible reasons for de-recruitment include:
  - Intended scrapping of the vessel;
  - The period of the ship's charter is about to end;
  - Change in the ship's trading pattern making future inspection visits difficult;
  - The Shipping Company has become insolvent and trading has or will soon cease;
  - Unsatisfactory reporting performance; and
  - The VOS Program has lapsed and there is no interest by the ship's personnel in restarting the program.
- Formally advise the Master, and if necessary the owners/managers, the ship is being withdrawn from the national VOF and that any loaned instruments will be recovered.
- Collect the NMS instruments, final logbook or data disks, handbooks and other stationery. Where this is not possible make arrangements for the instruments to be returned by post or landed with ships agents for subsequent return. Also refer to **International Support** below.
- Document the de-recruitment details:
  - **VOS de-recruitment:** use a nationally prescribed de-recruitment form (if applicable);  
or
  - **VOSClim de-recruitment:** use [VOSClim Recruitment/Update/Derecruitment Form](#).
- If the de-recruitment is the result of a change in the ship's trading pattern, with the consent of the Master contact the PMO in the region where the ship will trade and suggest that they recruit the ship into their national VOF.

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## Communication & Liaison

- Maintain regular contact with the VOS Program Manager or the national VOS Office.
- Maintain regular contact with other national PMOs if applicable, e.g. to ensure that inspection visits will not be duplicated.
- Maintain contact with [international PMOs](#) as necessary.
- Maintain contact with, and provide training or assistance as necessary to:
  - Local maritime colleges;
  - Harbour authorities; and
  - Yacht clubs, etc.

## International Support

- In response to a request from the [PMO](#) or the [VOS Focal Point](#) from the recruiting country of a ship:
  - Give assistance as requested by that country; or
  - Recover equipment from a designated ship in accordance with detailed instructions provided by the recruiting country:
    - These instructions should include specific details about each item to be recovered, e.g. description, quantity, serial number, etc; and
    - Arrange for the return of all recovered items to the recruiting country at the earliest opportunity. Liaise with the recruiting country to establish the preferred port for the delivery of the items and the relevant addressee's contact details.

*The recovery of equipment might occur if a ship has been re-routed and the recruiting country considers it unlikely that the ship will return to its port of recruitment to enable the retrieval of the equipment. Alternatively, a ship might land its meteorological or oceanographic equipment at a foreign port and request its return to the recruiting country when it learns it has been re-routed.*

## Complementary Programs

- At the request from the NMS, identify potential ships to assist with complementary marine meteorological and oceanographic observing programs, including:

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- [Ship of Opportunity Programme](#);
- [Automated Shipboard Aerological Programme](#);
- [Drifting buoys for DBCP](#); and
- [Profiling floats for Argo](#).

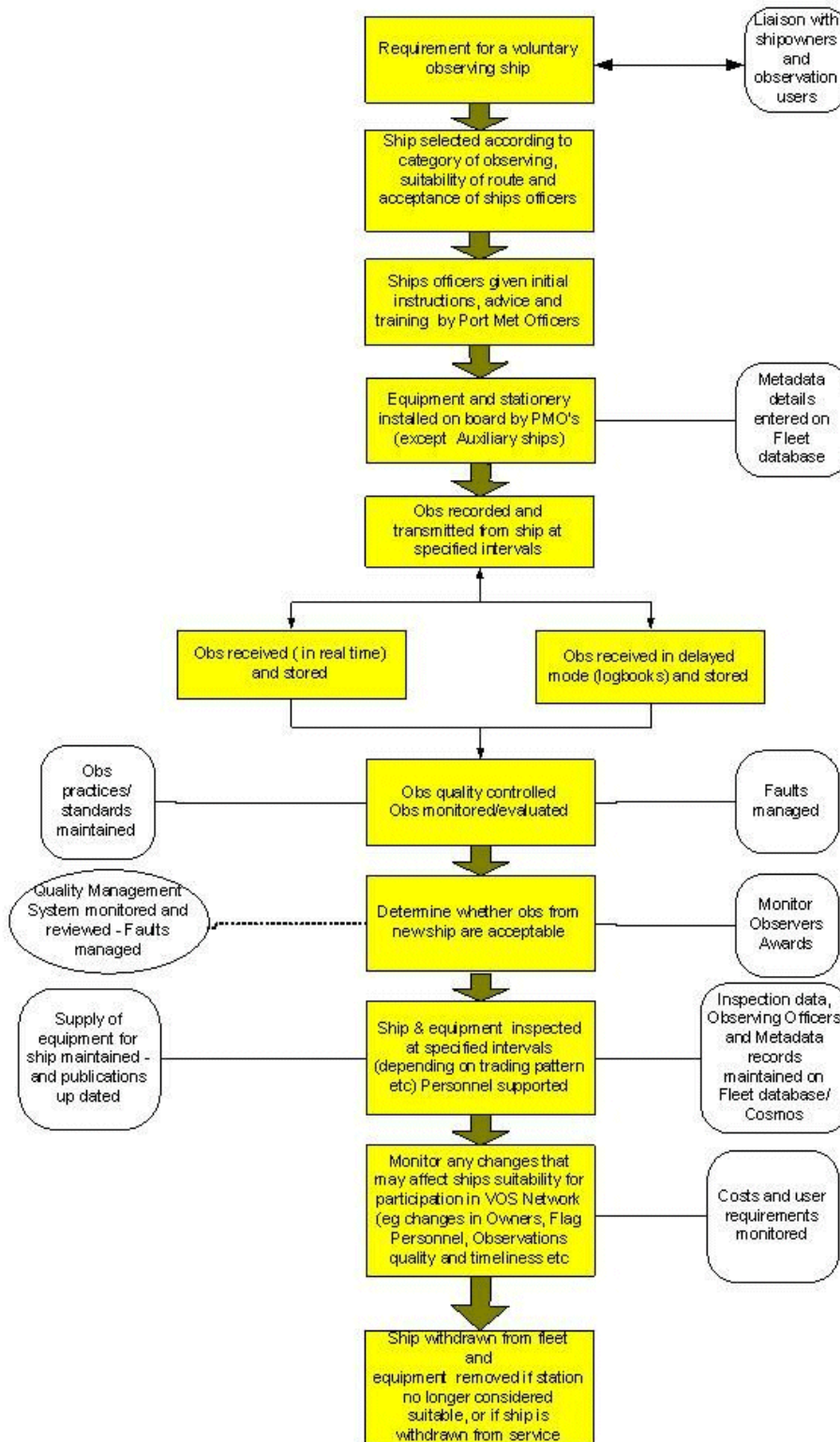
Prepared by [Julie Fletcher](#) and [Graeme Ball](#)

for the SOT Task Team on *VOS Recruitment and Programme Promotion*.



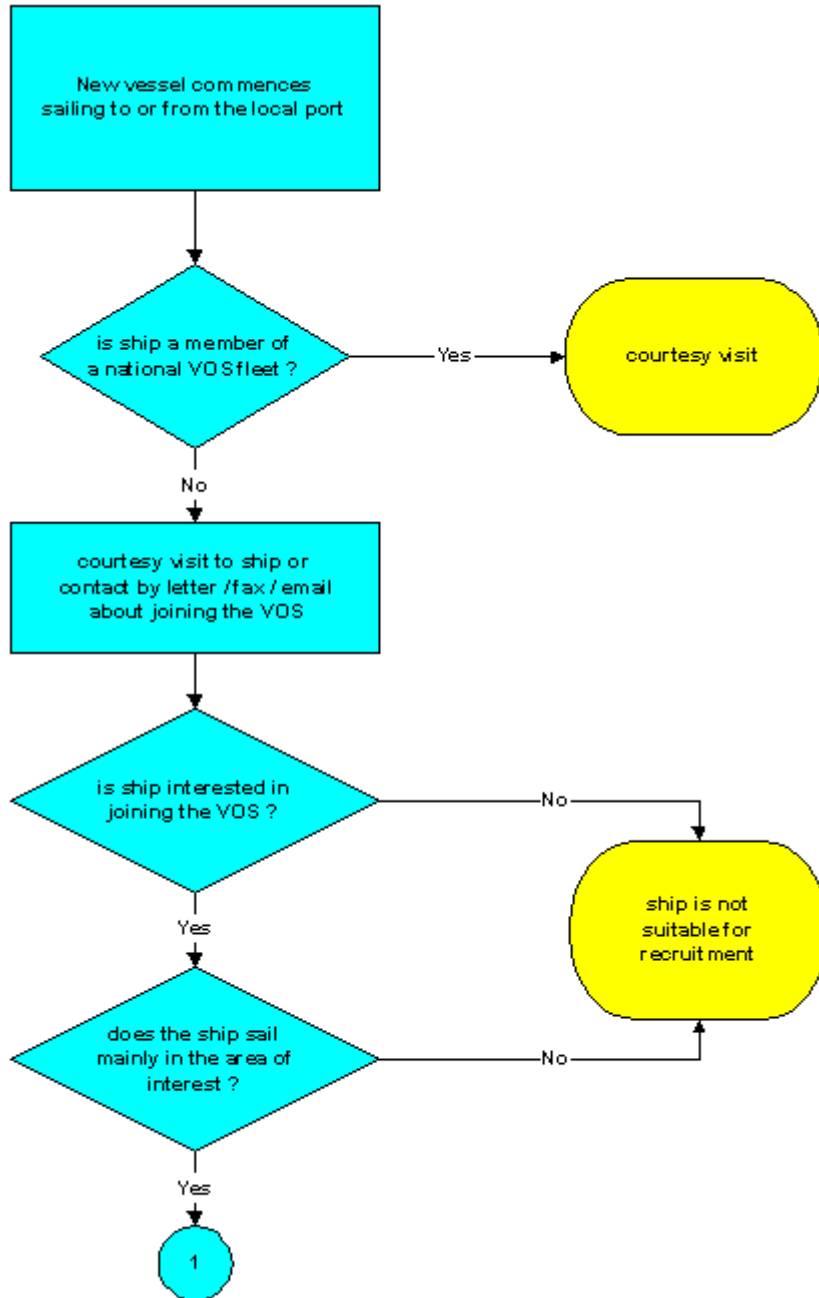
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## VOS Work Flow Diagram

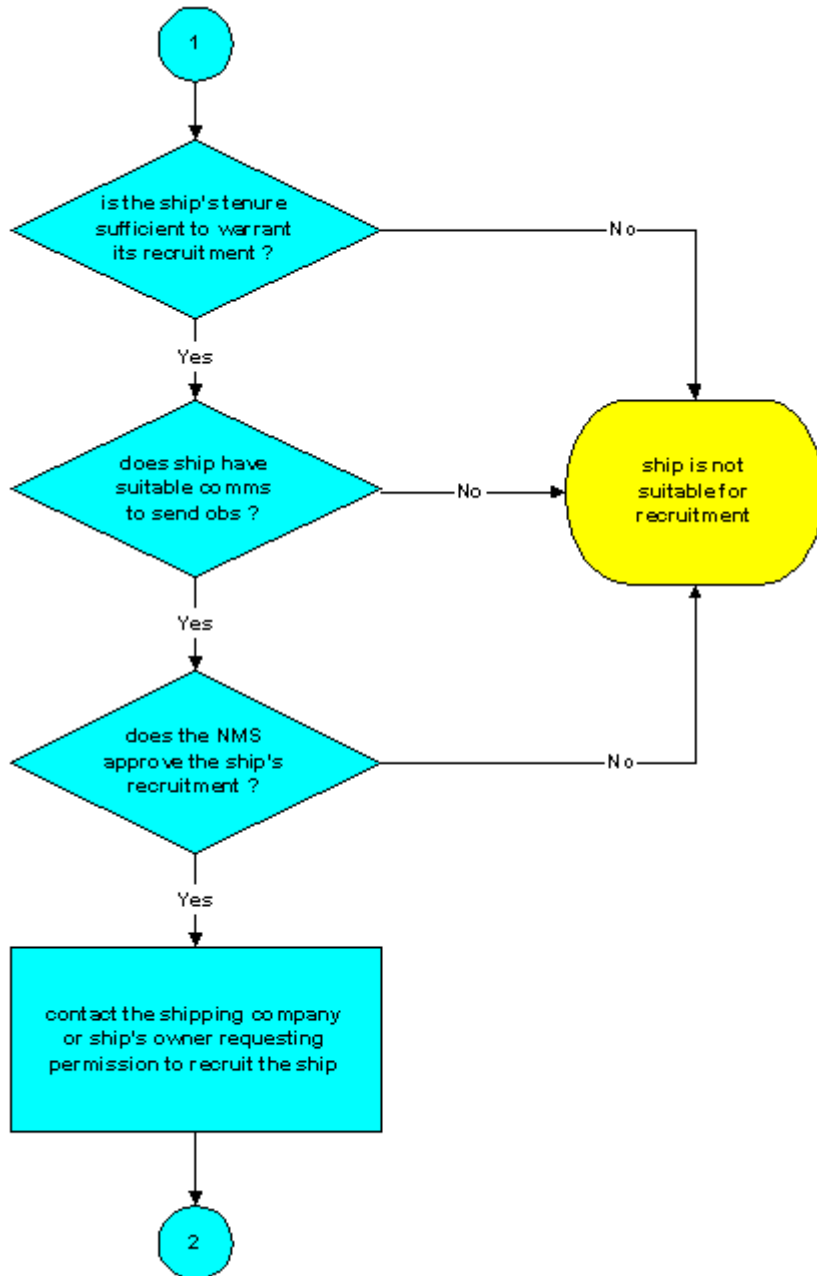


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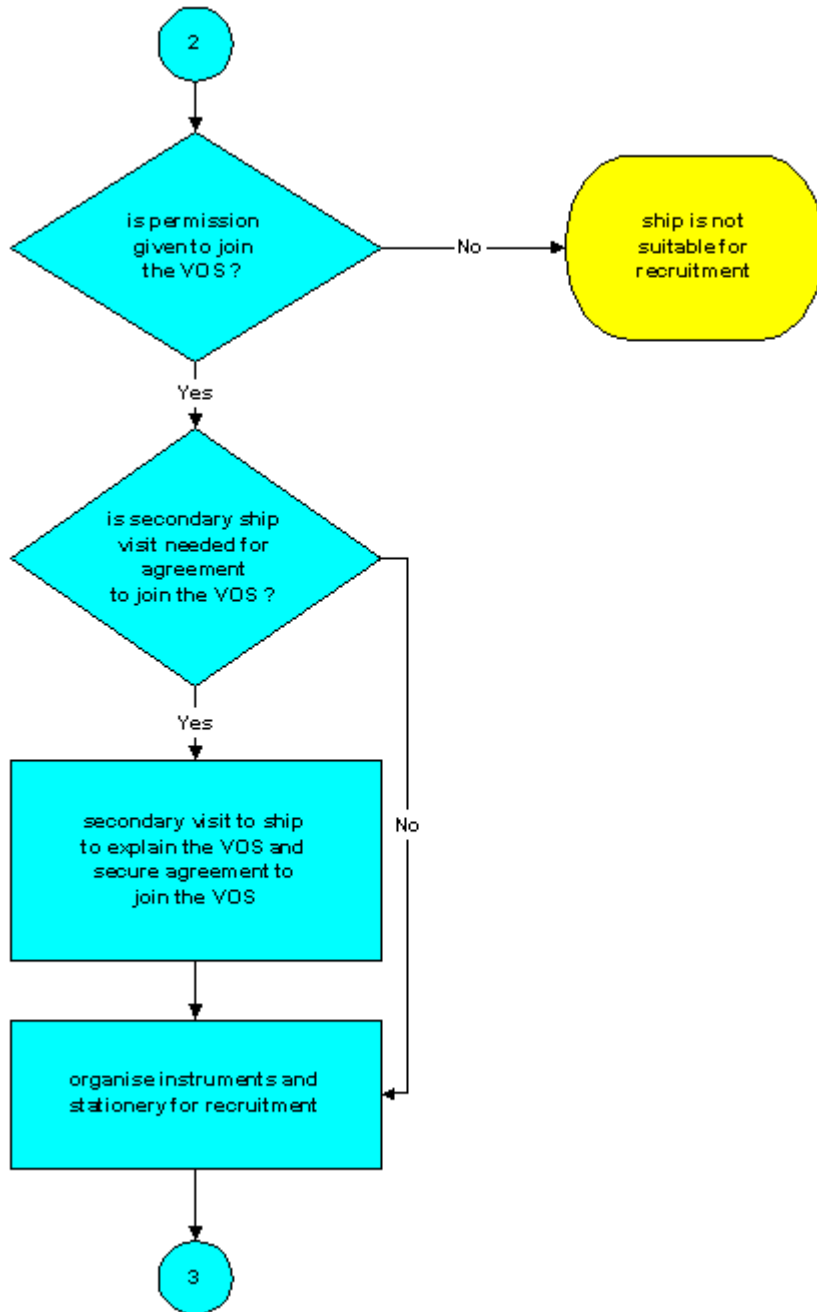
## VOS Recruitment Flow Diagram



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