



INTERNATIONAL CENTRE FOR ENC_s

COOPERATION ARRANGEMENT

Version 6.1

Adopted by the ENC Issuing Authorities
that supply their ENC_s through IC-ENC

Version	Date	Reason for Change
1.0	December 2003	Original
2.0	November 2012	Amended by IC-ENC Steering Committee 13
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INTRODUCTION

ENC Issuing Authorities that supply their ENC's through IC-ENC, hereinafter called the Participants, have decided to cooperate as set out in this Cooperation Arrangement

1. **Noting** the obligations placed on Contracting Governments by Chapter V of the SOLAS Convention;
2. **Noting** that in order to ensure the greatest level of harmonisation and consistency in the establishment of Electronic Navigational Chart (ENC) Services to international shipping, the International Hydrographic Organization (IHO) Member States have agreed the Worldwide Electronic Navigation Database (WEND) concept and a set of associated WEND Principles;
3. **Having considered** that the best way to implement the WEND Principles for their ENC Services is to supply their ENC's officially through a RENC, being IC-ENC;
4. **Noting** that IC-ENC is operated by the United Kingdom Hydrographic Office (UKHO) for and on behalf of the Participants;
5. **Noting** that to maximise the WEND Principles, the Participants have determined to establish Regional Offices, hosted by other National Hydrographic Offices, hereinafter called Host(s);
6. **Noting** that the IC-ENC Steering Committee represents the RENC interests of Participants;
7. **Noting** that Participants have separate Bilateral Arrangements with UKHO covering their relationship with IC-ENC;

This Cooperation Arrangement describes the principles of operation and governance for the IC-ENC, it is not legally binding under international or national law.

IC-ENC COOPERATION ARRANGEMENT - OPERATING PRINCIPLES AND GOVERNANCE

Section 1 PURPOSE & OBJECTIVES OF THE COOPERATION ARRANGEMENT

1. The purpose of this document is to continue and strengthen the cooperation of the Participants of the International Centre for Electronic Navigational Charts (IC-ENC).
2. The objective of this document is to describe the principles of operation of the IC-ENC (a RENC), which is operated by UKHO, to:
 - 2.1 Enable Participants to cooperate in coordinating and harmonising the production of their ENC's and ENC updates to ensure the integration, uniformity, timeliness and quality of the data needed to:
 - 2.1.1 Satisfy the requirements of international shipping in the carriage and use of electronic navigational charts that meet the relevant standards of the IMO and the IHO;
 - 2.1.2 Contribute to the safety of navigation, the protection of the environment and the effective operation of maritime activities.
 - 2.2 Assess and review the operation of the IC-ENC.
 - 2.3 Ensure that all core and non-core RENC Services (see Definitions) are delivered by UKHO for all IC-ENC Participants, and Production Support and Validation Services by the Hosts.

Section 2 TERMS OF REFERENCE FOR THE STEERING COMMITTEE

Membership

1. The IC-ENC Steering Committee (SC) consists of a representative from each Participant.

Scope

2. The Steering Committee will help to determine the strategy for the future operation of the IC-ENC. The scope will include consideration of technical and business issues related to the production, validation and distribution of ENC's and ENC updates, and to the services delivered by the IC-ENC.

Tasks

3. The SC will assess and review the operation of the IC-ENC and provide proposals, assistance, advice and guidance to the UKHO on the development and operation of the IC-ENC to ensure that it meets its objectives.

4. The SC will help to determine the strategy for the future operation of the IC-ENC, and review and endorse the Work Plan, but will not be involved in the day-to-day operation of IC-ENC.
5. The SC will determine solutions on issues related to the harmonisation of ENC production and distribution policies between the Participants, tasking a Technical Conference to discuss and provide recommendations on technical issues surrounding the content and application of ENCs. The SC will approve the Terms of Reference for the Technical Conference, included at Annex B.
6. The SC will establish, task and disband, any other subordinate bodies as necessary to accomplish specific tasks or to carry out specific functions.
7. The SC will review and endorse the IC-ENC Budget. The SC will keep the cost base of the IC-ENC under review and call for audits if any explanations for variance against the IC-ENC Budget are not satisfactory.
8. The SC will monitor and assess the experiences accruing from operating the IC-ENC and employing the WEND Principles as well as other IHO Standards and Regulations.
9. The SC will review progress and identify further opportunity for areas of harmonising ENC technical and distribution arrangements between RENCs.

Responsibilities of the SC Chair

10. The SC will elect a Chair for a period of two years. The SC may also elect a Vice Chair. IC-ENC will provide the Secretariat for the SC.
11. The SC Chair is responsible for the conduct of SC meetings and the circulation of SC Circular Letters to ascertain the collective view of members, and to inform the IC-ENC General Manager (IC-ENC GM).
12. The SC Chair acts as the representative of the Participants, as and when required.
13. The SC Chair has no executive authority over the IC-ENC operations.
14. The SC elects individuals to the Chair (and Vice Chair) position(s), not a Participant. Individuals from UKHO are not permitted to hold the role of Chair or Vice Chair.
15. The SC Chair will review the decisions regarding Value Added Reseller (VAR) applications (see Annex A), informing the SC if required.

Meetings

16. The SC will hold a meeting at least once per year. Other meetings may be held to consider urgent business at the request of the Chair. Notification of the meeting will be sent to all Participants not later than 3 months before the date fixed for each meeting. An agenda will be circulated to all Participants not later than 1 month before the date fixed for each meeting. Business not on the agenda will only be discussed by special permission of the Chair. Between meetings, business may be conducted through correspondence (usually electronic).

17. Representatives from the IC-ENC office(s) will attend the SC meetings to report on the operation of the IC-ENC.
18. In addition to Participants and representatives from the IC-ENC, other individuals or organisation may attend SC meetings. These will either be as Steering Committee Guests, Observers or Expert Contributors (see Definitions section).

Voting and decision making

19. The IC-ENC General Manager (GM) has a defined level of authority, set to balance the practicalities of day-to-day operations with the advice and involvement of the SC, defined as:
 - 19.1 The IC-ENC GM is empowered by the UKHO CEO to take decisions affecting the day-to-day business operations of IC-ENC, provided this is:
 - Within the direction set in the Work Plan.
 - Within the limits of the IC-ENC GM Letter of Financial Delegation (which is available to members).
 - 19.2 Where a decision is required on an issue beyond the Work Plan, the IC-ENC GM will require final approval from UKHO CEO. Prior to this, the IC-ENC GM will seek opinion, guidance and advice from the SC, via the Chair.
20. The aim for the SC is to provide guidance, express advice and comment by consensus. If consensus is not achieved, a vote will be conducted. In the event of a vote being conducted, each Participant will have one vote (see Section 7). Voting can be done at SC meetings, or between meetings via the IC-ENC Circular Letter (CL) system. The outcome of any SC vote will be to express the view of Participants to help to determine the strategy for the future operation of the IC-ENC.
 - 20.1 At SC meetings, a quorum will exist when a total of at least half of all the Participants are present, or have submitted their opinion to the Chair prior to the meeting, who will represent their views during discussions. The subject must have been referenced in the meeting papers. The vote result at SC meetings will be the simple majority of votes (whereby the highest number of votes for any one option will be recorded as the result). If a quorum does not exist, majority vote at the meeting will form the Chair's recommendation under a vote by IC-ENC CL.
 - 20.2 Voting by CL can be conducted following a SC meeting (as above), or at any time between meetings. The CL will contain a recommendation by the Chair, and be sent to all Participants via email. Participants will have two weeks to return their vote to the IC-ENC. 'Silence procedure' will be used (no response equates to approval of the recommendation). The view supported by the majority of Participants will be deemed the vote result.
21. The reaction to, and outcome of, the SC guidance, advice and comment are an integral part in determining Participants' customer satisfaction (customer value) as required for ISO 9001 Quality Management and for the Lean business principles as adopted by UKHO. Additionally, the SC will help to establish success metrics (e.g. Key Performance Indicators), which will be used to assess IC-ENC's performance.

22. Decisions taken outside of SC meetings, in accordance with the processes described in this section of the Cooperation Arrangement will, for clarity and transparency, in addition to confirmation by CL, be summarized to the SC at the next SC meeting.

Section 3 OUTPUTS OF IC-ENC HEADQUARTERS AND REGIONAL OFFICES

1. The IC-ENC, through the GM, is responsible for achieving the Work Plan.
2. The IC-ENC will not alter ENC files in any way, and will accept no product responsibility or liability for ENC contents or structure.
 - 2.1 For new Participants, IC-ENC Headquarters will conduct a verification (content) assessment of new ENC content, providing reports to the Producer, before inclusion in IC-ENC folio available to VARs.
3. The IC-ENC will validate all ENC base cells and updates using software tools, ECDIS systems and manual assessment. Feedback reports will be provided to the producing Participant, focussed on improving the ENC product for the user and using categories previously agreed with the Participant under the IC-ENC Partnership Approach to validation service.
4. The IC-ENC will aim to meet the following performance targets between receipt of ENC data and returning of the validation report to the Participant:
 - a. ENC Update files 3 working days
 - b. ENC New Editions 5 working days
 - c. ENC New Cells 10 working days
5. The IC-ENC will supply the ENC files that are ready for release to the network of Value Added Resellers (VARs) on a (at least) weekly cycle, who then have 7 days within which to make the new data available to the end users. VARs are significant maritime industry companies, and the VAR appointment process is carried out by IC-ENC, through the GM, with the assistance of the VAR Assessment Panel (see Annex A). Once appointed, all VARs (including the VAR operated by UKHO) are subject to the same contractual terms.
6. ENC files will be available for sale under a consistent set of licensing terms, as designed by IC-ENC, and approved by the SC, but with the wholesale price set independently by each Participant (which is valid for one calendar year – 1st January to 31st December). If required, IC-ENC will respect any national factors which need to be accounted for, for specific Participants.
7. The IC-ENC, through the GM, will manage the appointment and subsequent business relationship with the VARs (which will include a regular audit of VAR activity, to confirm conformance with the VAR contract), reporting to the Participants on a quarterly basis the sales volumes, and managing the settlement of payments to the Participants. VAR information, data, correspondence etc will be protected by IC-ENC Headquarters (i.e. kept confidential by using appropriate “firewalls”, with access limited to only appropriate personnel).
 - 7.1 If requested by a Participant, the IC-ENC will supply the Participant with ad hoc information on VAR activity regarding the Participant’s ENC folio in a timely manner

(provided the disclosure does not breach commercial business rules, e.g. with respect to confidentiality etc)

8. Transfer of ENC files (unencrypted) between Participant, the IC-ENC offices and VARs will be done securely. Only encrypted ENC files will be transferred out from VARs to end users, using an approved data protection standard (default is IHO S-63).
9. If expressly authorised to do so by a Participant (via IC-ENC Circular Letter 2019/12 response form), IC-ENC Headquarters will make available those ENCs to providers of services aimed at supporting non-ECDIS users (for example, small leisure craft). Costs and revenues of the non-ECDIS navigation management service will be reported in a separate section of the IC-ENC Budget reviewed by the SC, , but only be applicable to those Participants using this non-core service..
10. The IC-ENC, through the GM, will work with other RENC organisations with a view to harmonising RENC technical, licensing and distribution arrangements, enhancing the status of ENCs and RENCs within the international hydrographic community and improving the ENC data quality and services available to the mariner.
11. The IC-ENC, through the GM, will work with IHO Committees and Working Groups, and Regional Hydrographic Commissions, on technical and strategic issues with a view to enhancing the status of ENCs and RENCs within the international hydrographic community. If expressly authorised to do so by each Participant, the IC-ENC will submit those ENCs and/or ENC metadata files (as expressly defined by the Participant) to the IHO Secretariat to populate their databases.
12. The IC-ENC, through the GM, will prepare the Work Plan and the IC-ENC Budget, for review and endorsement by the SC.
13. The IC-ENC's working language is English, both for written documents and meetings. An IC-ENC Regional Office may use another language for internal/regional co-ordination as required.
14. The IC-ENC Regional Offices will conduct the Production Support and Validation core RENC Services.

Section 4 RESPONSIBILITIES OF PARTICIPANTS

1. Each Participant will supply its official ENCs to the IC-ENC Headquarters, on a non-exclusive basis, and will remain liable for the content and structure of its ENC. Each Participant remains the owner of its ENCs.
2. Each Participant will maintain its ENC database for navigationally significant changes and supply ENC New Editions (EN) and Update files (ER) to IC-ENC in a timely manner.
3. Each Participant will support the principle of continuous improvement of the ENC database, and;

3.1 Make available appropriate resources to act on the improvement recommendations made in the validation feedback reports.

3.2 Actively participate in IC-ENC Quality Improvement initiatives, through meetings, correspondence, data exchange and knowledge sharing with the IC-ENC offices and other Participants.

4. The Participant will support the IC-ENC's standard commercial policies, which are reviewed by the SC (e.g. keeping the wholesale price stable for each calendar year, 1st January to 31st December), and respond as required with respect to variable policies (e.g. SENC distribution). IC-ENC will respect, as far as possible, any national factors which need to be accounted for, for specific Participants (Annex F provides further information). This does not prevent the Participant providing their own local/alternative ENC services - as the ENCs are supplied to IC-ENC on a non-exclusive basis. However, because the IC-ENC financial model is based on a fixed fee per sale, Participants are expected to remain conscious of the IC-ENC funding mechanism when establishing other arrangements.
5. Each Participant will inform the IC-ENC of any change to its ENC wholesale price in writing before 15th October, to take effect on the following 1st January. If notification of change is not received, the existing wholesale price will remain in place.
6. Each Participant will promptly inform the IC-ENC GM and the SC Chair of any developments, claims or other important issues concerning its ENCs or the IC-ENC.
7. Any disputes regarding the interpretation and implementation of this Cooperation Arrangement will be resolved only by consultation among the Participants.

Section 5 RESPONSIBILITIES OF UKHO & HOSTS

1. As Operator of the IC-ENC, the UKHO will supply the UK based resources (staff, information technology, accommodation), and all general support functions (e.g. Human Resources support, Health and Safety), required to deliver the IC-ENC Work Plan.
2. The UKHO will maintain clear financial accounting for the IC-ENC activities, to allow transparent and auditable IC-ENC reporting, ensuring transparent and auditable justification for all charges made to the IC-ENC. These costs will form the basis for setting the annual fee per ENC sold and the fee will be set to comply with the IC-ENC's not for profit status (see section 6).
3. The IC-ENC has a Headquarters (HQ) office operated by the UKHO, and Regional Offices hosted by other HOs which contribute to the IC-ENC outputs. The IC-ENC HQ coordinates the work of the Regional Offices via regular interaction and engagement. Regional Offices are subject to the initial and ongoing agreement of the SC.
4. Hosts will supply the non-UK based resources (staff, information technology, accommodation), and all general support functions (e.g. Human Resources support, Health and Safety), required to deliver the IC-ENC Work Plan.
5. The "IC-ENC Regional Office Governance" document describes this further.

Section 6 IC-ENC FINANCIAL ARRANGEMENTS AND COSTS OF PARTICIPATION

1. The IC-ENC is a not-for-profit organisation. There are no joining fees or annual standing charges for the Participants. The IC-ENC's day to day running costs (including staff, accommodation, Information Technology, training and travel costs) are presented in the IC-ENC Budget which is endorsed by the SC. Expenditure is initially covered by the UKHO and Hosts, and then reimbursed by IC-ENC.
2. The IC-ENC retains a Fixed Fee (see Definitions section) for each ENC sold, in each service, using this revenue to fund its activities, as described in the Work Plan & Budget, and all other IC-ENC operational costs as endorsed by the SC. The amount of the Fixed Fee(s) is recommended annually by the IC-ENC GM, taking account of the financial position (deficit or surplus), and future forecasted operating costs and revenue, for agreement by the SC.
3. The intention is for the Fixed Fee(s) amount to be set to recover the actual IC-ENC operating costs, without accruing a sizeable surplus. IC-ENC will therefore reduce the Fixed Fee if required, and IC-ENC GM will apply this operational change pragmatically in year. However, if an increase is recommended, it will be communicated to the SC, for consideration, by 30 September at the latest and recommended to take effect from the following 01 January at the earliest.. This is to give Participants sufficient time to include this information in their annual wholesale price setting.
4. Each Participant will cover its own costs arising from being an IC-ENC Participant, unless otherwise included in the IC-ENC Budget.
5. Costs incurred by the SC Chair in relation to SC Chair activities will be refunded by IC-ENC.
6. Annex E describes the IC-ENC financial model and process, with further explanatory comments

Section 7 ACCESSION TO THE PRINCIPLES OF OPERATION OF IC-ENC

1. The IC-ENC GM will inform the SC on the signing of a new Statement of Intent to Join IC-ENC (at Annex C) with an ENC Issuing Authority related to the provision of ENCs to the IC-ENC. On completion of this signing, the ENC Issuing Authority has begun the process to become a Participant of the IC-ENC (with benefits and restrictions as described in the Statement of Intent to Join IC-ENC), with the expectation of the signing of a Bilateral Arrangement with the UKHO (see Section 7, paragraph 2) in due course.
2. The IC-ENC GM will inform the SC on the signing of a Bilateral Arrangement with an ENC Issuing Authority related to the provision of ENCs to IC-ENC. On completion of this signing, the ENC Issuing Authority is a Participant as described in this document.
3. Annex D provides the recommended template for the Bilateral Arrangement.

Section 8 PARTICIPANT WITHDRAWAL

- 1.** If a Participant considers withdrawing from IC-ENC, it will promptly notify the SC Chair and the IC-ENC GM.
 - 1.1** The Participant should consult with the IC-ENC GM about the reasons for and consequences of the withdrawal and the possibility of preventing it, before it presents a formal notice of withdrawal.
- 2.** In the event that a Participant decides to withdraw from IC-ENC, the following procedure will apply:
 - 2.1** Notice of withdrawal from IC-ENC must be given in writing to the UKHO's signatory (post, not person), and the Participant must give the period of notice as defined in the appropriate document:
 - 2.1.1** Statement of Intent to Join IC-ENC (Annex C): No defined period, however if the Participant's ENC's are distributed by IC-ENC, the aim is for these users to not be disadvantaged.
 - 2.1.2** Bilateral Arrangement (Annex D): Twelve months is defined in the recommended template.
 - 2.2** The withdrawing Participant and the UKHO will jointly decide on the arrangements necessary to effect the dissolution of the relevant activities covered by the Statement of Intent to Join IC-ENC or Bilateral Arrangement.

DEFINITIONS

Definition of terms used in this Arrangement to ensure a common understanding:

Circular Letter

A letter issued (usually by email) by IC-ENC to inform Participants of relevant information, for example date of next Steering Committee meeting. It may be for information only, or request a response from each Participant, for example when an SC vote is conducted outside of a meeting.

Electronic Chart Display and Information System (ECDIS)

A navigation information system which with adequate back-up arrangements can be accepted as complying with the up-to-date chart required by regulations V/19 and V/27 of the 1974 SOLAS Convention, as amended, by displaying selected information from a System Electronic Navigational Chart (SENC) with positional information from navigation sensors to assist the mariner in route planning and route monitoring, and if required display additional navigation-related information

Electronic Navigational Chart (ENC)

A database, standardised as to content, structure and format, issued for use with ECDIS on the authority of government authorised Hydrographic Offices (HOs). It contains all chart information necessary for safe navigation and may contain supplementary information in addition to that contained in the paper chart (e.g. sailing directions), which may be considered necessary for safe navigation.

ENC Services

The supply of ENCs and ENC updates, issued officially on the authority of the government-authorised Hydrographic Offices (HOs), designed to satisfy the requirements of international shipping in compliance with the relevant IMO resolutions and IHO standards. Such services are made available by Value Added Resellers.

Fixed Fee

The IC-ENC retains a Fixed Fee per ENC subscription from the revenue collected from the Value Added Resellers for the subscription (i.e. the wholesale price as set by each Participant). The remainder of the revenue is paid to the Participant. The Fixed Fee is set for a 12 month subscription period, and reduced pro rata for shorter periods.

Host

An organisation (usually a Hydrographic Office) which provides the facilities (e.g. accommodation, technology, general infrastructure) and resources (e.g. support functions, personnel) required to operate an IC-ENC Regional Office.

IC-ENC Budget

An annual estimate of IC-ENC's income and expenditure prepared by the GM for SC review and endorsement. An update (forecast) is provided to the SC at each SC meeting. The IC-ENC Budget will clearly distinguish the core services (applicable to all Participants) and the non-core services (applicable to only those Participants using the services). This will be achieved using unique cost centres, and the IC-ENC General Manager is responsible for directing IC-ENC costs into the appropriate IC-ENC cost centre, subject to approval from IC-ENC Financial Controller. See Decision SC21/4.

IC-ENC Headquarters

IC-ENC Headquarters provides all four of the core IC-ENC services (ENC Production Support, ENC Validation, ENC Distribution, ENC Revenue Management). In addition, all other IC-ENC business related activities, corporate governance and organisational management are conducted at IC-ENC Headquarters.

IC-ENC Regional Office

IC-ENC Regional Offices deliver two of the four core IC-ENC services (ENC Production Support, ENC Validation).

IMO SOLAS Convention

International Convention for the Safety of Life at Sea developed by the IMO. The contracting governments undertake to promulgate all laws, decrees, orders and regulations and to take all other steps which may be necessary to give the present Convention full and complete effect, so as to ensure that, from the point of view of safety of life, a ship is fit for the service for which it is intended.

IMO Performance Standards for ECDIS

Minimum performance requirements for ECDIS, adopted by IMO 23 November 1995 as Assembly Resolution and published as Annex to IMO Resolution A817(19) (15 December 1995 and its later amendments).

International Hydrographic Organization (IHO)

Inter-governmental organization with the object of (following the IHO Convention):

- To promote the use of hydrography for the safety of navigation and all other marine purposes and to raise global awareness of the importance of hydrography;
- To improve global coverage, availability and quality of hydrographic data, information, products and services and to facilitate access to such data, information, products and services;
- To improve global hydrographic capability, capacity, training, science and techniques;
- To establish and enhance the development of international standards for hydrographic data, information, products, services and techniques and to achieve the greatest possible uniformity in the use of these standards;
- To give authoritative and timely guidance on all hydrographic matters to States and international organizations;
- To facilitate coordination of hydrographic activities among the Member States; and
- To enhance cooperation on hydrographic activities among States on a regional basis.

Its International Convention entered into force in 1970 and its amended version entered in force in 2016. It has its Secretariat located in Monaco

International Maritime Organization (IMO)

The specialised organisation of the United Nations responsible among others to provide machinery for cooperation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade, and to encourage the general adoption of the highest practicable standards in matters concerning maritime safety and efficiency of navigation.

Issuing Authority

The official agency which issues the ENC's and ENC updates validated to comply with the relevant standards and quality requirements. For IC-ENC, this is usually a National Hydrographic Office, but in some cases will be other organisations.

Participants

ENC Issuing Authorities that supply their ENC's through IC-ENC.

Regional Electronic Navigational Chart Coordinating Centre (RENC)

An organisation, as conceptualised in the Worldwide Electronic Navigational Chart Database (WEND) principles of the IHO, through which IHO members can co-operate to resolve overlaps and gaps in coverage, ensure compliance with S57 and S63 encoding standards, provide a world-wide consistent level of high quality data and support the provision of co-ordinated end-user services for official ENC's.

The IHO WEND principles encourage Member States to distribute their ENC's through a RENC in order to share in common experience and reduce expenditure, and to ensure the greatest possible standardization, consistency, reliability and availability of ENC's

RENC Services - core

The core RENC services of the IC-ENC (from SC19 discussions) are:

- Production Support:
 - IC-ENC ENC Validation Training courses – up to three courses per year, for up to 15 funded students on each course
 - Technical Conference (yearly, unless otherwise decided)
 - ECDIS software supply and support
 - Access to IC-ENC Errors Database
- Validation: IC-ENC standard Quality Assurance processes
- Distribution: supply to and management/support of VARs, sales reporting and auditing
- Revenue Management: standard processes

Core services are applicable to all Participants, SC has confirmed that these core services will be for S-57 and S-101 ENC's (see Decisions SC21/8 and SC21/9).

RENC Services – non-core

IC-ENC non-core services are services which a subset of the IC-ENC Participants use. As not all Participants use them, these non-core services are considered via their own sections of the IC-ENC Budget. The non-core services are:

- Non-ECDIS navigation management service (as discussed at SC21 and subsequently through IC-ENC Circular Letter 2019/12).

Further non-core services may be added in the future.

Steering Committee Expert Contributor

An individual or organisation invited to attend part of a single SC meeting to provide expert contribution on a specific agenda item. Invitation issued at discretion of Chair.

Steering Committee Guest

An individual or organisation invited to attend a single SC meeting (all or part), invitation issued at the discretion of Chair. For example, an ENC Issuing Authority considering joining IC-ENC.

Steering Committee Observer

An individual or organisation invited to attend SC meetings. The SC is required to approve the status of Observer, and this status is continuing until revoked.

Value Added Reseller (VAR)

An organisation that markets and distributes services which include the ENC's supplied by IC-ENC, and which are designed in such a way that they add overall value for the user, for example by bundling complementary navigational products together within a single and tailored licensing structure.

WEND (Worldwide Electronic Navigational Chart Data Base)

The concept of a common, worldwide database of ENC's, produced to IHO standards, designed specifically to meet the needs of international maritime traffic using ECDIS which conform to the IMO Performance Standards for ECDIS.

Work Plan

Description of the work/tasks to be achieved by IC-ENC, considering a three year overview and a detailed next 12 months. It is reviewed and endorsed by the SC to help to determine the strategy for the future operation of IC-ENC.

ANNEX A – VALUE ADDED RESELLER ASSESSMENT PANEL TERMS OF REFERENCE

1. Overall Aim

The Value Added Reseller Assessment Panel (VAP) is established by the Steering Committee and managed by the IC-ENC Headquarters to help to provide an assessment function of companies applying to be appointed IC-ENC Value Added Resellers (VARs).

2. Objectives / Tasks

2.1 To contribute to the process of assessing VAR applications, by:

- i. Having available three independent assessors (from amongst the Participants) who have the necessary expertise and knowledge to perform VAR assessments, and who are anonymous to the VAR applicants, known as the VAR Assessment Panel (VAP).
- ii. Conducting assessments of VAR applications in accordance with the standard VAR assessment procedures.

3. Composition / Responsibilities

1. VAP membership shall be open to representatives from all Participants. However, given the specialist commercial skills required to perform a VAR application assessment, the IC-ENC will select the three most suitable representatives on a case-by-case basis for each VAR application assessment.
2. The VAP shall meet as necessary, and work via correspondence, to fulfil its objectives and tasks.
3. Travel and subsistence expenses incurred by participants attending VAP meetings (in the unlikely event one is needed) shall be met by the central IC-ENC budget.
4. VAP members are aware that there is a commitment required for VAP activities. Normally this will be not more than two working days per annum, via correspondence and/or meetings
5. The VAP shall provide a recommendation to the IC-ENC GM regarding the VAR application, however IC-ENC GM will make the decision. The IC-ENC GM shall inform the SC Chair of both the VAP recommendation and the IC-ENC GM decision, with an explanation if the decision does not conform to the recommendation. The SC Chair may choose to inform the SC.
6. A summary of VAP activities (including any VAP recommendations and IC-ENC GM decisions) will be expressly reported to the SC at each meeting.

ANNEX B – TECHNICAL CONFERENCE TERMS OF REFERENCE

1. Overall Aim

The Technical Conference is a subordinate body of the IC-ENC Steering Committee (SC). It provides a forum for reviewing and enhancing all technical aspects of the production, content, validation, quality control and distribution of the ENC data of the IC-ENC Participants, with the ultimate aim of achieving greater quality and consistency in the content of the ENCs.

2. Objectives and Tasks

2.1 To provide advice and guidance to IC-ENC Participants on the production, content, validation, quality control and distribution of their ENC data and to IC-ENC on the technical aspects of the operation of the RENC including:

(a) the technical topics of mutual interest and the exchange of views on any relevant ENC-related issues

(b) the multi-lateral cooperation of the Participants to the mutual benefit of all

(c) the technical problems encountered and recommendations for resolution

(d) the improvements in the quality and scope of the ENC validation processes

2.2 To enable IC-ENC to inform Participants of production and development work being progressed by IC-ENC.

2.3 To formulate, as required, combined input to relevant IHO Working Groups through IC-ENC.

2.4 To monitor, promote and support the development of ENC related standards and publications.

2.5 To alert the IC-ENC Steering Committee to any topic that needs its attention or approval.

2.6 To undertake any specific tasks as directed by the SC.

3. Composition, Responsibilities and Procedures

3.1 The Technical Conference shall comprise representatives from each of the Participants

3.2 Representatives of other stakeholders (for example, other HOs, RENCs, subject matter experts, Industry etc.) may be invited to attend meetings as Observers.

3.3 The Technical Conference shall meet yearly, unless otherwise decided. Between meetings, business shall be conducted by correspondence.

3.4 IC-ENC shall provide a Chairman for the Technical Conference.

3.5 IC-ENC shall provide a Secretary for the Technical Conference, whose responsibility will be to produce and distribute all documentation relating to the meetings in a timely manner.

3.6 The delegate selected by each Participant to attend the Technical Conference will actively participate in the preparation, event and post-meeting actions.

3.7 The aim shall be for the Technical Conference to reach decisions by consensus, or else by voting. The voting procedure will follow the same principles as the SC voting process (see IC-ENC Co-operation Arrangement, Section 2.16. In this case, “Chair” is Technical Conference Chair).

3.8 The Technical Conference does not have IC-ENC budgetary approval authority, but may decide how SC approved funds are used, and/or request IC-ENC funding from the SC for technical aspects.

3.9 Working groups and project teams may be created by the Technical Conference to undertake detailed work on specific topics, with a Co-ordinator. The terms of reference and rules of procedure of the working groups and project teams are determined or proposed by the Technical Conference as appropriate.

3.10 The date and venue of Technical Conference shall be announced by the IC-ENC at least three months in advance.

3.11 The Draft of Technical Conference Report shall be distributed by IC-ENC within two weeks of the event to attendees, and attendees' comments will be returned within two weeks of the date of despatch. The Final Report will be distributed within six weeks of the event.

3.12 The working language of the IC-ENC, including the Technical Conference, is English.

ANNEX C – STATEMENT OF INTENT TO JOIN IC-ENC

STATEMENT OF INTENT CONCERNING COOPERATION BETWEEN

THE ORGANISATION NAME AND THE INTERNATIONAL CENTRE FOR ENCs

The International Centre for ENCs (IC-ENC) is a Regional ENC Coordinating Centre (RENC), an organisation through which national Hydrographic Offices work together to ensure a high quality and consistent international ENC dataset.

The *Organisation Name (Organisation Initials)* has the responsibility and obligation to produce official ENCs.

The (*Organisation Initials*) and the IC-ENC agree to cooperate on the production, validation and distribution of (*Organisation Initials*)'s ENCs.

This Statement of Intent recognizes that (*Organisation Initials*) has begun the process to become a Participant of IC-ENC, via a Bilateral Arrangement.

Whilst the Bilateral Arrangement process is in progress, this Statement of Intent means that IC-ENC will provide *Organisation Initials* with:

- Support and advice on the production of ENC's, including full access to the IC-ENC Errors Database
- An independent ENC validation service
- A route to market for its ENCs
- Sales reporting and financial settlements to *Organisation Initials* (where appropriate)

During this period, *Organisation Initials* will:

- Supply its ENCs to IC-ENC; this is on a non-exclusive basis, and so does NOT prevent *Organisation Initials* from supplying its ENCs to other governmental or commercial organizations, to other RENCs, or to ENC users.
- Accept IC-ENC's core commercial and technical policies
- Be invited to participate in the IC-ENC technical working groups, training and so on
- Be invited to participate in the IC-ENC Steering Committee, via observation and contribution to discussion. The aim of the Steering Committee is to reach a consensus, but in the event of a vote, only those who are Participants through a Bilateral Arrangement will cast a vote.

This Statement of Intent does not represent a legally binding commitment under international or national law.

In the event that *Organisation Initials* decides to terminate cooperation with IC-ENC, *Organisation Initials* and IC-ENC will work together to ensure that all existing users of *Organisation Initials* 's ENCs are not disadvantaged.

Signed by:

.....
IC-ENC General Manager

.....
Head of...,
Organisation Name

Date.....

Date.....

ANNEX D – IC-ENC MEMBERSHIP ARRANGEMENT – RECOMMENDED TEMPLATE

This is the recommended template for the bilateral arrangement between UKHO and Participant in relation to membership of IC-ENC. While the aim and intention is for all membership arrangements to follow this template, it is acknowledged that there may be adjustments required to meet specific national considerations – however, the services and outputs that each member receives will be the same.

ARRANGEMENT FOR THE OPERATION OF INTERNATIONAL CENTRE FOR ENC'S (IC-ENC) BETWEEN THE UNITED KINGDOM HYDROGRAPHIC OFFICE (UKHO) AND [OTHER PARTICIPATING HO]

1. PURPOSE AND SCOPE OF THE ARRANGEMENT

1.1 The purpose of this Arrangement is to encourage cooperation between the UKHO and [other participating HO], represented by the signatories, in the operation of a Regional Electronic Navigational Chart Coordinating Centre (RENC) known as International Centre for ENC's (IC-ENC). It formalises the terms for the operation of IC-ENC by the UKHO and the inclusion of ENC's produced by [other participating HO] in the ENC database maintained by IC-ENC.

2. IMPLEMENTATION, REVIEW AND TERMINATION

2.1 This Arrangement will come into effect from the date of the last signature and will continue in operation until superseded by a revised version or terminated according to the principles in paragraph 2.3 below. Both Participants' responsibilities under this Arrangement will be suspended in the event of Force Majeure. If the Arrangement is so suspended the Participant giving notice of suspension will inform the other Participant immediately the resumption of this Arrangement becomes possible.

2.2 This Arrangement may be revised at any time by the written, mutual consent of both Participants.

2.3 This Arrangement may be terminated by either Participant giving at least twelve months' notice in writing of its intention to do so. Termination will come into effect at the end of a calendar year. Such notice of termination will be followed as soon as practicable by negotiations to seek to resolve outstanding differences between Participants.

3. PRINCIPLES

3.1 The UKHO will operate IC-ENC, on a not-for-profit basis, to process official ENC's from IC-ENC Participants into a single, integrated ENC database which it will release to Value Added Resellers on the authority of those Participants. The Value Added Resellers will, in turn, develop and market a range of ENC-based branded services.

3.2 [other participating HO] will supply its official ENC's to IC-ENC. Where [other participating HO] also supplies its ENC's to Derived Product Producers (DPPs) under a licence to produce derived products and services, it will ensure that DPPs are not allowed to provide services that could be passed off as the services of the participating HOs or IC-ENC.

3.3 The Participants will cooperate in establishing and maintaining procedures for the supply and updating of ENC's which comply with the standards agreed by the International Hydrographic Organization (IHO) and International Maritime Organization (IMO).

3.4 A Steering Committee, consisting of representatives from participating nations, will help to determine the strategy for the future operation of IC-ENC but will not be involved in the day-to-day operation of IC-ENC. Working Groups established by the Steering Committee will also advise on technical and commercial matters. The IC-ENC Co-operation Arrangement describes the Terms of Reference of the Steering Committee and its Working Groups.

4. **THE SERVICE PROVIDED BY IC-ENC**

4.1 IC-ENC will validate ENC data and updates received from *[other participating HO]* making use of an errors database which it will maintain and make available to *[other participating HO]*. IC-ENC will supply feedback reports to *[other participating HO]* from the results of its validation. In the event that IC-ENC receives an ENC or update from *[other participating HO]* that fails validation ("questioned data") and IC-ENC considers that the ENC or update requires amendment to ensure it complies with the relevant IHO standards, IC-ENC will notify *[other participating HO]* immediately. If, notwithstanding IC-ENC's concerns, *[other participating HO]* insists that the "questioned data" must be released without amendment, then IC-ENC shall have an absolute discretion to release the "questioned data" with such warnings as it thinks fit in the circumstances of the case, and shall have the right to bring such warnings to the attention of Value Added Resellers and end-users.

4.2 IC-ENC will collate all available ENC data into a single database which it will update at least weekly. From this database, IC-ENC will produce data exchange sets which it will make available in S57 and/or S101 format to Value Added Resellers. When approval has been received from *[other participating HO]*, IC-ENC will also allow Value Added Resellers to supply ENC data in SENC format.

4.3 IC-ENC will not supply data direct to end users but will distribute all ENC data through appointed Value Added Resellers. IC-ENC will manage and support the Value Added Resellers and appoint them according to published criteria.

4.4 Value Added Resellers will be expected to maximise the sale of ENC data through a distribution network. They will also define the services that are offered to end customers and will be required to add value to ENC data, for example, through product bundling and the use of flexible licensing models.

4.5 Value Added Resellers will receive ENC data from IC-ENC in a secure manner. They will be required to implement IC-ENC-approved data security measures before releasing the data to their Distributors or end users.

4.6 IC-ENC will operate a financial system for invoicing Value Added Resellers, auditing their sales reports and conducting credit management. Financial accounts will be maintained that allow IC-ENC to calculate the revenues due to participating HOs.

4.7 The IC-ENC Cooperation Arrangement describes the services provided by IC-ENC in greater detail.

5. **PROCEDURES**

5.1 *[other participating HO]* will notify IC-ENC of planned ENC production by means of regular updates to production schedules in a format and frequency as jointly determined by the Participants.

5.2 *[other participating HO]* will validate all its ENC data and updates before providing them to IC-ENC. All ENC data and updates supplied to IC-ENC by *[other participating HO]* will comply with IHO S52 and IHO S57-EN and S57-ER (and/or S101-EN and S101-ER) application profiles and the relevant ENC Product Specification. The latest editions of the relevant IHO standards should be used unless the Participants jointly decide otherwise.

5.3 The transfer of ENC data between *[other participating HO]* and IC-ENC will be carried out in a secure manner in accordance with procedures jointly decided by the Participants.

5.4 *[other participating HO]* and IC-ENC will establish points of contact within each organisation for all communications.

6. INTELLECTUAL PROPERTY RIGHTS

6.1 IC-ENC will recognise and respect the intellectual property rights in the ENCs, updates and associated information supplied by *[other participating HO]* to IC-ENC and will use all reasonable endeavours to protect these rights in its dealings with any Third Party.

6.2 IC-ENC has the right to copy and distribute the ENCs, updates and other associated information supplied by *[other participating HO]*, as required to provide the ENCs to Value Added Resellers and other nations participating in IC-ENC.

6.3 *[other participating HO]* will take all reasonable steps to ensure that any data supplied to IC-ENC (including, but not limited to, ENCs, updates and associated information) is free from Third Party intellectual property rights. In the event that such rights are identified, *[other participating HO]* will obtain the necessary consent(s) from the Third Party before supplying the data to IC-ENC. If data is supplied to IC-ENC, and a Participant subsequently receives any claim from a Third Party that IC-ENC's use of that data violates the intellectual property rights of that Third Party, then that Participant will promptly inform the other of that fact. Neither Participant will make any admissions in relation to any claim without the consent of the other Participant (which will not be unreasonably withheld or delayed). The Participant against which any such claim has been made, will always consult with the other Participant, and each Participant will render such reasonable assistance to the other as is necessary in order to settle the dispute either by out-of-court settlement or in legal proceedings.

7. LIABILITY

7.1 Liability, in the case of a claim by a Third Party, rests primarily with the supplier of the product used by the Third Party.

7.2 However, the Participants to this Arrangement jointly determine that:

7.2.1 Liability for the ENCs, updates and other associated information supplied by *[other participating HO]* to IC-ENC, and for the ENC data in IC-ENC's ENC database which *[other participating HO]* has validated, rests with *[other participating HO]*, provided that no material modifications have been made by IC-ENC.

7.2.2 Liability for any material modifications made by IC-ENC and for faults caused by IC-ENC's processing systems shall rest with the UKHO as operator of IC-ENC.

7.2.3 Liability arising out of the use by a Third Party of "questioned data" (as defined in 4.1) shall rest with *[other participating HO]*.

7.3 In the event of a claim being made by a Third Party, the Participants will as between themselves apportion liability, including any right of indemnity, on the basis of paragraph 7.2. Any damages awarded and payable to the Third Party by one of the Participants will be paid in full by that Participant. The other Participant will then refund its portion of the damages on the basis of paragraph 7.2.

8. FINANCIAL ARRANGEMENTS

8.1 *[other participating HO]* will be able to set the wholesale price at which IC-ENC will sell its ENC cells to Value Added Resellers. The wholesale price will be inclusive of the base cell and weekly updates for twelve calendar months. *[other participating HO]* may change the wholesale price at 1 January each year by giving IC-ENC notice in writing of the change by the previous 15 October.

8.2 IC-ENC will charge a fixed fee for each ENC cell sold to contribute towards recovering its set-up and operating costs. IC-ENC will review this fee each year, and will notify *[other participating HO]* of any change by 15 September. Any change will take effect on the following 1 January.

8.3 Each quarter, IC-ENC will inform *[other participating HO]* of the volume of sales of its ENCs and of any excess revenue payable after the fixed fees have been deducted from the revenues collected. The payments due from IC-ENC to *[other participating HO]* will be made on a quarterly or annual cycle, as chosen by *[other participating HO]*.

8.4 *[other participating HO]* will provide an invoice to IC-ENC in order for payments to be made. Payments will only be made to the declared bank account (which will not be a personal account):

Account Name: _____
Account no: _____
Sort code: _____
Swift code: _____
IBAN: _____
BIC: _____
Address: _____

9. **CONFIDENTIALITY OF THE ARRANGEMENT**

9.1 Once signed, the details of this Arrangement may only be released to a Third Party by consent of both Participants.

10. **DEFINITIONS**

10.1 Some terms in this Arrangement are used as defined below. Where these definitions apply each term begins with a capital letter.

Force Majeure	This includes, but is not limited to strikes, lockouts, riots, sabotage, acts of war or piracy, destruction of essential equipment by fire, explosion, storm, flood or earthquake, and delay caused by failure of power supplies or transport facilities.
Participant	The UK Hydrographic Office as the operator of IC-ENC or <i>[other participating HO]</i> .
Third Party	Any person, organisation or institution, including another Hydrographic Office, other than a Participant to this Arrangement.
Value Added Reseller	An organisation appointed by IC-ENC to distribute ENCs and that is able to add value to the ENCs, for example, by bundling them with other products.
Distributor	A distributor appointed by, and supplied by, a Value Added Reseller to enhance the availability of ENCs to the end user.

Derived Product	A product or service derived by a Third Party from the Participants' material within the rights granted to the Third Party and meant to be used or sold by the Third Party, its distributors and sub-licensees.
Derived Product Producer	A producer of a Derived Product.

.....
[signed]
National Hydrographer,
UK Hydrographic Office
as operator of IC-ENC

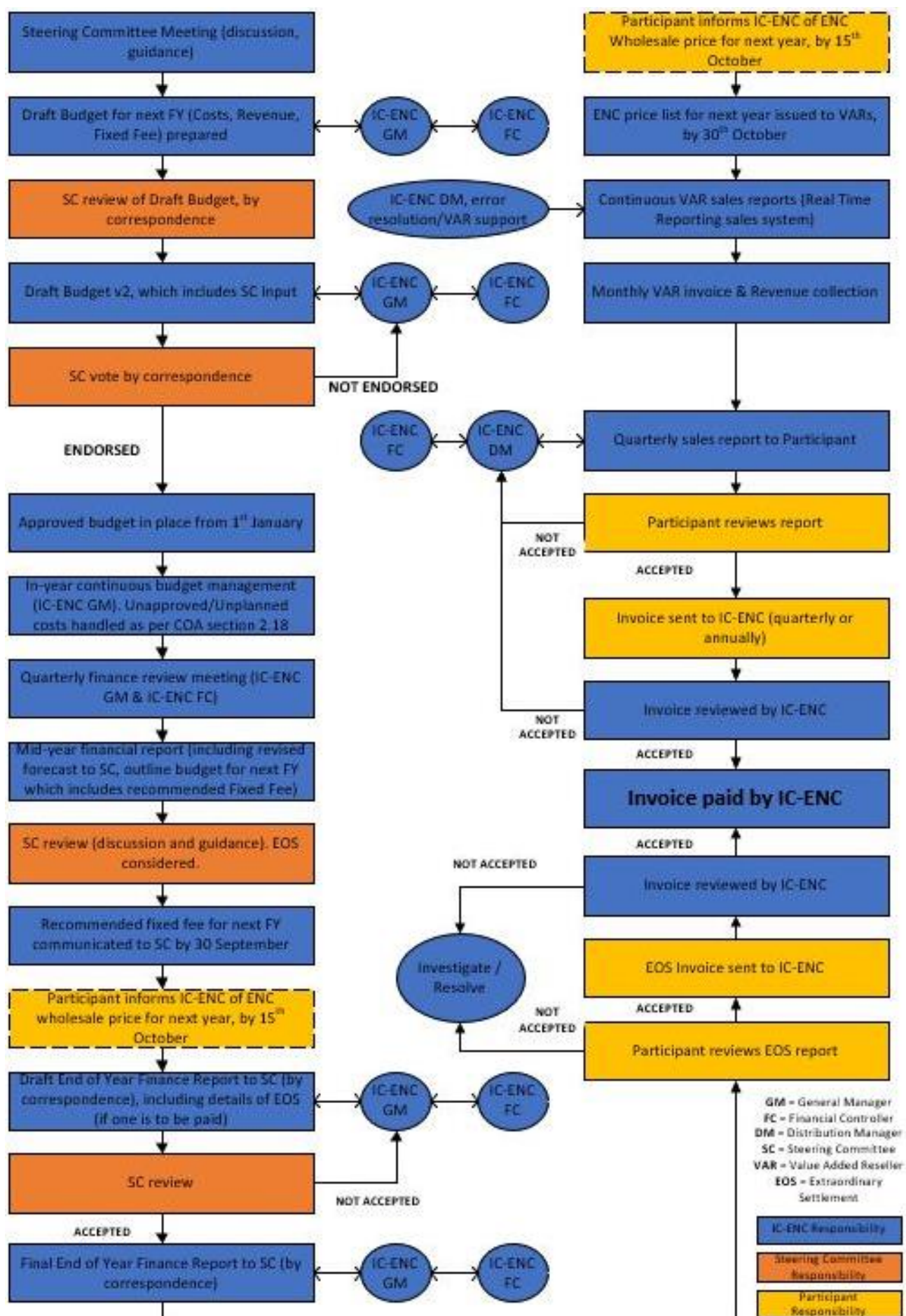
.....
[signed]
[other participating HO]

Date

Date

ANNEX E – IC-ENC FINANCIAL MODEL & PROCESS

1. Further to the description of IC-ENC in Section 6 above, the IC-ENC financial model is designed to be straightforward and not introduce barriers to entry. It promotes the ethos of working together as a group as far as possible. The Steering Committee has agreed (see Decision SC21/3) that IC-ENC's financial model must be able to easily include new Participants (to IC-ENC, or to those deciding to take up non-core services after they have launched). The financial arrangements will be those applicable at the point in time they join in.
2. As described in this COA, IC-ENC Participants supply their ENC's to IC-ENC on a non-exclusive basis. IC-ENC's funding is based on retaining a 'fixed fee' from ENC sales reported to IC-ENC by its VARs, and any one Participant will not contribute more than 20% of IC-ENC's operating costs.
3. The SC, through the IC-ENC risk register, has considered and understands the potential risk to IC-ENC's financial sustainability if Participants establish direct ENC supply arrangements to IC-ENC VARs, and the implications of this on the 'ethos of working together' that the IC-ENC funding model is designed to promote.
4. The principle of 'holistic funding' was endorsed by the SC via IC-ENC Circular Letter 2019/10. Holistic funding can be described as "The data a member issues via IC-ENC is generating the funding that provides the IC-ENC services the member receives, plus the revenue that is returned to the member".
5. This approach means that new, non-core, services established by IC-ENC can be launched without a prohibitively high fixed fee of their own (which might have been detrimental to service uptake). The SC recognised that this funding methodology is appropriate because all IC-ENC services can be considered to be of benefit (directly or indirectly) to marine vessels/users, financial forecasts can be made with a high degree of confidence, and it builds on the established and proven 'fixed fee' concept.
6. Under the principle of holistic funding, only those Participants using particular services are funding them.
7. The flow diagram below describes the IC-ENC Financial model and process; budget setting and review, fixed fee(s), and the responsibilities of the IC-ENC, SC and Participants. It includes a review and comment period for SC to consider the end of year financial report, before final publication. It shows that payment from IC-ENC to Participant will only be made in response to an invoice being supplied.



ANNEX F – ENC LICENSING TERMS (REGULATED ECDIS)

IC-ENC appoints Value Added Resellers through a contract. This is a legally binding document (see definitions), and all VARs are subject to the same terms and conditions. Referenced within the contract are the ENC Licensing terms and conditions (i.e. the Joint RENC Licensing model).

As a result of this contract and Licensing model, IC-ENC has some distribution policies which are mandatory, and some which are set by the Participant. The model is designed to be as flexible as possible (to support Participants), whilst giving a structure on which VARs can build their services. The main elements are described here:

Wholesale Price:

Each Participant sets its own wholesale price. This price covers the provision of updates and new editions for a period of one year. IC-ENC requires this to remain stable for each calendar year (January to December). Under the contract, IC-ENC is required to give 2 months notification of price changes (so by end of October), and this informs the requirement for Participants to inform IC-ENC by 15th October.

Subscription periods (traditional, i.e. in advance):

Value Added Resellers are allowed to sell subscriptions down to a minimum period of 3-months (which IC-ENC will charge 30% of the price), and in one month increments between 3 and 12 months. IC-ENC retains a fixed amount per subscription, this amount is set for an annual subscription, which is also reduced accordingly for shorter subscription periods.

“Pay As You Sail” (PAYS) Subscriptions:

These services from IC-ENC VARs are based on an ENC folio being pre-loaded onto the ECDIS for which an up-front “Planning Fee” is charged and renewed on a quarterly basis. The use of the ENC is monitored during the voyage and then appropriately charged for. There are limited subscription options available for PAYS services. A Joint RENC PAYS Specification underpins these services. Each IC-ENC Participant can choose whether or not to support PAYS.

System ENC (SENC) Distribution:

Some of the Value Added Resellers offer SENC services, where they convert the ENC data into their proprietary SENC format before they encrypt and distribute the data to their customers.

This conversion is done under controlled conditions within an independently accredited system and using type approved software. Each IC-ENC Participant can choose whether or not to support SENC Distribution.