



## PRIMAR 2017 ANNUAL REPORT

PRIMAR is a multi-lateral and government based organization. As a regional ENC coordinating center (RENC), it's primary role is to ensure a harmonized quality level of official electronic navigational charts (ENCs) from many producer nations (i.e. national hydrographic offices) and making this information available through a network of distributors to international shipping on a 24/7 basis.



## OPERATION OF PRIMAR

The Norwegian Mapping Authority, Hydrographic Service (NHS) operates PRIMAR on a non-profit cost recovery basis. The NHS uses a Norwegian state owned company, Electronic Chart Centre AS (ECC), to deliver services within database operations/validation, sales and distribution, infrastructure and R&D to PRIMAR through a service provider agreement. NHS is responsible for the daily operation within the framework of strategies and policies decided by the PRIMAR Advisory Committee. The Cooperating Hydrographic Offices, through the PRIMAR Advisory Committee (PAC) decides on the overarching policy of PRIMAR. PRIMAR's vision, mission and objectives are as follows:

### **PRIMAR's Vision:**

*In order to enhance safety at sea and protect the maritime environment, PRIMAR's vision is to be the most efficient model for the provision of ENC services and maritime geospatial data worldwide.*

## PRIMAR'S MISSION

- Assume RENC responsibilities in support of UN Resolutions, IMO Conventions and IHO WEND Principles.
- Provide all actors with responsibilities for safety of navigation and protection of the maritime environment with accurate up to date maritime geospatial data.
- Provide to HOs service solutions and framework to co-operate in the management and provision of ENCs and maritime geospatial data.
- Consider Capacity Building support to achieve adequate global ENC coverage.

## PRIMAR'S OBJECTIVES

- Foster closer cooperation between HOs to reach the greatest level of harmonization and consistency in ENC services.
- Encourage and support the achievement of adequate global ENC coverage.
- Encourage and support efforts to establish RENCs.
- To provide the most efficient ENC quality and distribution services and ensure continuous improvement.
- Foster close cooperation with private industry and distribution network to ensure the most efficient services.
- To ensure the visibility of PRIMAR and the promotion of IHO global ENC coverage.
- Provide cooperating hydrographic offices with operational and technical support and services in their work to produce, quality control and deliver harmonized ENC services compliant with all relevant international standards.

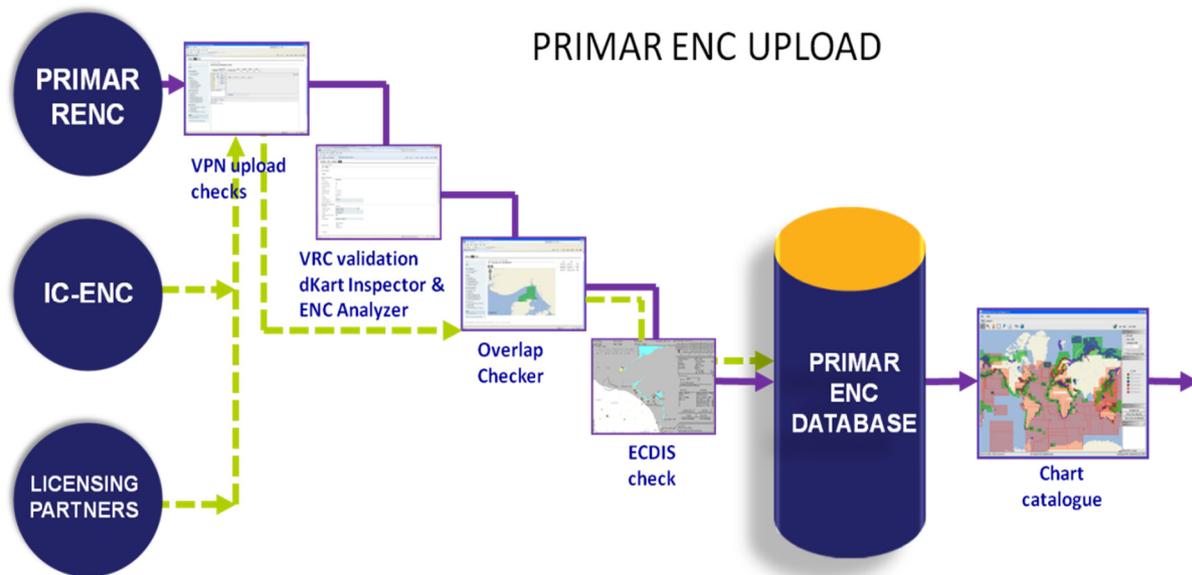
## PRIMAR FOCUS AREAS FOR 2017

The specific objectives for PRIMAR during 2017 have been:

- Continuously provide the world's most efficient ENC quality control and validation services
- To achieve increased ENC coverage in Asia and prepare for new members to join PRIMAR
- To increase knowledge and conduct training in ENC validation and quality control for member nations
- To increase ENC sales, maintain cost control and financial sustainability
- To further develop and improve the PRIMAR technology and services
- To be visible in the IHO arena and maintain a close relation with the network of distributors

## PRIMAR 2017 ENC QUALITY CONTROL AND VALIDATION SERVICES

All ENCs delivered to PRIMAR undergo a series of validation and quality control checks. To ensure that the ENCs are in accordance with relevant IHO standards, all ENCs go through automated S-58 upload checks in the PRIMAR VPN system. ENCs that contains errors are rejected, and a report is generated back to the relevant HO. Having been ISO 9001 accredited since 2005, PRIMAR has a high degree of focus on quality in all stages of the ENC validation and distribution process.



### PRIMAR ENC Validation Procedure

The main tool used for ENC quality control available for PRIMAR member nations is the **validation report checker (VRC)**. The VRC gives access to a whole range of different tools for checking the quality and consistency of the ENC product. All messages reported in the VRC are categorized with guidance on how to proceed with the validation of the ENCs. Historical data from the validation process of each ENC is stored and easily accessible in the VRC. In addition, PRIMAR provides support to the HOs in interpreting, understanding and suggest appropriate measures to resolve quality issues.



The PRIMAR ENC validation statistics for 2017 are as follows:

New ENC	New Editions	Reissue	Cancel cell	Updates
767	6978	833	180	23 230

The below table shows the development of the PRIMAR ENC database during 2017:

Date	Total no of ENCs	Overview	General	Coastal	Approach	Harbour	Berthing	Updates
01.01.17	15 015	178	549	2 461	4 300	5 628	1 899	38 950
01.07.17	15 374	178	588	2 506	4 374	5 762	1 966	40 396
31.12.17	15 781	181	622	2 544	4 504	5 910	2 020	43 685

## STRATEGIC ISSUES

The PRIMAR Strategic Working Group met in Split, Croatia in May 2017. PSWG tasked PRIMAR to further investigate and describe several issues, including S-57 distribution, S-101 development and the development of different distribution systems post CD-ROM area. The review and update of the PRIMAR Strategic Plan is ongoing and it will continue in 2018.

The 24<sup>th</sup> PRIMAR Advisory Committee (PAC) Meeting was arranged in Arlanda, Sweden in the timeframe 21 – 22 November 2017. The Swedish Maritime Administration hosted the meeting. Twenty-two delegates took part in PAC 24. The IHO secretariat represented by Director Mustapha Iptes participated throughout PAC 24 as observer.

The PRIMAR ENC database now contains more than 15 700 ENCs worldwide. During 2017, Albania and Vietnam signed agreements for PRIMAR RENC membership. An ENC distribution agreement was signed with The Shanghai Chart Centre (SCC) of the Maritime Safety Administration of China.

PRIMAR has set up several free-of-charge service deliveries to support the work of IHO:

- Global WMS coverage for internal use at IHO
- ENC catalogue (RENC / Non RENC coverage)
- CATZOC delivery from both RENCs



- Supply of Overlap Checker to all Regional Hydrographic Commissions. Improvement to functionality underway.

PAC 24 approved to introduce KPIs for ENC validation in PRIMAR. The following validation completion times was set as a target:

Type of data	Validation completion times (95 %)
ENC Update	1 day
ENC New Edition	2 days
New ENC	3 days

## TECHNICAL ISSUES

PRIMAR has conducted one ENC validation workshop during 2017. The workshop was arranged in Gdynia, Poland.

The 15th PRIMAR Technical Expert Working Group (TEWG) Meeting was arranged Stavanger, Norway 28. – 29. Nov 2017. Twenty-five participants from hydrographic offices and software suppliers attended the meeting. Topics covered included PRIMAR updates, ENC Improver, S-58, S-101, S-102 and T&P notices.

PRIMAR is actively participating in the IHO S-100 and S-58 standardization. PRIMAR will take a major role in the development of the new S-63 ed. 2.0 standard.

## ENC SALES, COST CONTROL AND FINANCIAL SUSTAINABILITY

PRIMAR 2017 financial forecast:

- Total revenue of ENC sales 12 % increase compared with 2016
- Total cost of PRIMAR operation \$2,04m.
- Financial surplus (excess of cost coverage after regular royalty payments) of approximately \$400k to be used for S-101 development.

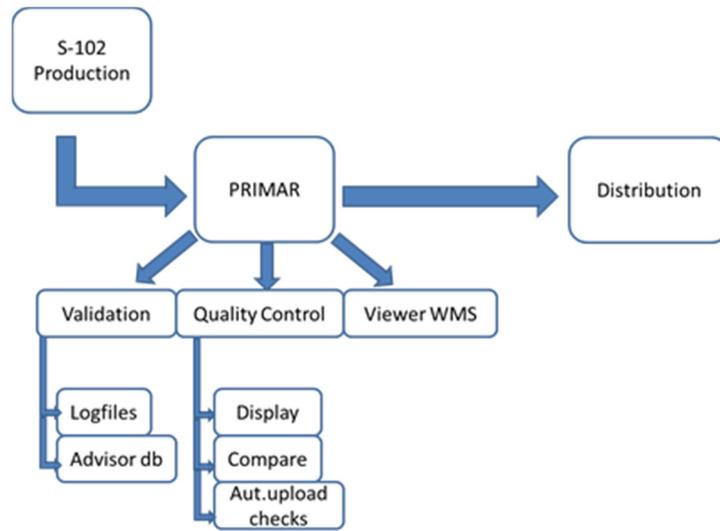
PRIMAR financial model 6.0 was introduced 1.1.2017 based on PAC23 Decision 2. The operating cost for 2017 has been clearly split between the PRIMAR commercial and national services. Since the introduction of the new financial model, payments are conducted quarterly to the PRIMAR member nations. PAC 24 has approved the following for the 2018 budget:

- Total cost of PRIMAR operation \$2,05m.
- Transaction fee commercial transactions: \$1,0
- Transaction fee national transactions: \$1,5
- Transaction fee national services to non-PRIMAR members: \$2,3

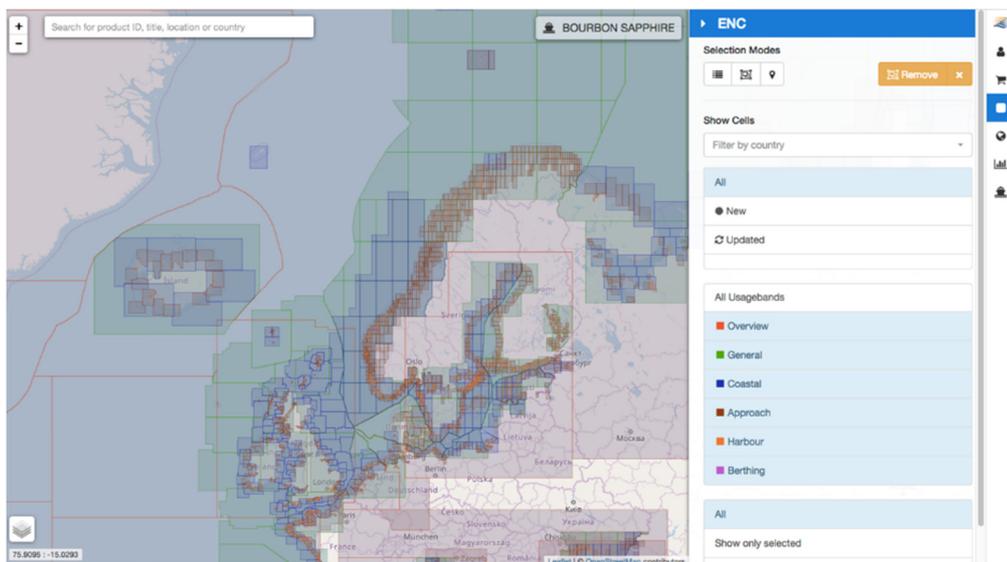
## DEVELOPMENT OF PRIMAR TECHNOLOGY AND SERVICES

The following technological developments have been conducted or are ongoing within PRIMAR:

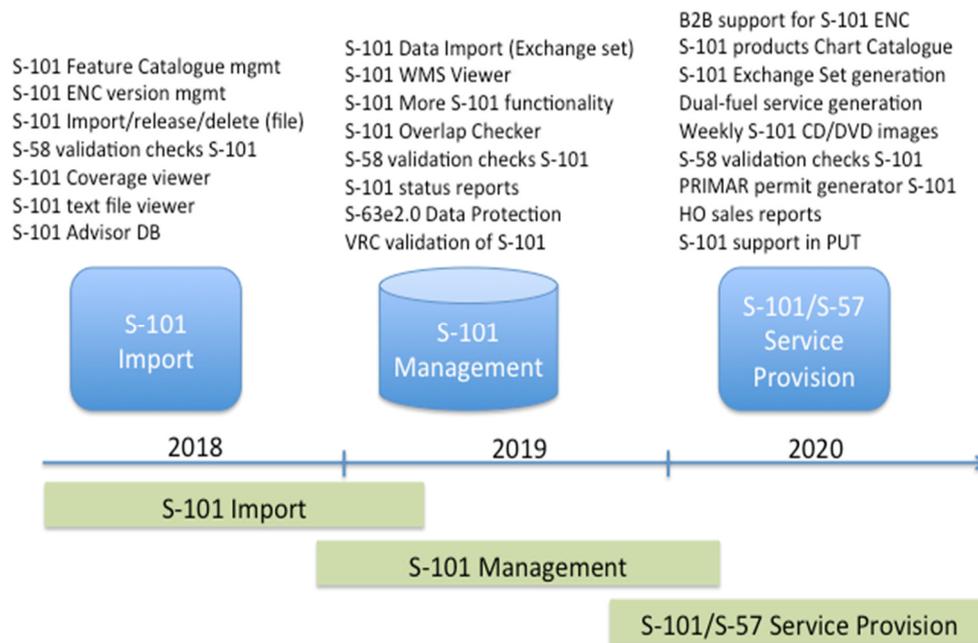
- The PRIMAR pilot project for development of S-102 bathymetric data distribution is continuing. The S-102 project is estimated to be fully implemented when the new S-63 ed. 2.0 standard is ready. A business model and marketing plan for the S-102 service will have to be developed. The principle of the service is illustrated below:



- In 2016, PAC 23 allocated funds for upgrading the PRIMAR Chart Catalogue from a Java-based solution to a more modern web interface. This development has been ongoing throughout 2017. The launch of the new chart catalogue is due for February 2018.



- PAC 24 approved the PRIMAR S-101 project to start as presented and the project budget for year 2018 to be funded by the expected PRIMAR budget surplus from year 2017. The S-101 development is expected to be a 4-5 year project, and to allow for operation of a dual-fuel S-57 / S-101 distribution system in the transition period between S-57 and S-101.



- The S-57 data distribution currently utilized by Sweden, Finland and Norway outside of PRIMAR (spin-off technology) will be included as a PRIMAR service in 2018. This service can then be utilized by individual PRIMAR member nations if desired.

## THE IHO ARENA AND RELATIONSHIP WITH THE DISTRIBUTOR NETWORK

During 2017, PRIMAR was present at the following IHO conferences to promote the RENC concept and contribute to the IHO working groups:

- WENDWG7, Washington, USA
- ROPME Sea Area Hydrographic Commission 7, Muscat, Oman
- 1<sup>st</sup> IHO Assembly, Monaco
- SAIHC 14, La Reunion
- MBSHC-20, Herceg Novi, Montenegro
- S-100WG, Genoa, Italy
- HSSC 9, Ottawa, Canada

During 2017, PRIMAR conducted several meetings with ENC distributors and participated in several maritime exhibitions and industry fairs to promote the RENC concept and the use of official ENCs. The bi-annual PRIMAR distributor survey was conducted in 2017. The survey provided PRIMAR with several useful comments and feedbacks from the network of commercial distributors.



## CONCLUSION AND FOCUS FOR 2017

2017 proved to be a successful year for PRIMAR with further increase in ENC sales, increase in the number of registered ENC users, increase in the use of Navy and Governmental services, expanded coverage in the RENC ENC database, new RENC members and several technological developments. The new financial model was successfully implemented, and the financial situation in PRIMAR is good.

At the end of 2017, PRIMAR have 17 member nations through bilateral agreements. 12 other nations and official ENC producers deliver data to PRIMAR through distribution agreements. All ENCs from IC-ENC are delivered to PRIMAR through a VAR agreement. Together, this comprise the global PRIMAR ENC database of 15 700 ENCs.

At the end of 2017, PRIMAR have 55 commercial ENC distributors around the world. For the member nations, PRIMAR operate 8 different Navy Supplier Services as well as 9 different Governmental ENC Supplier Services.

Development of new PRIMAR technology and services will continue in 2018.

A handwritten signature in blue ink that reads "Hans Christoffer Lauritzen".

Hans Christoffer Lauritzen  
Director PRIMAR

A handwritten signature in blue ink that reads "Rainer Mustaniemi".

Rainer Mustaniemi  
PAC Chairman