



## PRIMAR 2018 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.

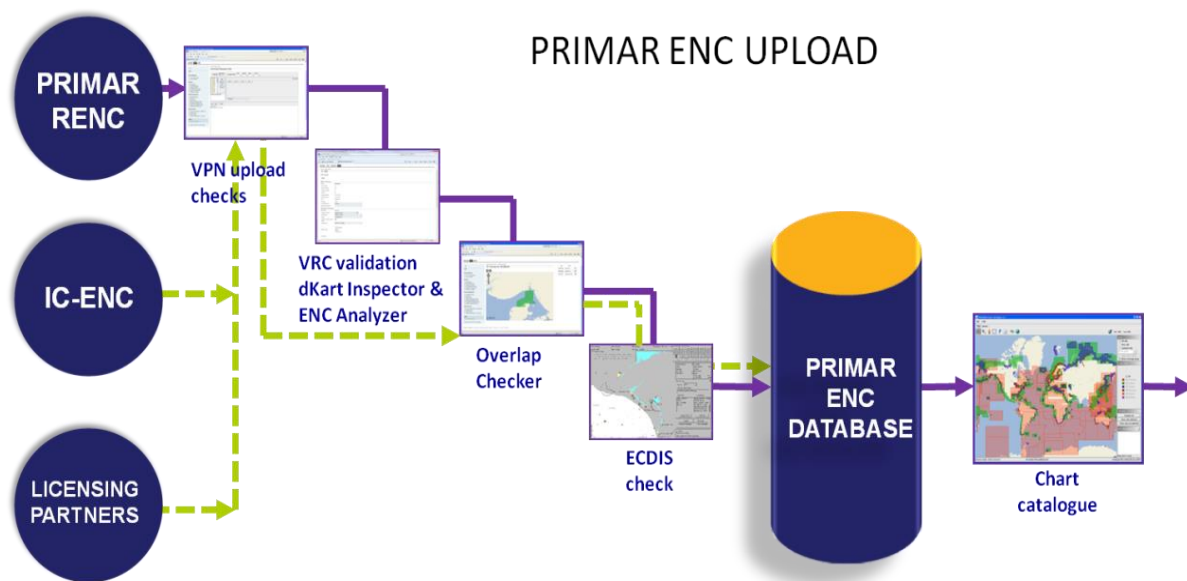
## PRIMAR FOCUS AREAS FOR 2018

The specific objectives for PRIMAR during 2018 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 2018 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 2018 are as follows:

New ENC	New Editions	Reissue	Cancel cell	Updates
1 222	5 932	656	158	24 916

The below table shows the development of the PRIMAR ENC database during 2018:

Date	Total no of ENCs	Overview	General	Coastal	Approach	Harbour	Berthing	Updates
01.01.18	15 781	181	622	2 544	4 504	5 910	2 020	43 685
01.07.18	16 044	178	611	2 551	4 574	6 027	2 103	43 257
31.12.18	16 285	179	633	2 549	4 802	6 113	2 009	43 925

In 2017, PAC 24 approved to introduce KPIs for ENC validation within PRIMAR. The following validation completion times was achieved in 2018:

Type of data	Validation KPI (95%)	2018 Average Achieved
ENC Update	1 day	8 hrs.
ENC New Edition	2 days	7 hrs.
New ENC	3 days	1 day 22 hrs.

## STRATEGIC ISSUES

The PRIMAR Strategic and Financial Working Groups met in Brest, France in May 2018. PSWG/PFWG tasked PRIMAR investigate a new financial model, 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 2019, taking into consideration the future S-100 standards.

The 25<sup>th</sup> PRIMAR Advisory Committee (PAC) Meeting was arranged in Tehran, Iran in October 2018. The Ports and Maritime Organization of the IR of Iran hosted the meeting. PAC 25 approved the new financial model 7.0 to be introduced from 1.1.2019. PAC 25 allocated funding for the PRIMAR S-101 development throughout 2019, and tasked PRIMAR to investigate potential new development projects like distribution of nautical information/publications and inland ENCs.



The PRIMAR ENC database now contains more than 16 000 ENCs worldwide. During 2018, a distribution agreement was signed with The National Taiwan Ocean University.

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/Consistency Checker to all Regional Hydrographic Commissions.

## ENC SALES, COST CONTROL AND FINANCIAL SUSTAINABILITY

PRIMAR 2018 financial result:

- Total revenue of ENC sales 18 % increase compared with 2017
- Total cost of PRIMAR operation \$2,46m (National + Commercial)
- Financial surplus (excess of cost coverage after regular royalty payments) of approximately \$690k to be used for S-101 development.

PRIMAR financial model 6.0 was introduced 1.1.2017. The operating cost was split between the PRIMAR commercial and national services, and cost coverage was attained by charging a fixed fee for national and commercial ENC transactions. After evaluation of financial model 6.0, PAC 25 decided to evolve the PRIMAR financial model further. From 1.1.2019, financial model 7.0 will be introduced. This financial model gives the PRIMAR member nations 100% royalty payback based on the ENC price set towards PRIMAR. A fixed fee for national transactions (navy/governmental) is retained.

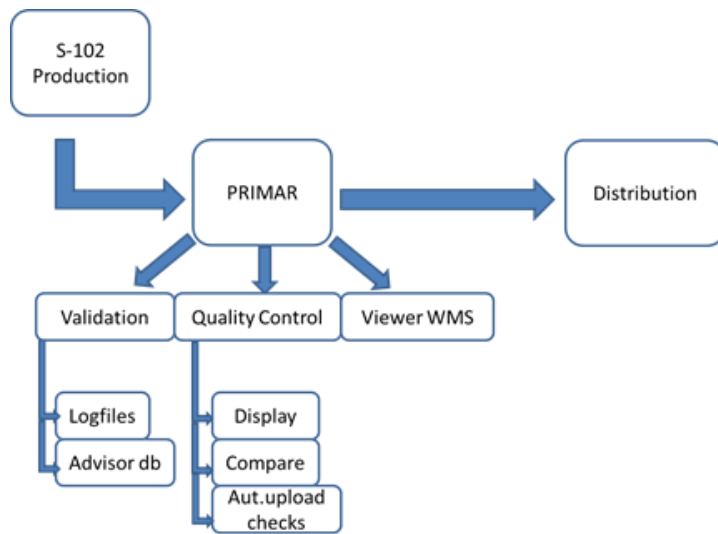
PAC 25 approved the following for the 2019 budget:

- Total cost of PRIMAR operation \$2,53m.
- Royalty payback: 100% based on ENC price set towards PRIMAR
- Transaction fee national transactions: \$1,5
- Transaction fee national services to non-PRIMAR members: \$2,3

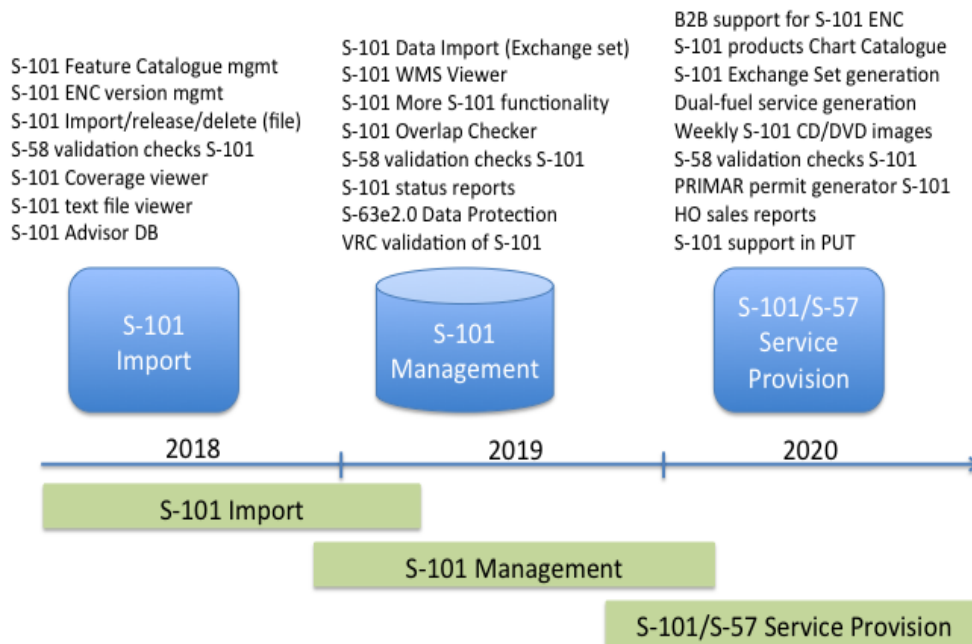
## DEVELOPMENT OF PRIMAR TECHNOLOGY AND SERVICES

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 2018, an S-100 data distribution project in cooperation with the Canadian Hydrographic Service and Teledyne CARIS was started.
- PRIMAR has taken a major role in the development of the new S-100 ed. 15 encryption standard during 2018.
- PAC 25 approved funding of the PRIMAR S-101 project throughout 2019 from the remaining budget surplus from year 2017 and the surplus from 2018. 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 development of the PRIMAR S-57 data distribution service has been conducted during 2018. This service is ready to be put in operational use in 2019.



## THE IHO ARENA AND RELATIONSHIP WITH THE DISTRIBUTOR NETWORK

During 2018, PRIMAR was present at the following events and IHO conferences to promote the RENC concept and contribute to the IHO working groups:

- WENDWG8, Buenos Aires, Argentina
- NIOHC-18, Goa, India
- World Hydrographic Day, Tehran, Iran
- S-100WG, Singapore
- ENCWG, Wollongong, Australia
- HSSC 10, Rostock, Germany

During 2018, 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 seminar and a distributor-training seminar was conducted in 2018. These events provided PRIMAR with several useful comments and feedbacks from the network of commercial distributors.

## CONCLUSION AND FOCUS FOR 2018

2018 proved to be a successful year for PRIMAR with further increase in ENC sales, increase in the number of registered ENC users, expanded coverage in the RENC ENC database and several technological developments underway. The financial situation in PRIMAR is good.

At the end of 2018, 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 more than 16 000 ENCs.

At the end of 2018, 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 2019.

Hans Christoffer Lauritzen  
Director PRIMAR

PAC Chairman