

navico

INDUSTRY – HO PARTNERSHIP

Serving all mariners

SAIHC Meeting
Cape Town 2-5 September 2019

Ivano Colombo – Data Sourcing Manager and HO relations

LOWRANCE

SIMRAD

B&G

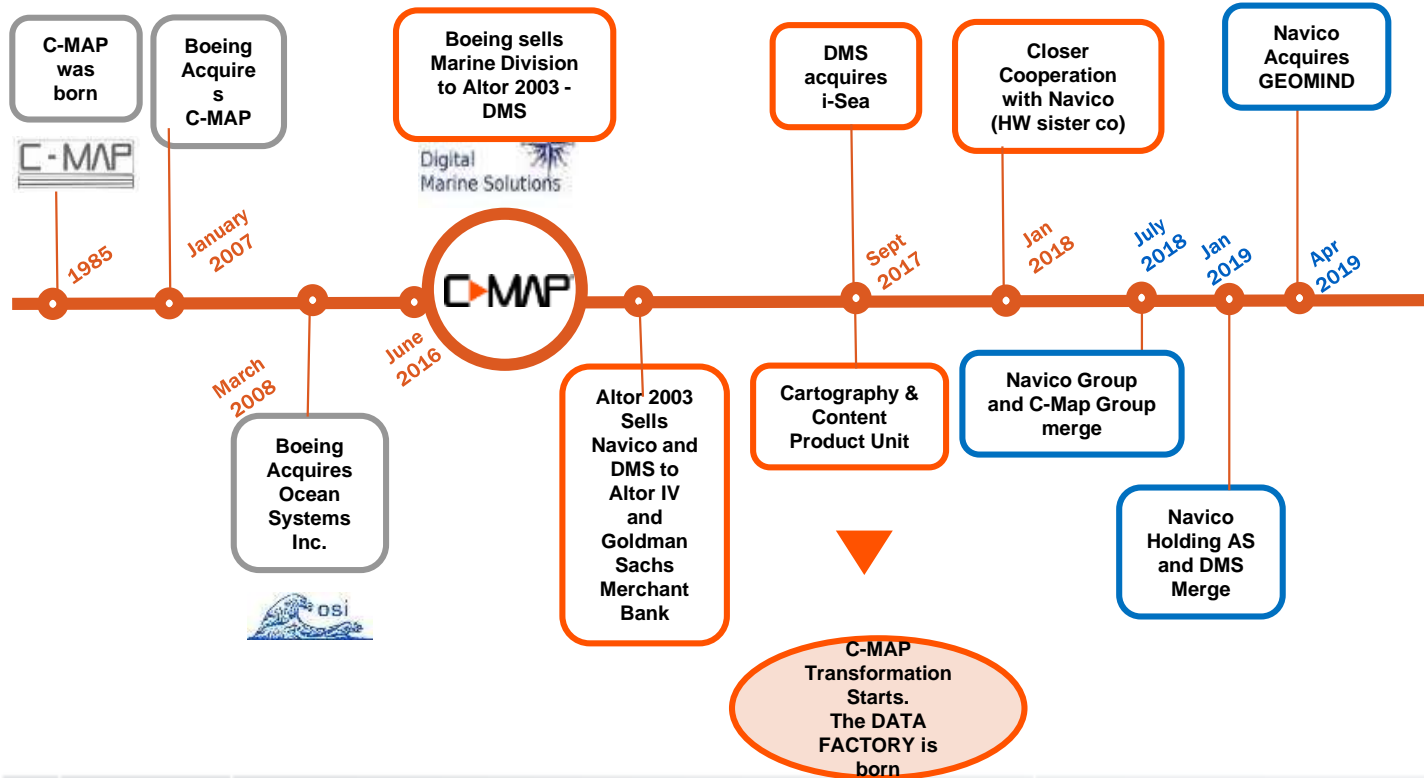
MAP



C-MAP JOINS NAVICO

- ▶ For more than 30 years, C-MAP has been a world leader in marine cartography and navigation solutions.
- ▶ We serve both the *Commercial* and *Recreational* marine markets, empowering our customers to make smarter decisions both on and off the water.
- ▶ We are the partners of many HOs worldwide supporting their chart production and maintenance needs with the dKART suite of products.
- ▶ We are charting a new course into the future of digital marine services through smart solutions that are synonymous with innovation, accuracy, and insight.
- ▶ We are a passionate crew of 250 colleagues working across eleven different countries.

C-MAP JOINS NAVICO



CARTOGRAPHY IN THE NAVICO WORLD

Offices / presence in 13 Countries



250 Employees Worldwide

NAVICO RECREATIONAL – THE FUTURE



Deliver the most detailed, accurate and attractive representation of Coastal and Inland Waters, integrated with Value Added Content and Services, to be deployed in an intelligent ecosystem of cross-platform, location-based, context-based and user-profile-based Digital Solutions, designed to build and serve the largest community of recreational boaters and others, for the safest, easiest, most enjoyable and rewarding journey on the water and around it.

THE DIGITAL ECOSYSTEM



CARTOGRAPHY

Scalability

- Modern map database and production pipeline
- Focus on automation, machine learning

Coverage

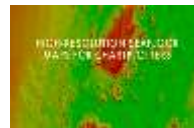
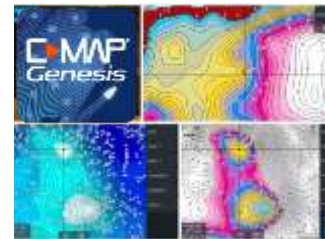
- Improved coverage inland, near-shore, marinas
- High definition bathymetry coverage

Sourcing

- Public source data mining and professional sourcing
- Own surveys (e.g. inland)
- Crowd-sourcing at scale via Navico

Diversity

- New chart formats
- New content to power value-added services (e.g. marina info)



A COMMON GOAL

Industry shares a common goal with Hydrographic offices:

To provide all mariners with accurate and adequately updated nautical data for the intended voyage.

Industry has the TECHNOLOGY to help Hydrographic Offices complete their MISSION.

License agreements should be designed to facilitate the process of data dissemination in different forms and through different channels, by selected and certified licensees.

THE GAP TO FILL

Hydrographic Offices in the past had to focus their digital efforts on ENC production and distribution.

Hundreds of thousands of recreational boats, fishing vessels and workboats do not, or cannot, use ENCs.

In many cases such vessels operate with insufficient and outdated nautical data and pose a safety challenge.



WHAT CAN THE INDUSTRY DO?

- ▶ Industry can act as data aggregator and «clearing house» for information to mariners.
- ▶ Different data is collected from various sources, ingested into a database, collated and packaged into products that are designed to serve different end-users.
- ▶ Such products are made available to mariners through different channels with aim to reaching the largest possible number of end-users.
- ▶ New data and updates are constantly collected and processed.



WHAT THE INDUSTRY NEEDS

- ▶ Access to the best data sources. In particular ENC's where available.
- ▶ Access to updates with the same frequency as for ENC's.
- ▶ Royalty models that are adaptive to the different products and the markets that such products aim to serve.
- ▶ License Agreements that foster products and services innovation and are easy to administer and audit.



NEW OPPORTUNITIES

Internet distribution, use of hand-held devices, mobile applications, web-based services are all new tools through which end-users can be reached, supported and stimulated to use the proper data in the proper way.



Value of Shore-based services. Nautical chart information is a valuable tool for enhanced shore-based services such as: Fleet management, Vessel monitoring, Voyage planning and route optimization, crisis management, emergency response, crew training, technical consultancy services



THE VOYAGE AHEAD

With a quest to serve chart data to all mariners, HOs and industry should join forces in a public-private partnerships (PPP)model –

"a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance"

HO – originator, owner and provider of navigation data
Industry – distribution channel and end user contact.

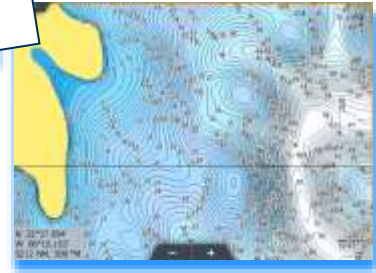
THE VOYAGE AHEAD

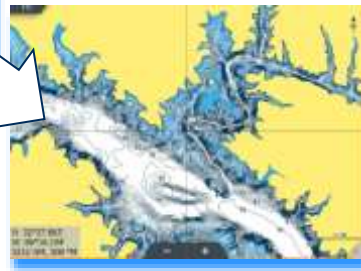
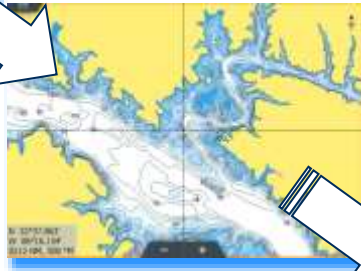
- ▶ HOs should agree to and apply a strict selection of partners based on certified data management processes, effective distribution capabilities and trusted back office and finance systems.
- ▶ HOs should allow and encourage industry to embrace and develop new technology to maximize end user reach.
- ▶ Industry should design new products and services that will stimulate mariners to use updated nautical data, and make such data readily available and affordable.

THANK YOU



SAMPLES OF THE EVOLUTION OF CARTOGRAPHY







**NEW HIGH RES BATHY COASTAL
Near and Off Shore.**

- **US** (Already by late summer 2018)
- **EMEA** (by year end 2018 or before spring 2019)
- **AUS/NZ** (by year end 2018 or before spring 2019)



Harmonization

HRBs with more
harmonized

Coastline and Bathymetry



**OLD
HRB**



**NEW
HRB**



Before

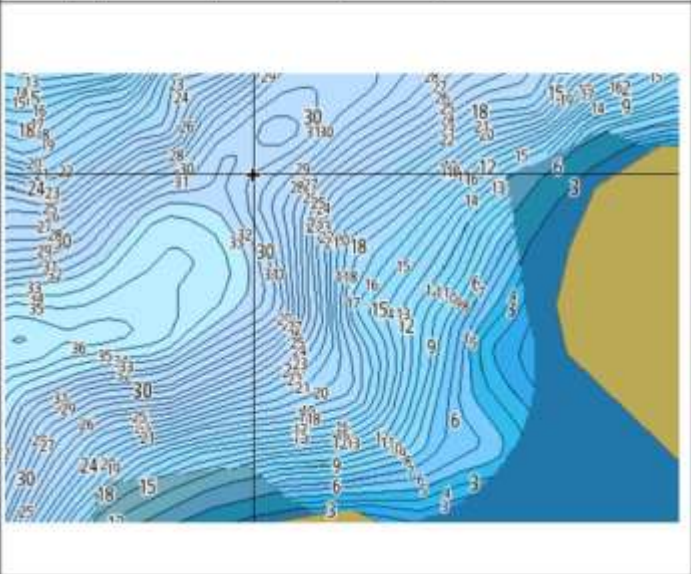


After



NEW LAKES INGESTION and REPROCESSING with Genesis Layer addition

New feature not available before – Genesis layer leveraging the content of the social map to be displayed on top of existing coverage



New feature not available before – Custom depth shading possible now due to the addition of the depth areas

