

# S-102 Bathymetry Data as a Service

**Mediterranean and Black Seas Hydrographic Commission (MBSHC)**

**Cadiz, Spain (11 – 13 June 2019)**



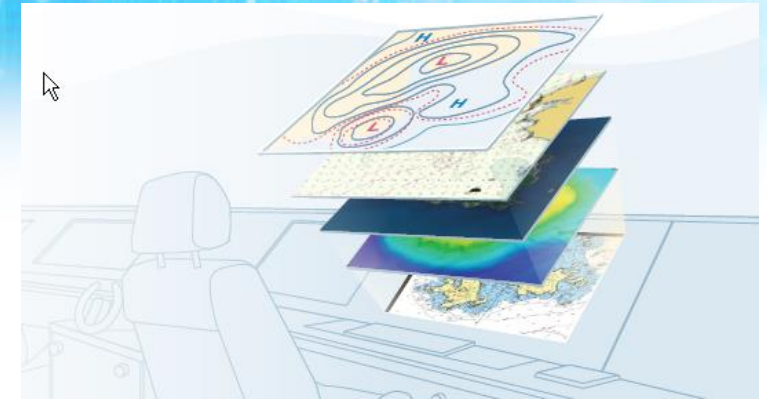
## INTRODUCTION

- Forward thinking hydrographic offices are moving from product centric to data centric workflows and services
- A project has been conducted with the CHS to implement an innovative bathymetry data service that will demonstrate the value of the evolving IHO S-100 data standards
- The Project Team is made up of CHS (HO), Teledyne CARIS (geospatial software) and PRIMAR (ENC distributor)
- It will focus on the latest technological approaches to leverage some key opportunities for tomorrow's hydrographic industry



## KEY OBJECTIVES

- **What problems are we trying to solve?**
  - The survey turn-around time
  - Efficiency and complexity of meeting the needs of multiple stakeholders
  - Operational preparedness for e-Navigation and autonomous shipping
  - Data integrity and security



TELEDYNE  
CARIS





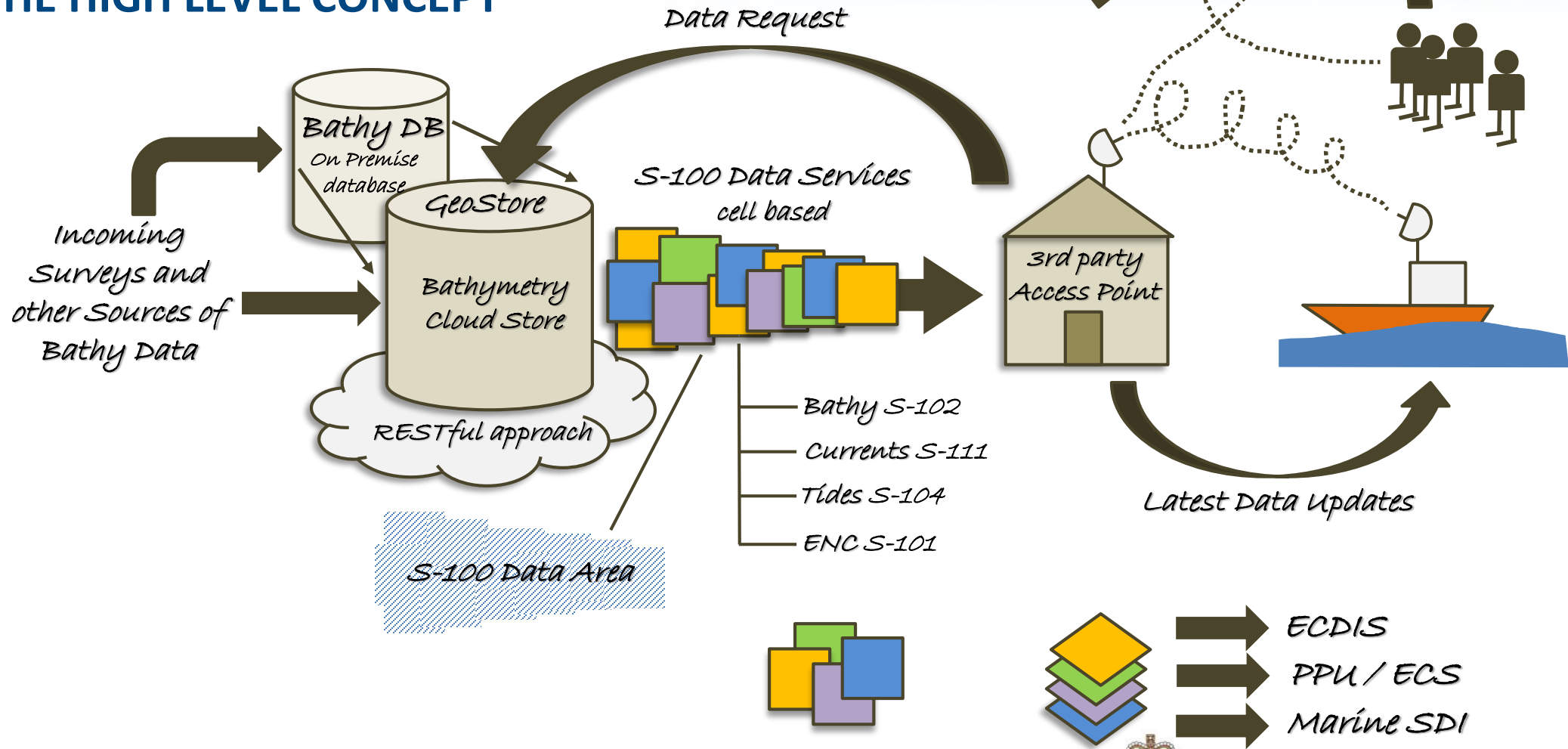
## KEY OBJECTIVES

- **What approaches are required for success in the market place?**
  - Service orientated
  - Cloud based
  - Bathymetry focused then charts
  - Latest open geospatial approaches
  - Latest computing techniques



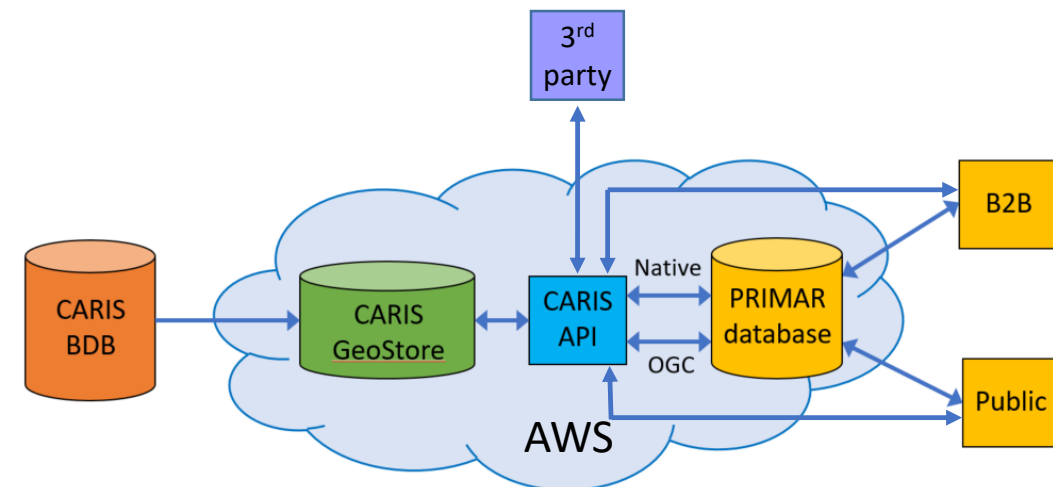
# THE HIGH LEVEL CONCEPT

Subscribe to data



## PILOT PROJECT OVERVIEW

- This pilot will allow CHS, Teledyne CARIS and PRIMAR to demonstrate its ability to provide a service that consumers of bathymetry data can subscribe to
- The bathymetry data will be available as S-102 products at 3 different resolutions and also OGC Web services
- Teledyne CARIS has developed cloud data store and cloud processing tools
- Teledyne CARIS has developed a rich API providing 3<sup>rd</sup> party access to the datastore
- PRIMAR has expanded its existing store front to allow users to subscribe to their area of interest as S-102 bathymetry products and OGC web services

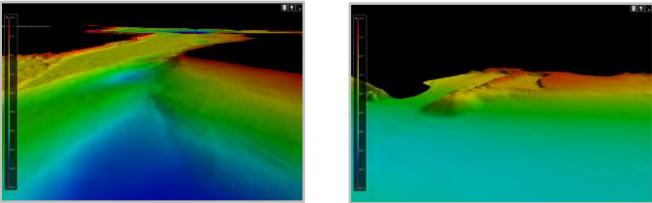
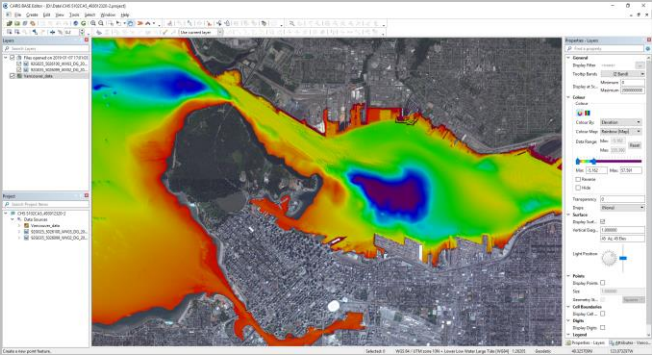




# DEMONSTRATION SCENARIO – S-102 DATA AND THE POTENTIAL FOR e-NAVIGATION

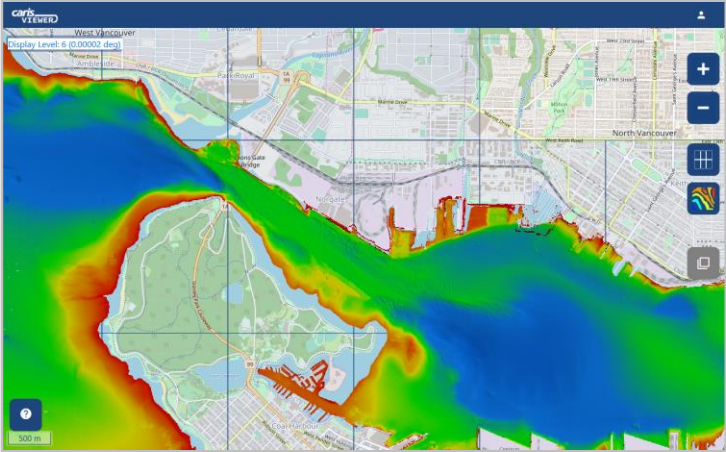
Vancouver Harbour in Bathy DataBASE, PRIMAR Map Viewer and Kongsberg S-102 Demonstrator

CHS bathymetry in  
CARIS Bathy DataBASE



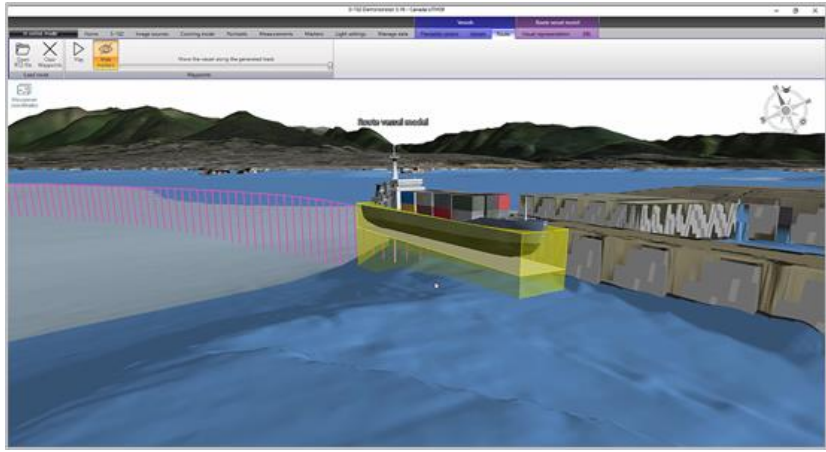
Link to video:  
<https://www.youtube.com/watch?v=AMQGSL5QtOY>

S-102 datasets PRIMAR Map Viewer



Link to video:  
[https://www.youtube.com/watch?v=fuy\\_R40Dlp8](https://www.youtube.com/watch?v=fuy_R40Dlp8)

Vancouver Harbour in Kongsberg S-102  
Demonstrator



Link to video:  
<https://www.youtube.com/watch?v=qe1DmG3BRMs>



## OUTREACH

- Outreach is a key aspect of this pilot project
- This outreach will help all team members to determine the viability of moving from a pilot towards a commercial solution, feedback is needed and appreciated
- Papers will be presented at hydrographic conferences, e-navigation events and wider geospatial conferences
- Articles will be published in journals, trade press and through social media channels
- Progress will be reported be at IHO and OGC meetings
- We want other HO's to get involved





## CLOSING SUMMARY

- *The combination of CHS, the project proponent, CARIS the principle supplier of geospatial software, and PRIMAR an internationally recognized and utilized ENC distributor, represents a great team with the necessary skill to achieve the goals of this pilot*
- *Together we want to help define the model for the future hydrographic products and services by using the latest geospatial approaches*

