



Hydrographic Data Management (HDM)

General Commission For Survey - KSA

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NIOHC 2016
Chittagong, Bangladesh
March 2016

- Project Description and Purpose
- Key Objectives and Deliverables
- Project Team
- System Architecture and Key Components
- Status Update
- Conclusion

Project Description and Purpose

Requirement to build the infrastructure and develop necessary 'Hydrographic Data Management' (HDM) capabilities

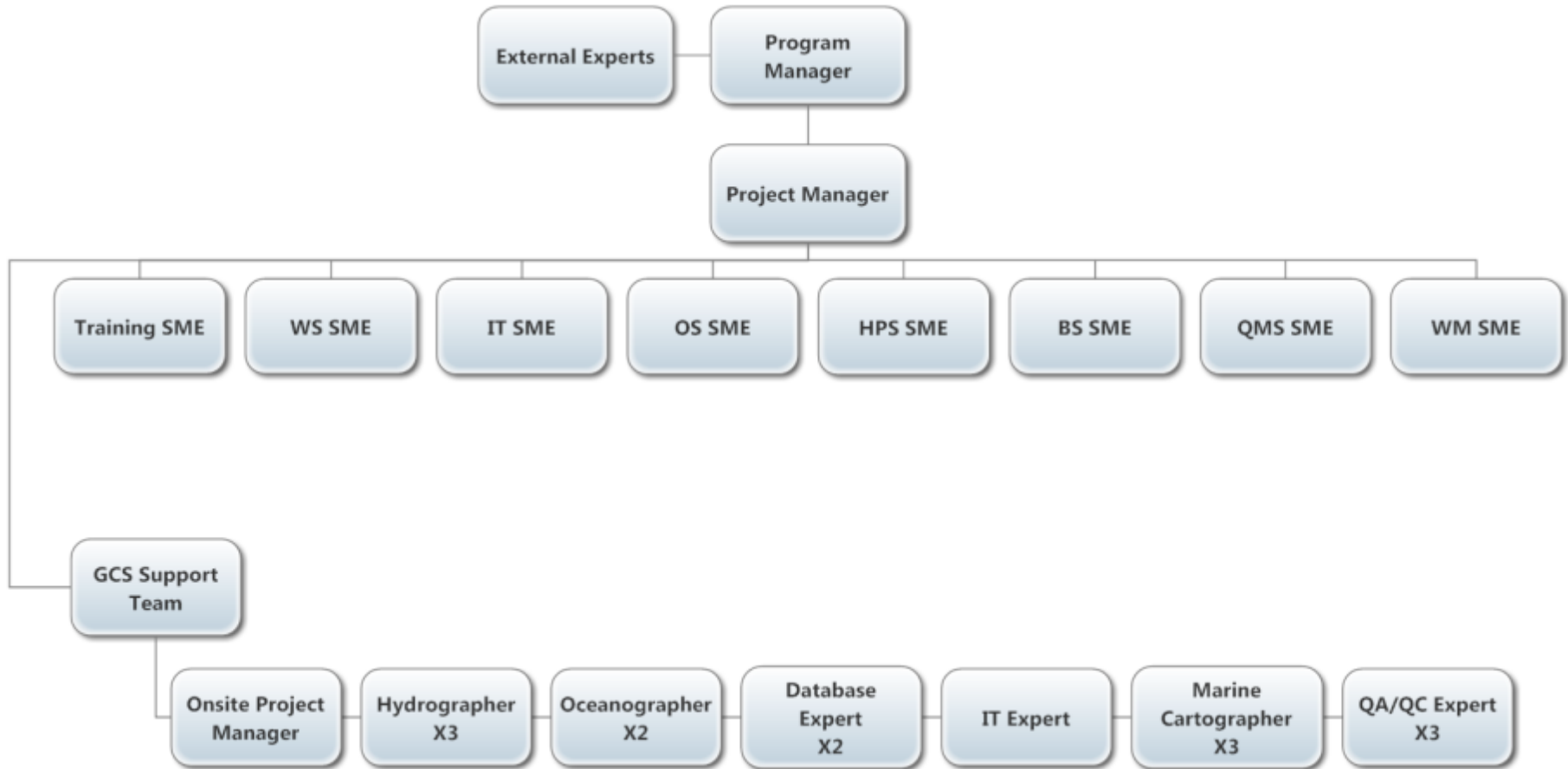
Meet the governmental requirements of a National Hydrographic Service and to administer a wide variety of oceanographic and marine sciences data.



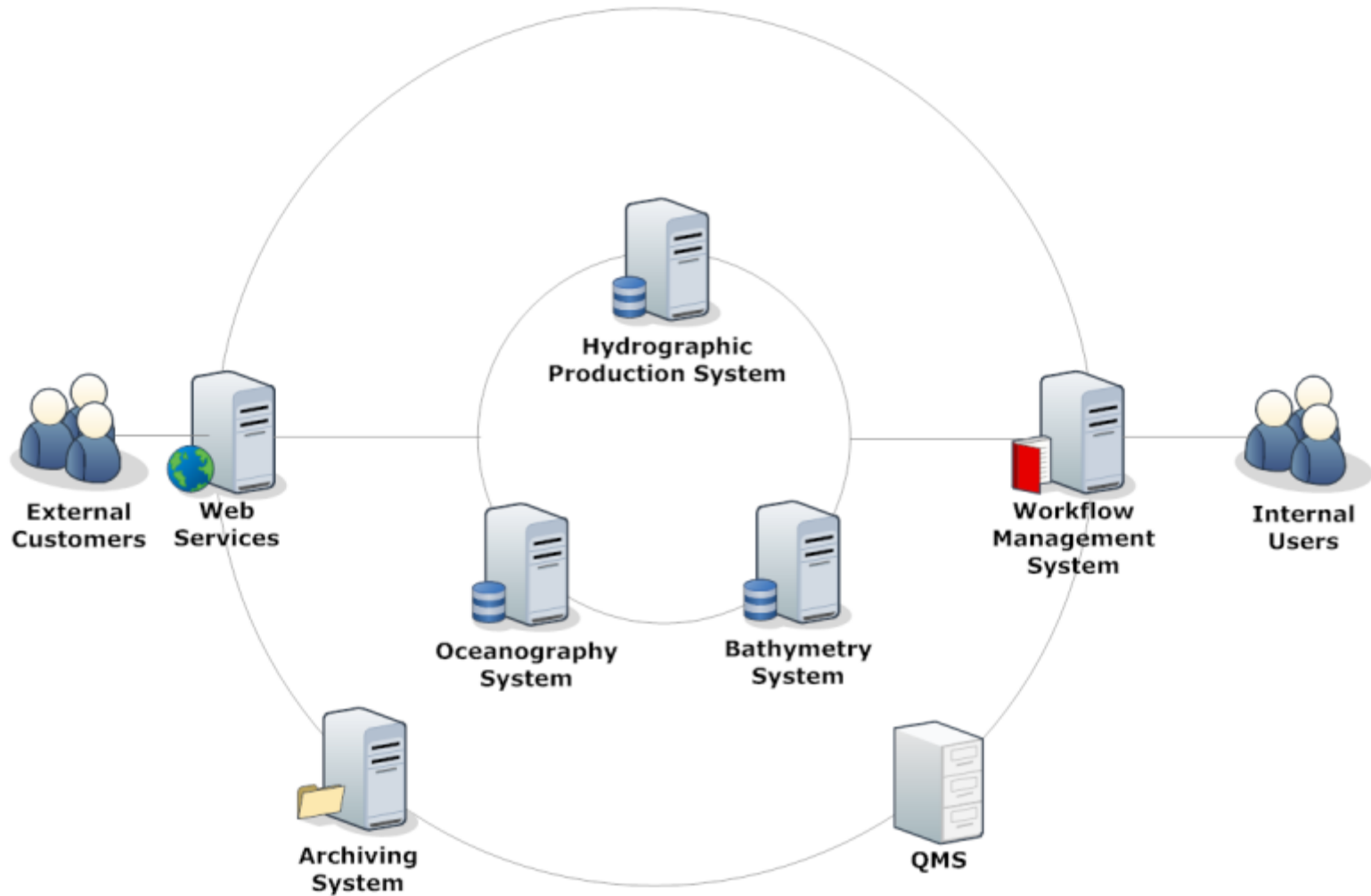
Key Objectives and Deliverables

- Evaluate hardware and software solutions for the operation of a hydrographic, oceanographic and marine sciences services
- Develop the work processes and the necessary Standard Operational Procedures (SOPs)
- Train GCS staff
- Establish a quality management system (QMS) that can be certified against ISO 9001
- Develop the capability in GCS to support a Marine Spatial Data Infrastructure (MSDI)
- Deploy all developed sub-systems

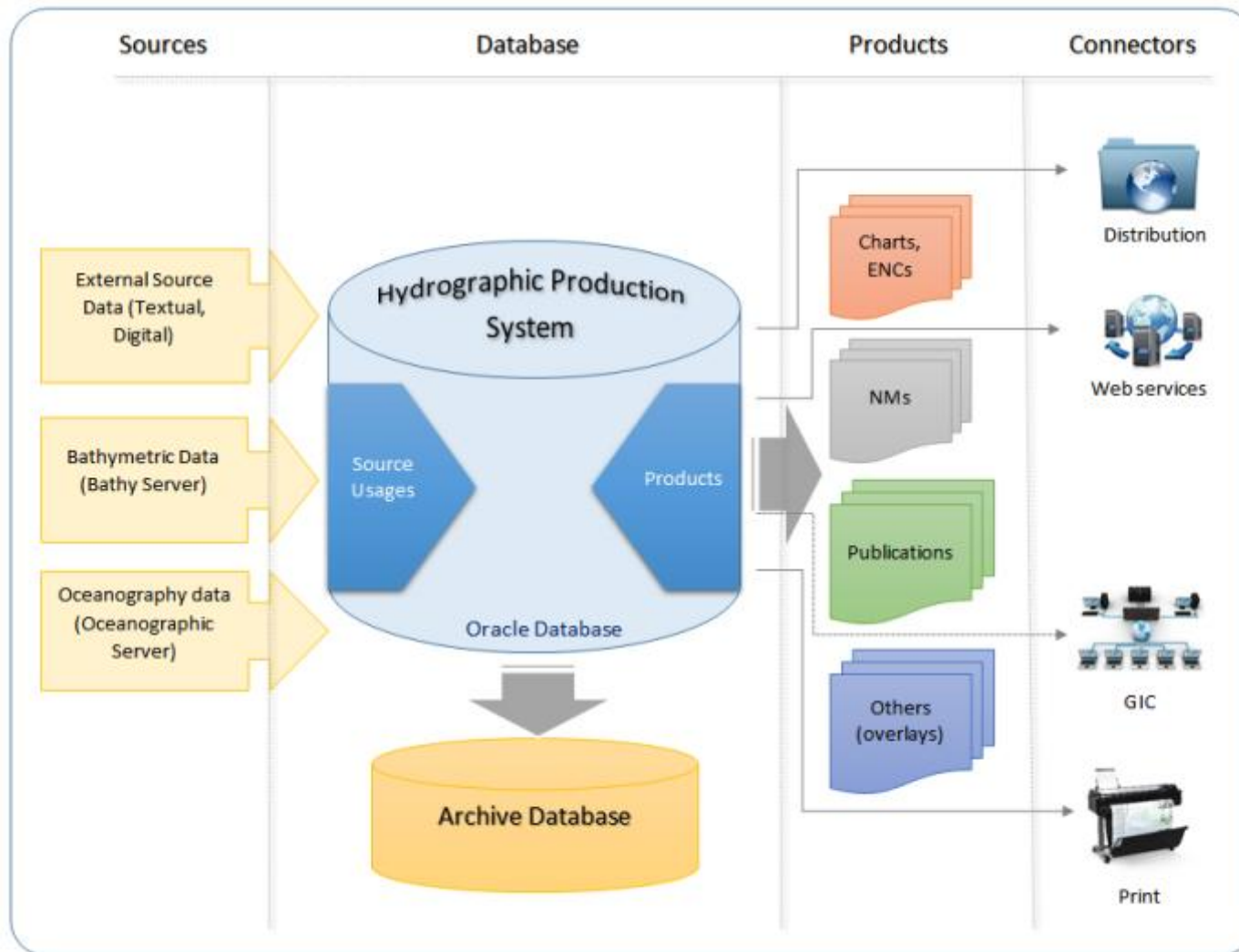
Project Team Composition



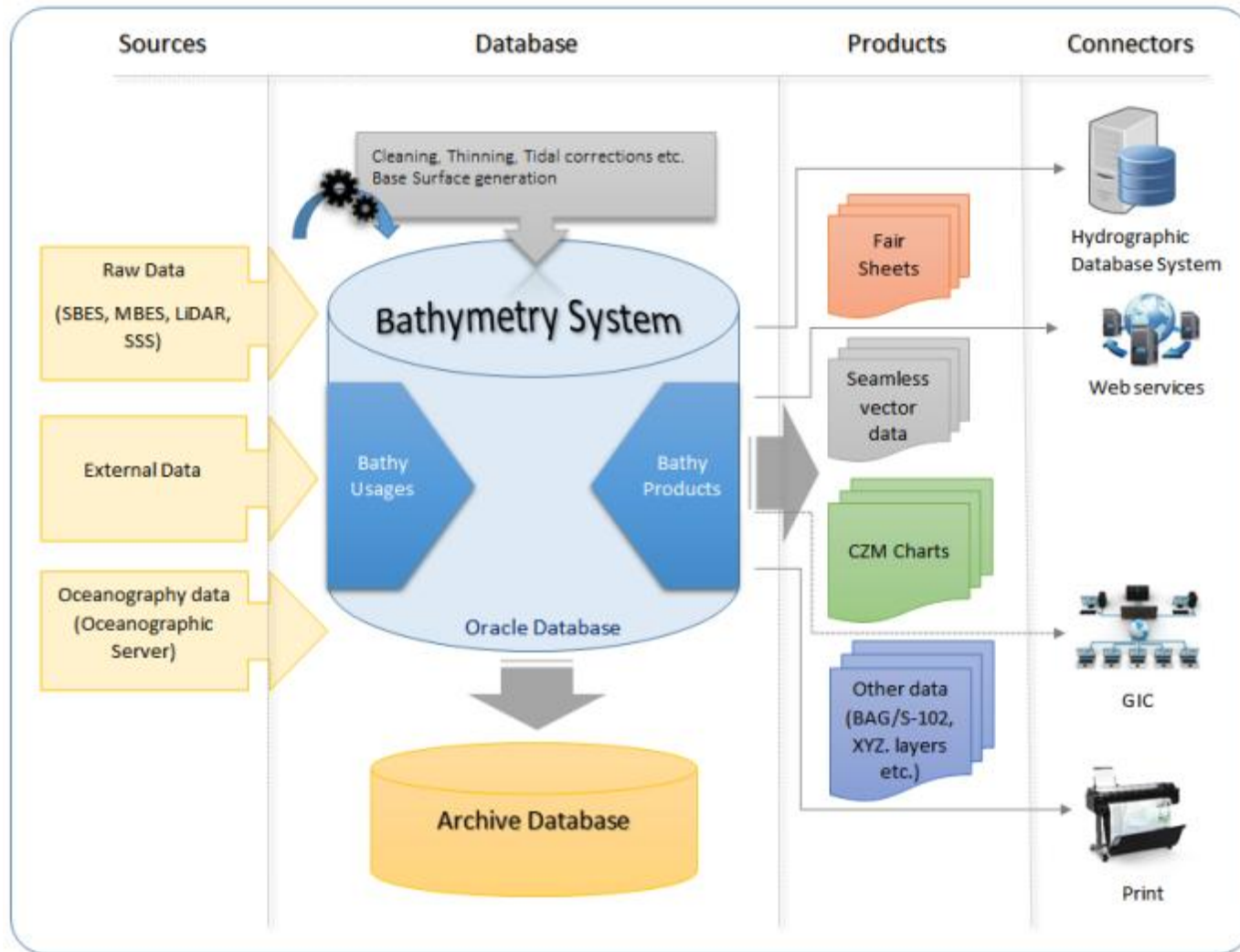
System Architecture Overview



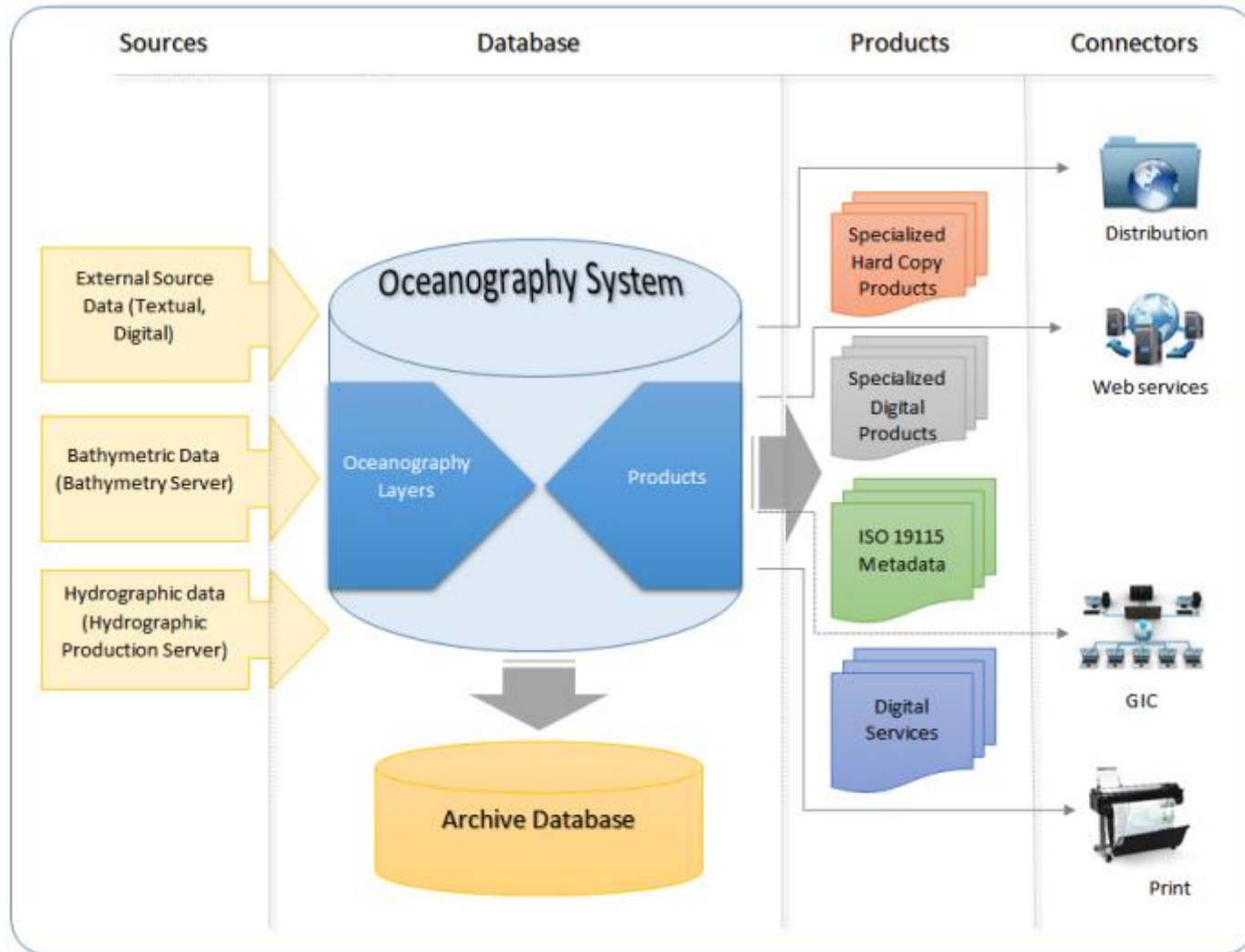
Hydrographic Production System



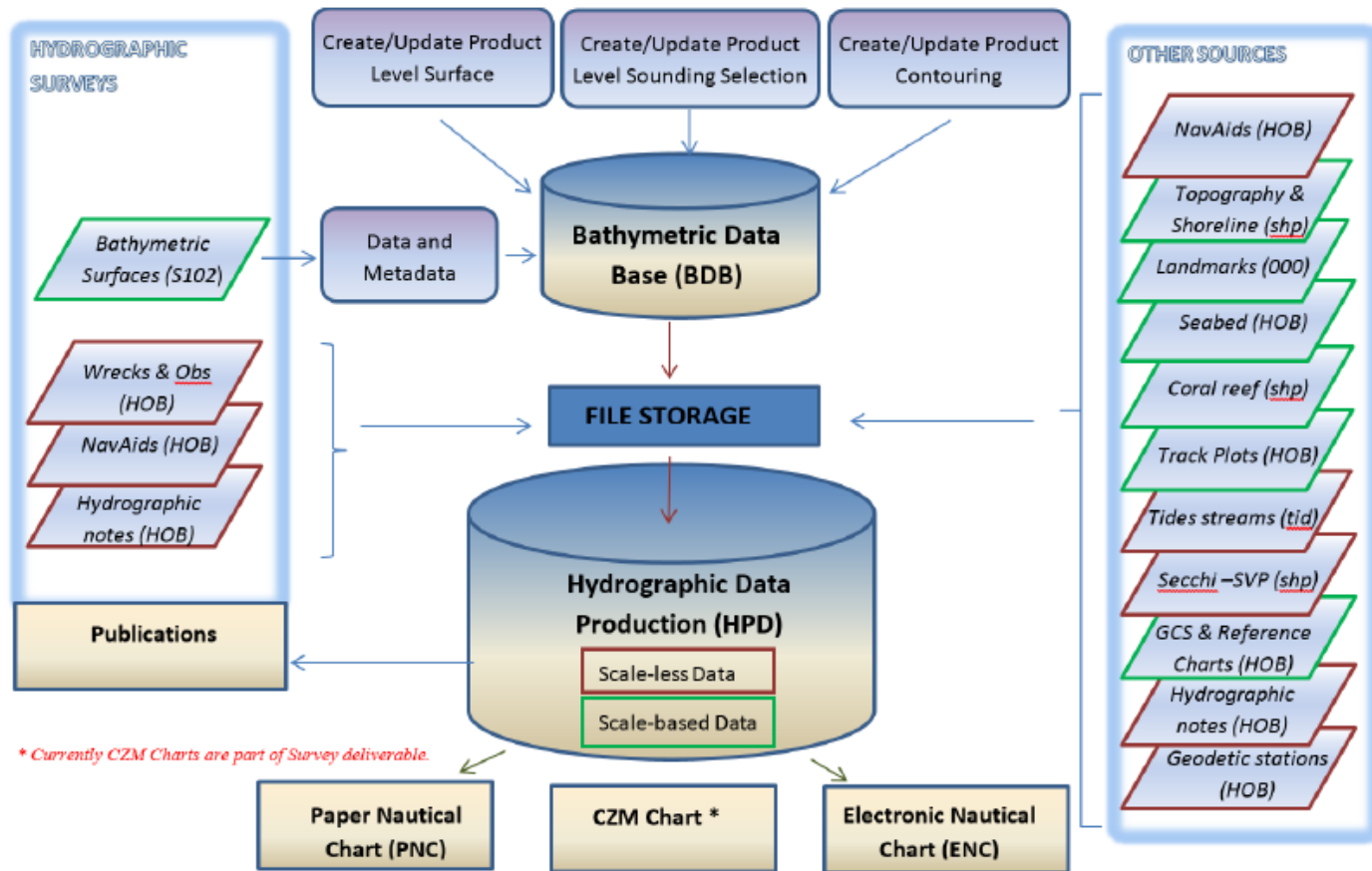
Bathymetry System



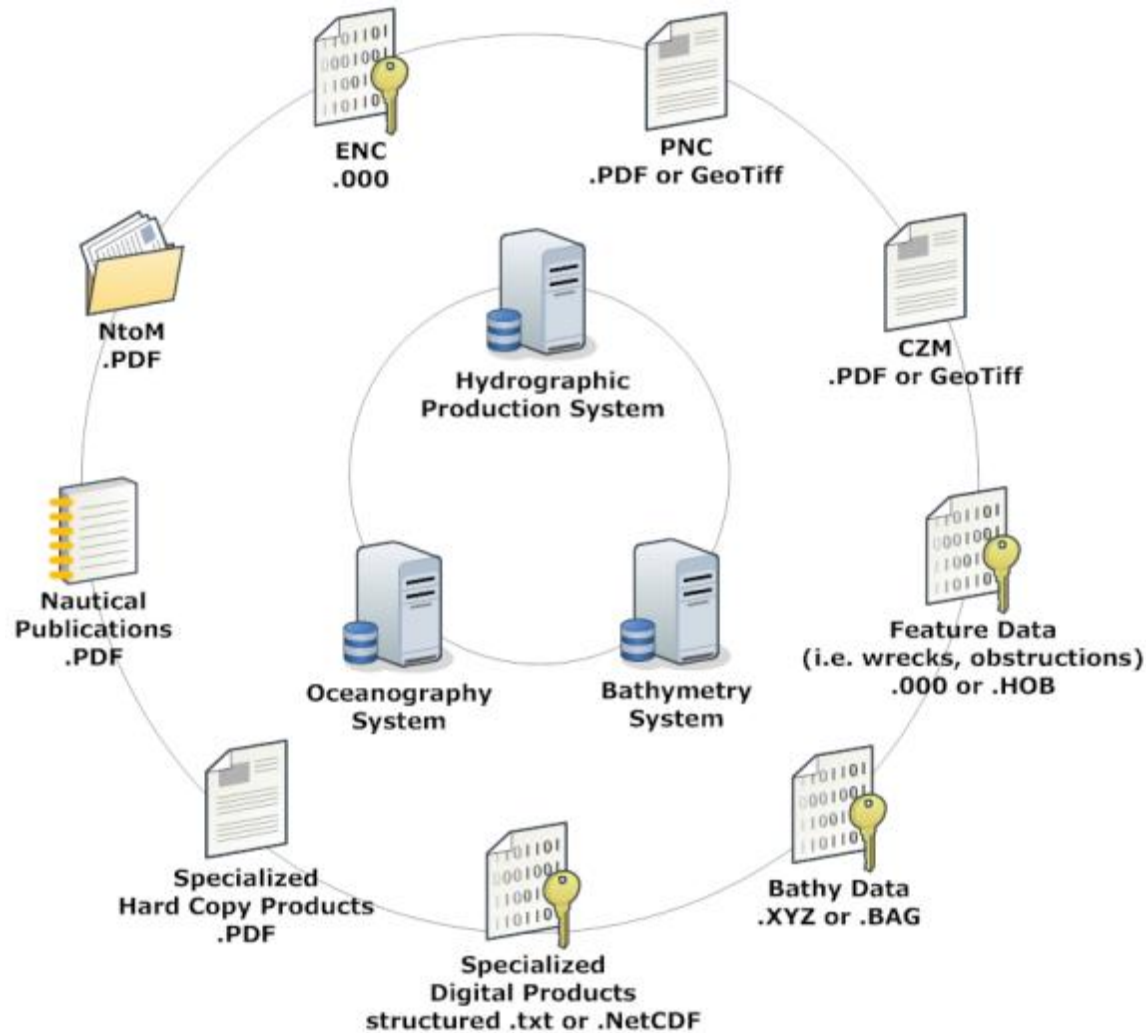
Oceanography System



HDM DATAFLOW DIAGRAM



HDM Products



NEW PATHS, NEW APPROACHES

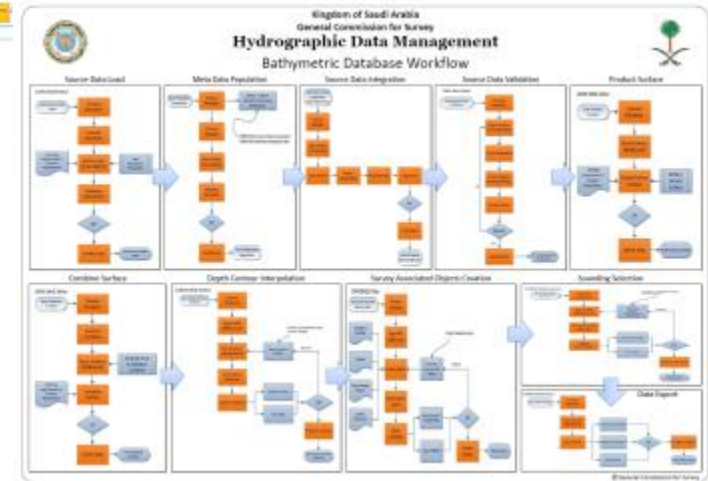
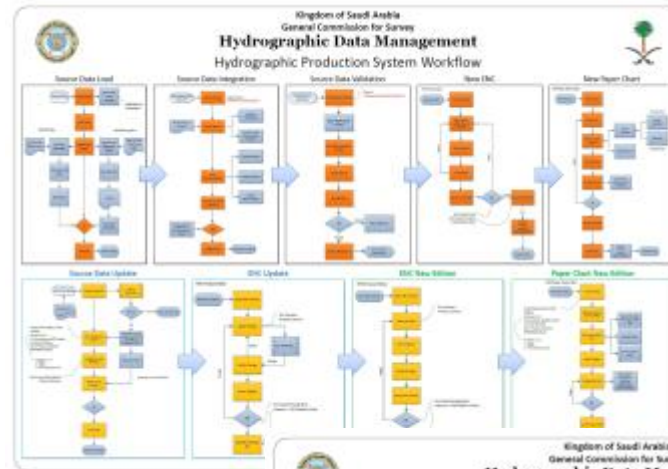
- Hardware and Software Installations in Coordination with GCS IT Team
 - ✓ Virtual servers
 - ✓ Physical servers
 - ✓ Workstations
 - ✓ Other hardware
 - ✓ Software
- Foundation Training Sessions
- Production Training Sessions
- Customization and Fine Tuning of Core Systems
- First Chart Production Task

- Development of Standard Operating Procedures for Core BS and HPS Systems

- ✓ 10 CARIS BDB SOPs
- ✓ 15 CARIS HPD SOPs

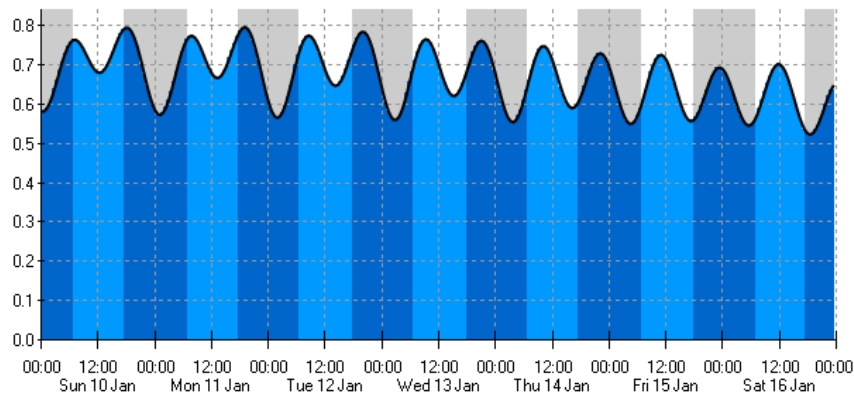
- Reports

- ✓ HDM Charting Plan Assessment Report
- ✓ HDM Data Assessment Report
- ✓ Chart Specifications
- ✓ Naming Conventions
- ✓ Core System Customization Report
- ✓ System Acceptance Testing Report



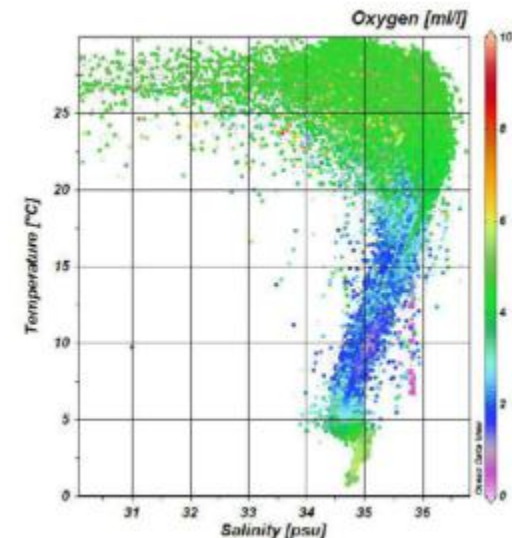
- QMS ISO 9001:2015 mandatory documents
 - ✓ Quality manual
 - ✓ Quality policy
 - ✓ Quality objectives
 - ✓ Procedure for control of documents & records
 - ✓ Procedure for control of non-conformities
 - ✓ Corrective and preventive action procedures
 - ✓ Internal audit procedure
- WMS development and deployment
- QMS and WMS introductory training

- Tidal data processing
- Oceanographic data analysis and visualization



| Sun 10 Jan | | | | Mon 11 Jan | | | | Tue 12 Jan | | | |
|------------|-------|-------|-------|------------|-------|-------|-------|------------|-------|-------|-------|
| LW | HW | LW | HW | LW | HW | LW | HW | LW | HW | LW | HW |
| 00:17 | 07:05 | 12:18 | 18:04 | 01:03 | 07:46 | 13:13 | 19:00 | 01:53 | 08:31 | 14:10 | 19:59 |
| 0.6 m | 0.8 m | 0.7 m | 0.8 m | 0.6 m | 0.8 m | 0.7 m | 0.8 m | 0.6 m | 0.8 m | 0.6 m | 0.8 m |

| Wed 13 Jan | | | | Thu 14 Jan | | | | Fri 15 Jan | | | |
|------------|-------|-------|-------|------------|-------|-------|-------|------------|-------|-------|-------|
| LW | HW | LW | HW | LW | HW | LW | HW | LW | HW | LW | HW |
| 02:44 | 09:17 | 15:10 | 21:00 | 03:38 | 10:06 | 16:13 | 22:07 | 04:33 | 10:56 | 17:18 | 23:18 |
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HDM project is poised to be a benchmark tool for Hydrographic & Oceanographic Data collection, production and dissemination at GCS.



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THANK YOU !