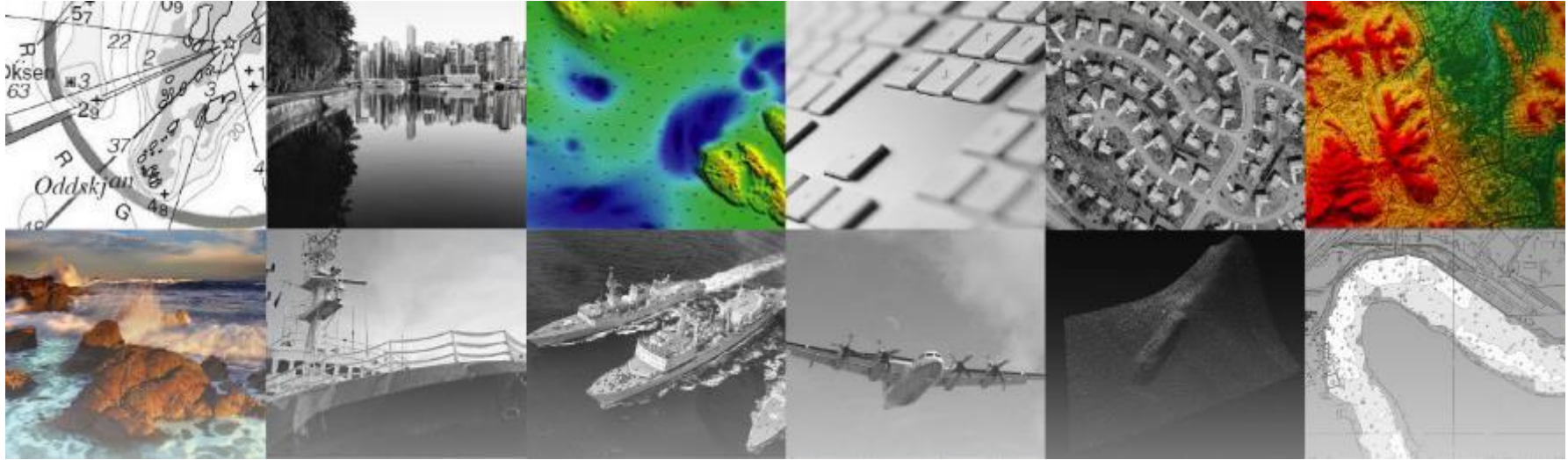




INTERNATIONAL HYDROGRAPHIC ORGANIZATION
MESO AMERICAN & CARIBBEAN SEA HYDROGRAPHIC COMMISSION



Hydrographic Data Management Workflow Management System

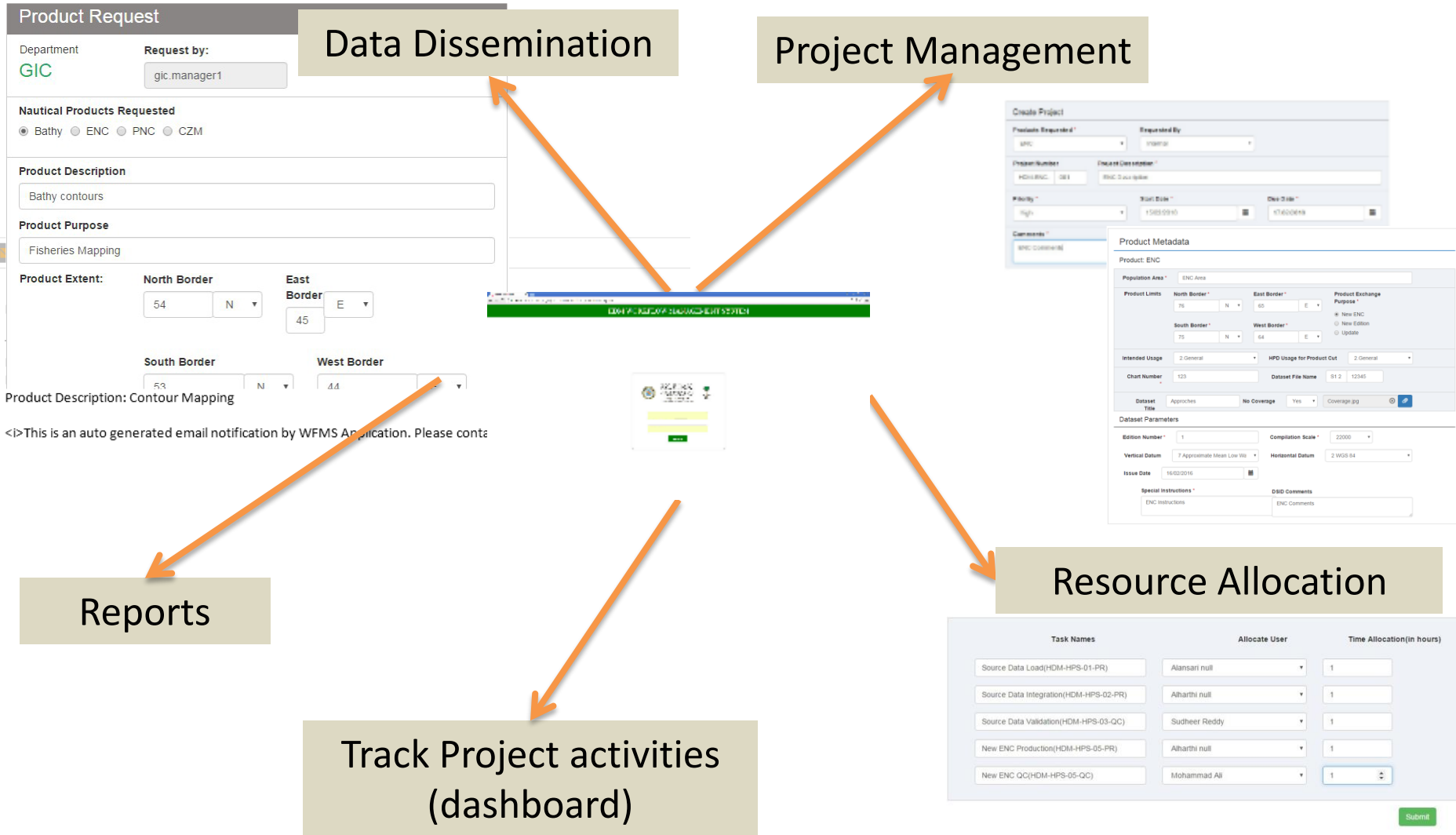
MACHC18 – Varadero, Cuba

- Understand the purpose of Workflow System
- Understand the Workflow Automation
- Understand Project concepts and operational
- Understand challenges/advantages

INTRODUCTION TO WORKFLOW SYSTEM

- The Workflow Management System will support for running HDM production workflows and manage teams to engage in
 - Production
 - Tracking
 - Monitor work progress
 - Collaborate for data exchange

Workflow Management – Components



- Create standardized business process
- Production line for multiple **Products**
- Sequencing **Tasks** and **Processes**
- Create **Projects** and **Manage**
- Assign Tasks to appropriate **Personnel** and **Manage**
- Communicate about important project events **Automatically**
- In-built Quality Control mechanism
- Collaboration between Hydro & GIC

- Store Project information in a **Single Repository**
- Track work progress with
 - Reports
 - Historical project information
- Structure of the organization integrated within the Workflow System
 - Users
 - Groups
 - Roles
- Grant and track access to the system
 - Log actions
 - Control application functionality
 - Production of statistical information

- **Advantages**

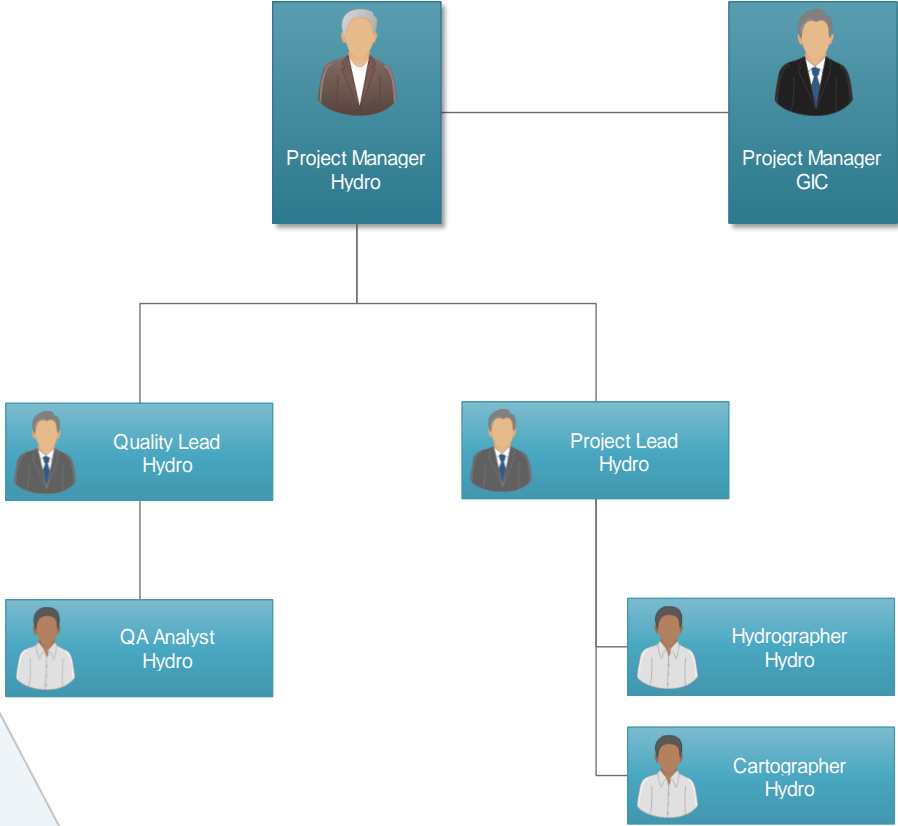
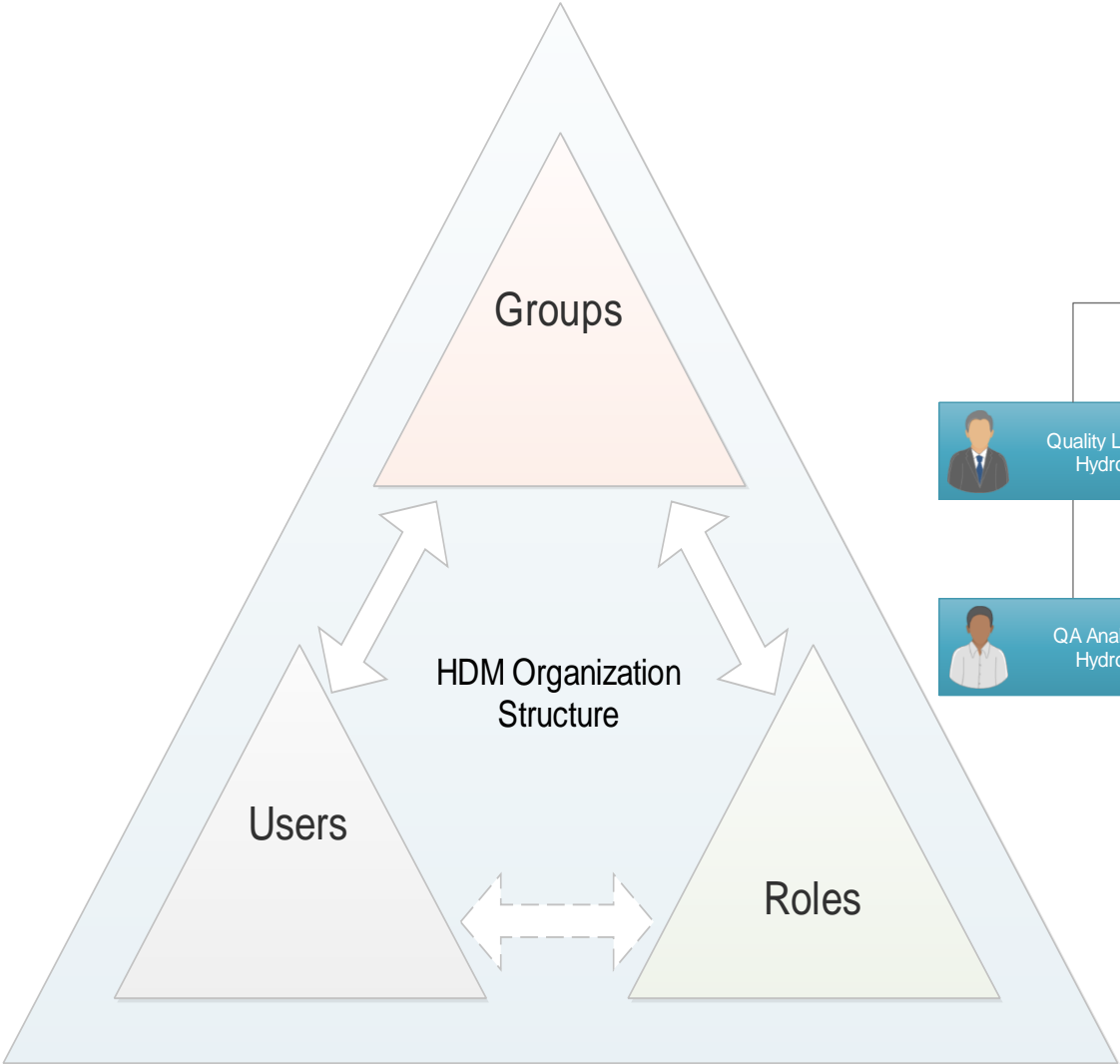
- Automated workflow and rules
- Systematic approach to run product production with effective and efficient process
- Manage Task allocation at one step
- Building Project/Product Metadata
- Inbuilt quality cycle
- Tight collaboration between teams
- Measure and analyze the production progress
- Faster adoption of best practices
- Nautical Publications efficient production and management

- **Challenges**

- Adoptability
- Accountability
- Consistency of data inputs
 - Naming convention
 - Metadata

WORKFLOW MANAGER - ORGANIZATION

HDM Organization Model



- **Project Management**

- **Project Manager** – Initiate project, monitor progress, control process and Sign-off the project
- **Project Lead** – Prepare datapack, populate metadata, allocate users, monitor progress

- **Production**

- **Cartographers & Hydrographers** – Plan activities, Perform Tasks, update task progress, log comments

- **Quality Control**

- **QA Lead/QA Analyst** – Plan activities, perform tasks, update task progress, accept/reject results

- **Data Dissemination**

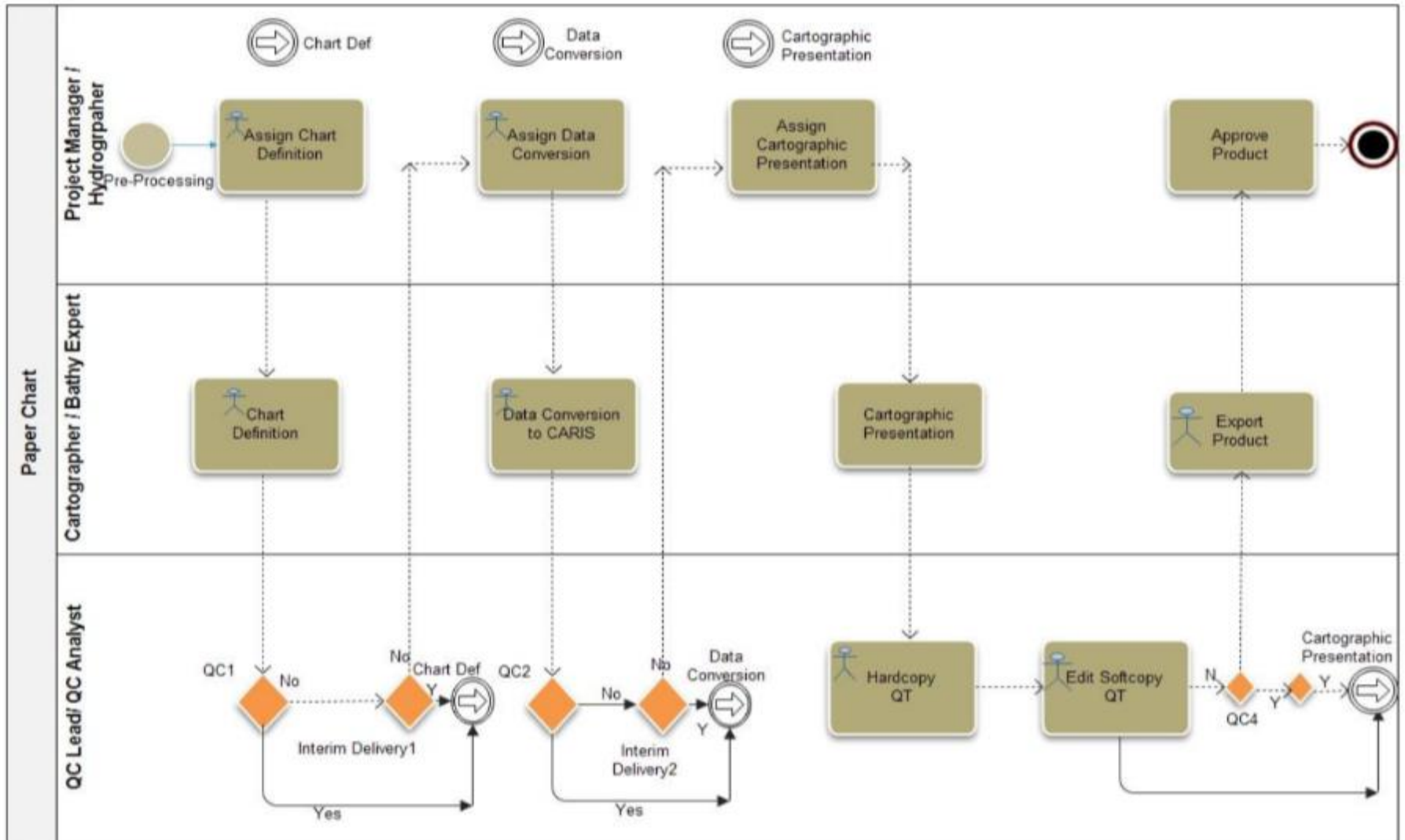
- **GIC Manager** – Request product, monitor progress, access HDM products for dissemination

HDM – Roles





Process	Task	department	Role	Username	System Privileges
Hydrography	Project Initiation	Production	Project Manager	p.manager	Administrator
Hydrography	Metadata population	Production	Production lead	pd.lead	User
Hydrography	Source data load	Production	Cartographer	pd.user	User
Hydrography	Source data integration	Production	Cartographer	pd.user	User
Hydrography	New ENC	Production	Cartographer	pd.user2	User
Hydrography	Source Data Validation	Quality	Quality Analyst	qa.user	User
Hydrography	New ENC QC	Quality	Quality Lead	qa.lead	User
Hydrography	Project Closure	Production	Project Manager	p.manager	Administrator
Data Distribution	Initiate process	Production	Data Manager	dd.manager	User
Hydrography	Bathy	Production	Hydrographer	Pd.user3	User

Sample Workflow for Paper Chart Production



Create Project

Products Requested *	Requested By	
ENC ▼	Internal ▼	
Project Number *	Project Description *	
HDM-ENC- 123	ENC production	
Priority *	Start Date *	Due Date *
High ▼	23/02/2016 	05/03/2016 
Comments *		
Testing for ENC production		

WfMS screenshots – Project Metadata



Product: ENC

Project Number: HDM-ENC-S150113

Population Area: Port

Product Limits

North Border	22	N	East Border	23	E
South Border	21	N	West Border	22	E

Product Exchange Purpose

New ENC
 New Edition
 Update

Intended Usage: 5. Harbour
HPD Usage: 5. Harbour

Chart Number: SA113 Dataset File Name: S1 5 R0113

Edition Number: 1 Update Number: 0

Dataset Title: S150113 No Coverage: No

Dataset Parameters

Sounding Datum	14 Approximate Mea	Compilation Scale	12000
Vertical Datum	10 Approximate Low	Horizontal Datum	2 WGS 84

Special Instructions: ENC

DSID Comments: This sample dataset produced by GCS

Source Data exists


WfMS screenshots – Data Request



Product Request

Department

Request by

Delivery Due Date * 

Hydro

Tidal Data

Tidal Stream
 Tidal Levels
 Saudi Tide Tables
 MDB Data Processing


Tide Gauge Station *

Referred Standard Port *

Chart Number *

Specific Location *

Request Attachments *



Marine Sciences Department

Project Number * Project Description *

Requested Purpose *

Delivery Due Date *

Process : Tide Data Analysis

Tide Gauge Stations *

- RS Jazan
- RS Al Qunfudah
- RS Jeddah
- RS Yanbu
- RS Al Wajh
- RS Duba
- RS Magna
- AG Ras Abuqamis
- AG Al Oqair
- AG Ras Tanura
- AG Mardouma
- AG Al Khafj
- NTGN1
- NTGN2

Location

Data Parameters *

Reference System

Chart Datum *

Geoid *

Ellipsoid *

Data

Duration From *

Data Interval *

Sensor Type *

Attachments

Product Request

Department Request by: Delivery Due Date * Select Department *

Tidal Data

- Tidal Stream
- Tidal Levels
- Saudi Tide Tables
- MDB Data Processing

Data range

From * To *

Tide Gauge Stations *

- RS Jazan
- RS Al Qunfudah
- RS Jeddah
- RS Yanbu
- RS Al Wajh
- RS Duba
- RS Magna
- AG Ras Abuqamis
- AG Al Oqair
- AG Ras Tanura

Specific Location *

Referred Standard Port *

Requested Parameters *

Comments *

Request Attachments

WfMS screenshots – Task allocation IIC TECHNOLOGIES

Task Names	Allocate User	Time Allocation(in hours)
Source Data Load(HDM-HPS-01-PR)	Varaprasad Ponduru	6
Source Data Integration(HDM-HPS-02-PR)	Giri Annamaneni	6
Source Data Validation(HDM-HPS-03-QC)	Sudheer Reddy	3
New ENC Production(HDM-HPS-05-PR)	Varaprasad Ponduru	7
New ENC QC(HDM-HPS-05-QC)	Sudheer Reddy	3

- Based on product type, system will pick predefined tasks from workflow
- Users are displayed based on task type
 - i.e. production/QC
- Allocate estimated time for task completion and tracking progress

Allocate User *

Select an option

- Abdulrahman Mohammad Mohammad Al-Ansari
- Abdullah Raja Muneer Al-Harathi
- Abdulaziz Hofan Marai Al-Qarni
- Abdulaziz Awad Saeed Al-Qahtani
- Abdullah Marei Abdullah Al-Qahtani
- Abdullah Saud Ayad AL-Otaibi
- Fahad Saud Zaben Al-Otaibi
- Ghazi Hussain Ali AL-Qahtani
- Giridhar Rao Annamaneni
- Jehan Samar Gui Shah
- Khaled Saad Faleh Al-Mutairi
- Khalid Mohammed Ghorman AL-Shehri
- Mohammed Ali Mohammed Al-Shehri
- Mohannad Fahad Dhaam Al-Harbi
- Mohammed Murdhi Mubarak Al-Bathan
- Omar Abdullah Mohammed AL-Ghaihab
- Turki Nasser Humaidi Al-Otaibi
- Turki Mohammad Salem Hussen
- Venkata Varaprasad Ponduru

WfMS screenshots – Tasks forms



Source Data Load

Project Number : HDM-ENC-S150113

Please Provide Supported Attachment * HDM-HPS-F01 Source Data Load

Percentage 100

Pause

Source Data Integration

Project Number HDM-ENC-S150113

Please Provide Supported Document * HDM-HPS-F02 Source Data

Percentage 100

Pause Resume

Source Data Validation

Project Number HDM-ENC-S150113

HDM-HPS-F01 Source Data Load Checklist V1R1.xlsx
HDM-HPS-F02 Source Data Integration Checklist V1R1.xlsx

Choose any one option

Accepted
 Not Accepted

Please Provide Supported Document * HDM-HPS-F01 Source Data Load

Please Provide Supported Document * HDM-HPS-F02 Source Data Integ

Are you sure you want to continue? yes no

Thanks for Accepting..

Percentage 100

Pause Resume Finish

- Based on task, task form will displayed
- User can log work breaks and task progress (0-100%)
- Track Quality results
- Store task check lists in database

WfMS screenshots – Project closure IIC TECHNOLOGIES

Project Closure

Project Number HDM-ENC-S150113	Product Name S1 5 R0113
Start Date 16/10/2016	Due Date 26/10/2016
Issue Date 23/10/2016	
Product Folder Path * V:\Hydrography\DMC\HDM\Products for Release\SA 135\ENC_Edn01	
<input checked="" type="checkbox"/> GIC Email Notification	

Task Names	User Names	Status
Source Data Load	v.venkata	Completed
Source Data Integration	v.venkata	Completed
Source Data Validation	s.gunthaka	Completed
New ENC Production	v.venkata	Completed
New ENC QC	s.gunthaka	Completed

[Sign Off](#)

- Project sign-off complete production cycle
- Sharing data
- Notifications to teams

WfMS screenshots – Project Monitoring



HDM PROJECT REPORTS

Project Summary [Export to PDF](#)

No. of projects	Opened	Completed
13	11	2

Product Summary [Export to PDF](#)

Product Name	Total Products	Closed	Opened
ENC	1	0	1
PNC	6	0	6
Bathy	6	2	4

Project Status Details [Export to PDF](#)

Project Number	Priority	Start Date	Due Date	Total Tasks	Tasks Open	Tasks Completed
HDM-BS-7-210	HIGHEST	2016-10-06	2016-10-09	11	1	10
HDM-BS-7-214	HIGHEST	2016-10-06	2016-10-07	11	0	11
HDM-BS-7-211	NORMAL	2016-10-08	2016-10-30	11	1	10
HDM-BS-7-212	HIGHEST	2016-10-08	2016-10-09	11	0	11

Project Status Details : ENC
 Project Status Details : PNC
 Project Status Details : BS

[Close](#)

WfMS screenshots – Reports & Dashboards


HDM PROJECT REPORTS

- Project Summary
- Product Summary
- Project Status Details
- Project Status Details : ENC
- Project Status Details : PNC
- Project Status Details : BS

Close

- Reports


- Report outputs - PDF



Hydrographic Data Management (HDM)
Kingdom of Saudi Arabia
General Commission of Survey

Product Summary and Progress
User : g.palasham
Date : Sunday 19 October 2016


No. of Projects	No. of Projects Open	No. of Projects
10	11	2



Hydrographic Data Management (HDM) Project
Kingdom of Saudi Arabia
General Commission of Survey

Product Summary and Progress
User : g.palasham
Date : Sunday 19 October 2016

Task/Phase	Priority of Projects	No. of Open	No. of Done
ENC	1	0	1
PNC	0	0	0
BS	0	2	4



Hydrographic Data Management (HDM) Project
Kingdom of Saudi Arabia
General Commission of Survey

Project Status Details
User : g.palasham
Date : Sunday 19 October 2016

Project No.	Priority	Start Date	Due Date	Task Type	Task Status	Task Assignment
HDM-BS-2-2	HIGHEST	2016/10/19 08:00:00	2016/10/19 08:00:00	11	1	10
HDM-BS-2-4	HIGHEST	2016/10/19 08:00:00	2016/10/19 08:00:00	11	0	10
HDM-BS-2-1	MEDIUM	2016/10/19 08:00:00	2016/10/19 08:00:00	11	1	10
HDM-BS-2-3	HIGHEST	2016/10/19 08:00:00	2016/10/19 08:00:00	11	0	10
HDM-BS-2-5	HIGHEST	2016/10/19 08:00:00	2016/10/19 08:00:00	11	1	10
HDM-PNC-2-1	MEDIUM	2016/10/19 08:00:00	2016/10/19 08:00:00	2	0	2
HDM-PNC-2-2	MEDIUM	2016/10/19 08:00:00	2016/10/19 08:00:00	2	0	2
HDM-PNC-2-3	HIGHEST	2016/10/19 08:00:00	2016/10/19 08:00:00	2	0	2
HDM-PNC-2-4	HIGHEST	2016/10/19 08:00:00	2016/10/19 08:00:00	2	0	2
HDM-PNC-2-5	HIGHEST	2016/10/19 08:00:00	2016/10/19 08:00:00	2	0	2
HDM-BS-4-1	HIGHEST	2016/10/19 08:00:00	2016/10/19 08:00:00	11	0	0

WfMS screenshots – Reports & Dashboards



DMC - Hydrographic Projects

+ Add Project View Reports Go to Portal Projects Completed Search

Project Number	Chart Number	Description	Start Date	Due Date	Status
HDM-ENC-S150113	SA113_1_0	Sample ENC	Oct 16, 2016	Oct 26, 2016	Completed

Project Information

Case ID: 1025

Project Number: HDM-ENC-S150113 Project Description: Sample ENC

Product Requested: ENC Start Date: Oct 16, 2016 Due Date: Oct 26, 2016

Priority: NORMAL Status: Completed Comments: Populate ENC

Completion Date: Oct 16, 2016

Folder Path: V:\Hydrography\DMC\HDM\Products for Release\SA 130\ENC_Edn01

Product Information ENC

Population Area: PORT

Production Status

Project Estimated Time: 50:00
Project Actual Time: 00:00

Task Name	User	Status	Start Date	End Date	Duration (HH:MM)	Estimation (HH:MM)
Source Data Load	v.verkata	Completed	Oct 16, 2016		00:00	10:00
Source Data Integration	v.verkata	Completed	Oct 16, 2016		00:00	15:00
Source Data Validation	s.gunthaka	Completed	Oct 16, 2016		00:00	10:00
New ENC Production	v.verkata	Completed	Oct 16, 2016		00:00	15:00

Documents

- HDM-HPS-F01 Source Data Load Checklist VIR1.xlsx
- HDM-HPS-F02 Source Data Integration Checklist VIR1.xlsx
- HDM-HPS-F03 Source Data Load Checklist VIR1.xlsx
- HDM-HPS-F04 Source Data Integration Checklist VIR1.xlsx
- HDM-HPS-F04 New ENC Checklist VIR1.xlsx
- HDM-HPS-F04 New ENC Checklist VIR1.xlsx

DMC - Hydrographic Projects

Project Information

Case ID: 1025

Project Number: HDM-ENC-S150113 Project Description: Sample ENC

Product Requested: ENC Start Date: Oct 16, 2016 Due Date: Oct 26, 2016

Priority: NORMAL Status: Completed Comments: Populate ENC

Completion Date: Oct 16, 2016

Folder Path: V:\Hydrography\DMC\HDM\Products for Release\SA 130\ENC_Edn01

Population Area: PORT

- Project / Product Metadata

- Standardized systematic production process
- Integrate and organize quality control
- Enhance collaboration and communication within Hydrographic Offices
- Centralized platform with end to end real time project management
- Export Metadata: reports, graphs, presentations
- Manage Nautical Publications

Thank You