

RSAHC 6 - Data usage/MSDI

Integrated Data and GIS information

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Marine Spatial Data Infrastructure WG (MSDIWG)

There is a need to move from a

“Product Centric”

to a

“Data Centric”

paradigm!

Data versus Information

An Aviation Example

2/1257 PART 1 OF 5 FLIGHT RESTRICTION WASHINGTON, DC. PURSUANT TO SPECIAL FEDERAL AVIATION REGULATION 94, ENHANCED SECURITY PROCEDURES FOR OPERATIONS AT CERTAIN AIRPORTS IN THE WASHINGTON D.C. METROPOLITAN AREA SPECIAL FLIGHT RULES AREA, THE FOLLOWING PROCEDURES ARE EFFECTIVE IMMEDIATELY UNTIL FURTHER NOTICE. EXCEPT FOR DOD, LAW ENFORCEMENT, OR AEROMEDICAL FLIGHT OPERATIONS, ALL PERSONS OPERATING AN AIRCRAFT TO OR FROM THE COLLEGE PARK AIRPORT (CGS); POTOMAC AIRFIELD (VKX); OR WASHINGTON EXECUTIVE/HYDE FIELD (W32), LOCATED WITHIN THE AIRSPACE DESIGNATED AS THE WASHINGTON D.C. METROPOLITAN SPECIAL FLIGHT RULES AREA MUST ABIDE BY THE FOLLOWING OPERATING REQUIREMENTS AND ANY ADDITIONAL PROCEDURES SPECIFIED BY THE ADMINISTRATOR AS NECESSARY TO PROVIDE FOR THE SECURITY OF AIRCRAFT OPERATIONS TO OR FROM THE AIRPORT. OPERATING REQUIREMENTS: NO PERSON MAY OPERATE AN AIRCRAFT TO OR FROM THE ABOVE INDICATED AIRPORTS UNLESS SECURITY PROCEDURES THAT MEET THE PROVISIONS OF PARAGRAPH 4 OF SFAR 94 HAVE BEEN APPROVED BY THE ADMINISTRATOR FOR OPERATIONS AT THAT AIRPORT. **END PART 1 OF 5 WIE UNTIL UFN**

2/1257 PART 2 OF 5 FLIGHT RESTRICTION WASHINGTON, DC. AIR TRAFFIC PROCEDURES: 1. ONLY AIRCRAFT BASED AT THE AIRPORT OF OPERATION IS ALLOWED TO FLY INTO AND OUT OF THAT AIRPORT. EACH PILOT SHALL COMPLY WITH THE FOLLOWING: A) FOR ALL ARRIVALS AND DEPARTURES, FILE EITHER AN IFR OR VFR FLIGHT PLAN WITH LEESBURG AUTOMATED FLIGHT SERVICE STATION (AFSS), VIA TELEPHONE AT 866-225-7410. A SEPARATE FLIGHT PLAN IS REQUIRED TO DEPART AND ARRIVE AT THESE AIRPORTS REGARDLESS OF WHETHER OR NOT THERE IS AN INTERMEDIATE STOP. B) FILING FLIGHT PLANS IN THE AIR IS NOT AUTHORIZED. C) OBTAIN AN AIR TRAFFIC CONTROL (ATC) CLEARANCE WITH DISCRETE TRANSPONDER CODE AS DESCRIBED IN DEPARTURE/ARRIVAL PROCEDURES BELOW. D) MAINTAIN TWO-WAY COMMUNICATION WITH ATC WITHIN THE CONFINES OF THE SPECIAL FLIGHT RULES AREA AND THE CLASS B AIRSPACE. E) HAVE AN OPERATIONAL MODE C TRANSPONDER. **END PART 2 OF 5 WIE UNTIL UFN**

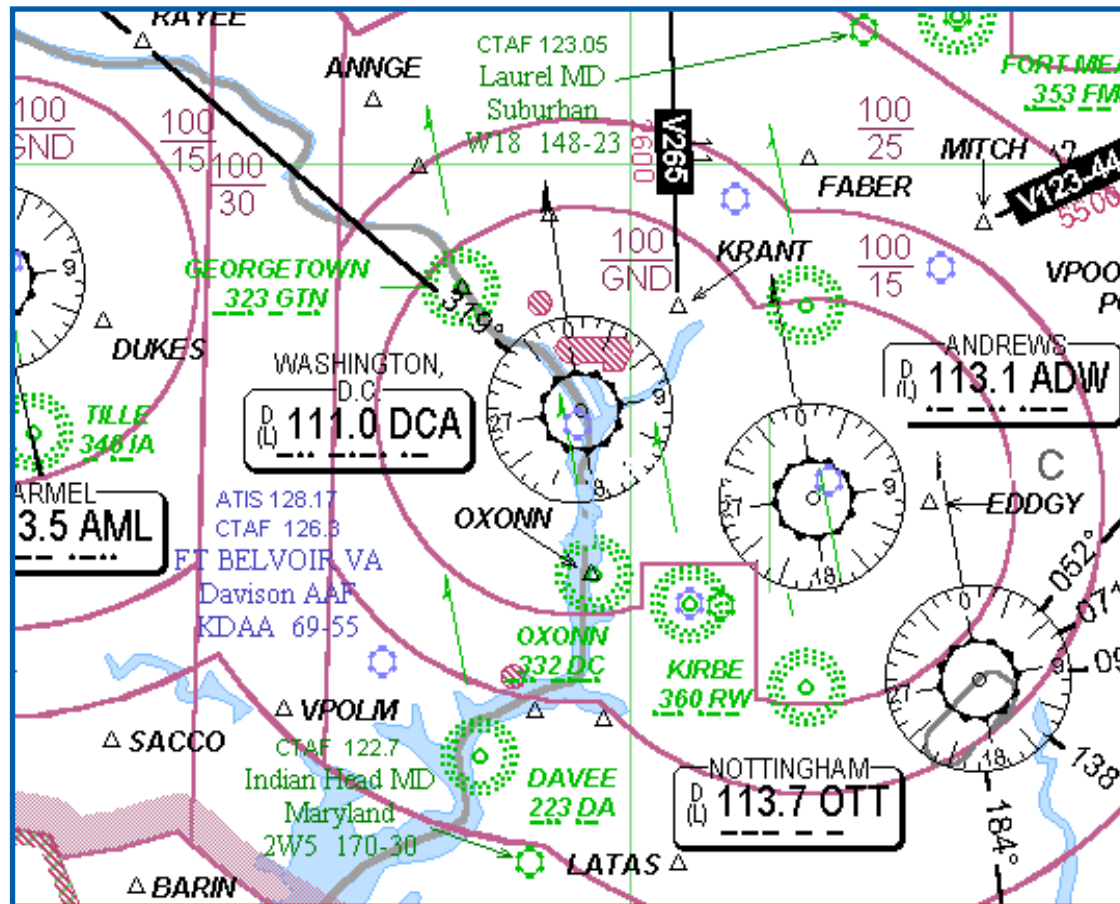
2/1257 PART 3 OF 5 FLIGHT RESTRICTION WASHINGTON, DC. FLIGHT PLAN PROCEDURES: 1. EACH PILOT SHALL CALL LEESBURG AFSS AND PRIOR TO FILING FLIGHT PLAN SHALL IDENTIFY HIM/HER-SELF AND USE THE CONFIDENTIAL PILOT IDENTIFICATION CODE ASSIGNED TO THEM. 2. LEESBURG AFSS WILL ACCEPT FLIGHT PLAN AFTER VERIFYING CODE. 3. LEESBURG AFSS WILL FORWARD PILOT'S FLIGHT PLAN TO THE UNITED STATES SECRET SERVICE. 4. PILOTS SHALL CLOSE VFR FLIGHT PLANS WITH LEESBURG AFSS ONLY AFTER THEY ARE ON THE GROUND. 5. PILOTS MAY REQUEST AND ATC MAY ACCEPT CANCELLATION OF IFR WHILE IN THE AIR. HOWEVER, PILOTS ARE REQUIRED TO REMAIN ON THEIR ASSIGNED BEACON CODE UNTIL ON THE GROUND AND REQUIRED TO CONTACT LEESBURG AFSS AFTER THEY ARE ON THE GROUND. 6. LEESBURG AFSS WILL NOTIFY THE UNITED STATES SECRET SERVICE AND APPROPRIATE ATC FACILITIES WHEN THE FLIGHT PLANS ARE CLOSED. **END PART 3 OF 5 WIE UNTIL UFN**

2/1257 PART 4 OF 5 FLIGHT RESTRICTION WASHINGTON, DC. F) DEPARTURE PROCEDURES. EACH PILOT SHALL: 1. OBTAIN AN ATC CLEARANCE FROM WASHINGTON APPROACH VIA TELEPHONE NUMBER (703) 603-7020. 2. IFR - a) DEPARTING HYDE/WASHINGTON EXECUTIVE AIRPORT AND POTOMAC AIRPORT: ATC WILL PROVIDE EASTBOUND OR SOUTHBOUND RADAR VECTORS TO OUTSIDE THE SPECIAL FLIGHT RULES AREA. AIRCRAFT WILL THEN PROCEED ON COURSE AND REMAIN CLEAR OF THE SPECIAL FLIGHT RULES AREA. b) DEPARTING COLLEGE PARK AIRPORT (CGS): ATC WILL PROVIDE EAST-BOUND OR NORTHBOUND RADAR VECTORS TO OUTSIDE THE SPECIAL FLIGHT RULES AREA. AIRCRAFT WILL THEN PROCEED ON COURSE AND REMAIN CLEAR OF THE SPECIAL FLIGHT RULES AREA. 3. VFR - a) DEPARTING HYDE/WASHINGTON EXECUTIVE AIRPORT, POTOMAC AIRPORT, AND COLLEGE PARK AIRPORT: DEPART AS ASSIGNED BY ATC, EXPECTING A HEADING DIRECTLY AWAY FROM THE SPECIAL FLIGHT RULES AREA AIRSPACE UNTIL TWO-WAY COMMUNICATION IS ESTABLISHED WITH WASHINGTON APPROACH. AIRCRAFT WILL FLY AS ASSIGNED BY ATC UNTIL CLEAR OF SPECIAL FLIGHT RULES AREA AND/OR CLASS B AIRSPACE. **END PART 4 OF 5 WIE UNTIL UFN**

2/1257 PART 5 OF 5 FLIGHT RESTRICTION WASHINGTON, DC. G) ARRIVAL PROCEDURES. EACH PILOT SHALL: 1. ESTABLISH COMMUNICATIONS WITH ATC FOR AUTHORIZATION TO ENTER THE SPECIAL FLIGHT RULES AREA. 2. VFR: a) APPROACH TO COLLEGE PARK AIRPORT: AIRCRAFT SHALL REMAIN OUTSIDE THE TFR AIRSPACE UNTIL AUTHORIZED BY AIR TRAFFIC CONTROL TO ENTER THE SPECIAL FLIGHT RULES AREA. PILOTS CAN EXPECT ROUTING TO COLLEGE PARK VIA THE VICINITY OF FREEWAY AIRPORT. b) APPROACH TO POTOMAC AND HYDE/WASHINGTON EXECUTIVE AIRPORTS: AIRCRAFT SHALL REMAIN OUTSIDE THE SPECIAL FLIGHT RULES AREA AIRSPACE UNTIL AUTHORIZED BY AIR TRAFFIC CONTROL TO ENTER THE TFR. PILOTS CAN EXPECT ROUTING TO POTOMAC AND HYDE/WASHINGTON EXECUTIVE AIRPORTS VIA THE VICINITY OF MARYLAND AIRPORT OR NOTTINGHAM VOR. 3. IFR a) IFR ARRIVALS TO COLLEGE PARK, POTOMAC, AND HYDE/WASHINGTON EXECUTIVE AIRPORTS ARE AUTHORIZED. H) THE FAA WILL EVALUATE THESE PROCEDURES AFTER 60 DAYS. I) ANY QUESTIONS ON THIS MATTER SHOULD BE DIRECTED TO TOM DAVIDSON AT (202) 2 67-7232. **END PART 5 OF 5 WIE UNTIL UFN**

GIS an Information Solution

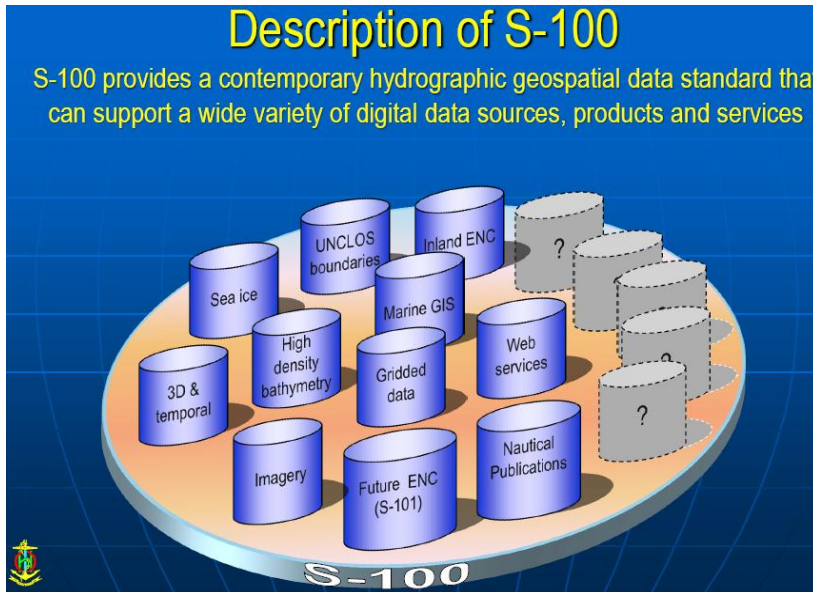
GIS as a tool to convert data into information - an Aviation Example



IHO GI Registry within Common Maritime Data Structure

Description of S-100

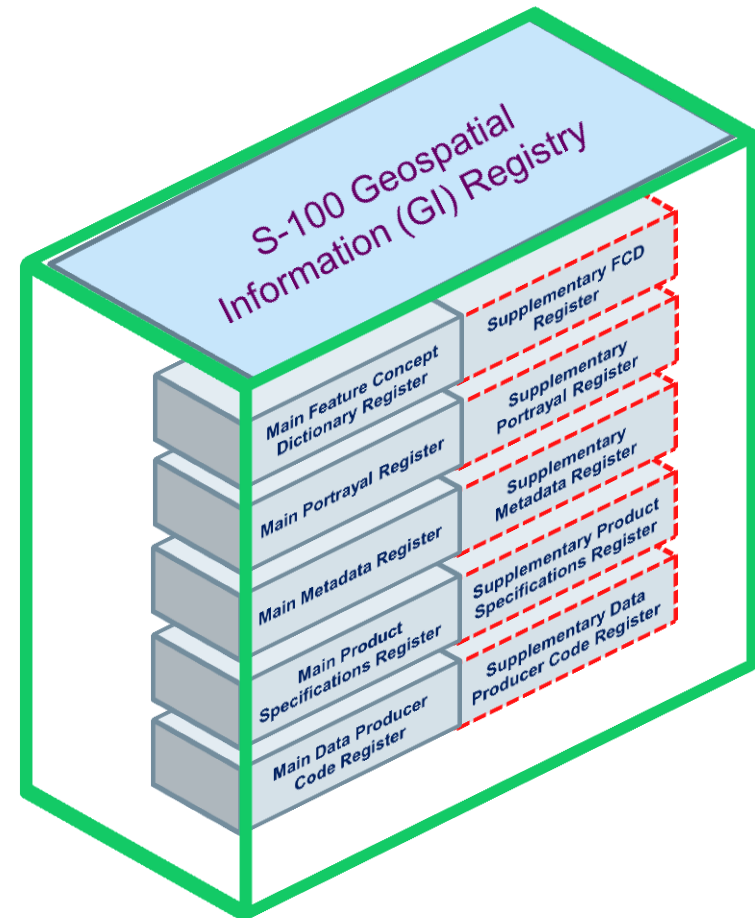
S-100 provides a contemporary hydrographic geospatial data standard that can support a wide variety of digital data sources, products and services



Gilles Bessero, Director IHB

e-Navigation Underway Conference 30 Jan 2013

**IHO GI Registry is the desired
CMDS data model by
key e-Navigation Stakeholders**



*Barrie GREENSLADE, UKHO, Chair IHO TSMAD WG
Joint IALA e-Nav / IHO Workshop, 4-6 May 2011, Taunton*

The Value of Information:

Integrated Intelligent Information to enable Competency

Pyramid of Competency

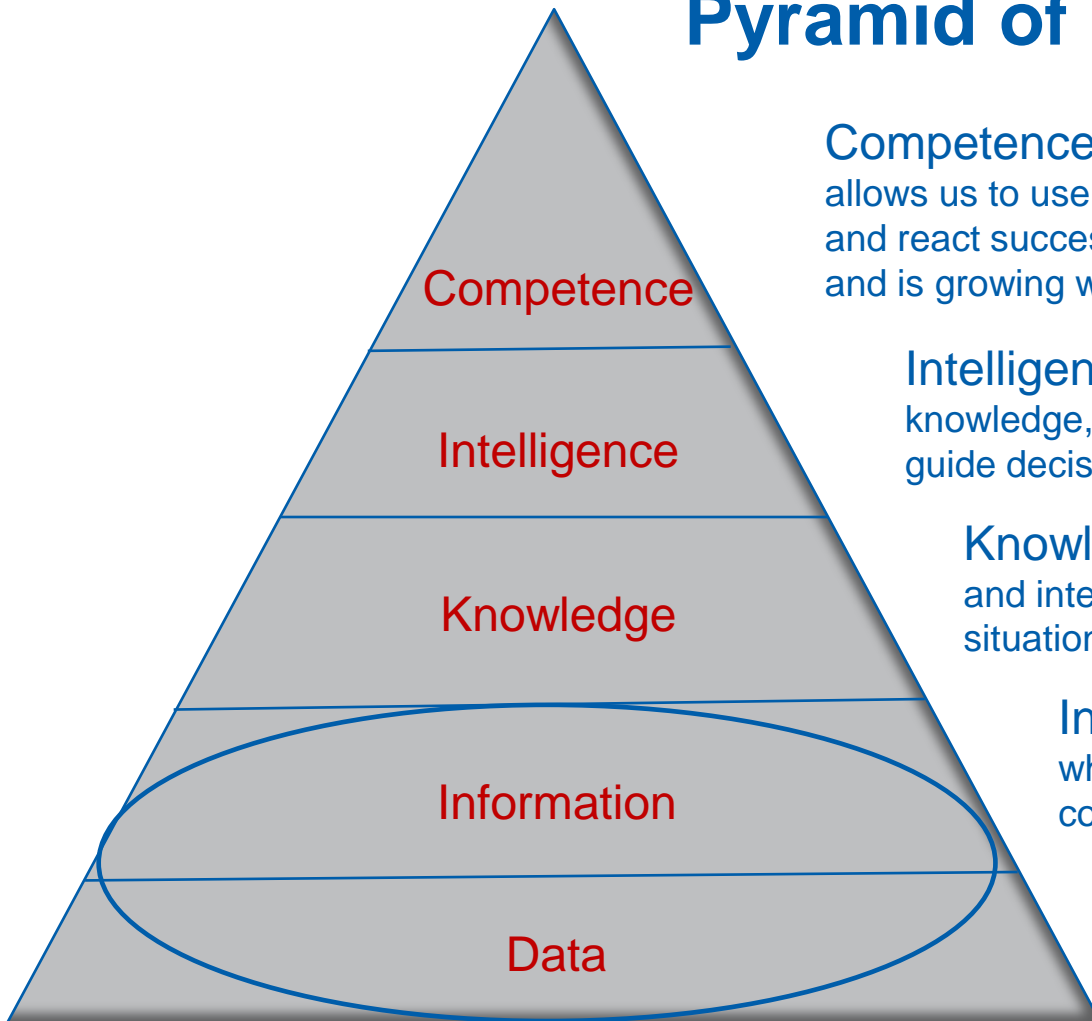
Competence — the ability to do a job properly. It allows us to use our intelligence for doing wise decisions and react successfully based on situational awareness and is growing with experience on the job to be done.

Intelligence — The full collection of past and present knowledge, which allows us to assess new situations and guide decisions

Knowledge — all what has been detected, learned and internalized and has developed in insight and situational understanding

Information — integrated and processed data, which is useful and meaningful for the data consumer

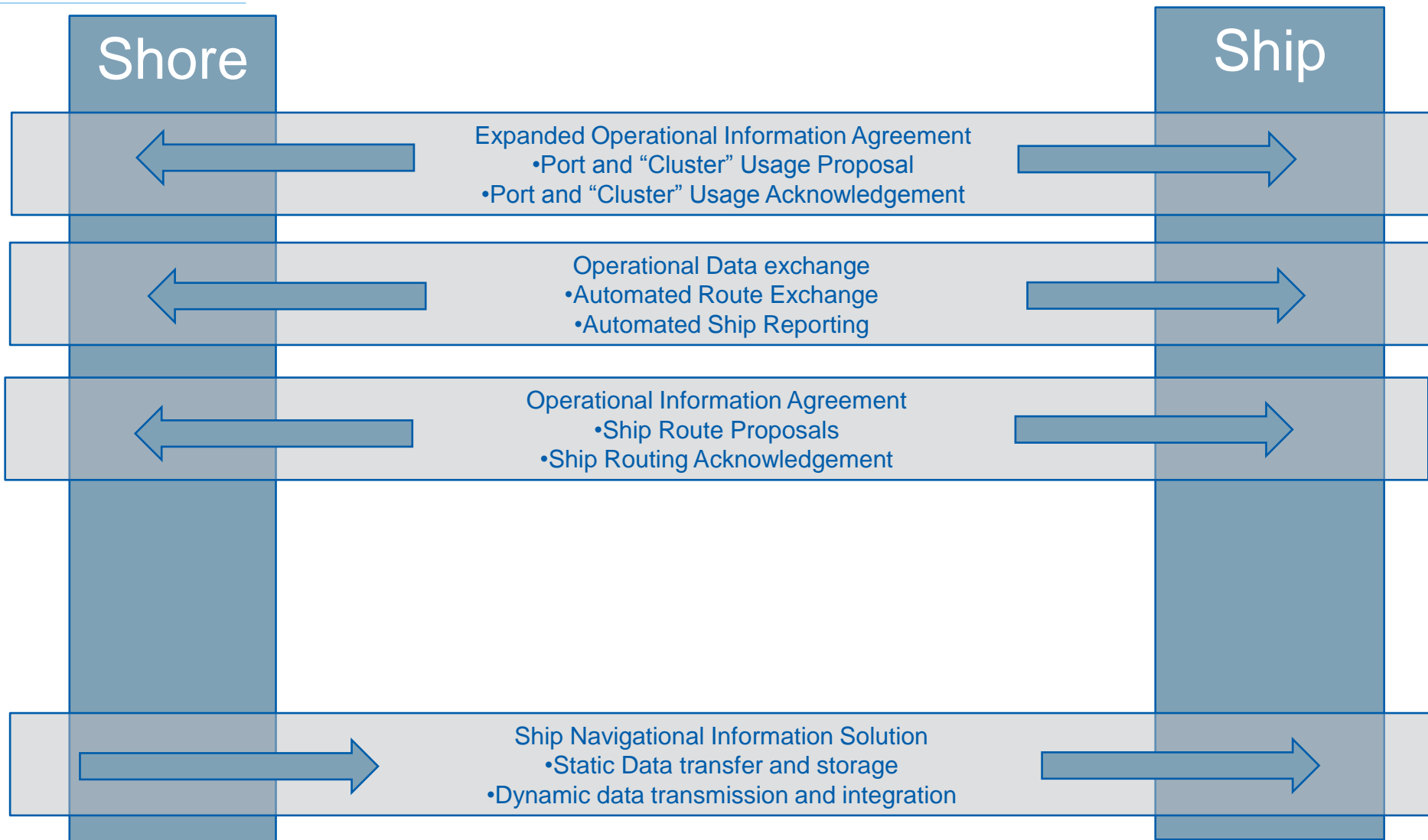
Data — collection of facts, which may be compiled, but by themselves do not have a specific meaning or usability



Michael Bergmann, e-Maritime Annual conference 2012, 22 - 23 November, Brussels

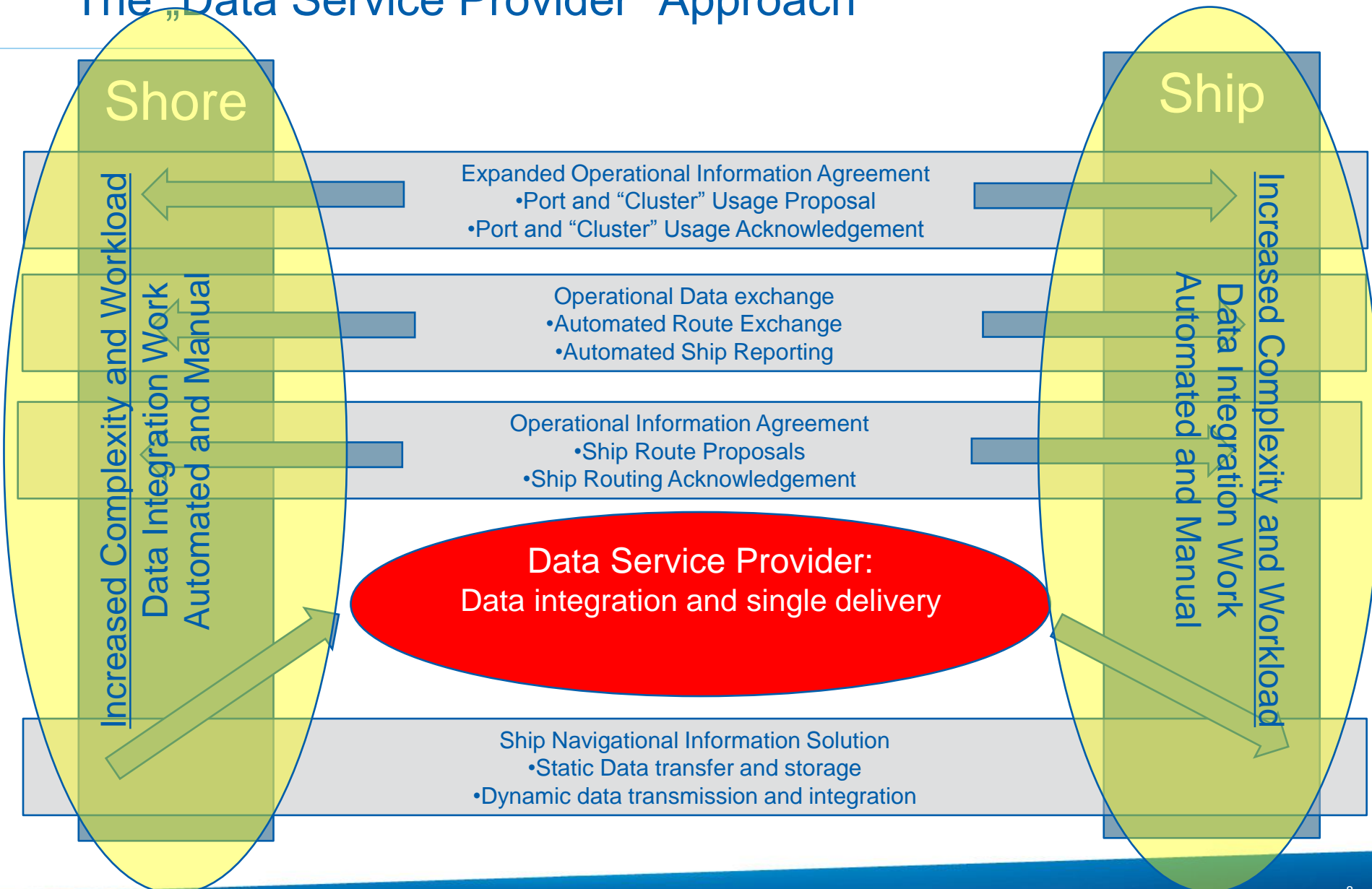
Multi Dimensional Data Integration

The „Data Service Provider“ Approach

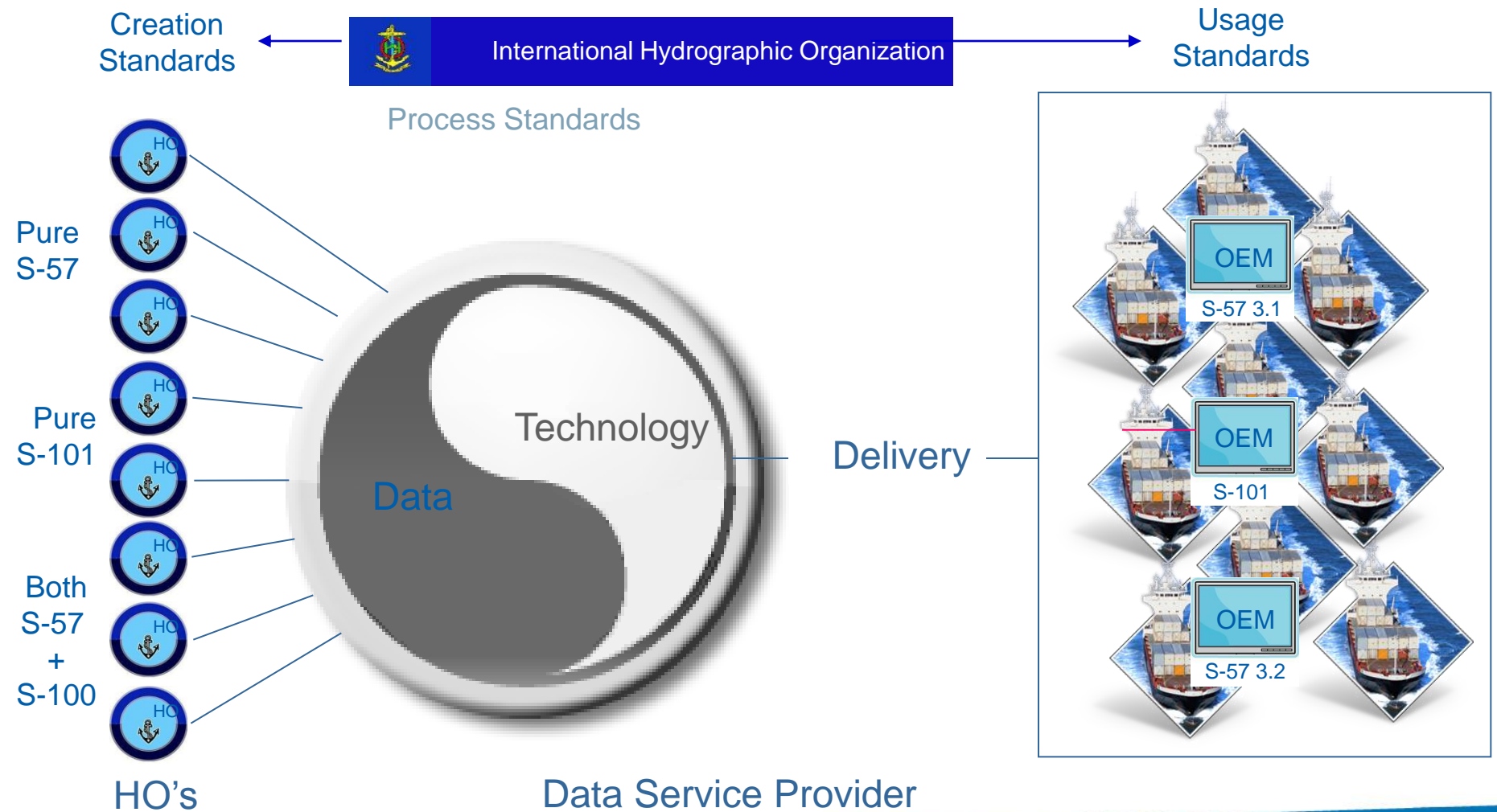


Multi Dimensional Data Integration

The “Data Service Provider” Approach



Data Service Provider in the ECDIS World: Fusion of Content and Technology



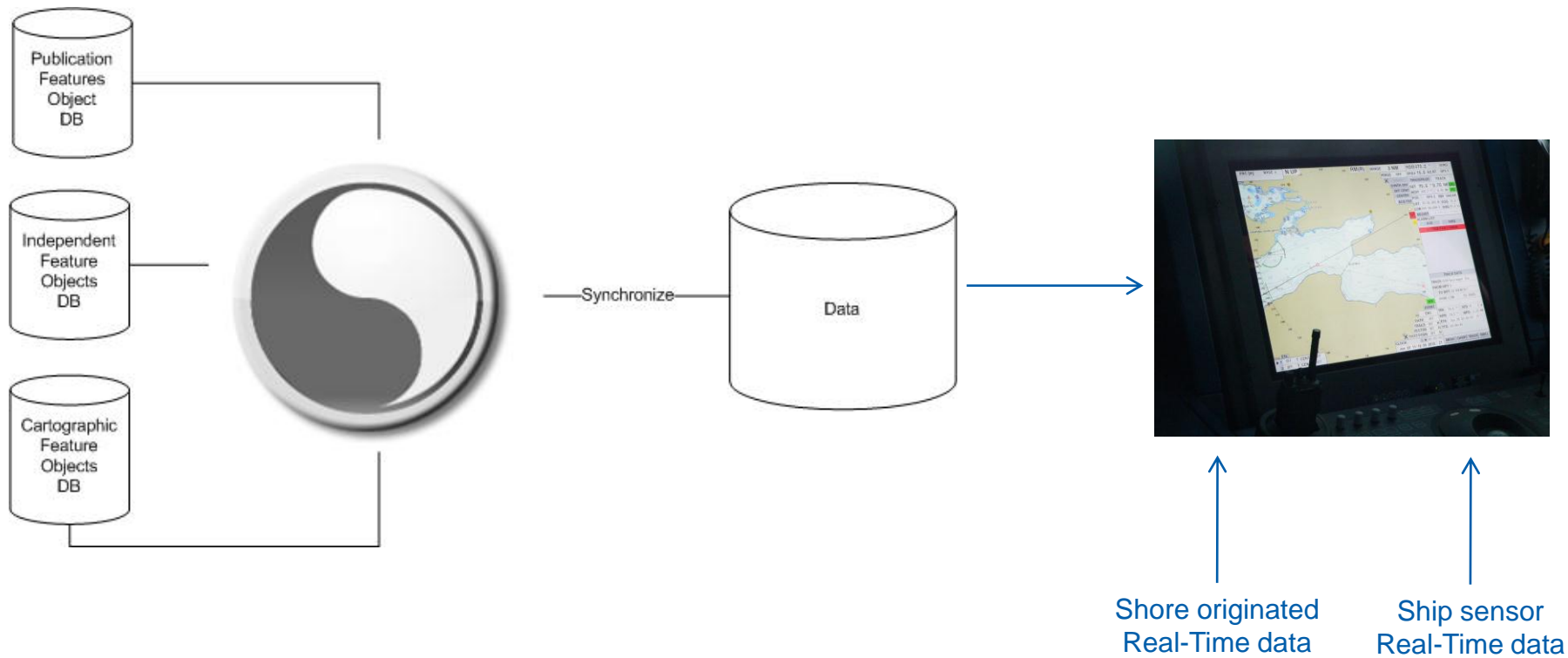
The Data-Integration in Full MSDI concept

Data Production

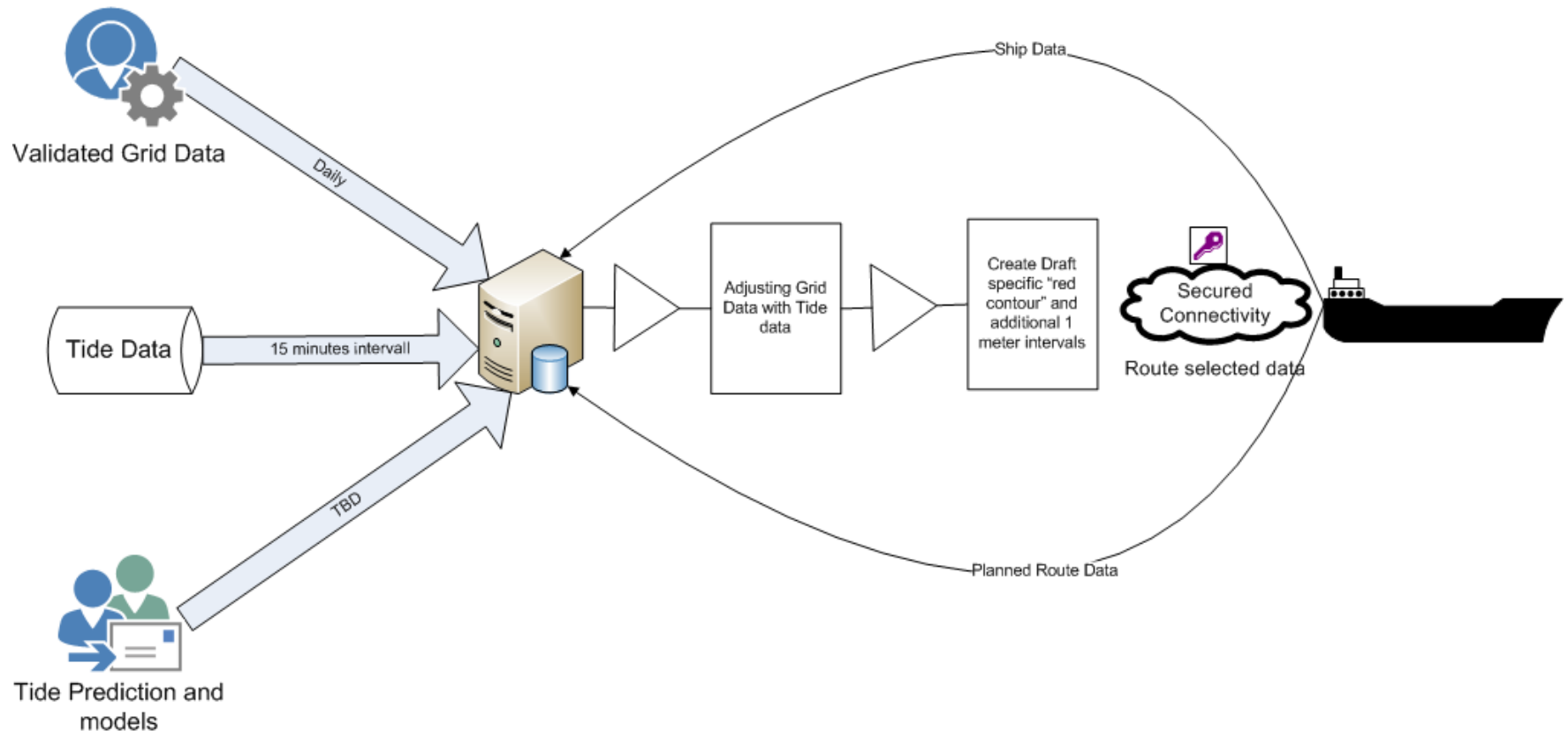
Data Integration

Data-Product Implementation

Information Visualization



Data Integration - Increased situational awareness on board



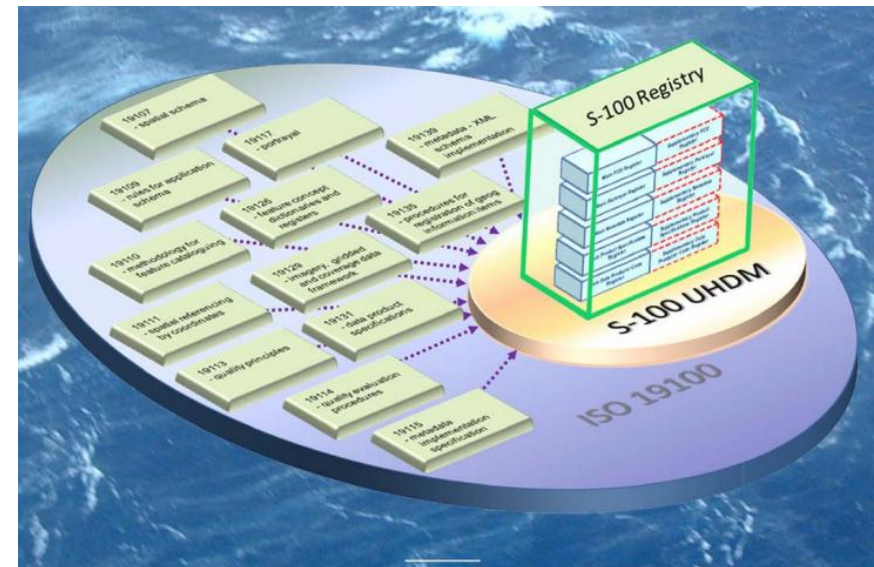


“Product Centric”

to a

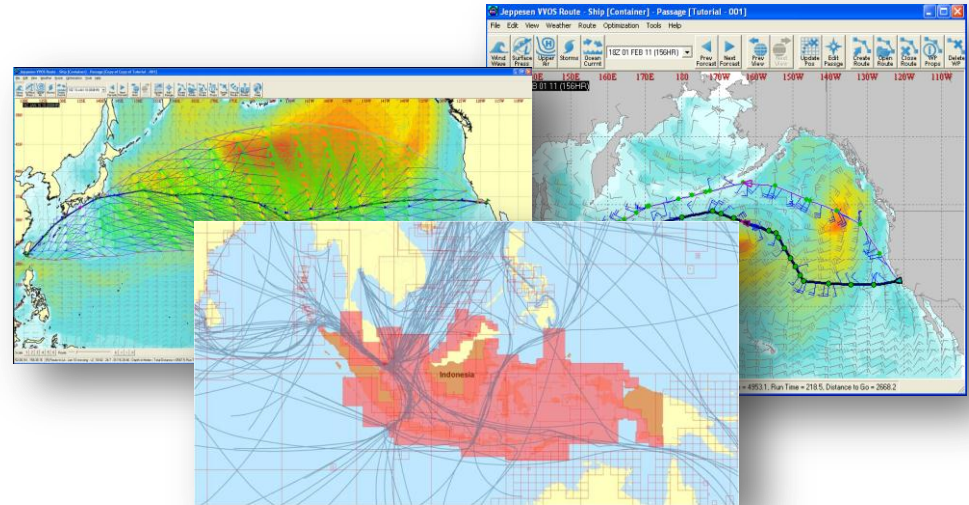
“Data Centric”

paradigm!



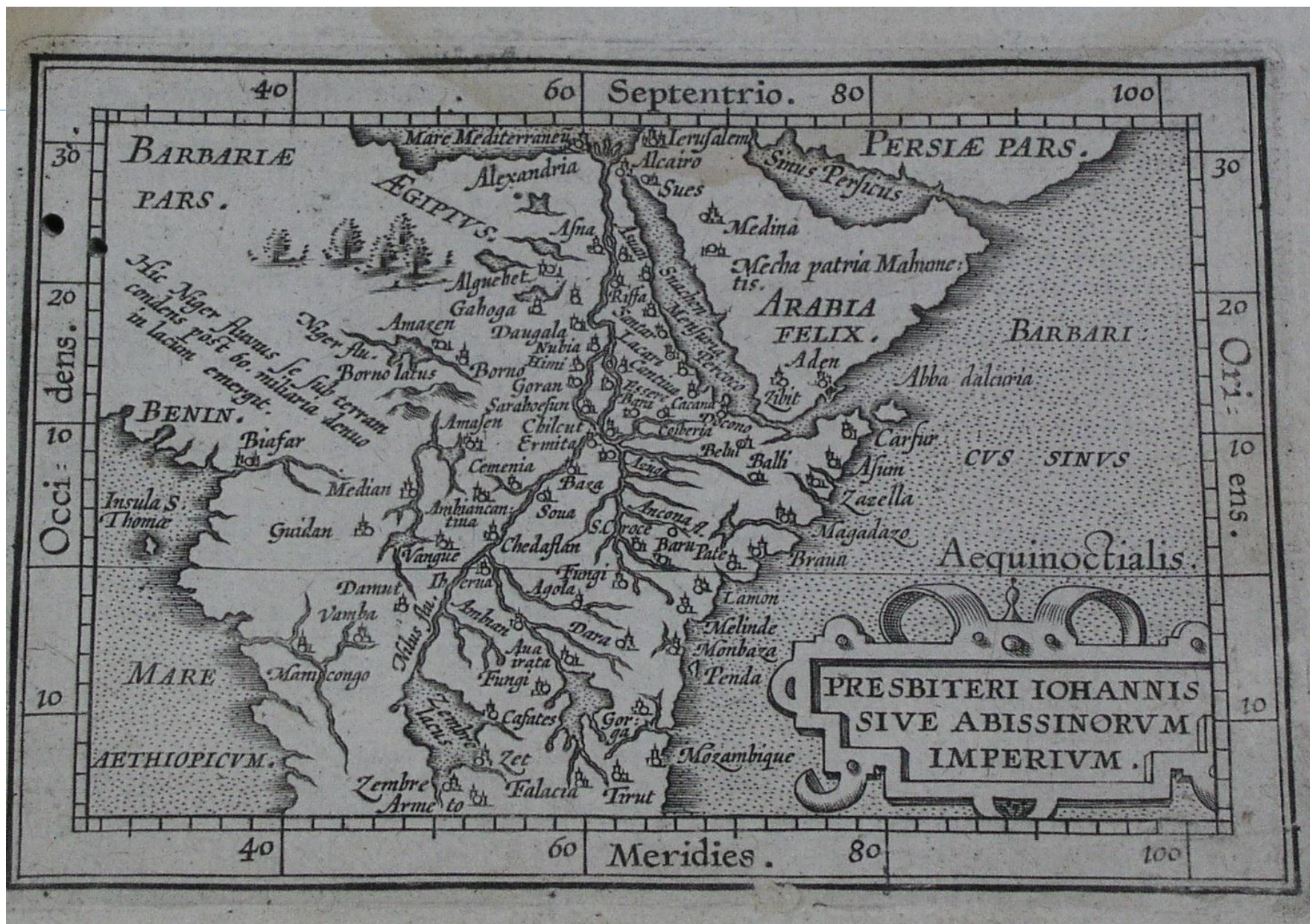
Conclusion

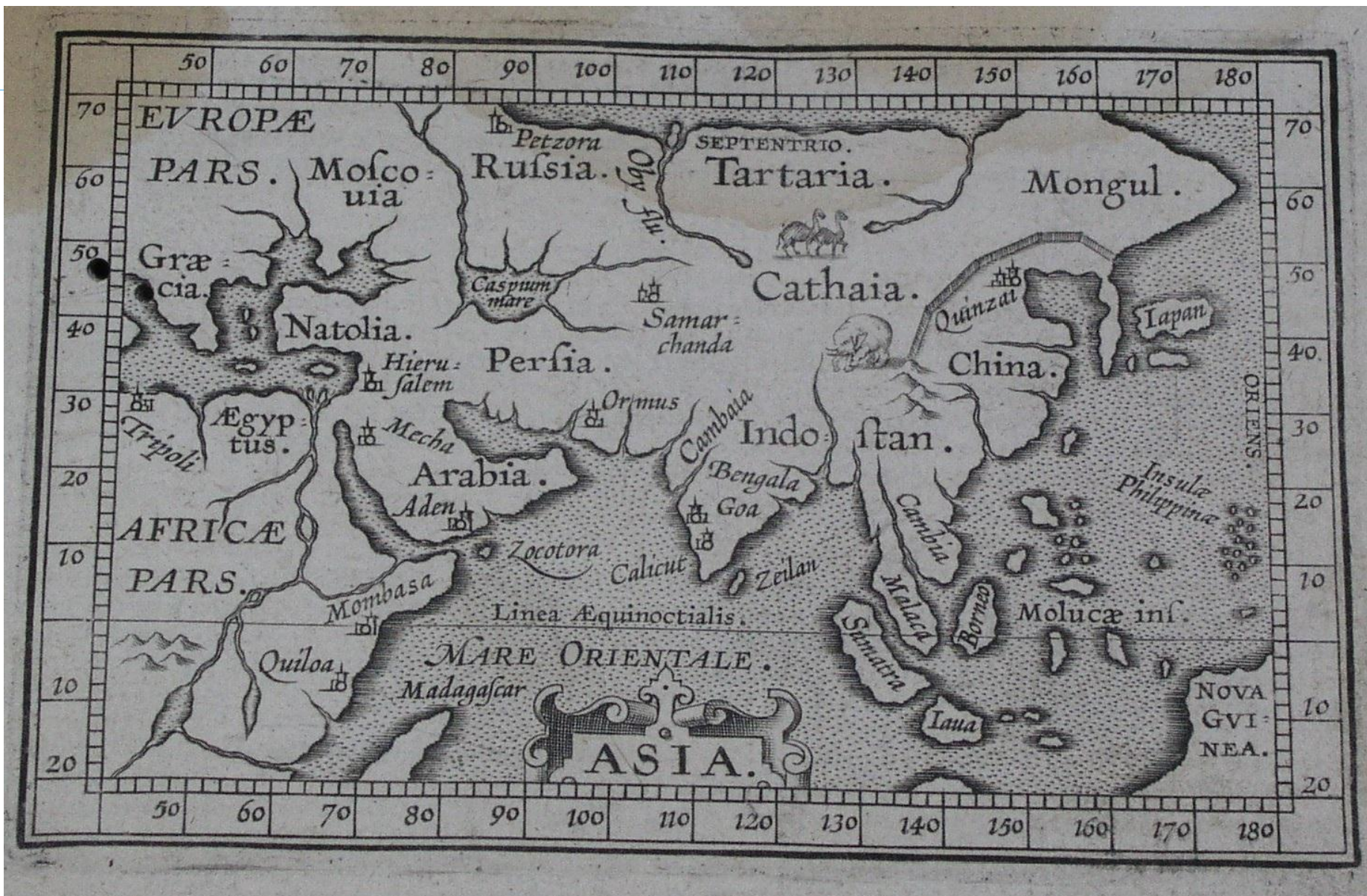
- Differentiate Data and Product
- Integrate Static and Dynamic Data
- Fully establish IHO GI Registry (S-100 concept) as HO basis for MSDI
- Integrating HO data in the larger MSDI infrastructure
- Convert Data into Information to increase Situational Awareness
- Geospatial information is not just a “new buzz word”, but the essential tool to master the information presentation in today's maritime world of growing data needs



Bonus slides for you as cartographer











THANK YOU !

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