

# ENC Production Desktop and Database Solutions

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Canada

Netherlands

United States

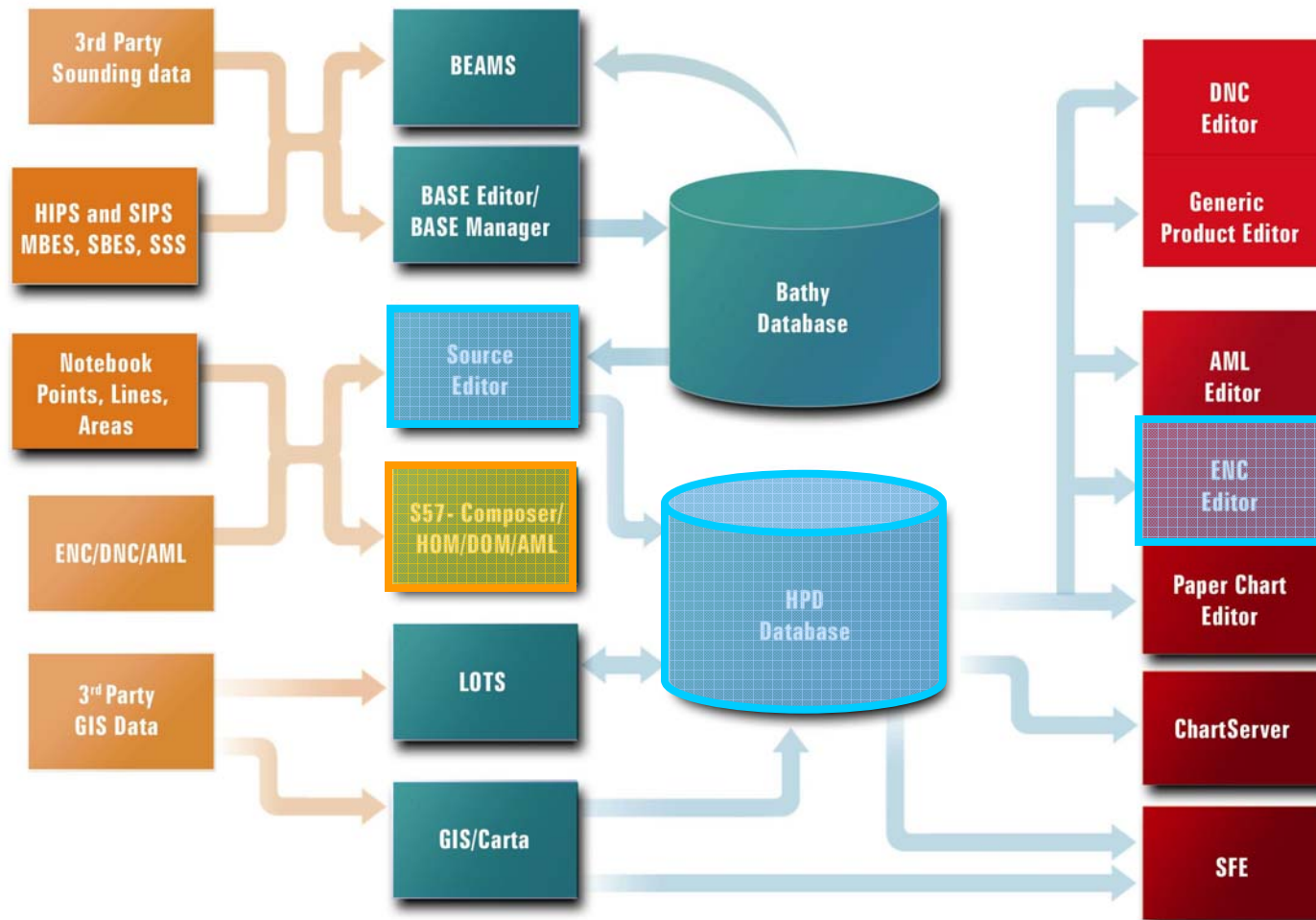
Australia

United Kingdom

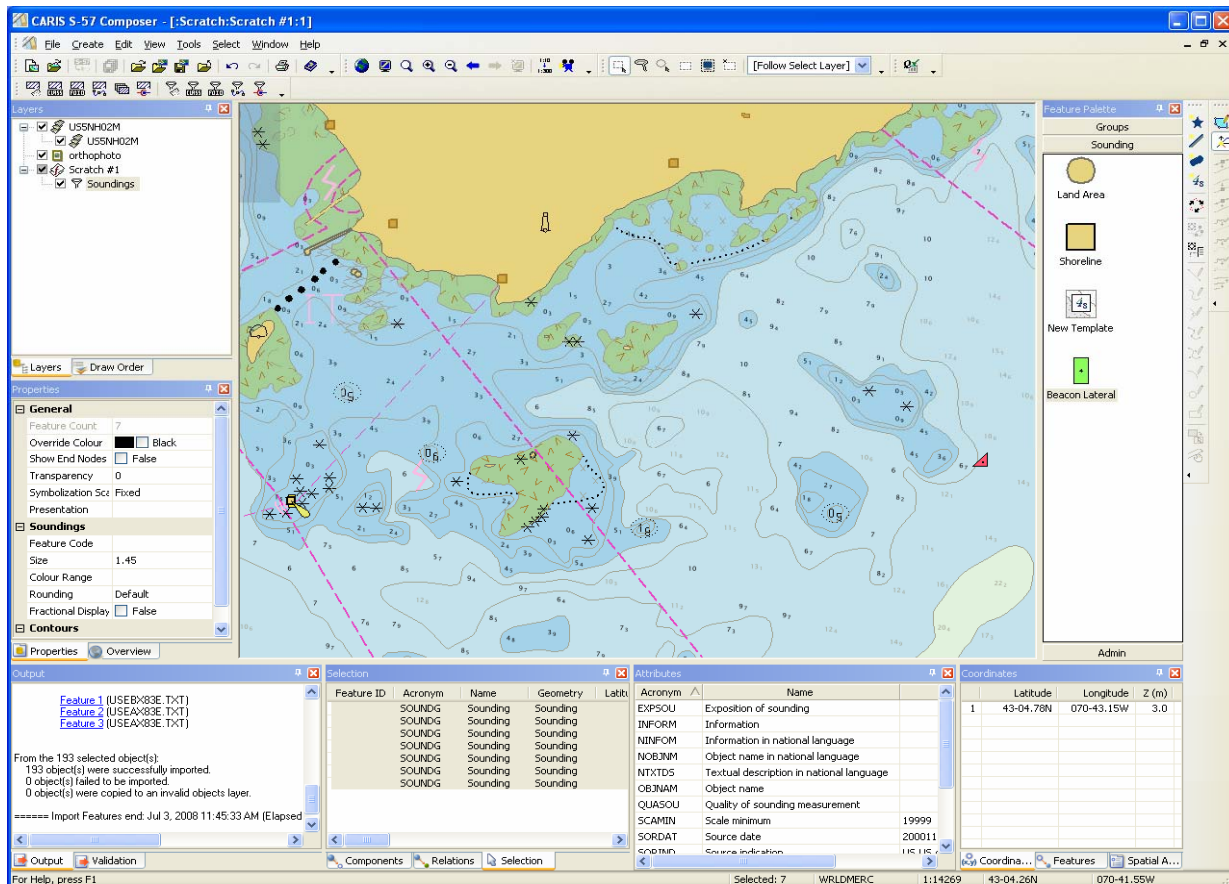
Niteroi, November 2008

**caris**

# The CARIS Software Suite and ENC Production tools



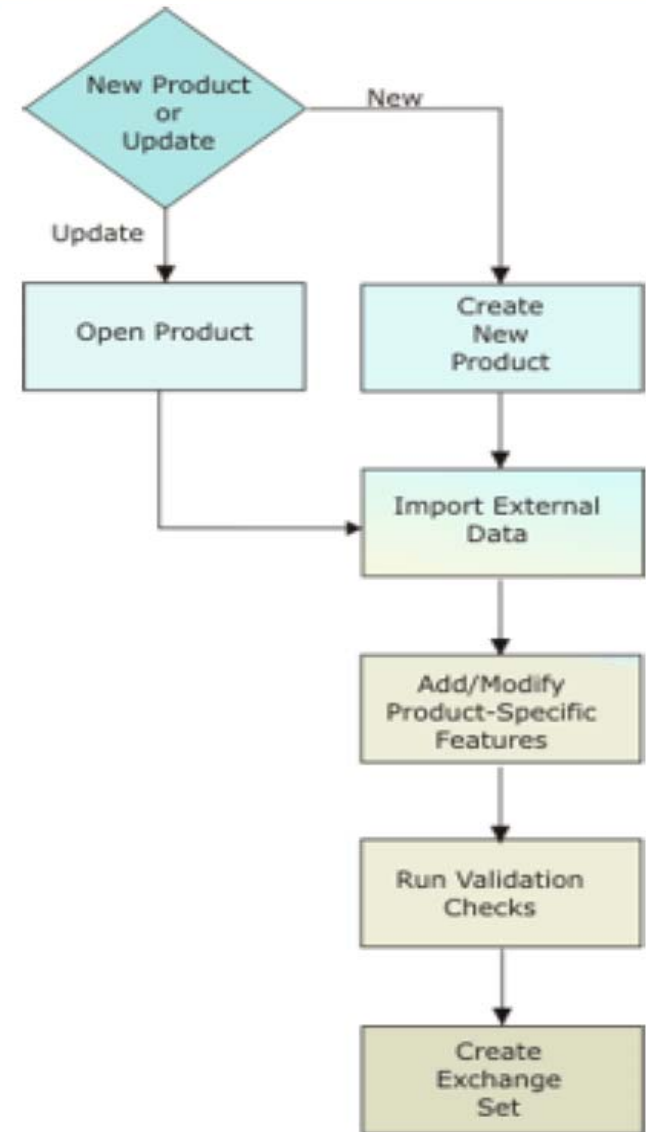
- Provides the same robust object creation and editing tools as in CARIS HPD
- Work directly on S-57 features and maintain topological relationships automatically
- View, query, add, edit, delete and validate S-57 features with a intuitive workflow



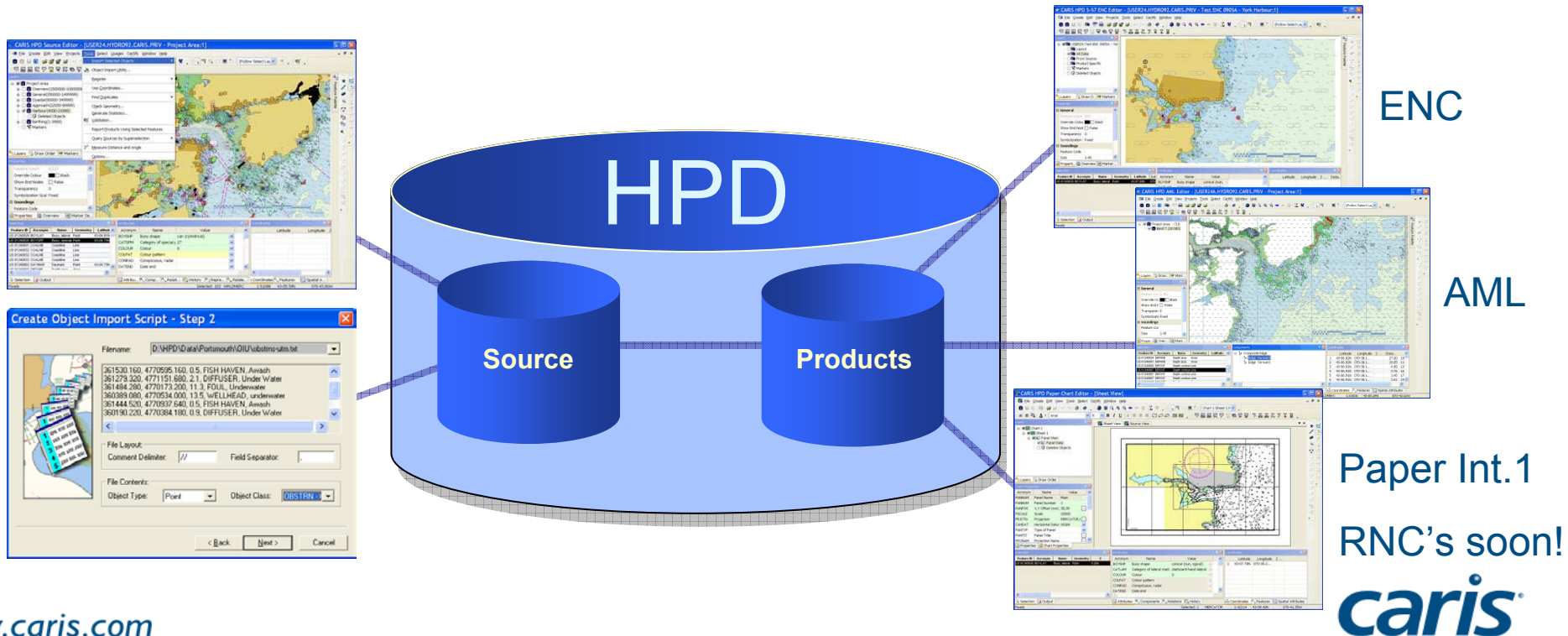
Unified approach,  
One tool for...

- ENC
- AML
- IENC
- MIO
- Bathy ENCs

1. **(a) Create New Product, or  
(b) Update Existing Product**
  - Intuitive 6 step wizard
2. **Import from a wide variety of external data sources.**
3. **Add, Modify or Re-assign product specific features**
4. **Perform S-57 & S-58 data validation checks**
5. **Export and create S-57 Exchange Set**



- HPD databases contain source and product info in one integrated database
- Focus production efforts on compiling the source data
- One database feature can be represented in multiple products
- Automatically update products after changes are made to source



## 1. Administration Tools

Install software, set up accounts, privileges

## 2. Project Manager

Create and manage "Projects"

## 3. Data Import Options

## 4. Source Editor

Add, edit, delete source data

Assign new feature representations

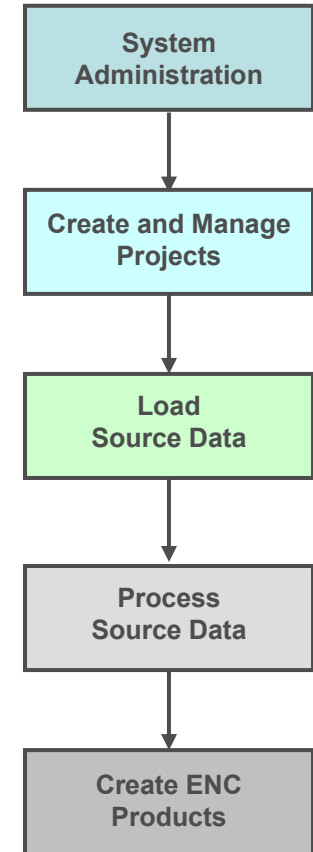
Certify features

## 5. Product Editors: ENC, AML, Paper Chart, ...

Create new product, then export

Update with modified source data

Create product updates



# A challenge in ENC Production

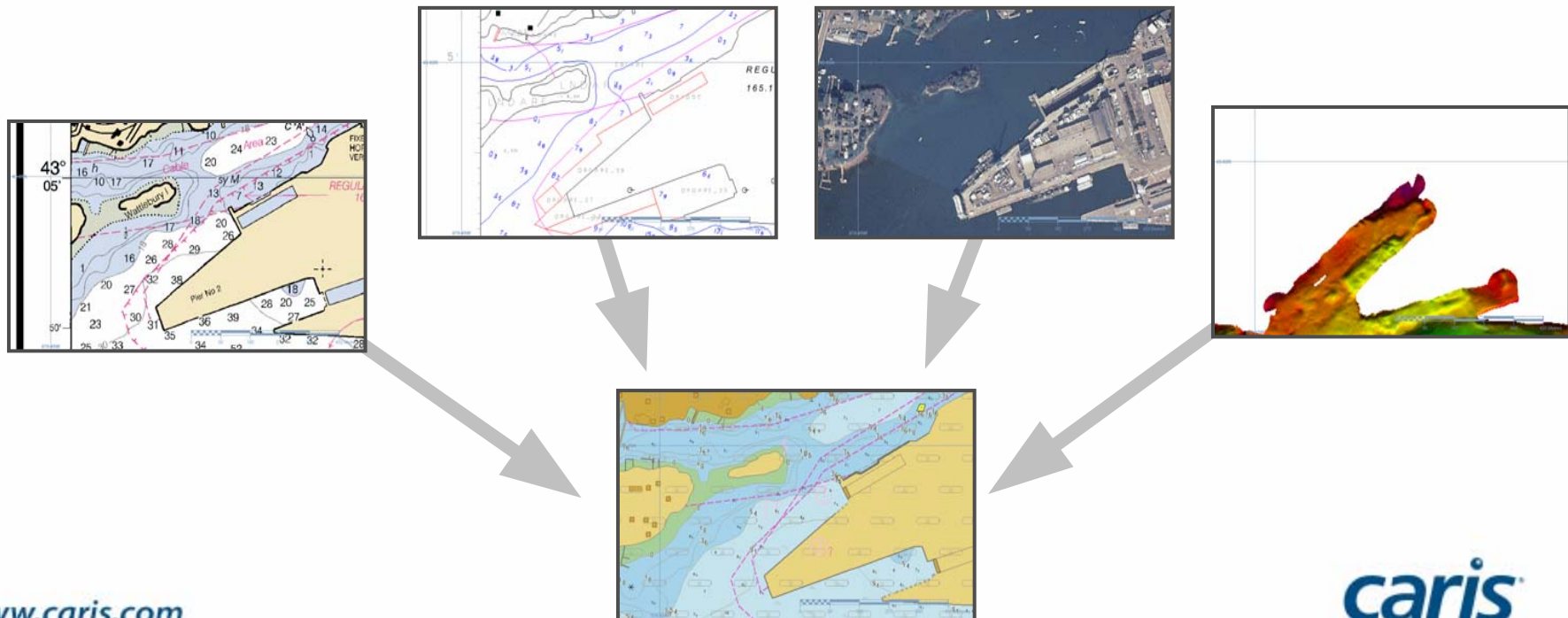
- **What data to use as ENC Source....**

**existing paper charts** – CARIS Map to S57 conversion

**vector GIS data** – grab vector data from background or import and map to S57

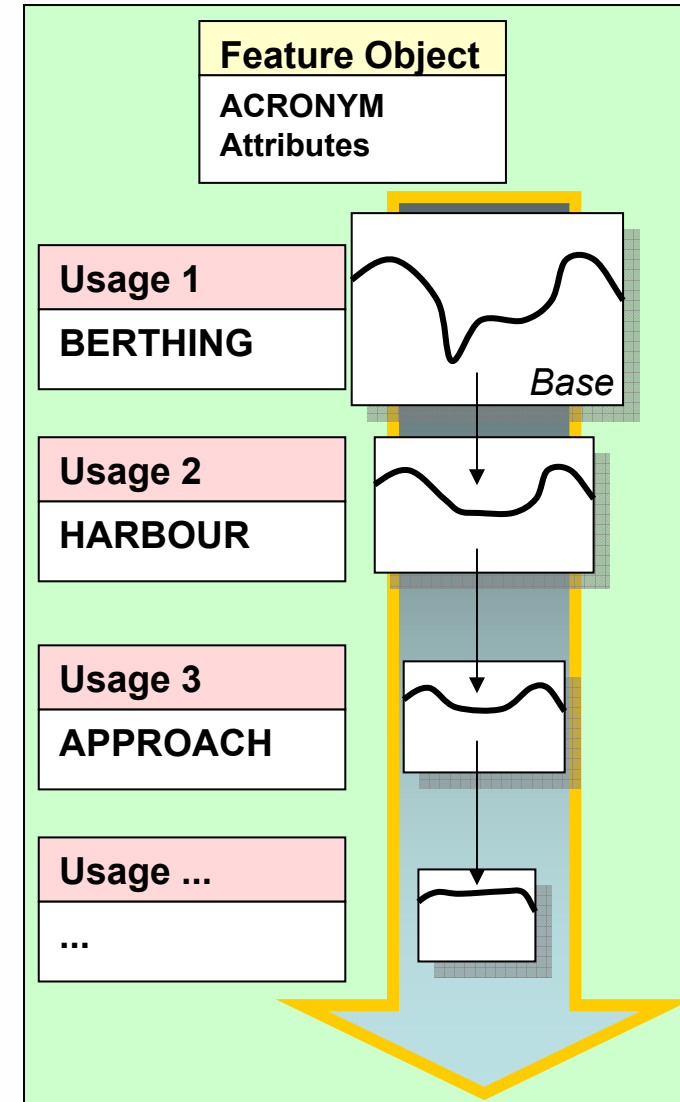
**raster imagery** – semi automated vectorisation of raster background

**new survey data** – bathymetry from CARIS HIPS and Bathy DataBASE



# A challenge in Database driven (data centric) ENC Production

- **Different mindset and workflow is required from traditional product centric workflow**
  - Re-organisation of cartographic team roles e.g. System Admin, Source Compiler, QA, Updater
  - More people working on source than products
  - Different cartographic emphasis e.g. generalisation
  - Need for new standard operating procedures
- **How can CARIS help**
  - By deploying CARIS HPD consultants on site for extended periods
  - By implementing Workflow Management for H.O.





# Which System for ENC Production?

- **Desktop e.g. S-57/S-100 Composer**

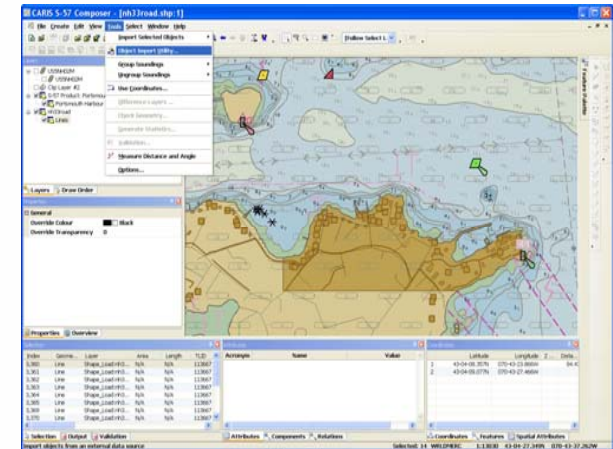
- Specialty Product creation
- Small ENC portfolio
- Limited IT infrastructure
- Simple initial approach

- **Database e.g. HPD**

- Larger ENC portfolio
- Enterprise Client/Server system with interoperable DB core
- Efficient maintenance workflow for multiple scale ENCs
- Ability to create other products from same source data

- **Easy migration path from Desktop => Database**

- S-57/S-100 Composer will become the ENC/AML Editor for HPD
- Become a HPD DB user by easy license activation
- Assist in change management process, share user interface



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