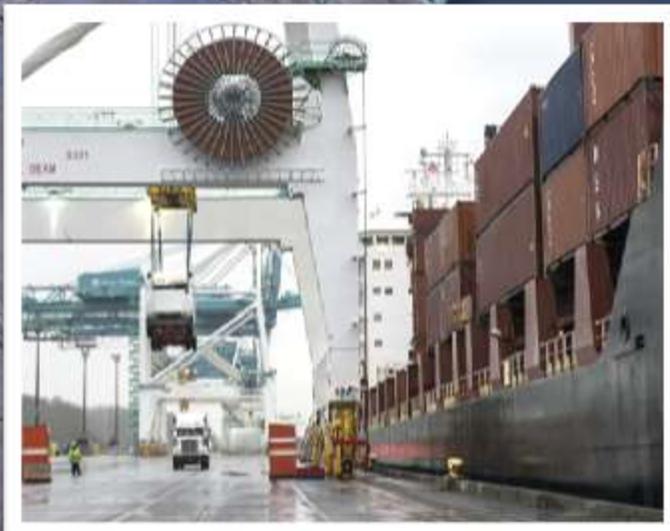


Efficient USV/SV Dredging Survey  
with  
**NORBIT WINGHEAD and NORdredge**

This is not a sales presentation  
This is a technology awareness  
presentation

TN-220025



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# USV for the job





# NORBIT

# Hydrographic survey paradigm

The collage illustrates the hydrographic survey paradigm through various software components:

- Top Left:** A bathymetry map showing depth contours in shades of blue and green.
- Top Center:** A window titled "CARIS Mira A" with a dark background and colorful circular markers.
- Top Right:** A "Goto" window with a table of coordinates and a small plot. The table includes columns for Date, Time, Lat, and Lon.
- Middle Left:** A window titled "RTK8" showing "Age:03" and "5.0 MPH". It includes status for "Serial Port" (Connected to COM 5 at 38400bps) and "NTRIP Status" (Connected, 6,212 bytes received).
- Middle Center:** A window showing two side-by-side plots of depth data over time.
- Middle Right:** A large bathymetry map of Lake Michigan with a color scale from 0 to 100 meters. Labels include "Chicago Canal", "Cape Charles", and "Lake Michigan".
- Bottom Left:** A window displaying sensor status and accuracy data. It includes sections for "Status", "Accuracy", "Position", and "Dynamics".
- Bottom Center:** A window showing a 3D visualization of a bathymetric surface.
- Bottom Right:** A window titled "BES snippets" showing a cross-section of a bathymetric profile.

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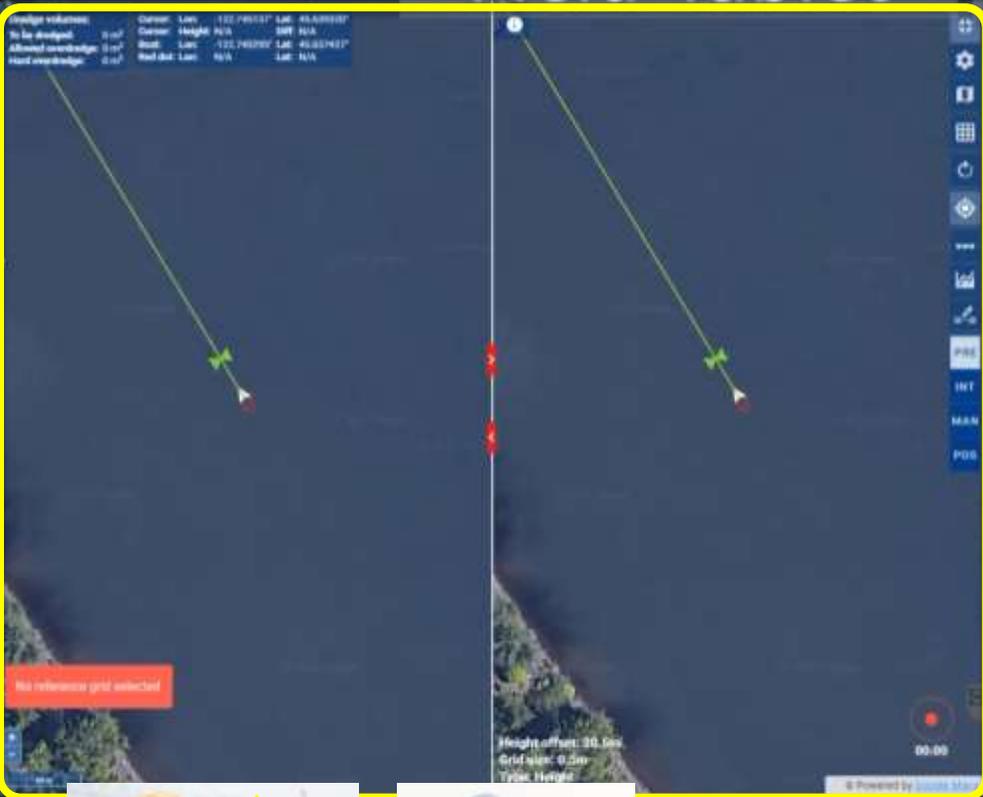
Are you ready for this?





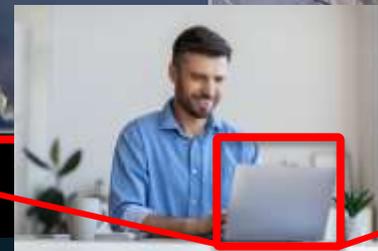
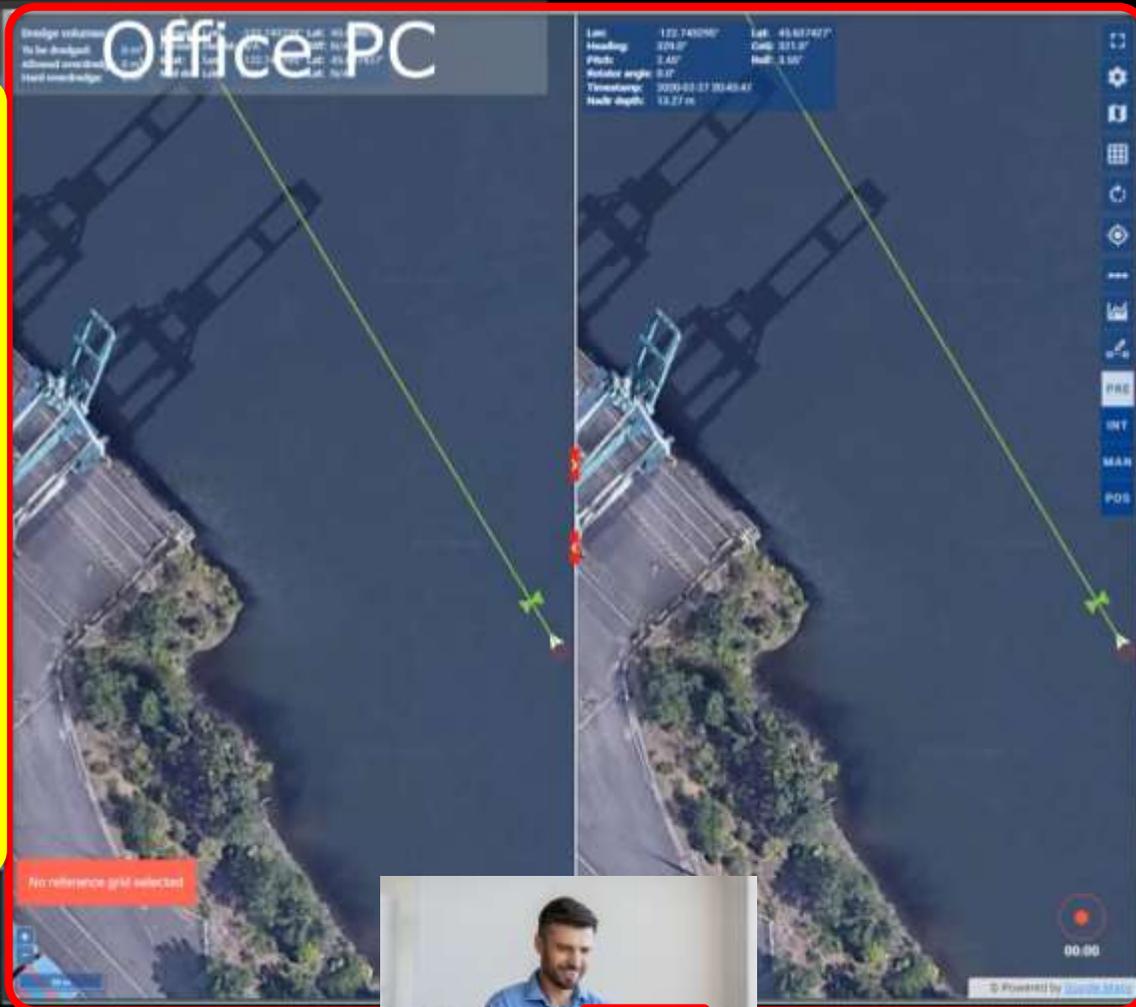
NORdredgwINGHEAD

# Field Tablet



Operators

# Office PC

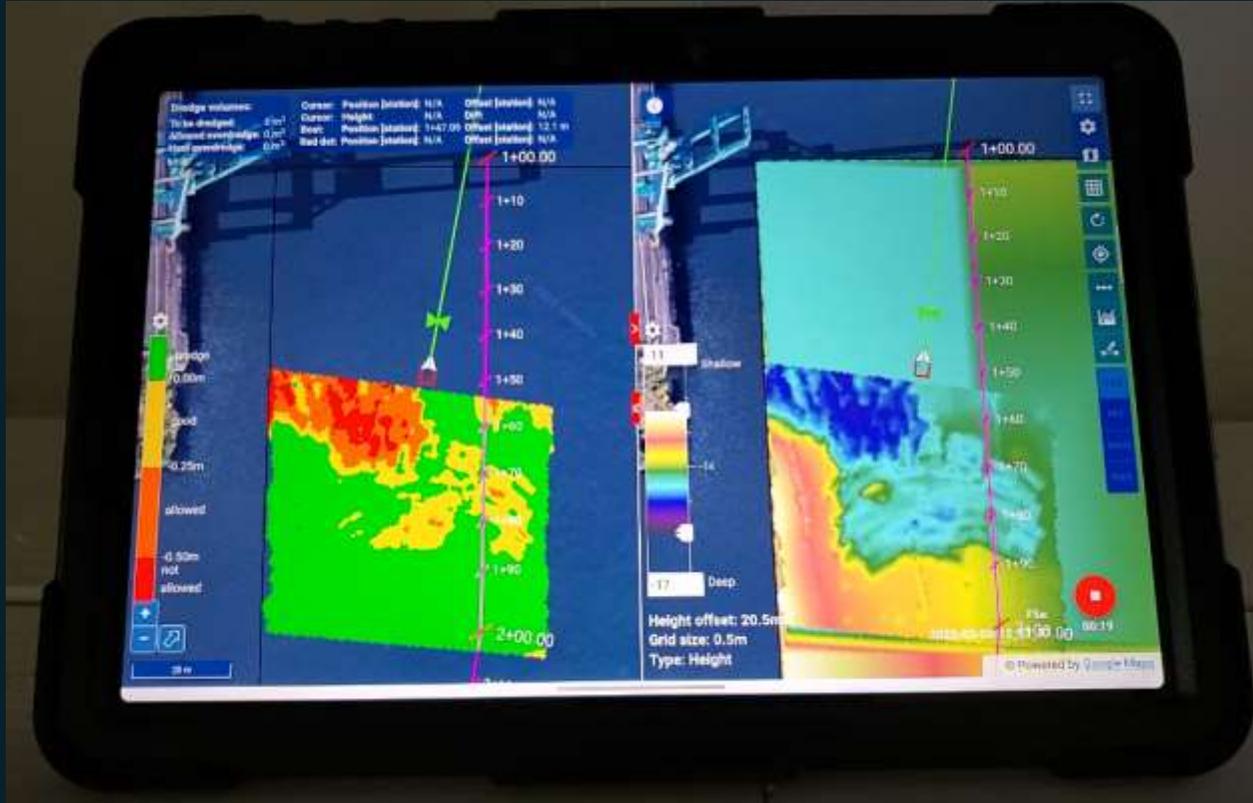


Hydrograph  
er

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Thank you!

NORdredge - solution for efficient dredging surveys



[subsea@norbit.com](mailto:subsea@norbit.com),

[pawel@norbit.com](mailto:pawel@norbit.com)

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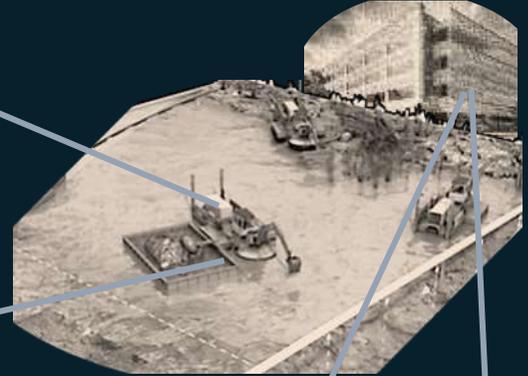
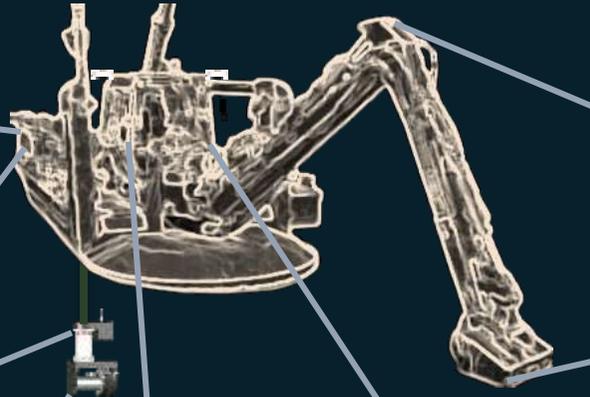
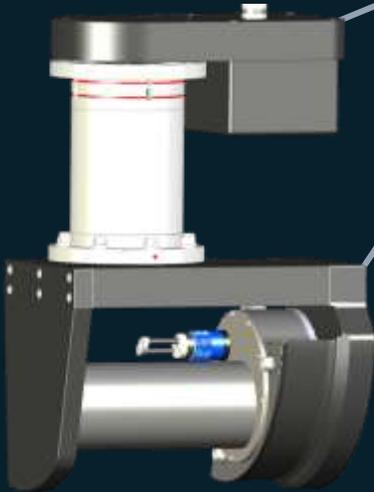
*- explore more -*

NORdredge

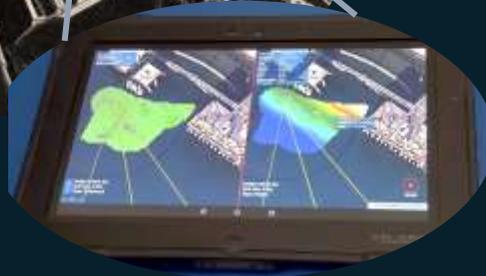
Processor



iSTX36  
0



Tablet



PC at the  
Office

# REPORT GENERATION

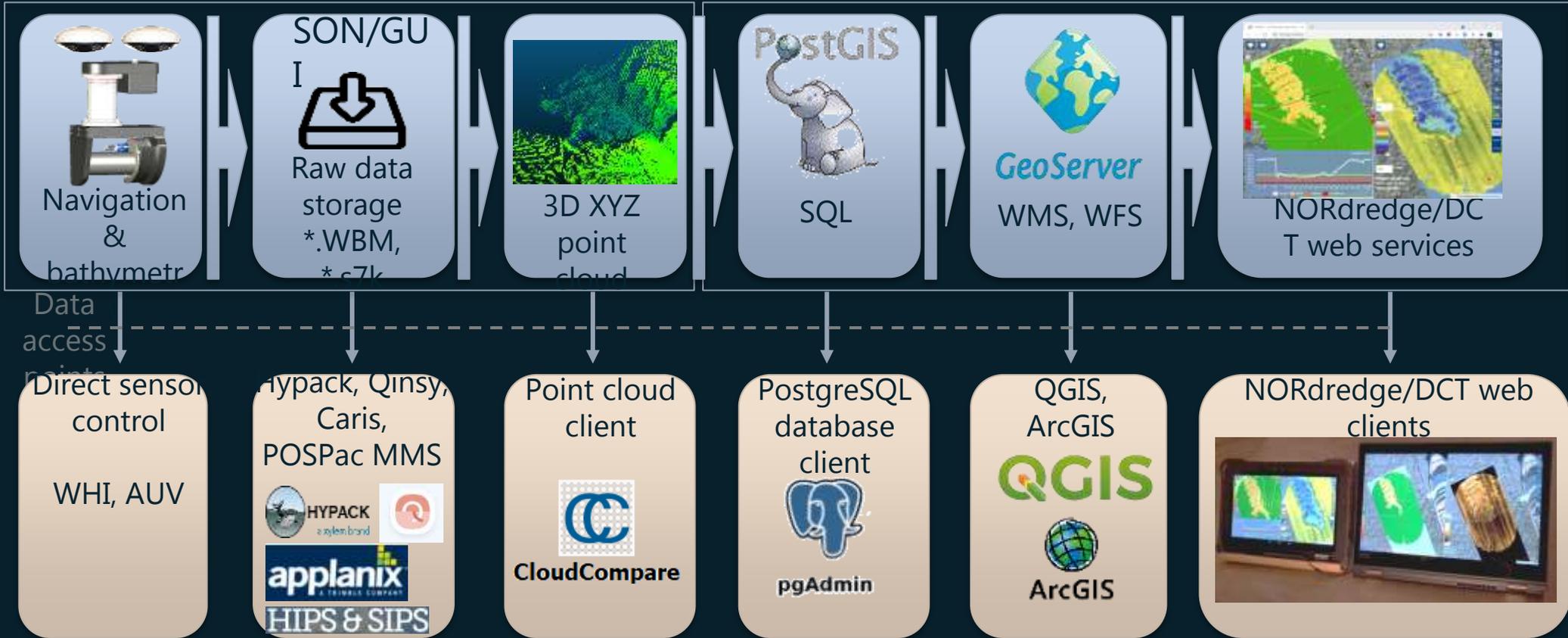
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WITH QGIS

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Open Hydrography Platform (for NORdredge/DCT) – data flow and data access

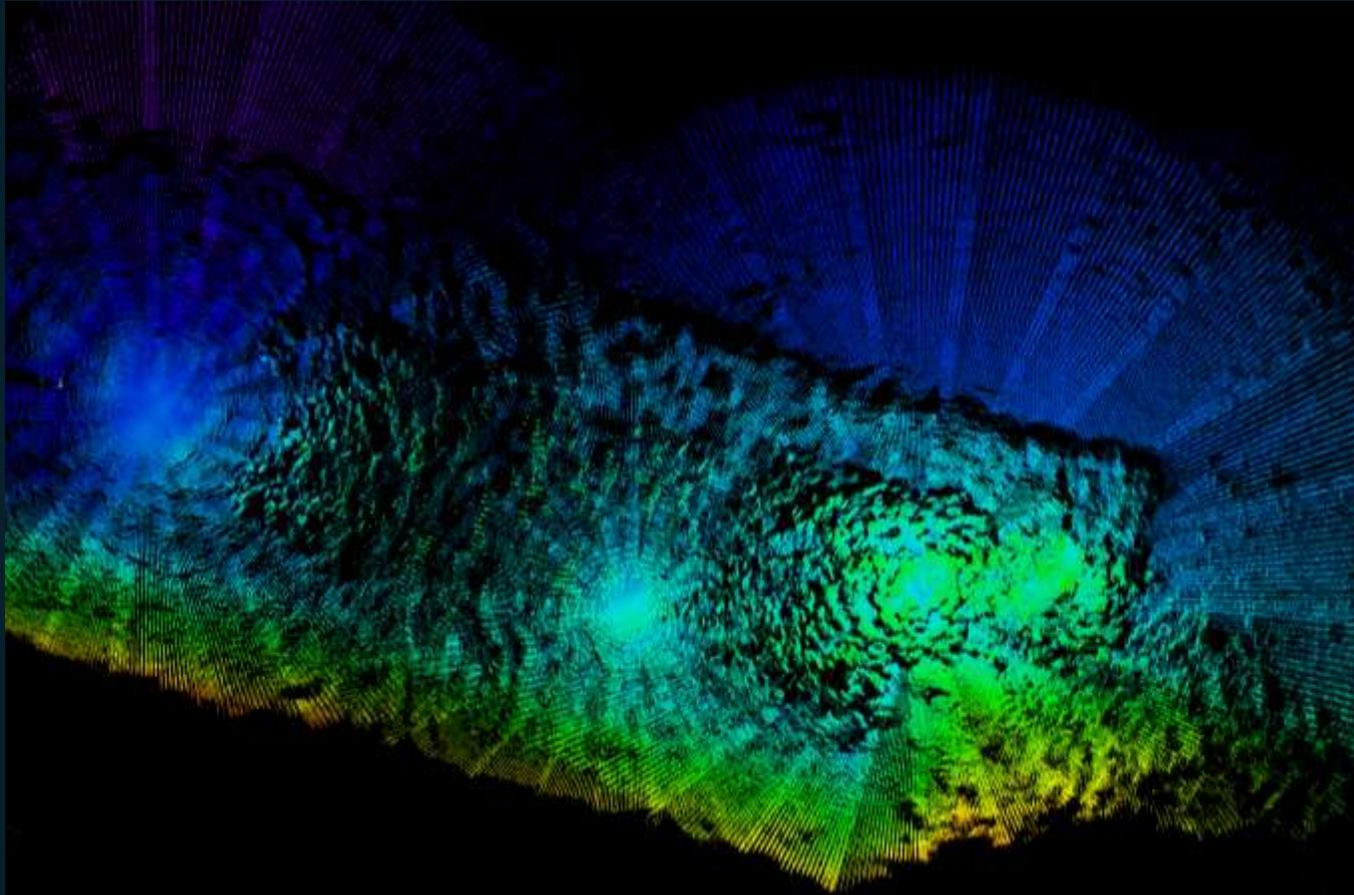


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## NORdredge 3D point cloud

NORdredge 3D point cloud data

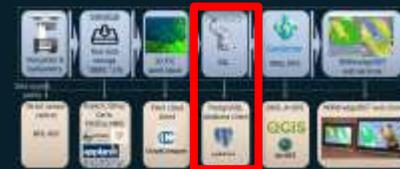


# NORBIT

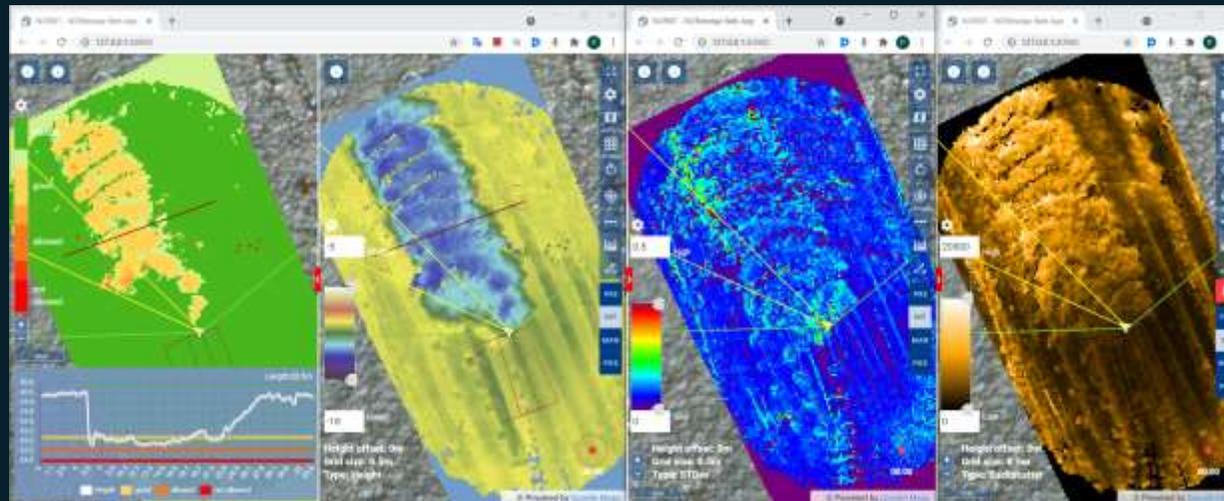
- explore more -

NORdredge database is a PostgreSQL/PostGIS database with following components and tables

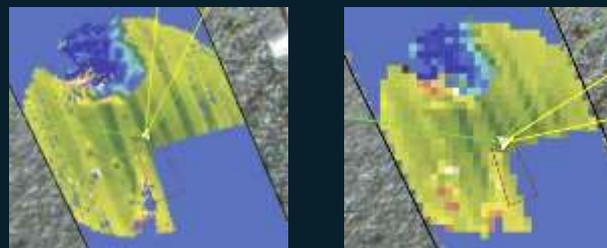
NORdredge database



difference\_grid\_layer\_view  
height\_grid\_layer\_view  
count\_grid\_layer\_view  
intensity\_grid\_layer\_view  
std\_dev\_grid\_layer\_view



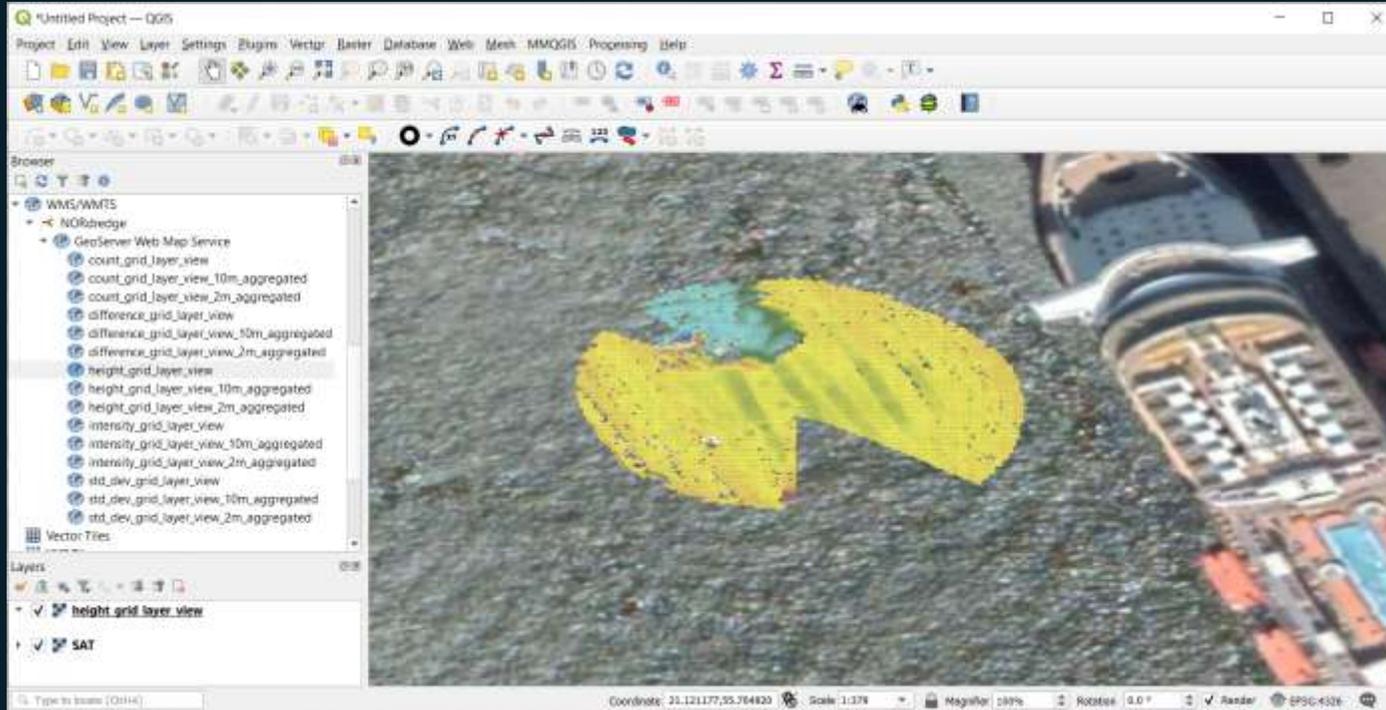
Native views vs  
aggregated views



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## NORdredge database components and tables via WMS & WFS

NORdredge database access via GeoServer



To access the data for WMS and WFS service use the following:

WMS: <http://XXX.XXX.XXX.XXX:40801/geoserver/wms?version=1.1.1>

WFS: <http://XXX.XXX.XXX.XXX:40801/geoserver/wfs?version=1.1.0> - select version 1.1

Where XXX.XXX.XXX.XXX is the IP of the NORdredge PC

## The comparison between WMS and WFS service to access the NORdredge data

Feature	WMS (Web Map Service)	WFS (Web Feature Service)
Type of data	Tiles – raster images	Geometries, vector data
Bandwidth	Low (like Google Maps, area independent)	Moderate (depends on area)
Feasible for quick reports and maps	Yes	Requires manipulation
XYZ export capabilities	No	Yes
Data manipulation	Limited to raster images	Full vector analyses: Query a dataset and retrieve the features

### Example showing a simple editing geometry data

