# Dragados-NORdredge Case study

USA

- Traditionally, the dredging operation encountered downtime due to a survey boat conducting bathymetric survey, post-processing the data and updating the dredger operator with new instructions.

- To save time, operators would chose to stretch time between surveys or limit the survey scope, which can result in poorer work quality, waste of materials, and delays in the project.

- Relying on the standard sensory operation is inaccurate, and mission-critical workflow depends on the operator's ability to transfer subjective information to the next crew.

- This working process is complex and inefficient.

- NORBIT presents a real-time dredging monitoring turn-key solution used during the Parallel Thimble Shoal Tunnel Project for Chesapeake Bay Bridge-Tunnel.

- The technology adopted by Chesapeake Tunnel JV during the construction of a second two-lane parallel tunnel under the Thimble Shoal navigation channel next to the existing tunnel.
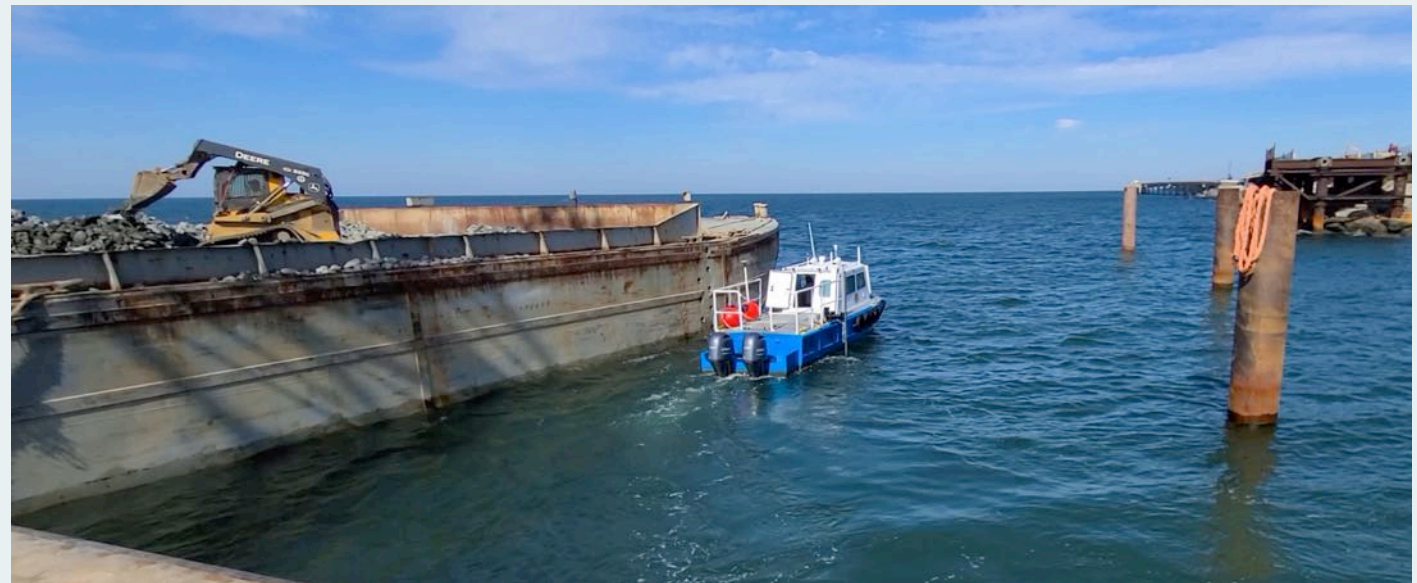
Dragardos USA is headquartered in New York, and is one of the leading construction brands in the ACS Group (www.grupoACS.com).

ACS group is the world's most internationalized construction and engineering organization, according to the ranking elaborated by the "Engineering News-Record" (ENR) magazine and is one of the top 10 firms in the ENR Top Global Contractors List worldwide.

DRAGADOS has built more than

4,500 miles of highways,
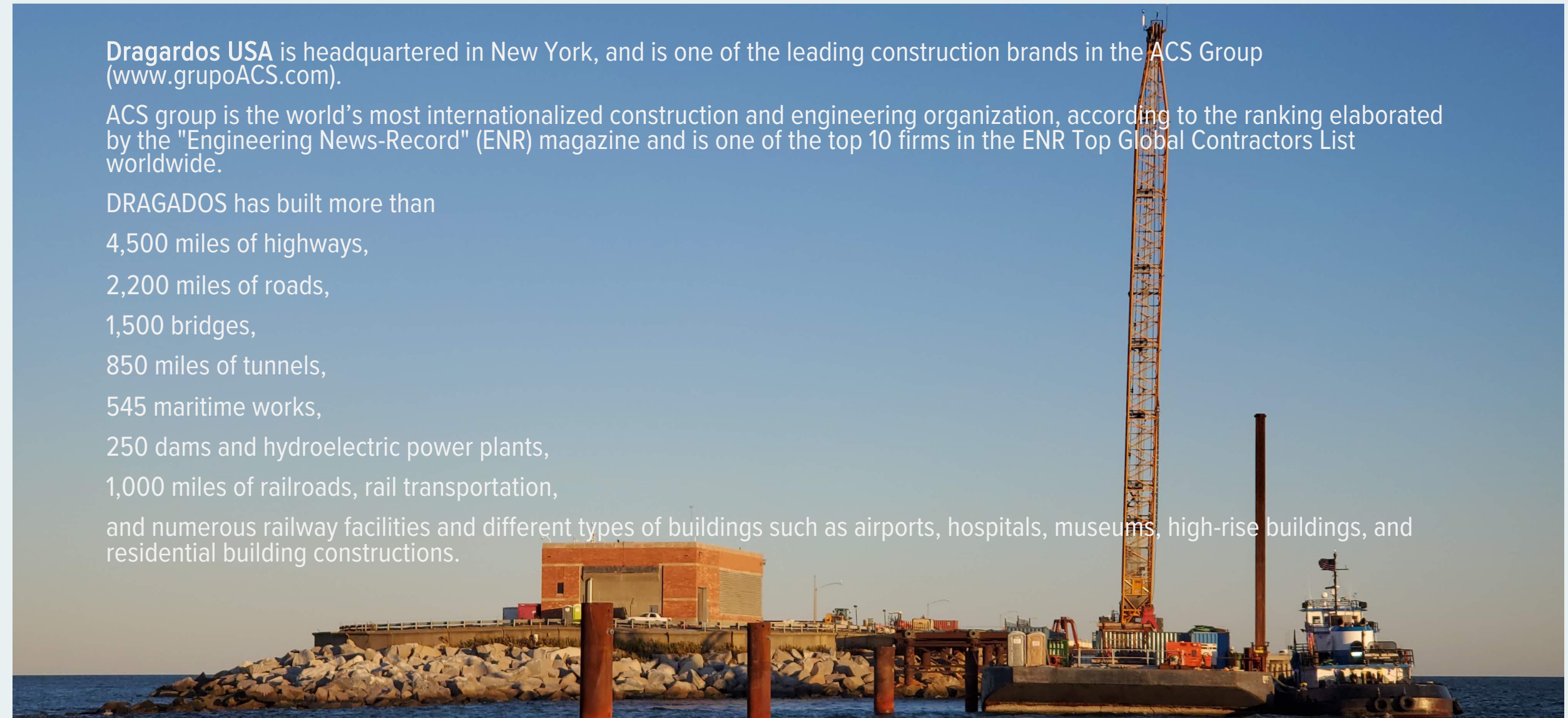
2,200 miles of roads,

1,500 bridges,

850 miles of tunnels,

545 maritime works,

250 dams and hydroelectric power plants,

1,000 miles of railroads, rail transportation,

and numerous railway facilities and different types of buildings such as airports, hospitals, museums, high-rise buildings, and residential building constructions.

NORBIT introduced a real-time dredging monitoring solution using the NORBIT sonar system directly from the dredger with the real-time display to the operator and concurrent remote access for the hydrographer.

Access at the office
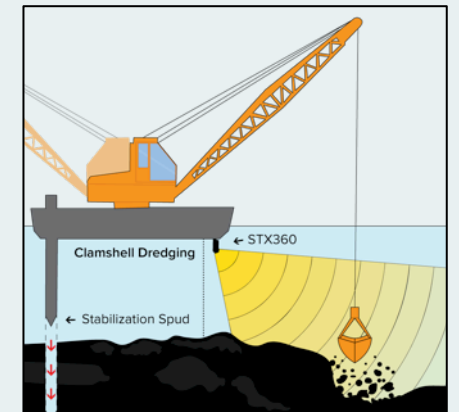
NORdredge

Operator's tablet

NORdredge

iSTX360
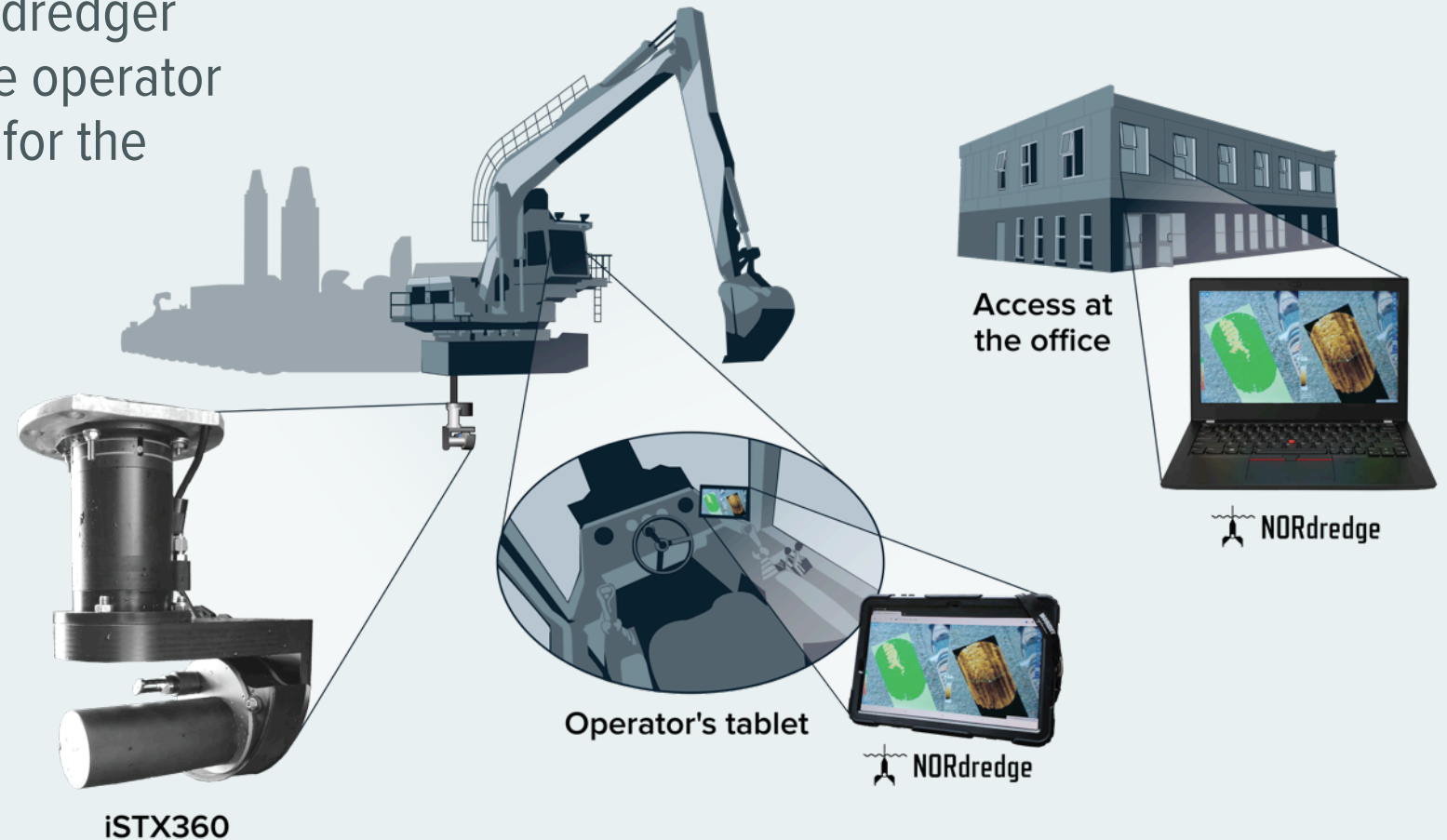
Dragados System consists of:

- NORdredge software
- NORBIT iWBMS STX
- Rotator
- GNSS/INS navigation
- Topside unit
- PORTUS Pole

iWBMS STX sonar mounted on NORBIT carbon fibre "Portus" mounting pole, and then secured to the platform.

The sonar is strategically placed to monitor the operation area

iSTX360 Mounted on a Portus Pole
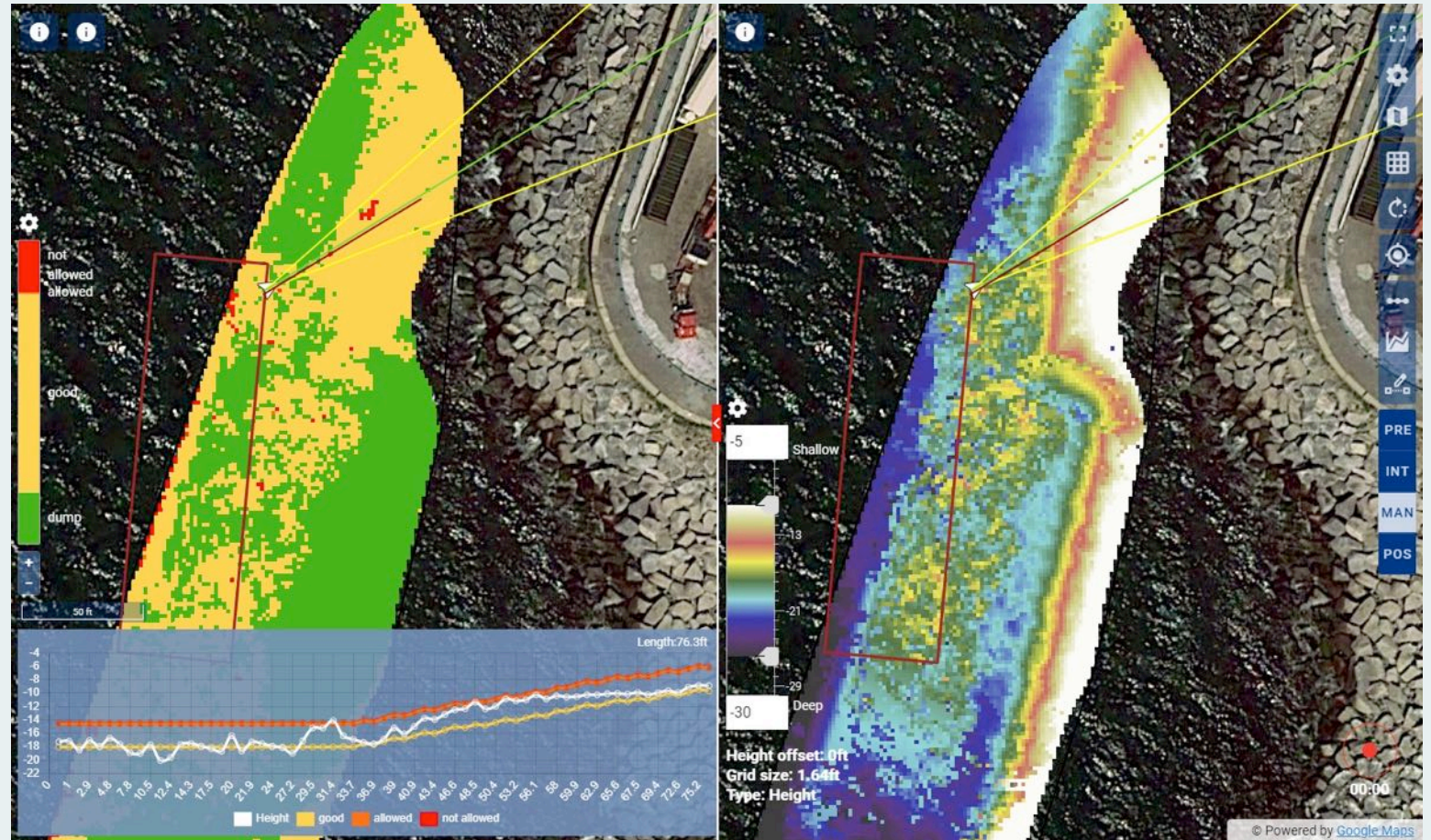
Operator

Remote access point

- NORdredge is powered by NORBIT Open Hydrography Platform (OHP) allowing concurrent smart dataflows and shared distribution of interactive data

- NORBIT OHP is based on the GIS backend seamlessly interfacing with other GIS software of choice for reports and QC.

- Hydrographers, survey managers or superintendents can seamlessly access the data without disturbing the dredge operator
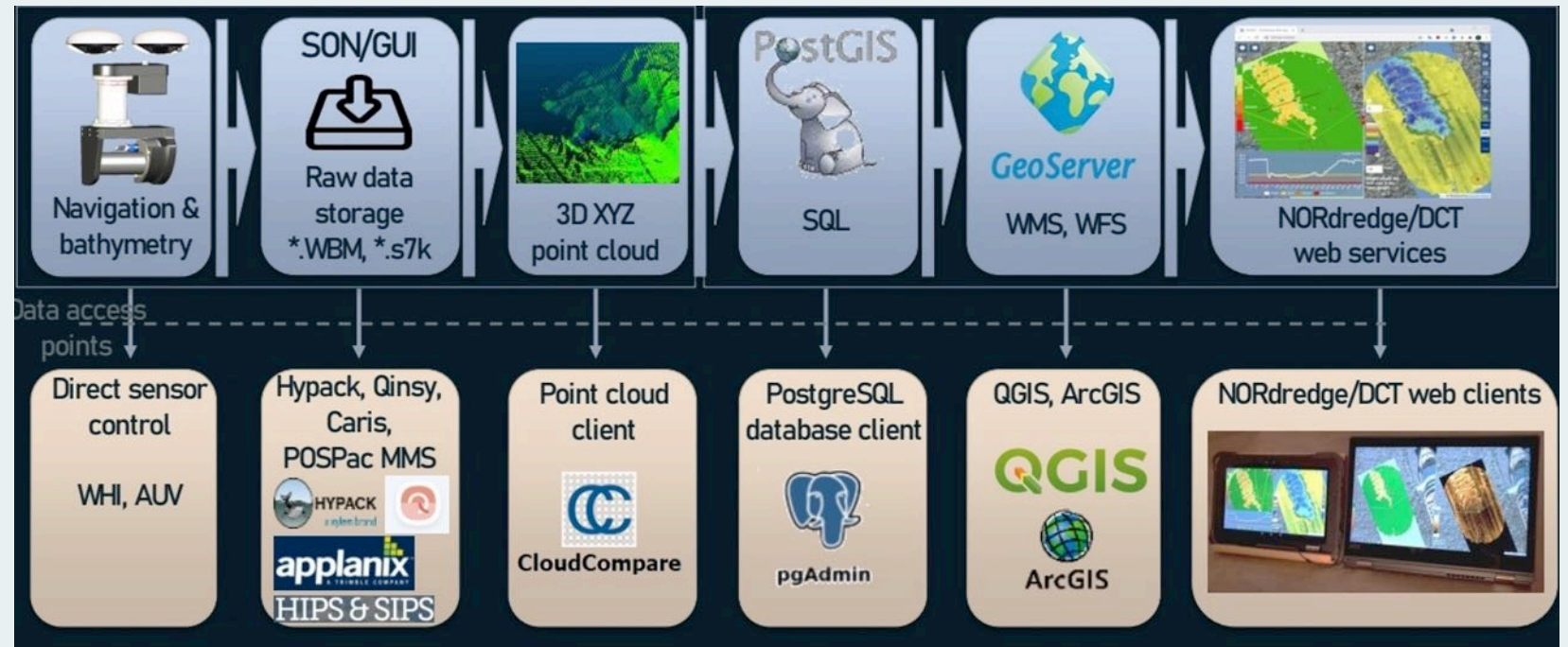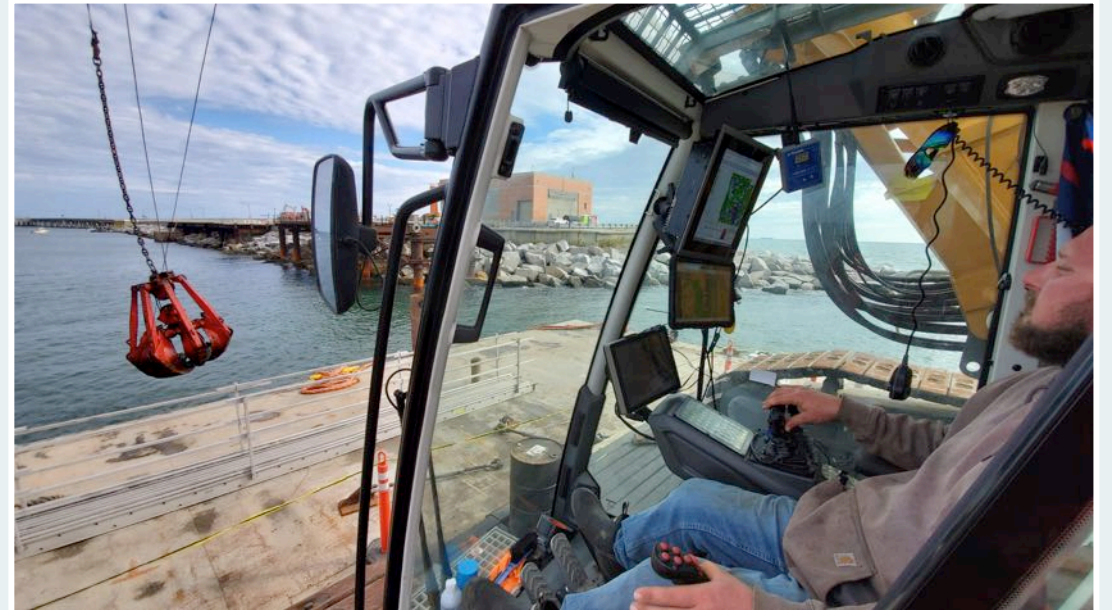
NORdredge Software provides

- Real-time dredging progress display

- Simple color-codes allow to dredge up to design margins

- Accurate (RTK) high resolution maps

- Remote access to data via WMS/WFS GIS protocols

- Option for OEM integration

- 4D data (X,Y, Z and time)

Simple color-codes allow operator to dredge up to design margins

- Operators can see the job progress in real-time on a tablet.

- Simple interface allows controlling the sonar with a tap of a finger

- Simple colors allow for quick decisions and corrective actions in real-time – no need to stop the operation for externally done survey

- The concurrent access by the remotely located superintendent allows loading the design template and further QC the data when needed

NORdredge software maximizes the benefits of using NORBIT integrated sonar systems to conduct bathymetric surveys for the dredging industry by simplifying the survey experience and providing a concurrent work platform for dredge operators and hydrographers.

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