

# Terradepth's Absolute Ocean Enhances Collaboration and Near Real-Time Analysis for Orange Force Marine

## ORANGE FORCE MARINE

Orange Force Marine Ltd. is a specialized commercial marine services company, providing capable, safe, flexible, and reliable vessels; experienced and highly professional mariners; and results - focused project management to ensure outstanding service delivery for their clients. These capabilities and characteristics highlight our unwavering ability to safely, efficiently & cost effectively deliver on our client's marine requirements and truly deliver "Excellence at Sea."

## PROJECT

With approximately 23% of the world's oceans and only 15% of the Great Lakes surveyed using high resolution bathymetric survey technology, Orange Force Marine is at the forefront of conducting survey efforts using both traditional survey means and via crowdsourced bathymetry solutions.

Leveraging technology and their survey operations expertise, Orange Force Marine (OFM) deploys their crowdsourced bathymetry (CSB) kits (called the "Mussel")

across multiple vessels in order to contribute to survey efforts under the Lakebed 2030 and Seabed 2030 initiatives. These CSB kits are installed on vessels worldwide to incrementally and automatically collect bathymetric data as their client vessels conduct their day-to-day sailings.

## CHALLENGE

OFM's own vessels and "Mussel" CSB equipped vessels are routinely plying the lakes and oceans conducting bathymetric surveys or gathering other marine data. Traditionally, data collected onboard requires manual upload and processing after the vessel has returned alongside following its voyage. Given the longer collection cycles and large amounts of data, there can be substantial delays in uploading, storing and analyzing collected survey data. This results in long time lags between data collection and data visualization. Coupled with challenges in data transmission and data storage, these time lags can negatively impact decision making regarding vessel operations and tasking; resulting in duplication of efforts, inefficient survey routing and wasted ship time.

**“Orange Force’s challenges are common in the international marine community where the traditional approach has thwarted the ability to quickly manage, collaborate with, and deliver ocean data.”**

**Joe Wolfel, CEO of Terradepth.**

## SOLUTION

Absolute Ocean (AO) is Terradepth’s intuitive cloud-native geospatial ocean data management solution providing secure on-demand access, visualization and analysis tools to internal and external stakeholders.

Using AO and Orange Force Marine’s Mussel crowdsourced bathymetry kit, OFM can automatically upload and visualize data in near real-time, instead of waiting for data to be uploaded manually from vessels. Through this near real time collection, transmission and visualization, Orange Force Marine is able to quickly validate the data, confirm quality coverage and provide real-time feedback to survey clients and collecting vessels.

Absolute Ocean’s collaboration feature also allows OFM to communicate collected data coverage, provide updates to surveying progress, and express levels of data contribution over a date range or on a per ship or per survey basis. Through the visualization tools in AO, OFM is able to clearly demonstrate the value of crowdsourced bathymetry efforts and highlight areas of good coverage or areas requiring further survey sea time.

## RESULT

Through automated uploading of data that is quickly categorized and easily accessed, OFM and clients can efficiently visualize, validate and interpret what data has been collected in a given area and immediately communicate with vessel captains. This allows them to adjust operations to cover more area or optimize their sea time. OFM’s use of AO results in significant time and fuel savings, along with an opportunity for additional data collection made possible through efficiency and optimization.

**“We are thrilled with how effectively Absolute Ocean helps us in collecting, transmitting, storing, categorizing and visualizing bathymetric data in near real-time.**

**By incorporating Absolute Ocean into our data pipeline, we’re better able to achieve our vision of “Ping to Cloud” by visualizing the depth data collected almost immediately following the vessel passing over a location on the seabed.**

**Absolute Ocean is a key component of our crowdsourced bathymetry initiative and we’re very pleased with Terradepth’s ability to meet our data management and visualization needs.”**

**Derek Niles, President and Founder of Orange Force Marine Ltd.**