



**SUBSEA TECHNOLOGY**

# AUV swarm communication network

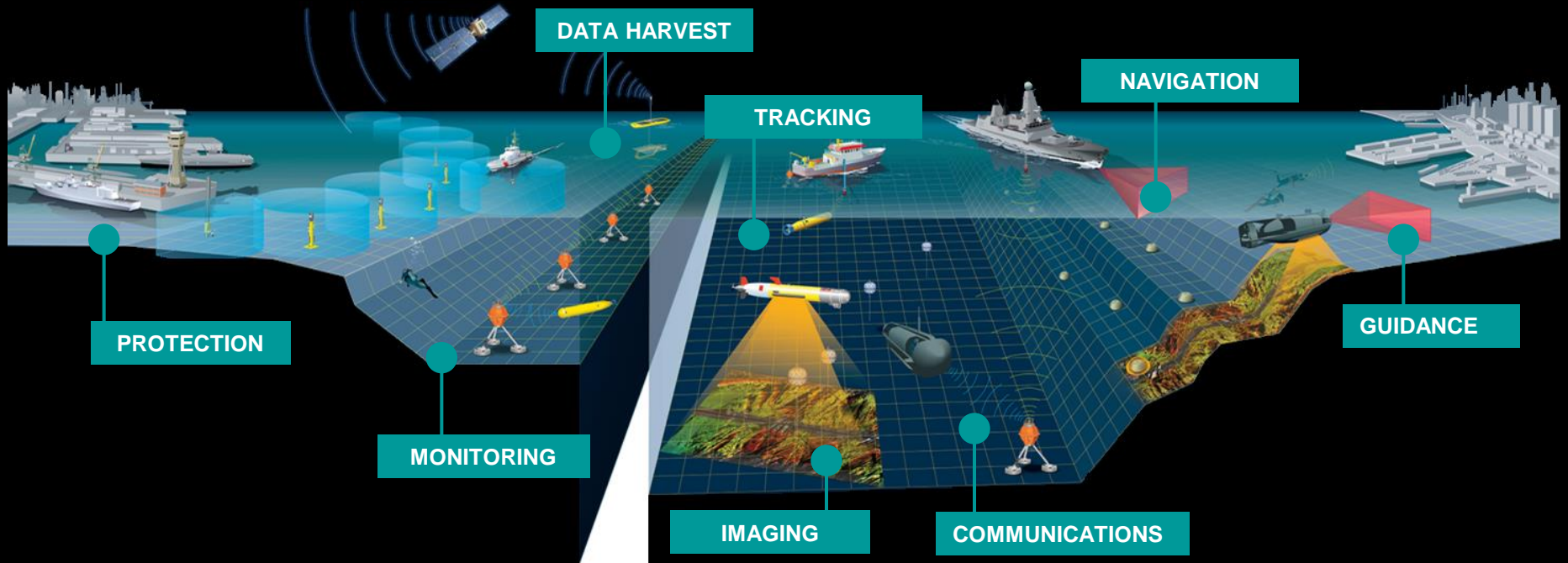
## UDT 2018

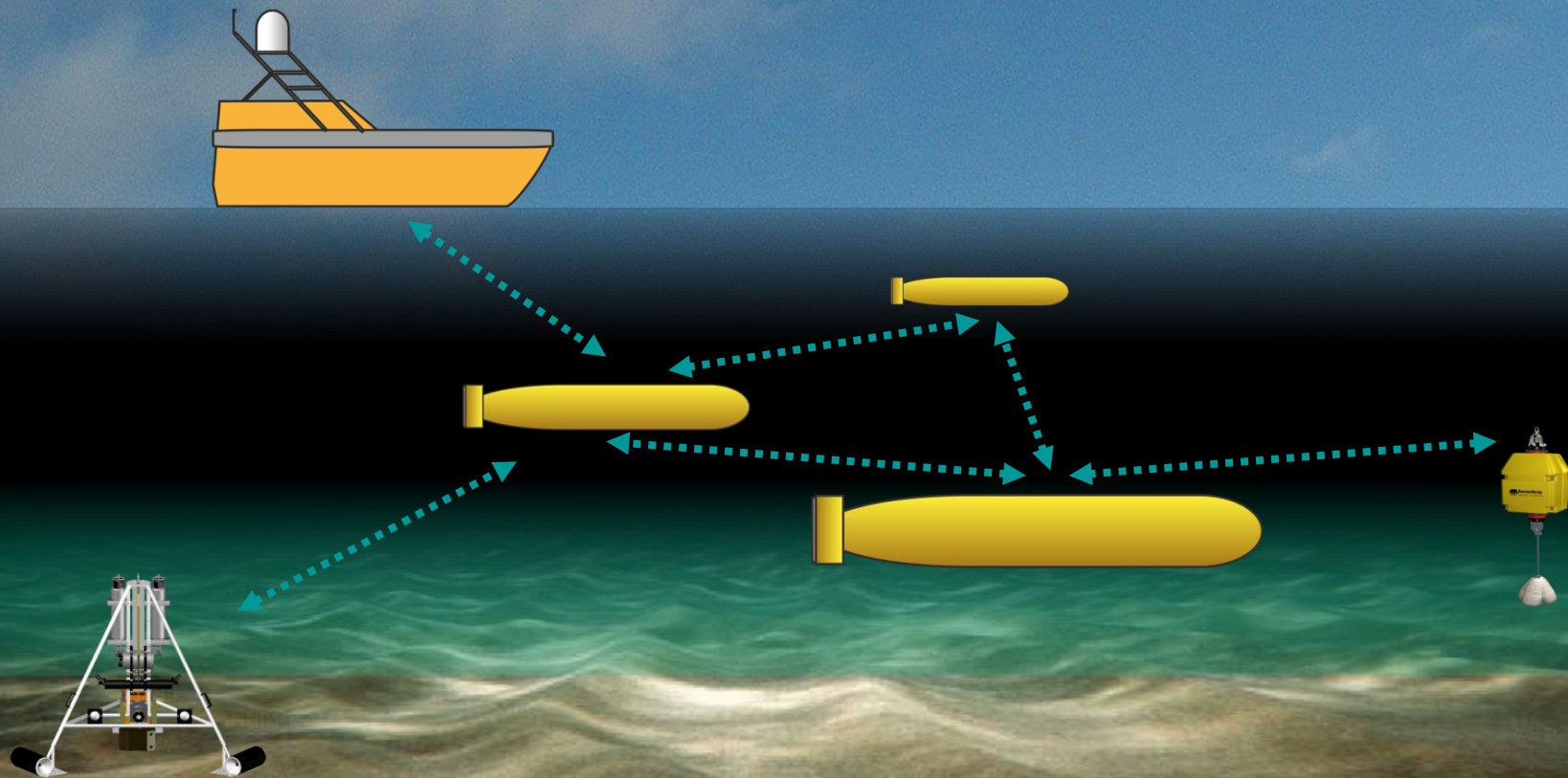
**Ioseba Tena**

Global Business Manager – Marine Robotic Platforms

**POSITIONING  
NAVIGATION  
COMMUNICATION  
MONITORING  
IMAGING**

Overview





- **Increase Search Classify Map (SCM) Survey Area.**
- **Increase Mission Quality and Tempo.**
- **Improve Percentage Clearance.**

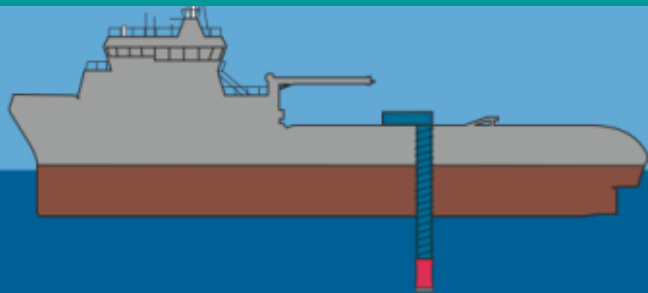
- **Scale AUV operations.**
- **Adapt mission based on best-of-breed decisions.**
- **Share the communication channel.**

AUV Swarms

AUV Tracking & Communications



“Today we can track and communicate  
across full Ocean depths.”



# Sonardyne Wideband® 2



Better than 0.1% range accuracy 1cm resolution and telemetry



USBL

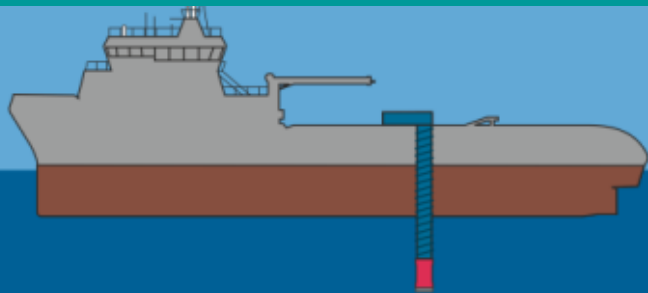
AUV Swarms

AUV Tracking & Communications



**“We Communicate and Share Critical Data”**





# Sonardyne Wideband® 2



Track

Exchange Data



USBL



**Battery: 95%**  
**Status: Green**  
**Mission: W4**  
**Lat: 50.33503°**  
**Long: -4.160042°**

**“Track and Communicate with AUV”**

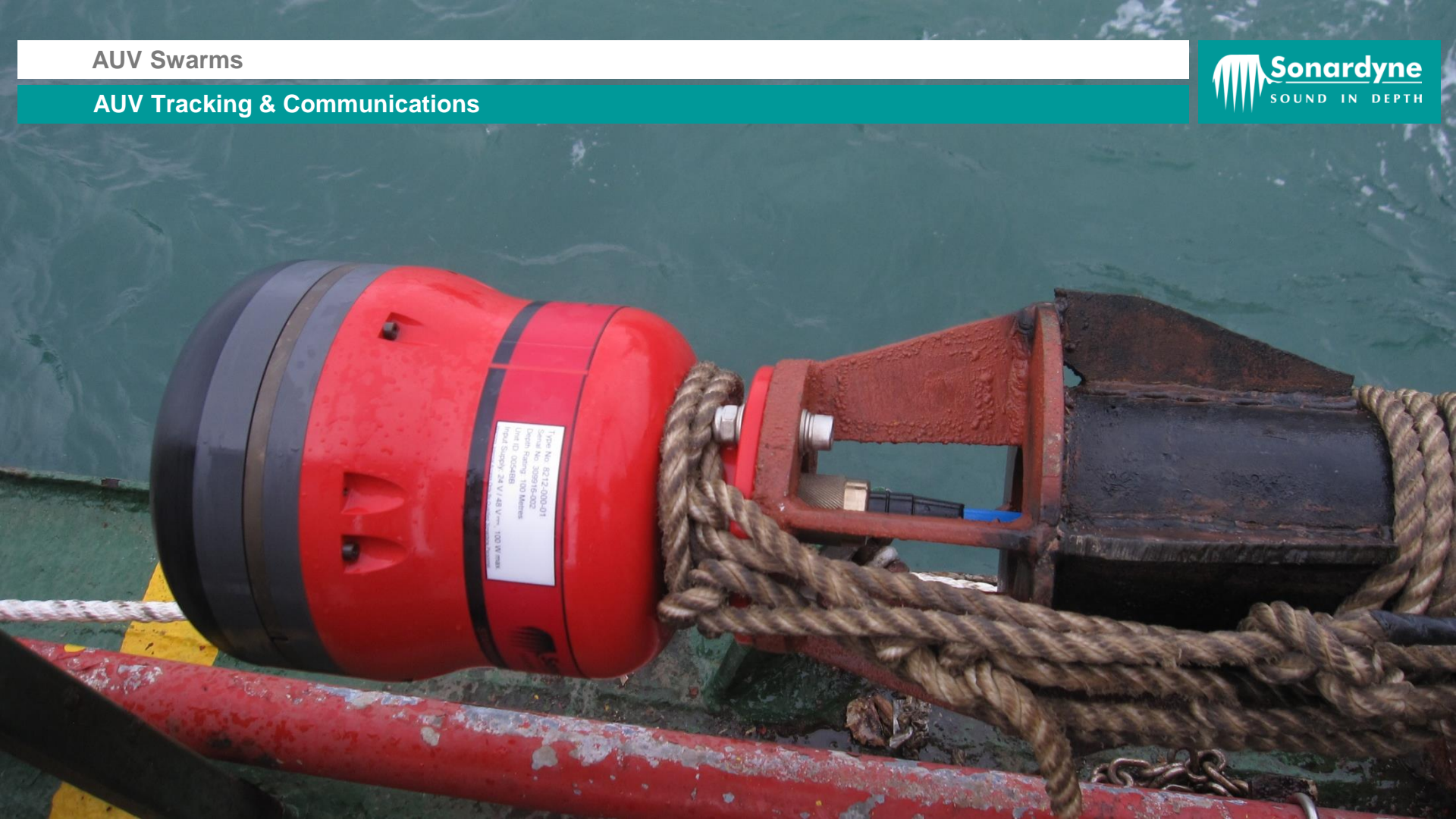
AUV Swarms

AUV Tracking & Communications



AUV Swarms

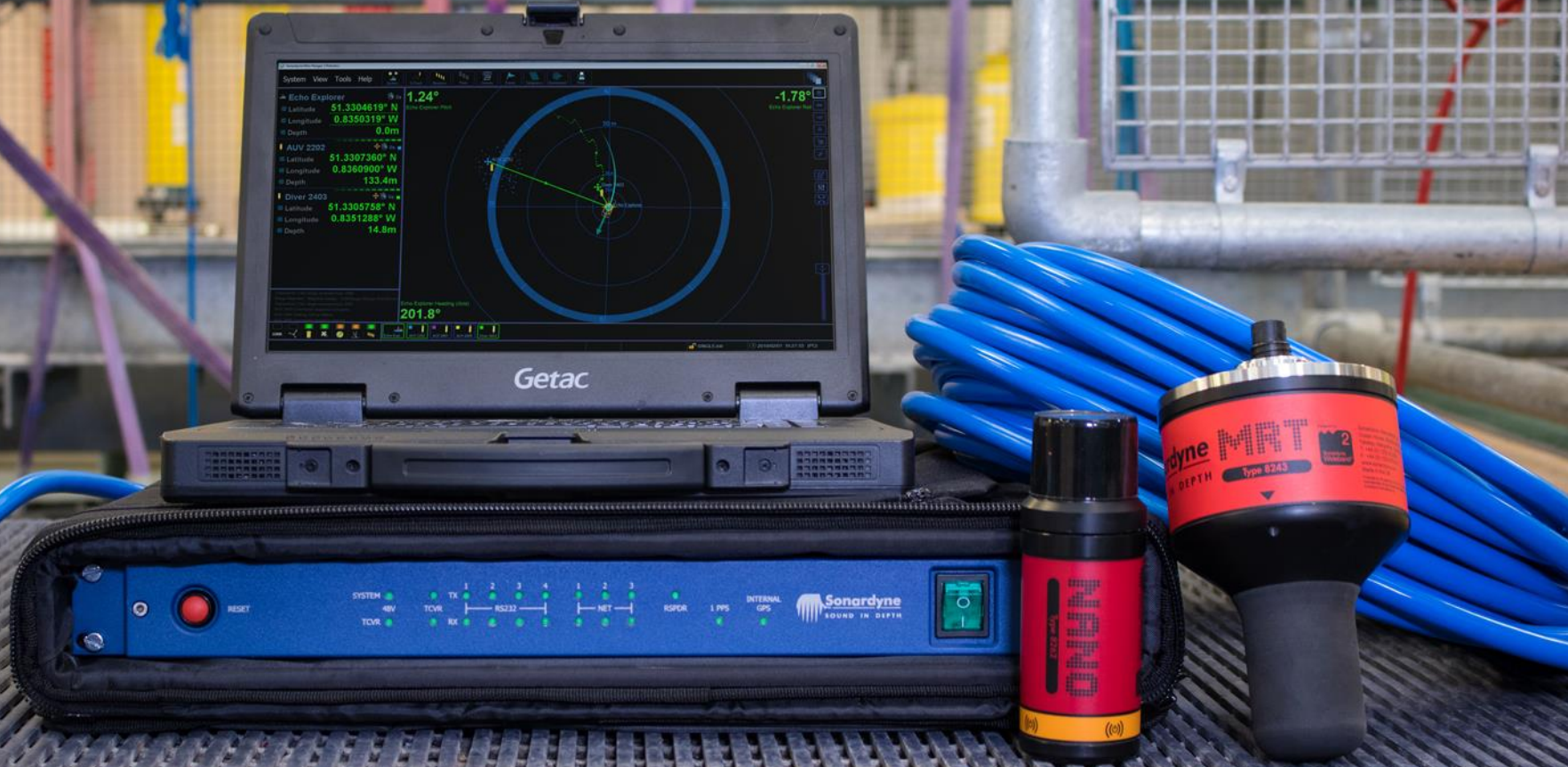
AUV Tracking & Communications



1/101 No. 8212-000-011  
Design Range: 300 Meters  
Line ID: 05048B  
Type: 24 V / 24 V / 24 V / 24 V  
100 W / 100 W / 100 W / 100 W

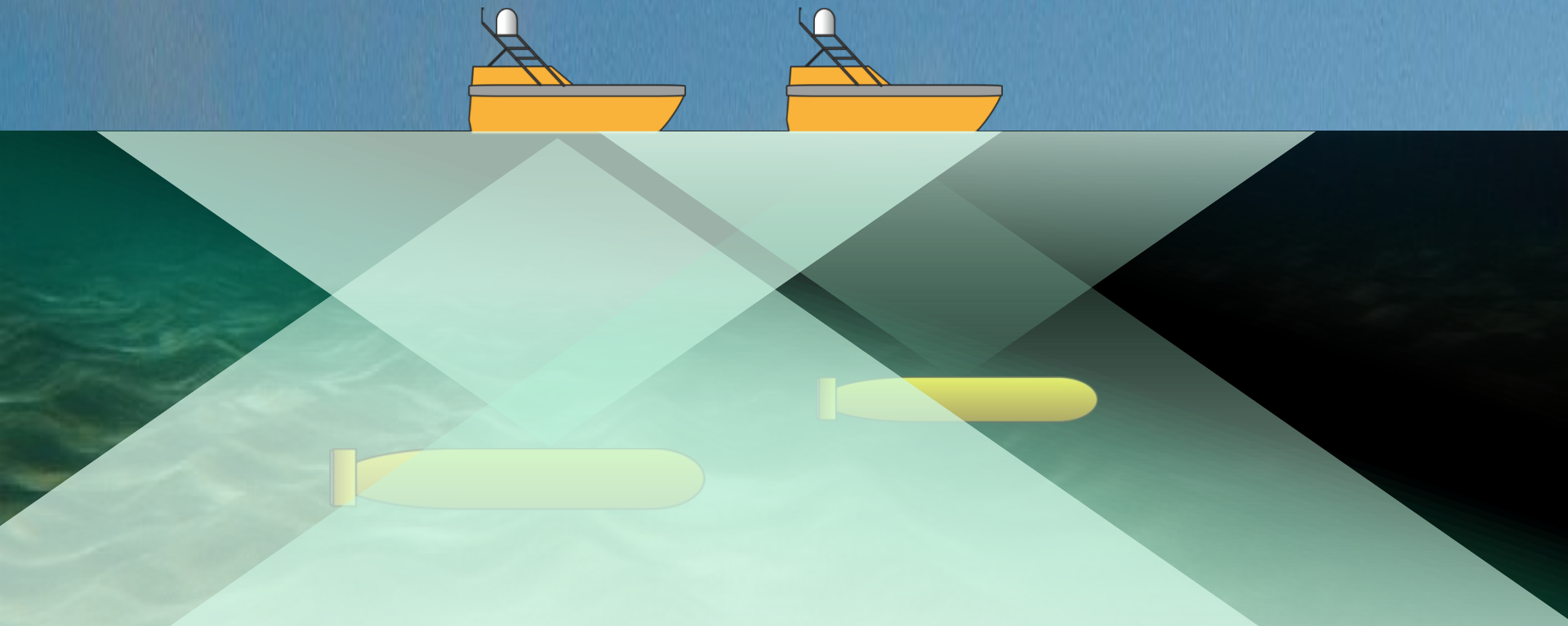
AUV Swarms

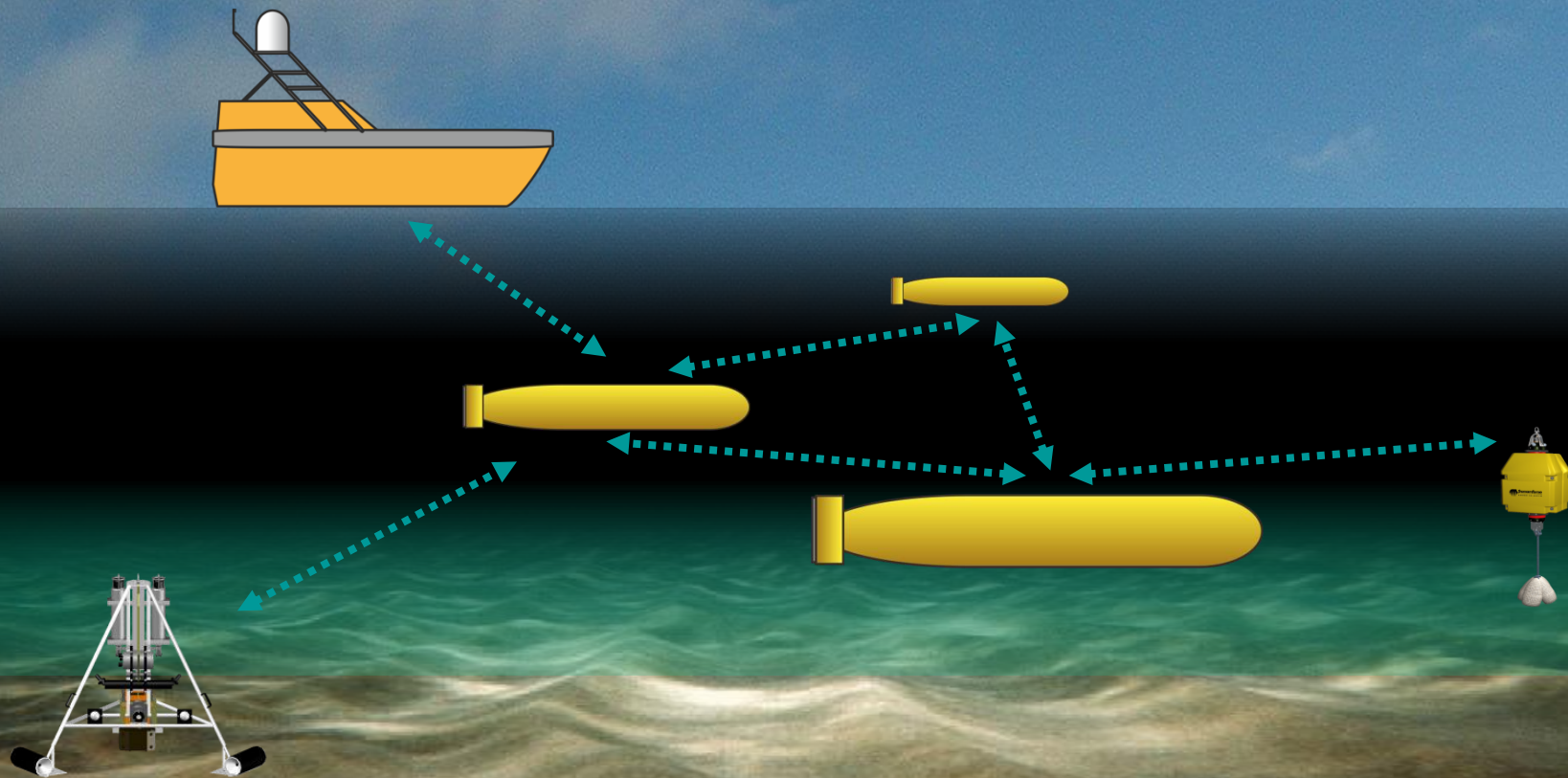
AUV Tracking & Communications



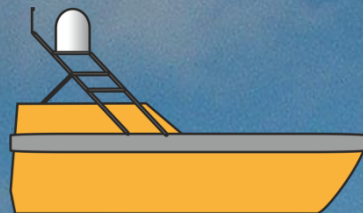
- Nano AvTrak 6 OEM and AvTrak 6 OEM available
- Bespoke designs also available on request
- All AvTrak 6 family use 6G common software platform
- Nano AvTrak 6 OEM is the smallest transceiver available in the market at 56 mm x 88 mm



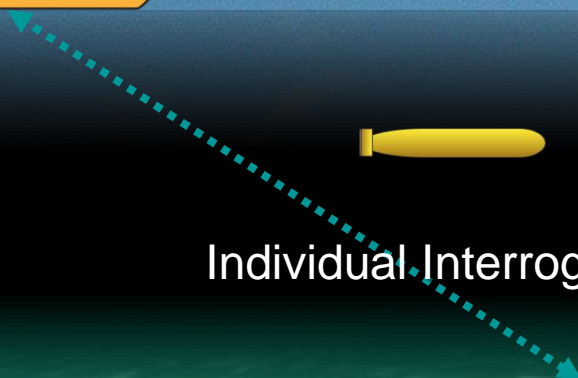


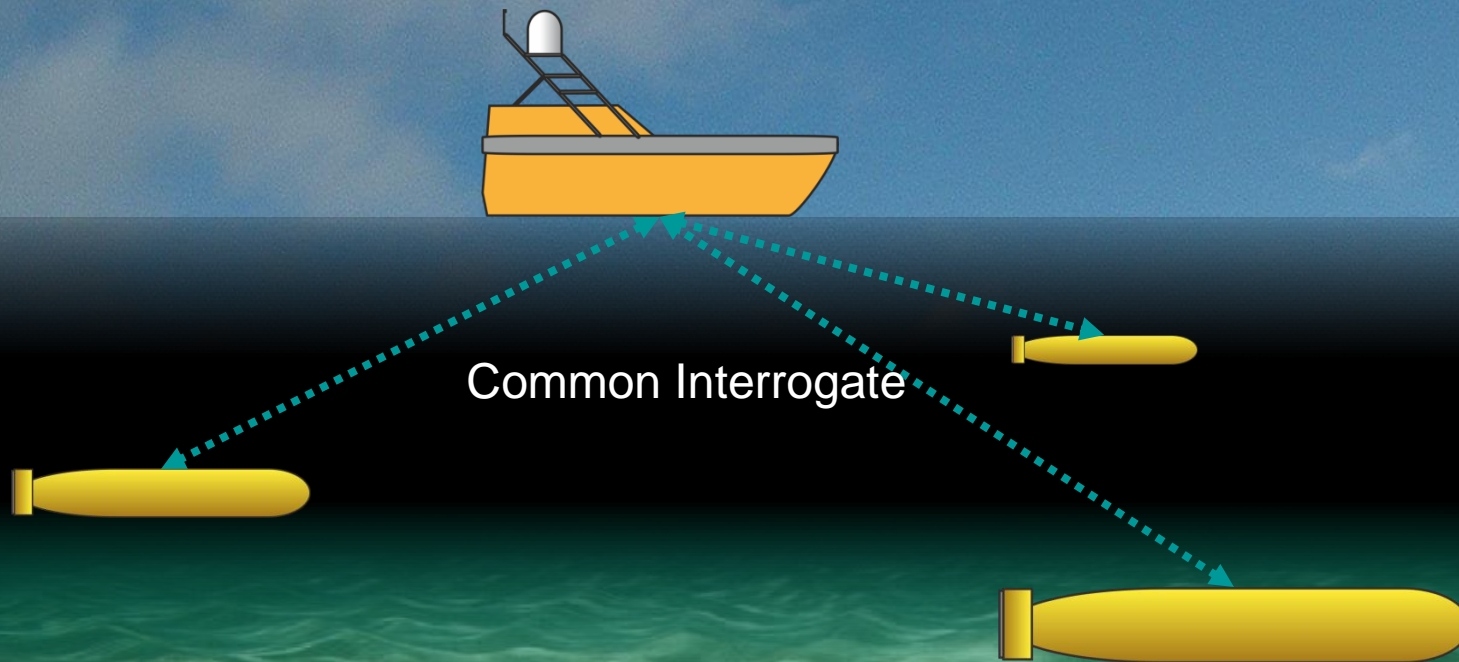


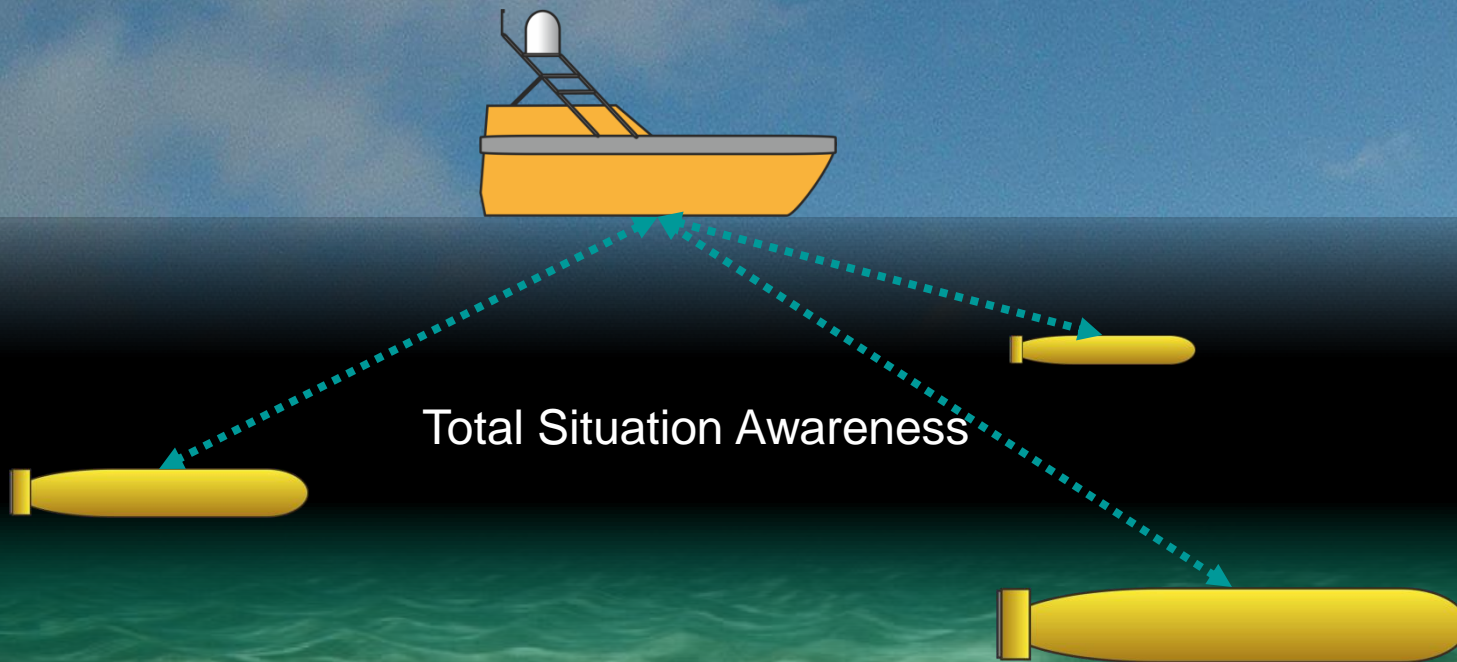




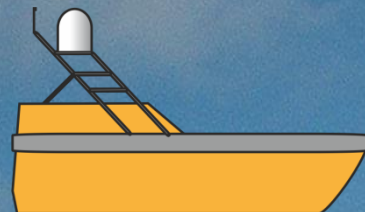
Individual Interrogate



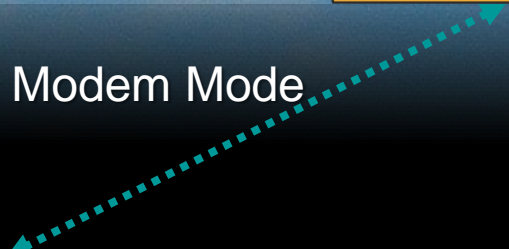


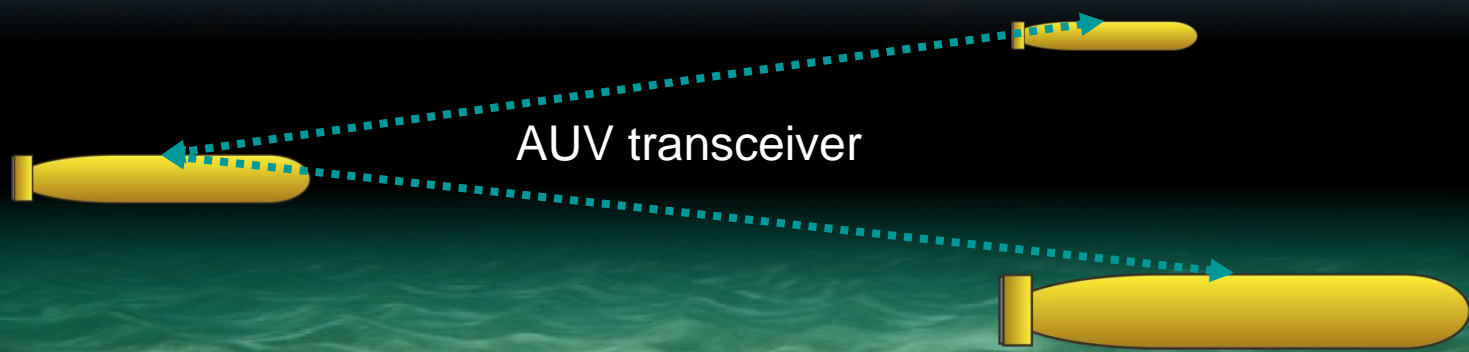
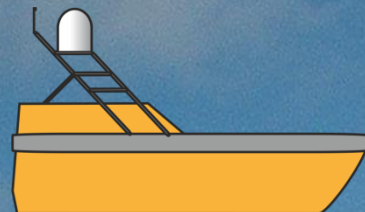


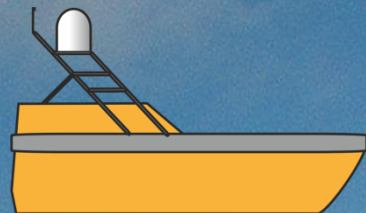
Total Situation Awareness



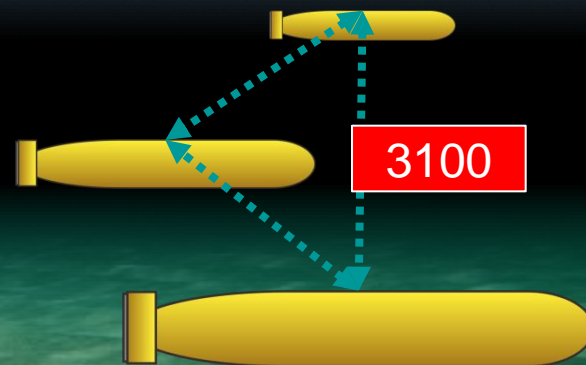
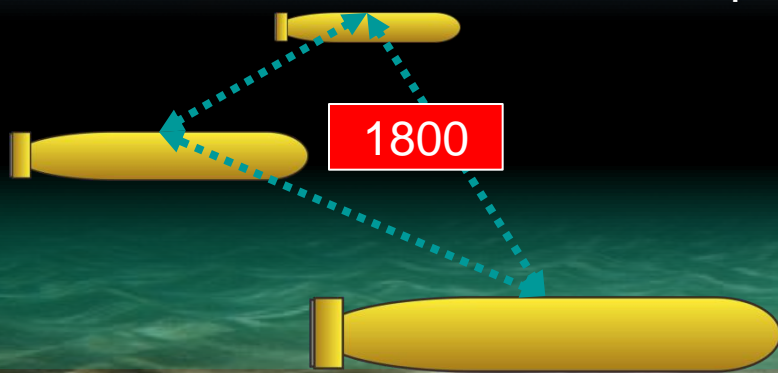
Modem Mode

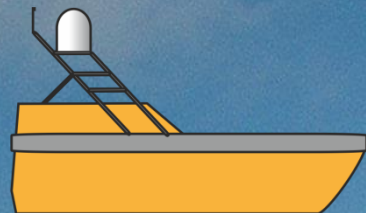




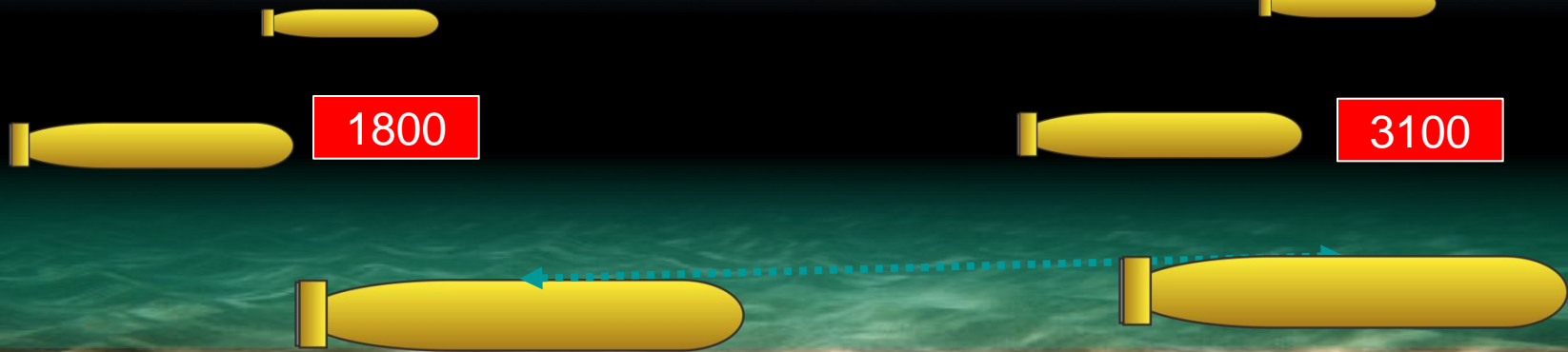


Frequency Layers





Frequency Layers



**Ship 1** 1s

Latitude **51.2858625° N**

Longitude **0.8294600° W**

Depth **0.0m**

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**3001** 0s

Latitude **51.2856997° N**

Longitude **0.8308579° W**

Depth **99.5m**

---

**3002** 0s

Latitude **51.2856107° N**

Longitude **0.8308429° W**

Depth **99.6m**

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**3003** 0s

Latitude **51.2855216° N**

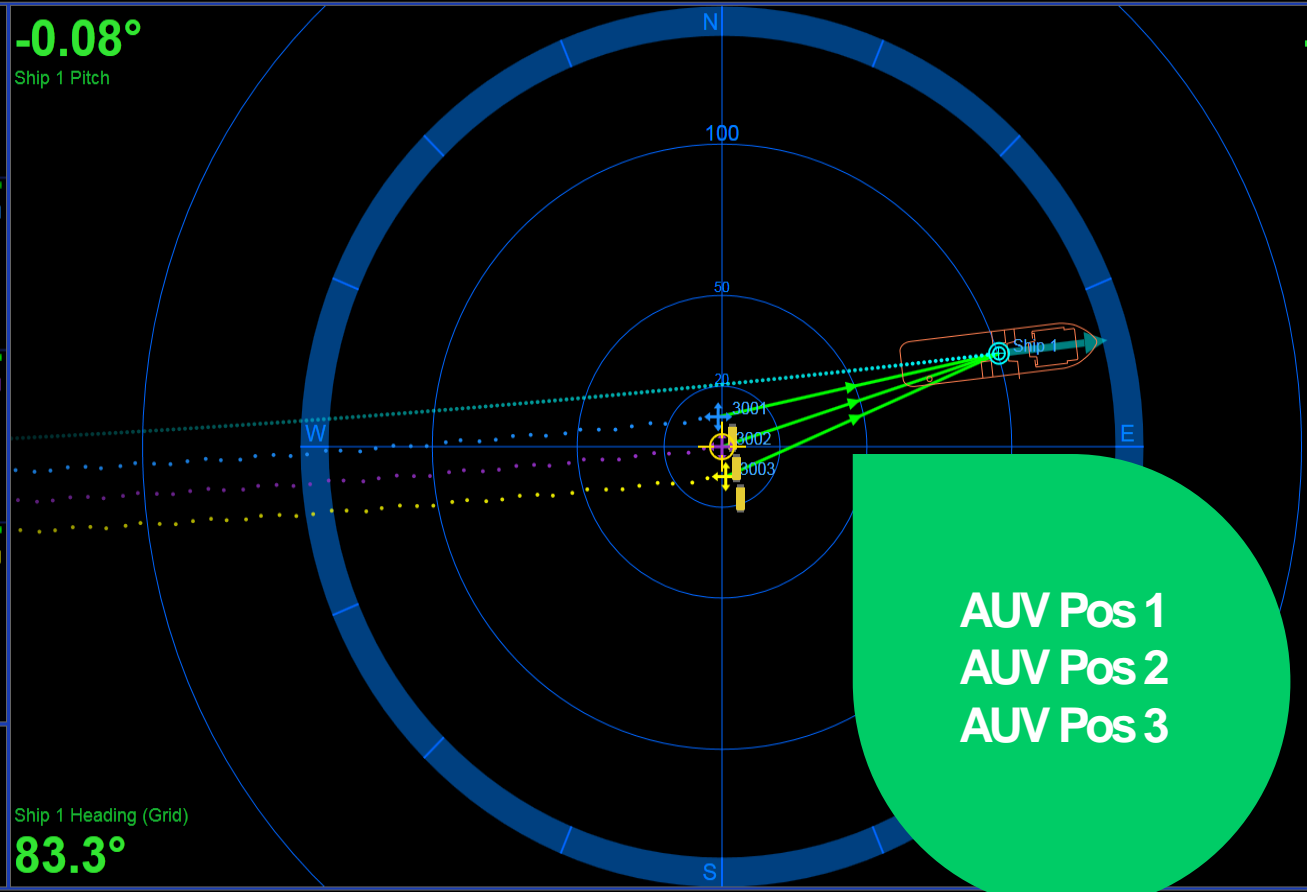
Longitude **0.8308286° W**

Depth **99.6m**

**-0.08°**  
Ship 1 Pitch

**-0.46°**  
Ship 1 Roll

Ship 1 Heading (Grid)  
**83.3°**



Ship 1
3001
3002
3003



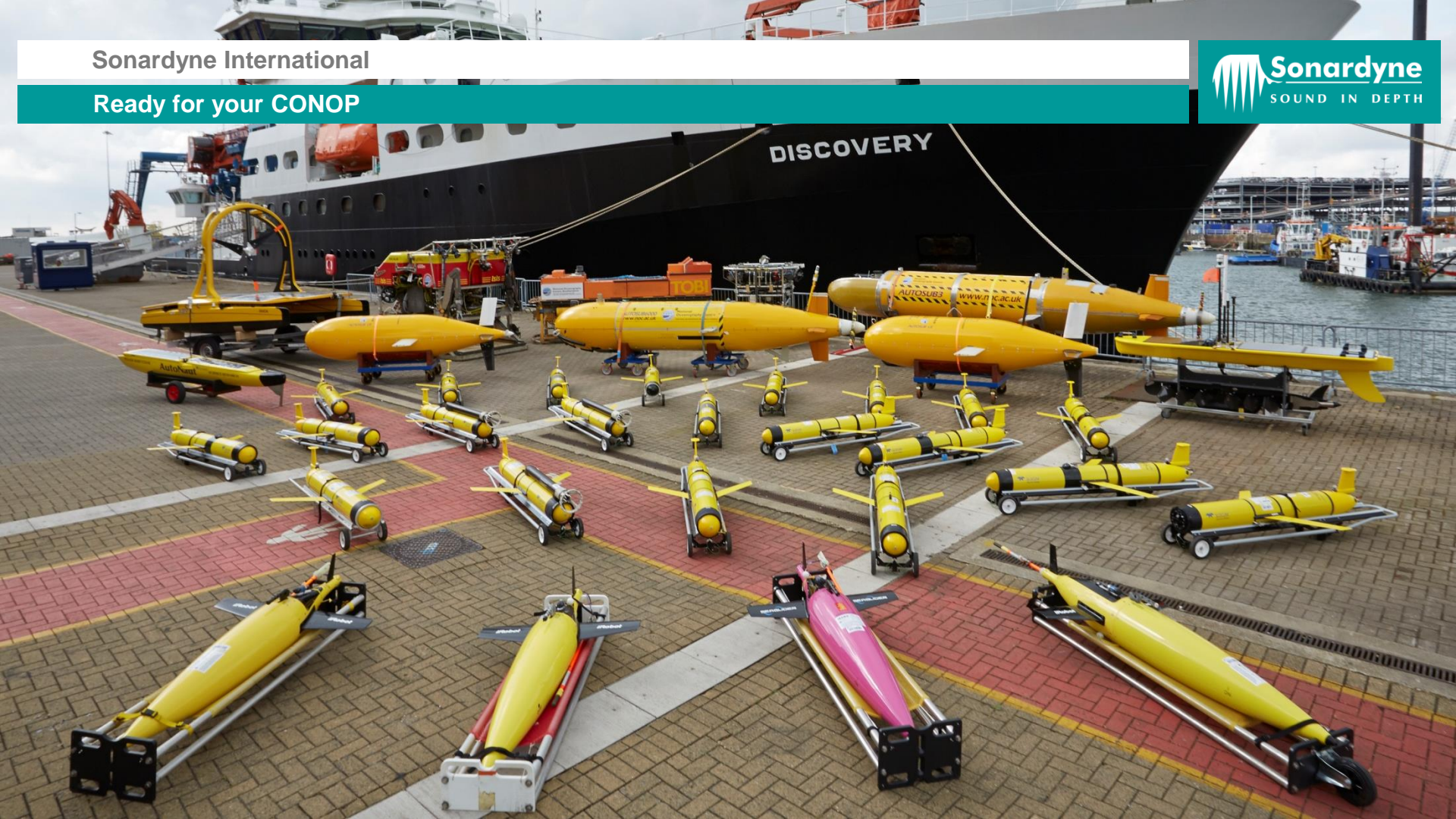


(U.S. Navy photo by Mass Communication Specialist 1st Class Peter D. Blair/Released)



Sonardyne International

Ready for your CONOP





**SUBSEA TECHNOLOGY**

**Thank you for your time today  
Any questions?**

SONARDYNE.COM



**POSITIONING  
NAVIGATION  
COMMUNICATION  
MONITORING  
IMAGING**