







2000+ EMPLOYEES

80 COUNTRIES

24/7 21 **TECHNICAL SUPPORT INDUSTRIAL SITES** 

15 % revenue increase **CAGR 18-22** 







# 320+ **MEUROS TURNOVER**

# 20 + % OF TURNOVER INVESTED IN R&D

# 2000 **CUSTOMER BASE**



2023 figures



# A global footprint



# Technology provider from components to complex systems



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# OCEANOGRAPHIC

# PORTOFOLIO



### Surface & Subsea positioning & communication



### SOFTWARE



**DelphINS** Navigation Post processing



**Delph Roadmap** 2D/3D visualization



**Delph Subsea Positioning** LBL array design & operation

### SONAR



SEAPIX F/R/C







# **Sonar Product Portfolio**

### **ECHOES Sub-Bottom Profiler**



### **DELPH Software Suite**



DELPH MAG LOCATOR







# EXPANDING REMOTE OPERATION CAPABILITIES

PORTOFOLIO



A UNIQUE COMBINATION OF SPEED ENDURANCE AND PAYLOAD CAPACIY

exail

# **DRIX 0-16**

# **Exail - Maritime Autonomy Solution**



**Maritime Autonomy** 

### **Origin : Merge of 3 iXblue division**

### **Resources:**

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- —
- —

Shipyard : ~60 R&D team, Naval architecture Project Managers, Composite specialists, engineers electricians...

Robotic & Al team : ~24

Survey specialists: ~30 hydrographers,

oceanographers, field project managers, engineers, seamen and divers

40 Autonomy freelancers to support the operation

# Autonomous vehicule references



# **Maritime Autonomy Solutions – DriX Family**



DriX H-8 Medium range USV



Long range USV

Length	7,71 m	9 m	15,75 m	
Displacement	7,6 t	2,1 t	10,5 t	
Endurance*	< 10 days	< 20 days	< 30 days	
Speed < 14 kts		< 13 kts	< 16 kts	
Fuel capacity 250 L		550 L	2,300 L (dual hybrid propulsion)	
Range	1,000 nm	2,000 nm	2,500 nm	
Communications	Wifi, 4G, Satellite communication, UHF radio	Wifi, 4G, Satellite communication, UHF radio	Wifi, 4G, Satellite communication, UHF radio	
Towing / launch & recovery	ROTVs towing capabilities	ROTVs towing capabilities	ROTVs, Inspection Class ROVs, 1,000 m rated AUVs	
Station keeping Hovering		Hovering	Dynamic Positioning	
MBES capacity	3,000 m depth	3,000 m depth	Full ocean depth	
Transportation	1x 40' High Cube container	1x 40' High Cube container	er 2x 40' High Cube container	
Other	Launch & Recovery system		Customizable stern section for additional payload integration	
Producer all sectors	A CREATER AND AND AND ADDRESS CONDITION			

Endurance depends on speed, gondola size, towing capabilities



### DriX O-16

Transoceanic range USV

### > DRIX O-16 FULL OCEAN CAPABILITY



**Available Options:** 

Main DimensionsLength Overall (LOA)15,6 mBeam:1,75 mDraft :2,5 mDisplacement :10,5 TonsDynamic positioning: Station keepingConstruction materialsHull & Deck & superstructure in E-Glass-Kevlar Epoxy	MACHINERYSTD propulsion:1 x 170 HP diesel engineElectric propulsor :20 kWPower generation:Up to 20 kW generatorAir conditioning :6000 BtuFuel Capacity:Up to 2500 LOil Maintenance Cycle:700 hours
PERFORMANCES*Speed Range Std:0 – 12 kt in Tier IIIPowered up Speed range :Up to 16 ktAutonomy at Sea :Up to 30 daysOperational conditionsSea Sate 6Survival conditionsSea state 9	AUTONOMY*Maximum Range~6000 Nm @ 4 knotsLong range Speed:> 4000 Nm @ 6 knotsMedium range Speed:> 2000 Nm @ 8 knotsFast Transit Speed:> 1000 Nm @10 knots

PERCEPTION EQUIPMENT:	LIDAR, Video Camera, IR camera
MISSION PAYLOAD:	Inside the gondola (wide range of sensors
	SSS, LBL, USBL etc
COMMUNICATION:	WiFi, Maritime Broadband Radio (MBR), S
Aft DECK CAPABILITIES	ROTV , Inspection ROV with Winch, AUV 1

### Modular aft deck: Up to 1 tonne of payload capacity Capable to launch & Recover ROV / AUV / ROTV + Winch arrangement

available. MBES EM124, EM304, EM2040, ADCP, SBP,

SATCOM, IRRIDIUM LOOO m depth.

# **DRIX O-16 - OVERVIEW**

### Dual redundant hybridation:

- Main Engine (110 kW)
- Generator (20 kW)
- Battery pack (20-30 kW.h)
- > Azipod (20 kW)

### Communication

- > RC
- > WIFI
- 4G
- Satellite (high bandwidth)
- Radio Broadband
- VHF over IP



Versatile Payload interface

### Perception

- IR Cameras
- **RGB** Cameras
- Lidar
- Radar
- AIS (Class A)
- Acoustic directional antenna

**Control Command** 

Payload Electronics

20

### Perception

Forward Looking sonar

### DRIX RANGE COMPARISON (ROUGH ORDER OF MAGNITUDE )



### DriX range estimate

DriX Autonomy in days



\*Notes: Performances & range may vary depending on Engine rating and payload configuration and weather conditions



- Drix H9 Average
- DRIX H8 Average
- DRIX 016 Avg

- DRIX H8 Average
- DRIX O16 Avg



# CUSTOMIZABLE REAR DECK WITH OVER 14 CAPACITY

A STATE AND





# > DRIX 0-16 – CONTAINER TRANSPORTATION







# SUCCESS BUILT ON A UNIQUE HMI

# REMOTE AWARENESS CAPABILITIES



### SUPERVISED AUTONOMY Shore, Ship or Office based



### Multi-Vehicles (Surface, AUV)

### Heterogeneous infrastructure

Remote Supervision

Multiple Operational Scenarios

# Over the horizon capabilities

### SUPERVISED OVER THE HORIZON OPERATION

- **GPRS NETWORK** -
- SATELLITE COMMUNICATION SOLUTION





# > OVER THE HORIZON



VPN (Virtual Private Network)



4G

### Iridium CERTUS (\*)

# > ALTERNATIVE OPS - LINE OF SIGHT FROM MOTHER VESSEL



![](_page_22_Figure_2.jpeg)

# > ALTERNATIVE OPS - LINE OF SIGHT FROM MOTHER VESSEL

![](_page_23_Figure_1.jpeg)

WIFI

### Kongsberg MBR

### Sailing over the horizon safely: CortiX Sense

![](_page_24_Figure_1.jpeg)

![](_page_25_Picture_0.jpeg)

### DriX Map

.....

AND DEC DOM: NO

INF ARRAY TOTALS

DVX 29

-

Main navigation control display

- A series of icons provides quick access to key displays and functionnality

Guidance Parameters, Conning, Keel and Network status, VHF, Object tracking

![](_page_26_Picture_4.jpeg)

![](_page_27_Figure_0.jpeg)

![](_page_28_Picture_0.jpeg)

![](_page_29_Picture_0.jpeg)

# MAIN HYDROGRAPHIC AND NAVY **REFERENCES AND USE CASE**

![](_page_29_Picture_2.jpeg)

# USE CASE: FORCE MULTIPLIER OPERATED FROM A MOTHER SHIP

![](_page_30_Picture_1.jpeg)

### SHOM- French Hydrographic Service

- Force Multiplier
- Single and Dual DriX
- 3 operations
- Bought 1 DriX since 2024

![](_page_30_Picture_7.jpeg)

### NOAA - US National Oceanographic & Atmospheric Agency

- Force Multiplier
- Single and Dual DriX
- Multiple operations
- Hydrography, Oceanography
- Fisheries
- Bought 3 DriX since 2021

![](_page_30_Picture_15.jpeg)

### Polish Navy

- Force Multiplier
- Single DriX deploiement
- Hydrography and Surveillance
- Bought 1 DriX since 2023

![](_page_30_Picture_21.jpeg)

### US 4th Fleet

- Force Multiplier
- Single DriX deploiement
- Surveillance and Detection
- 40 days Service 2024

![](_page_30_Picture_28.jpeg)

# **USE CASE PORT TO PORT OPERATION**

![](_page_31_Picture_1.jpeg)

GEOSA- SAUDI ARABIA Hydrographic Service

- Port to port operation
- 600+ Days of operation
- Services 2 DriX from REACH Subsea

US 5th Fleet

- Single DriX Services
- Surveillance, scouting survey
- Multiple operations 2023 & 2024

French Corps of Engineer

- Single DriX Services
- Underwater surveillance sea trials
- Antennas tests
- Multiple operations 2022, 2023, 2024

### REPMUS NATO EXERCICE

- Single DriX Services
- Underwater surveillance sea trials
- Hydrography and Oceanography
- Multiple operations 2023
- Invited for 2025

![](_page_31_Picture_21.jpeg)

![](_page_31_Picture_22.jpeg)

DGA

## 8 Years Sales / 8 Years Operations more than 100.000 hours

![](_page_32_Picture_1.jpeg)

**Previous operation Present positions of DriXs** 

![](_page_32_Picture_3.jpeg)

![](_page_32_Picture_4.jpeg)

![](_page_32_Picture_5.jpeg)

![](_page_32_Picture_6.jpeg)

![](_page_32_Picture_7.jpeg)

![](_page_32_Picture_8.jpeg)

![](_page_32_Picture_9.jpeg)

![](_page_32_Picture_10.jpeg)

# SURFACE AND SUBSEA SURVEILLANCE

British

Antarctic Survey

![](_page_32_Picture_14.jpeg)

![](_page_32_Picture_15.jpeg)

![](_page_32_Picture_16.jpeg)

![](_page_32_Picture_17.jpeg)

### KSA >5000km/month

### HYDROGRAPHY

![](_page_32_Picture_20.jpeg)

![](_page_32_Picture_21.jpeg)

### Ifremer

![](_page_32_Picture_23.jpeg)

![](_page_32_Picture_24.jpeg)

![](_page_32_Picture_25.jpeg)

OCEANTECH

![](_page_32_Picture_26.jpeg)

![](_page_33_Picture_0.jpeg)

# GEOPHYSICAL & UXO SURVEY

![](_page_33_Picture_2.jpeg)

# Multiple Hydrospatial Observations Geophysical / Environmental / Military Survey

Système	DriX H8	DriX H9	DriX O16
Payload	<ul> <li>Up to 3 sensors</li> <li>Shallow Water MBES</li> <li>SBP – Echoes or Innomar</li> <li>ADCP – 500kHz</li> <li>Hydrophones</li> <li>Fish Stock monitoring sonar</li> <li>USBL</li> </ul>	<ul> <li>Up to 3 sensors</li> <li>Shallow Water MBES</li> <li>SBP – Echoes or Innomar</li> <li>ADCP – 500kHz</li> <li>Hydrophones</li> <li>Fish Stock monitoring sonar</li> <li>USBL</li> </ul>	<ul> <li>Shallow Water MB</li> <li>Full ocean depth M</li> <li>Forward looking so</li> <li>ADCP 50kHz – 100</li> <li></li> </ul>
Towing capacity	<ul> <li>FlipiX fixed length cable</li> <li>100m max immersion</li> <li>Sidescan sonar</li> <li>Magnetometer</li> <li>Streamer passive acoustic</li> </ul>	Winch Cable Or FlipiX fixed length cable 100m max immersion - Sidescan sonar - Magnetometer - Streamer passive acoustic	<ul> <li>Winch cable</li> <li>FlipiX</li> <li>Sidescan sonar</li> <li>Magnetometer</li> <li>Streamer passive a</li> <li>Oceanographic wind</li> </ul>
Deployment capacity	None	None	ROV small inspection ROTV AUV small 300m max
Draft	2m	2m	2.5m
Survey speed / Max Speed	8kts / 13kts	8kts / 13kts	8kts / 13kts
Endurance @survey speed	3 days – 500Nm 1 to 2 days with FlipiX	7 days - 1000Nm expected 3 days with FlipiX	12 to 30 days 3500Nm
Operations	Port to Port Force Multiplier with LARS	Mainly Port to Port Possible LARS	Port to Port
	Overing mode	Overing mode	Static Positioning

![](_page_34_Picture_3.jpeg)

acoustic nch

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depth

![](_page_34_Picture_7.jpeg)

![](_page_34_Picture_8.jpeg)

### Conclusion Key take away

>DRIX becomes DriX Series to push further the limit of applications

>A versatile and open architecture offering (multiple payload, coms, ROS)

>A wide range of services: Training, offshore support, ROC support, Maintenance, spares

>A unique track record

**Constant improvment** 

>A wide choice of possible Business model

- GOGO (Government owned, Government operated)
- GOCO (Government owned, Corporate operated)
- COCO (Corporate owned, Corporate operated)

![](_page_35_Picture_10.jpeg)

![](_page_35_Picture_15.jpeg)