

Asso.subsea

Company presentation



Bridging the distance - **Connecting the World**

Agenda

1. Introduction

2. Vessels And Trenchers

Company Owned Vessels

Trenchers

3. Main Projects Pipeline

1 Introduction

We are **Asso.subsea**

- Formerly known as Assodivers
- **Greek-owned and based company**
- Founded in **1976**
- Providing services to clients for more than **47 years**
- Specialized in **worldwide submarine utilities** installation and repair activities
- **In-house design** of vessels and tools
- **Creative, innovative, reliable and cost-effective solutions** fitted to customer needs

45+

Years
of Excellence



25+
units



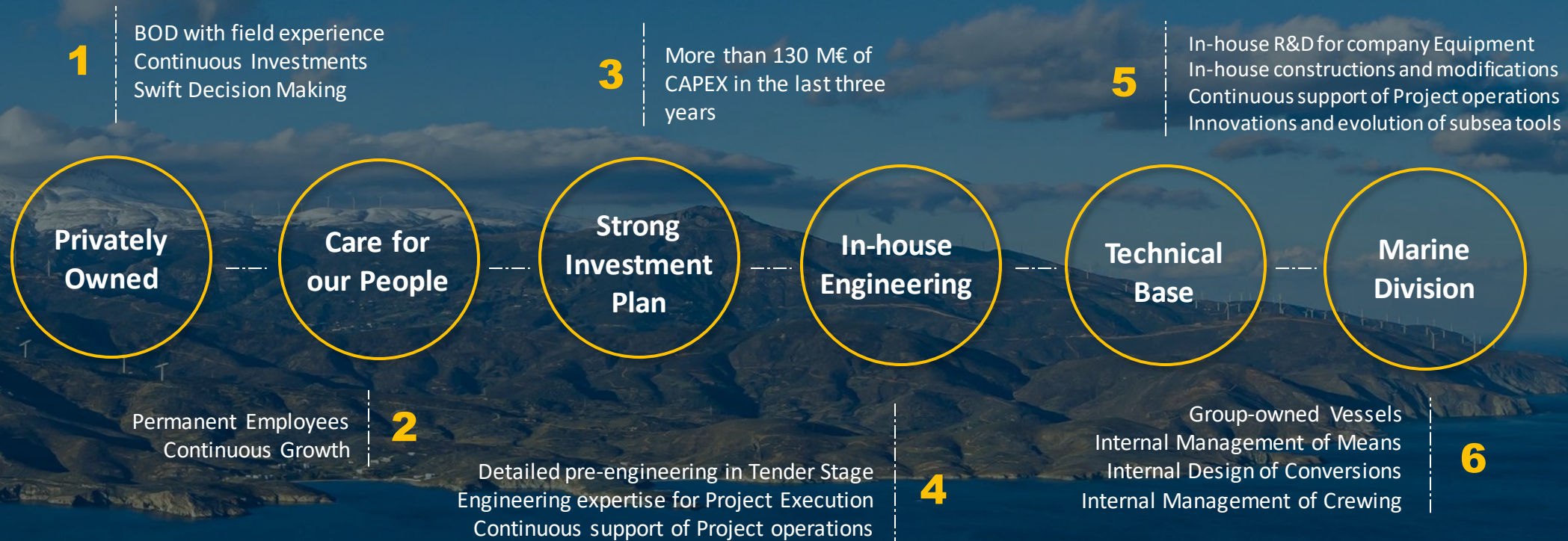
860
professionals



9
vessels

1 Introduction

ASSO Added Values



1 Introduction

ASSO QHSE Management System



Excellent project performance as measured by extensive set of KPIs



In 2022 LTIRF reduced to 0 and TRIR to 6, while man-hours increased to 1,230,000



Safety First

No fatality or serious injury in Group's history



Favorable results noted in Client QHSE Audits, Suitability Surveys, HSE inspections, CMID inspections, and PSC inspections



No significant environmental incident in Group's history



No maritime accident in Group's history

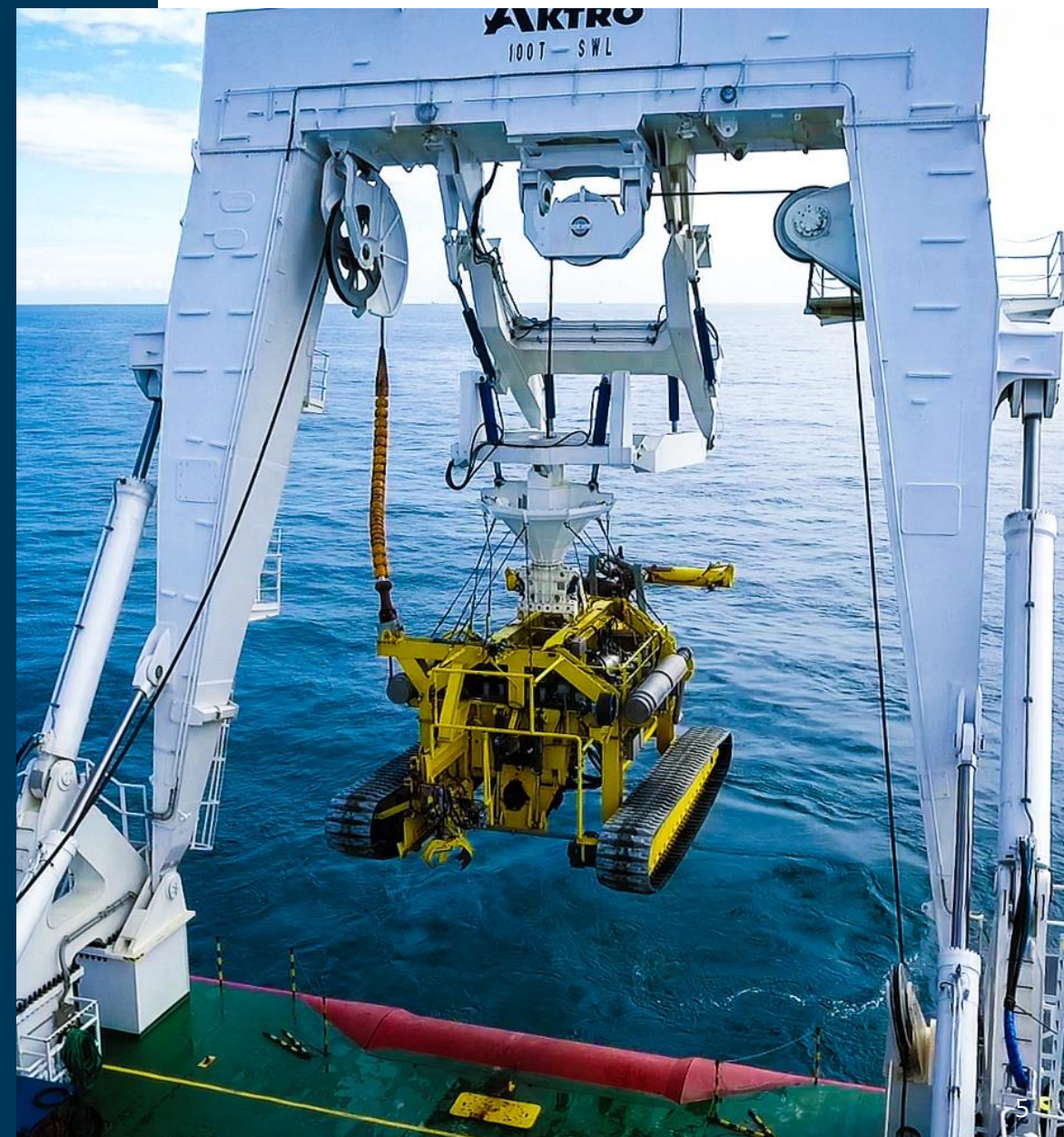
Integrated management system covering all ASSO activities, i.e. shore-based (offices, technical base), maritime, project-related

Certified to **ISO 9001:2015**, **ISO 14001:2015**, **ISO 45001:2018** by Bureau Veritas Certification

Ship management companies also certified to **ISM Code** by Bureau Veritas

Marine means also certified to **ISM Code**, **ISPS Code**, **MLC, 2006** by Bureau Veritas

Integrated management system overseen by single Group-wide function, namely the **R&QHSE Team**, which consists of QHSE Engineers, QHSE Advisors and DPA



Board of Directors

Executive Team



CEO



COO

Chief Operating Officer



CBO

Chief Business Officer



CFO

Chief Financial Officer

Cable Installation



Executive Director Cable Installation



Business Solutions



Assets



Engineering
Studies



Operations



Project Management

Central Functions



IT

Information
Technology



RQHSE



People
Operations
& Culture



Supply
& Logistics



Financial

Business
Development

Commercial

Marine

Robotics

Inter-
connectors

OWFs

Specialty

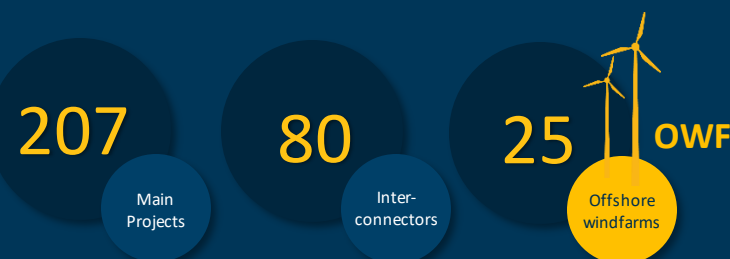
1 Introduction

ASSO worldwide references

Our worldwide projects

Asso.Subsea has participated in a string of operations worldwide, working for some of the leading players in the field.

25 FOC-flexibles-others, 77 repairs



Arabian Gulf

GCCIA
Kahramaa

Indonesia

Java-Bali

USA & Australia

Hudson River
Replacement
BassLink

Belgium & Holland

Seamade OWF Project
HKZ Interlink Repair

France

Fecamp
St Brieuc
IFA 2 Interconnector

UK & Ireland

Viking Link Interconnector
IFA2 HVDC & HVAC
Interconnector
Rampion OWF
Western HVDC Link
Shannon River
Rathlin
Isle of Man

Greece

Lavrio – Karystia
Kafireas Interconnection
St. George OWF
Evia – Andros – Tinos
Cyclades Phase A, B, C, D
Attica – Evia
Attica – Crete
Mantoudi- Skiathos

Turkey

Çanakkale II
Çanakkale I

Germany & Denmark

Viking Link Interconnector
COBRA Interconnector
Kaskasi OWF Exports
Deutsche Bucht – GT1 - Albatros
Kriegers Flak CGS
CWA I
DolWin 3
BorWin 3
Veja Mate
HelWin 2
SylWin 1
BorWin 2 – HelWin 1

Italy & Spain

Malta-Sicily Repair
Messina
SAPEI
Mallorca – Ibiza
COMETA
Italy-Montenegro (MONITA)
Capri-Torre Annunziata
Italy-Greece (GRITA)
ESMA (Remo)

Agenda

1. Introduction

2. Vessels & Trenchers

Company Owned Vessels

Trenchers

3. Main Projects Pipeline

2 Vessels & Trenchers

Our Fleet

Cable Laying Vessels

Company owned CLV's diversified characteristics and ASSO flexibility provide complete 'laying' solutions for:

- Deep water operations
- Shallow water operations
- Challenging shore landings
- Platform pull-ins
- Simultaneous lay and burial



CLV Ariadne

Key Features:

DP-3 Specialized Cable Laying Vessel
Extensive track record on diverse subsea construction projects under harsh environmental conditions (also as Viking Poseidon).
High Sea State capability.
Accommodation: 106 Persons
Built 2009, Norway - under Greek Flag and ABS Class

Currently Equipped with:

- **2x Turntables of 7,000T combined total**
(5,000T & 4,000T)
- **1x Work-Class ROV**
- **1x 250T Offshore Crane**
- **Pick-up Arm and Cable Pathway**
- **PLGR Equipment**



CLV Atalanti

Key Features:

DP-2 Specialized Cable Laying Vessel
Extensive track record on diverse subsea cable installation projects.
Shallow water operation with beaching capability.
Bundle and SLB cable laying capabilities
Accommodation: 77 Persons
Hull built 2008, China / Outfitted 2010, Greece - under Greek Flag and ABS Class

Equipped with:

- **1x Turntable of 4500T**
- **1x Turntable of 2500T**
- **1x Work-Class ROV**
- **1x 35T Offshore Crane**
- **3x Pick-up Arms and Cable Pathways for maximum flexibility**
- **2x Spud cans for position keeping**
- **4 point mooring system**

2 Vessels & Trenchers

Our Fleet

Trenching Support Vessels

Company owned TSVs optimized for supporting the Group's specialized subsea spreads:

- Hard-soil trenching vehicles
- Jetting vehicles
- Multi-functional pre-trenching ploughs
- Boulder removal grabs
- Mattress installation frames etc.
- State-of-the-art Work-Class ROV systems



TSV Argo

Key Features:

DP-2 Specialized Trenching Support Vessel. Extensive track record on diverse subsea cable installation projects.
Multi-role capability
80T Bollard pull capability
SPS Certified
Accommodation: 112 Persons

Built 2011, Spain – under Greek Flag and ABS Class

Equipped with:

- 2x Trenching support spreads
- 1x 150T Offshore Crane
- 2x Work Class ROVs
- 1x Moonpool



TSV Aethra

Key Features:

DP-2 Specialized Trenching Support Vessel. Extensive track record on diverse subsea cable installation projects.
Multi-role capability
150T Bollard pull capability
SPS Certified
Accommodation: 87 Persons

Built 1999, Norway – under Greek Flag and ABS Class

Equipped with:

- 2x Trenching support spreads
- 1x 100T A-frame
- 1x 150T Offshore Crane
- 1x Work Class ROV
- 1x Moonpool with Boulder Grab System



TSV Athena

Key Features:

DP-3 Specialized Trenching Support Vessel. Extensive track record on diverse subsea offshore projects.
Multi-role capability
110T Bollard pull capability
SPS Certified
Double-deck for simultaneous operations
Accommodation: 100 Persons

Built 2013, Singapore – under Greek Flag
Equipped with:

- 2x Trenching support spreads (from 2022)
- 275T Offshore Crane
- 1x 170T A-Frame
- SAT & Surface Diving Systems
- Anchor and chain handling systems
- 1,500T Cable Carousel (optional)

2 Vessels & Trenchers

Our Fleet

General Support Vessels

The primary role of the Alcione is to support all shore-end trenching operations related to cable laying (either pre-excavation or post lay burial), and any near-shore or coastal subsea scope which may be necessary.

The primary role of the Astrea is to support in the context of route preparation such as PLGR surveys. She is also engaged as a TSV with trencher tools.



MSV Astrea

Key Features:

DP-2 Specialized Trenching Support Vessel. Extensive track record on diverse subsea cable installation projects.
MultiRole capability
Shallow water operation capability
SPS Certified
Accommodation: 55 Persons

Built 1987, Norway / Conv. 2008, Greece – under Greek Flag and ABS Class

Equipped with:

- 1x Trenching support spread
- 1x 55T A-frame
- 1x 20T Offshore Crane
- 1x Work Class ROV



MSV Alcione

Key Features:

7-point anchor spread
2 x Anchoring Spud-poles
2~2.5m draft capable to reach shallow shore-ends
MultiRole capability
Accommodation: 12 Persons

Built 2006, Italy – under Greek Flag and ABS Class

Equipped with:

- 1x Clam shell excavation Gear
- 1x Hammer
- 1x inspection class ROV
- 1x 120T Crane



AHTS Artemis

Key Features:

DP-1 Anchor Handling Tug and Supply Vessel
Extensive track record on towing and subsea cable installation projects
MultiRole capability
132 Tons Bollard Pull
Accommodation: 30 Persons

Built 1984, Germany – under Cyprus Flag and ABS Class

Equipped with:

- 2 x Towing Winches
- Stern roller, shark-jaws and towing pins

2 Vessels & Trenchers

Deep Water Trenchers

Soft Soil Trencher



AssoJet III Mk1
Jetting Vehicle (1.3 MW)



AssoJet III Mk2
Jetting Vehicle (1.56 MW)

Hard Soil Trencher



AssoTrencher IV Mk9
Mechanical Trencher – Chain or Wheel modules



AssoTrencher IV Mk12
Mechanical Trencher – Chain or Wheel modules

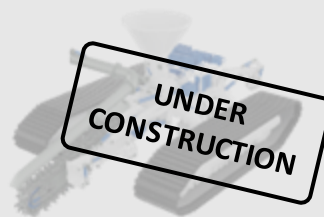


AssoTrencher IV Mk13
Mechanical Trencher – Chain or Wheel modules and backfilling mode

Shallow Water Trencher

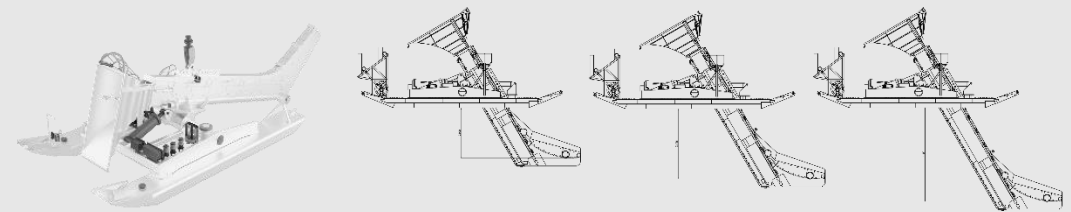


Assotrencher V Mk3
Shallow water trencher – configurable with jetting swords, cutting chain or wheel



Assotrencher V Mk4
Shallow water trencher

Simultaneous Lay & Burial Plough



Hydroplow(s)
Jet Sleds – configurable for surface fed or onboard pumps – variable depth stingers



Boulder Clearance & Pre-trenching services

Multi-Functional Plough

Key Features:

- ✓ 3x modes of operation:
 - ✓ Boulder Clearance Mode
 - ✓ Pre-Trenching Mode
 - ✓ Backfilling Mode
 - ✓ Fully instrumented & steerable
 - ✓ Continuous Bollard Pull 150Te
- ✓ Boulders disposal up to ~2.0m
 - ✓ 0.7m penetration during BC for buried boulders
 - ✓ Clearance corridor of 12m
 - ✓ More than 600kPa soil strength capability
 - ✓ Trench depth up to 1.7m
 - ✓ Y-shaped Share and Trench Type
 - ✓ Trench base width 0.5m

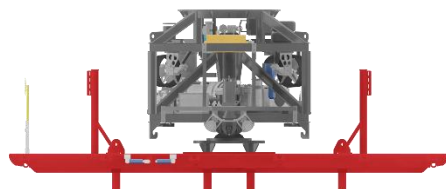
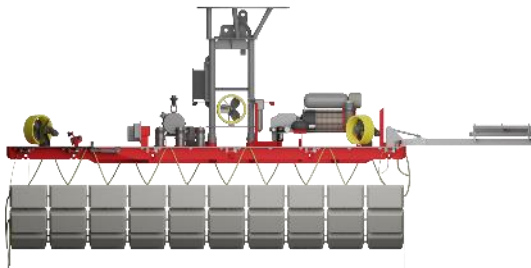
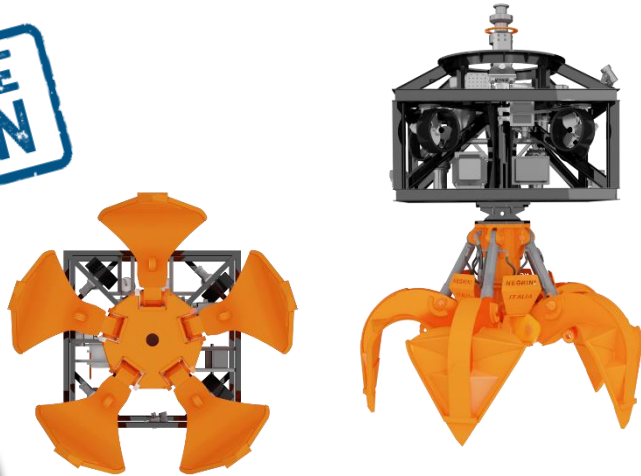
Up to
1.7m
DOL



2 Vessels & Trenchers

IN-HOUSE
DESIGN

1100 m
Water
Depth



Additional services

Boulder removal and Mattresses installation

AssoGrapple series

Key Features:

- ✓ In-house system design
- ✓ 3.1m x 2.1m x 6.5m, along with a powerful 200HP HPU
- ✓ Fast and accurate removal of boulders
- ✓ Highly maneuverable with four thrusters

- ✓ Min/Max boulder dimension: from 0.3m up to 3.0m in one direction (Length, Width, Height)
- ✓ Max Capacity heaped: ~2.3 m³
- ✓ Max weight of the boulder: 15Te
- ✓ Max Operational Depth: 3,000m

AssoMat Series

Key Features:

- ✓ This in-house system designed for fast and accurate installation of mattresses and similar products designed for provision of protection on cables, pipelines and crossings

- ✓ Max product weight: 12000kg
- ✓ Max Operational Depth: 3,000m
- ✓ Up to 8 low light cameras 12 LED lights
- ✓ Up to 4 pan/tilt
- ✓ Up to 4 sonar (both imaging & profiling)
1 x altimeter ,1 x gyro compass

Agenda

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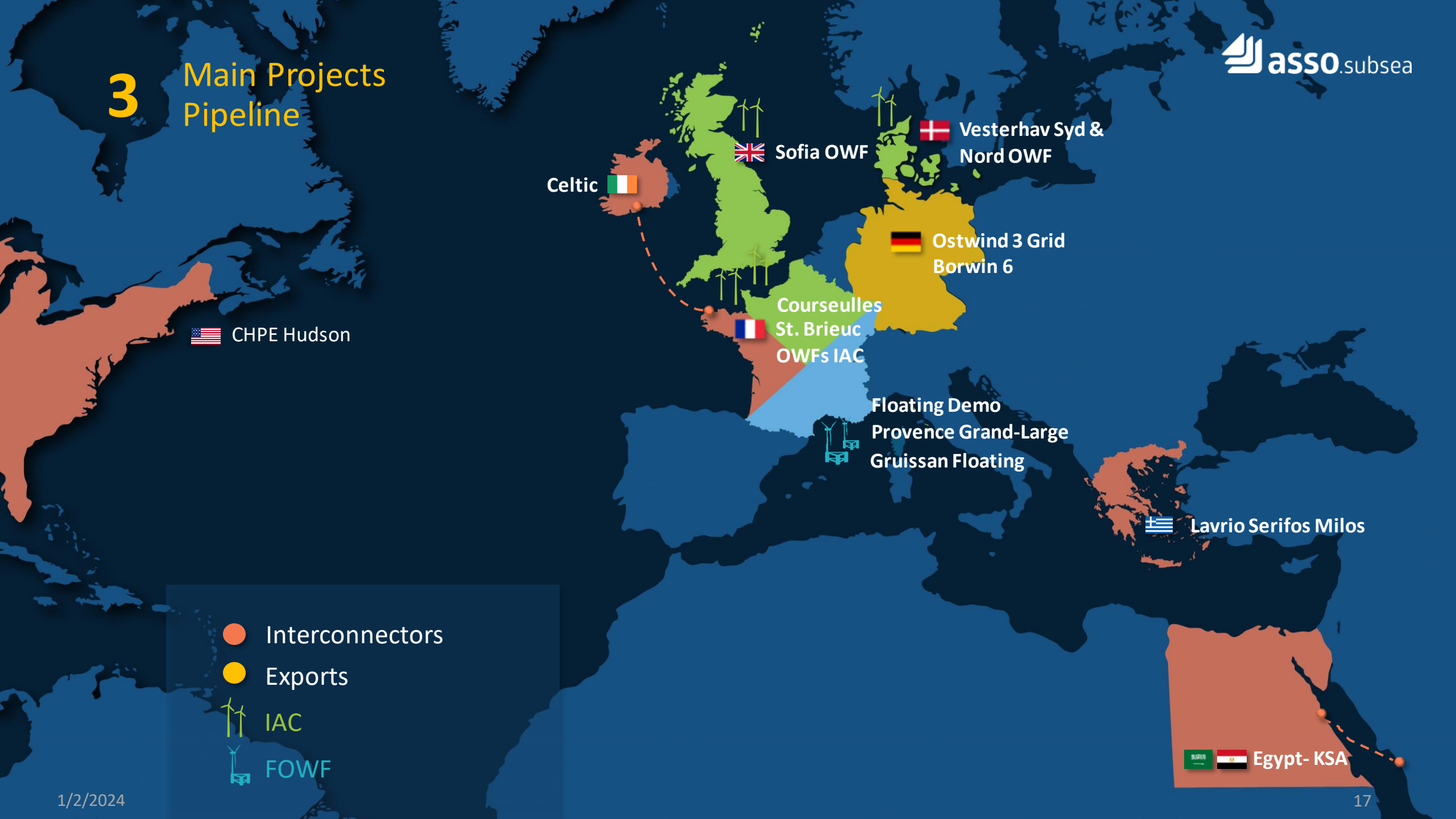
2. Vessels & Trenchers

Company Owned Vessels

Trenchers

3. Main Projects Pipeline

3 Main Projects Pipeline



- Interconnectors
- Exports
- ↑ IAC
- ↑ FOWF

Thank you



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