

# From shipyard to field – Optimising installation of floating production units





# Maersk Supply Service

Global player with 50 years experience



1967  
Maersk Supply  
Service founded

2003  
First field and subsea  
support vessel delivered

2019  
Fleet renewal programme  
complete with delivery of  
10 new vessels

1979  
Delivery of first anchor  
handling supply vessel  
over 10,000 BHP

2017  
Maersk Supply Service  
begins offering full  
scope integrated  
solutions



Hebron Tow, Jeanne d'Arc Basin 2017

# Versatile assets

A dynamic fleet of 40+ offshore support vessels and crews

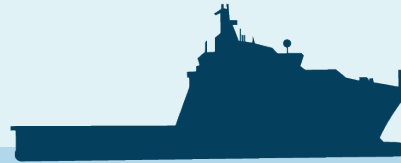
9

SUBSEA SUPPORT VESSELS



30

ANCHOR HANDLING TUG SUPPLY VESSELS



3

CRANED ANCHOR HANDLING VESSELS



## RENEWED FLEET

- 23 vessels divested
- 10 newbuilds delivered
- Average fleet age reduced to <10 years
- 44-vessel modern fleet



## ENERGY EFFICIENCY

- 13% reduction in CO2 emissions since 2016
- Target for 5% reduction in fleet fuel consumption



**MAERSK**  
SUPPLY SERVICE



# In-house delivery

One point of contact working  
with our customers to optimise  
operations every step of the way





# Culzean towing and mooring project

One contract covering project management, engineering and offshore execution

Source:  
Google Maps

**Customer:**  
Total E&P UK

**Location:**  
Culzean field,  
UK North Sea

**Water depth:**  
90 m

**No. of vessels:**  
8

**Project duration:**  
From 2017 to  
2018

**Vessel days:**  
550

**Operations:**  
FSO Tow  
Mooring  
Installation  
FSO Hook-up



# Safe, successful delivery

On time and on budget

## Parameters

Ready to connect in Singapore on 01-06-2018

Complete hook up in North Sea by Mid Sept 2018

12,200 NM transit to the North Sea at an average speed of 8 knots including stops

Zero incidents or accidents





# How did we do it?



## REDUCING INTERFACES

Increasing performance by limiting unnecessary interfaces



## COLLABORATION

Encouraging a collaborative approach and building the A-team



## CALL ON EXPERIENCE

Maximising benefits drawn from user experience



A person wearing a high-visibility yellow-green suit with "MAERSK SUPPLY SERVICE" printed on the back, a yellow helmet, and safety glasses stands on a ship's deck. They are looking out over a calm body of water towards a range of mountains under a clear sky. The scene is captured from behind the person, emphasizing the vastness of the maritime environment.

Reducing risk and increasing  
performance by limiting  
unnecessary interfaces



# Culzean project timeline

Employing in-house assets to eliminate schedule risks

## TOW

12,200 NM



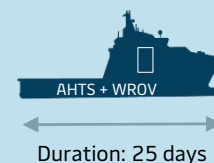
## INSTALLATION

- 12x 50 tonne anchors
- Tensioned to 723 tonnes
- 12x 140mm chains and sheathed wires

### BOULDERS REMOVAL



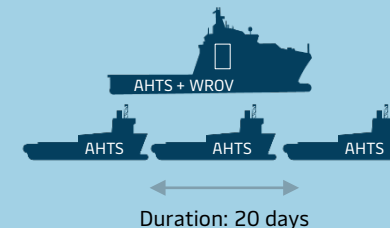
### PRESET OF ANCHORS



### MOORING LINES INSTALL



### HOOK UP



Q3

Q4

2017

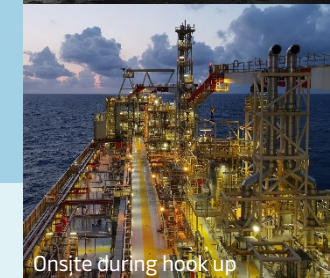
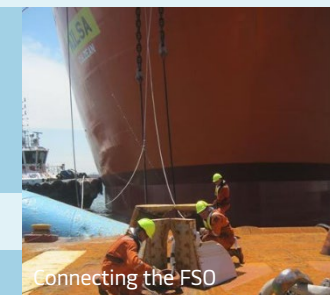
Q1

Q2

2018

Q3

Q4





# The right vessels at the right time

Utilising the most extensive fleet of large AHTS vessels among solutions providers

AHTS	Class	No.	Build Year	Bollard Pull	BHP	Deck	Winch
	M	6	2019	260 t	23,000	924 m <sup>2</sup>	450 t
	C	2	2014	180 t	15,000	545 m <sup>2</sup>	400 t
	L	6	2010	260 t	23,500	810 m <sup>2</sup>	500 t
	T	10	2009	170 t	13,800	600 m <sup>2</sup>	400 t
	D	2	2006	220 t	18,200	755 m <sup>2</sup>	400 t
	A	2	2004	260 t	23,500	803 m <sup>2</sup>	625 t
	H	2	2002	190 t	17,500	537 m <sup>2</sup>	500 t

Four L-class vessels used during the Culzean project



**Guarantees technical solution**



**Ensures availability at the optimal time**



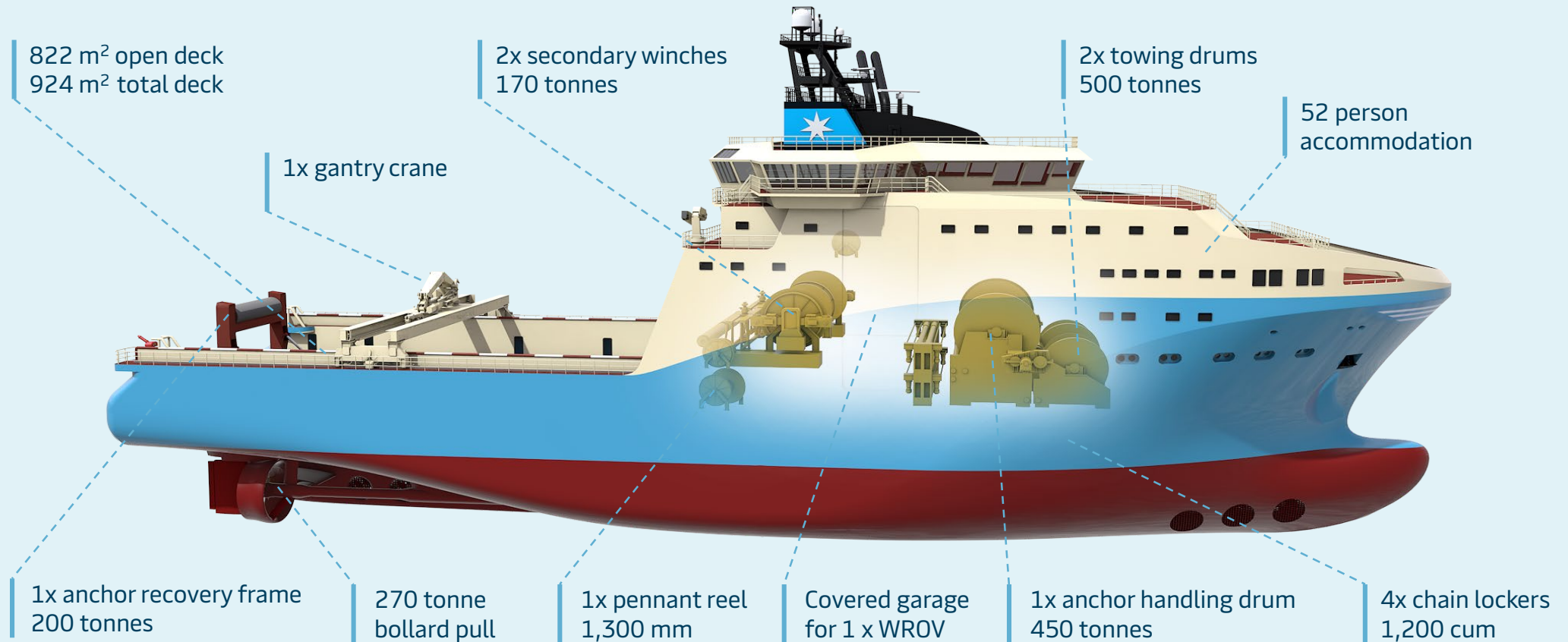
**Eliminates schedule risks**

SSV	Class	No.	Build Year	Accom.	Helideck	Deck	Crane	ROVs
	I	4	2018	120	Y	1850 m <sup>2</sup>	400 t	2
	F	1	2015	120	Y	1120 m <sup>2</sup>	250 t	2
	N	2	2009	60	Y	775 m <sup>2</sup>	200 t	2
	A	3	2003	86	N	770 m <sup>2</sup>	250 t	2
	Cable	2	2000, '16	68, 90	Y	1200, 2308 m <sup>2</sup>	30, 50 t	0



# M-class AHTS

Designed for increased fuel efficiency, capacity and safety





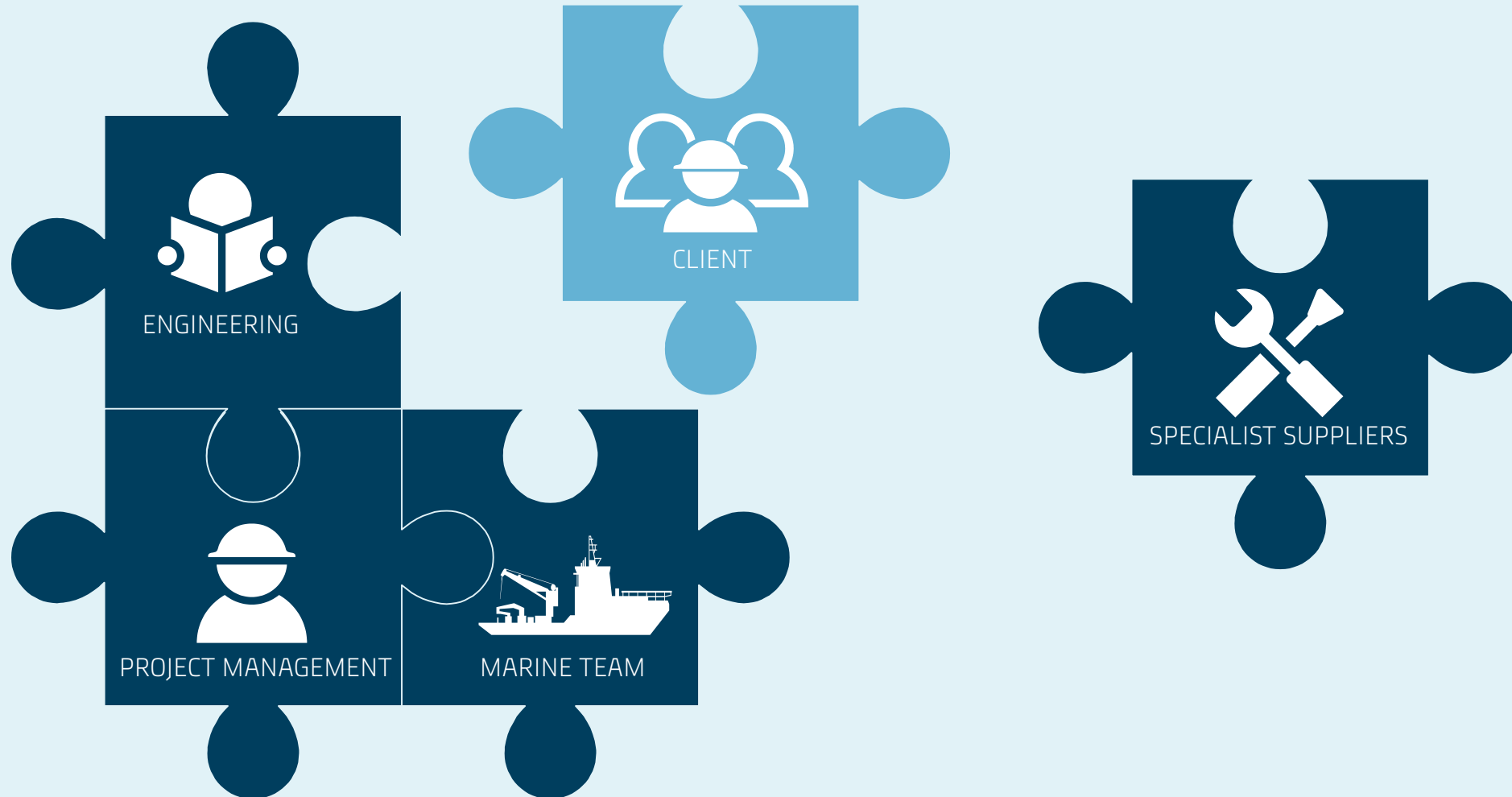
# Ensuring a collaborative approach and building the A-team





# Building the A-team

Needs to begin as soon as the contract is signed to create alignment



# Early engagement

Ensures the solution design and methodology is optimised from the marine perspective






# Offshore synergies

Open collaboration to reduce operational risks



Using vessels owned and operated by the same provider means the offshore execution team has in-depth knowledge of each other's capabilities, and the technical capabilities of the vessels involved.



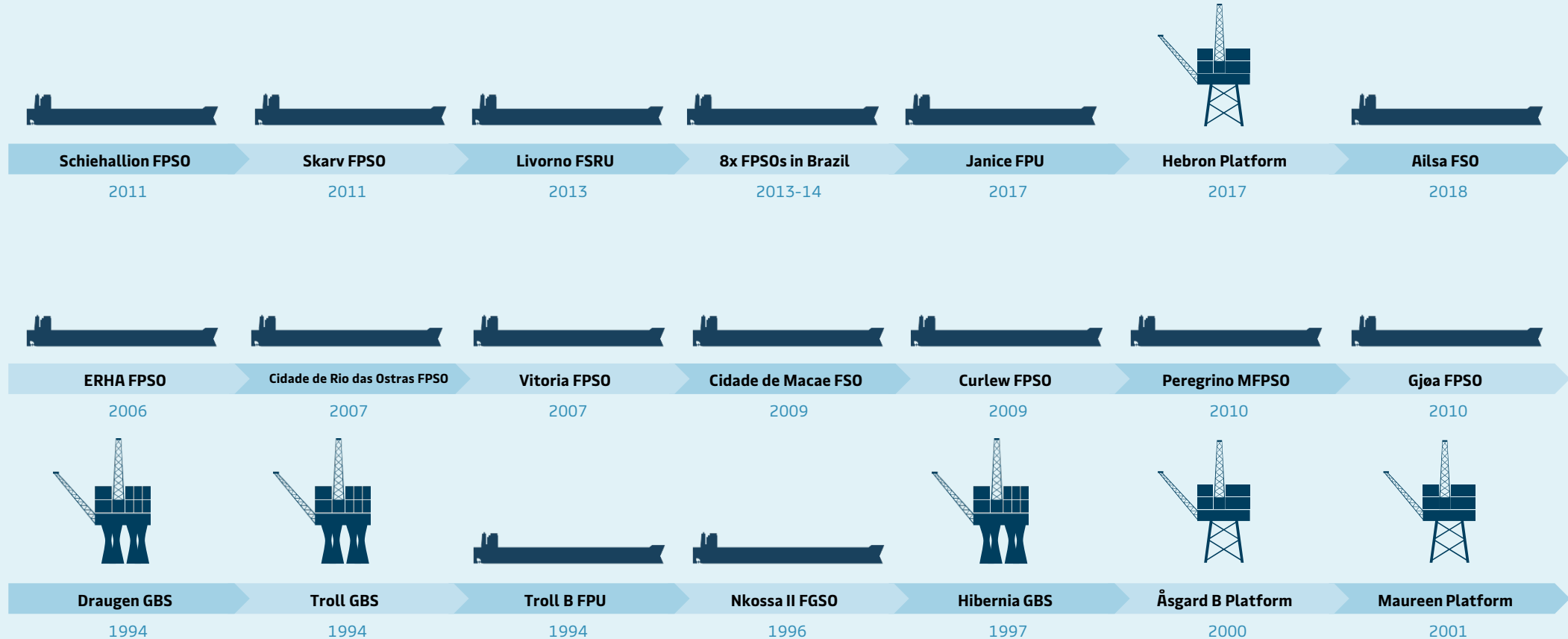
A person is seated in a ship's control room, viewed from behind. They are wearing a blue shirt and a black chair with "aker yards" written on the back. The control room features several computer monitors displaying various data, including a map and graphs. The person's hands are on a control panel with many buttons and joysticks. A large window in front of them shows a vast blue ocean with a long, thin structure, possibly a pipeline or cable, stretching across the water. Two small boats are visible on the left side of the structure. The sky is overcast.

Maximising  
benefits drawn from  
user experience



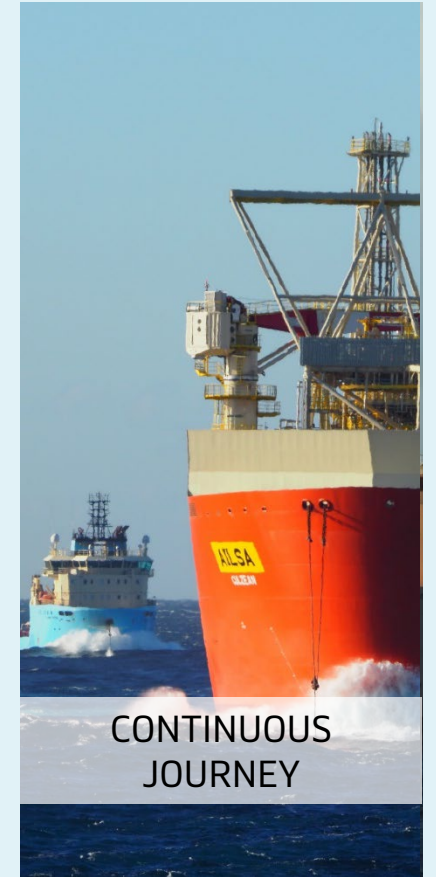
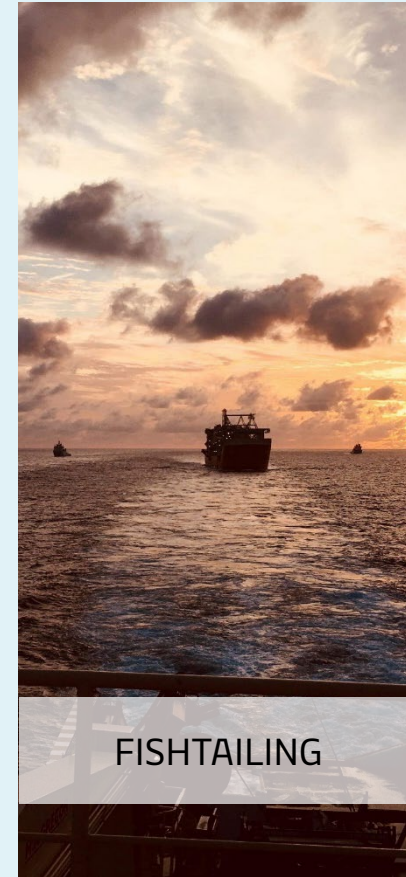
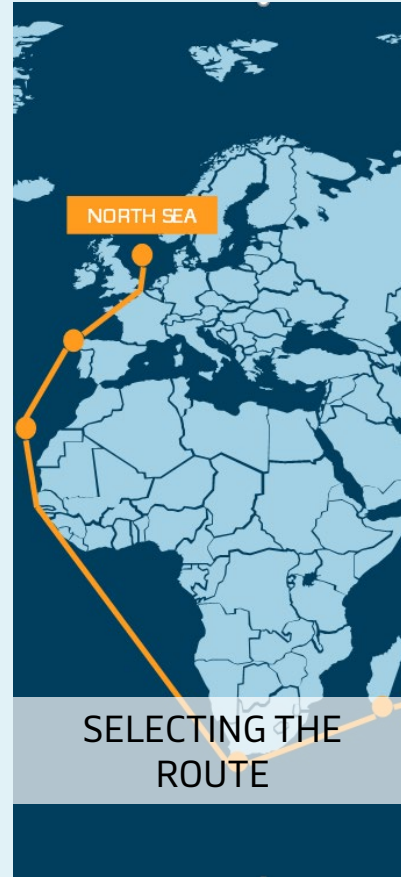
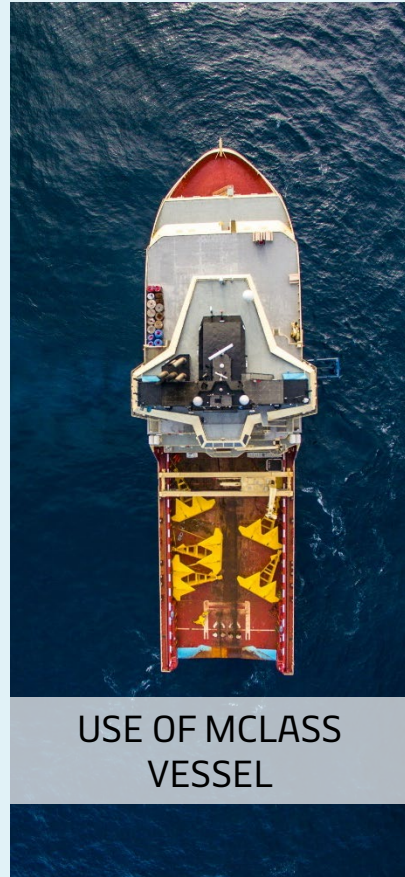
# Leveraging experience

50 years track record with towing and mooring installation at the core of our operations



# Marrying theory and practical experience

Finding solutions together





# What are the criteria for success?

We all need to be onboard



Select great professionals



Create mutual trust



Align interests



Foster cross-functional relationships



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**Safe hands.** Sound business.

Visit us in BOOTH 20