



ORIENT MARINE Co., Ltd.

Operationalizing Methanol Bunkering
Capt. Jagadeesan Natarajan
General manager – Orient Marine Co. LTD
23 Oct 2023



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Total Solution Provider for Ship-Related Business



**Orient Marine was established in 1988
as a wholly owned subsidiary of Mitsui
& Co. JAPAN**

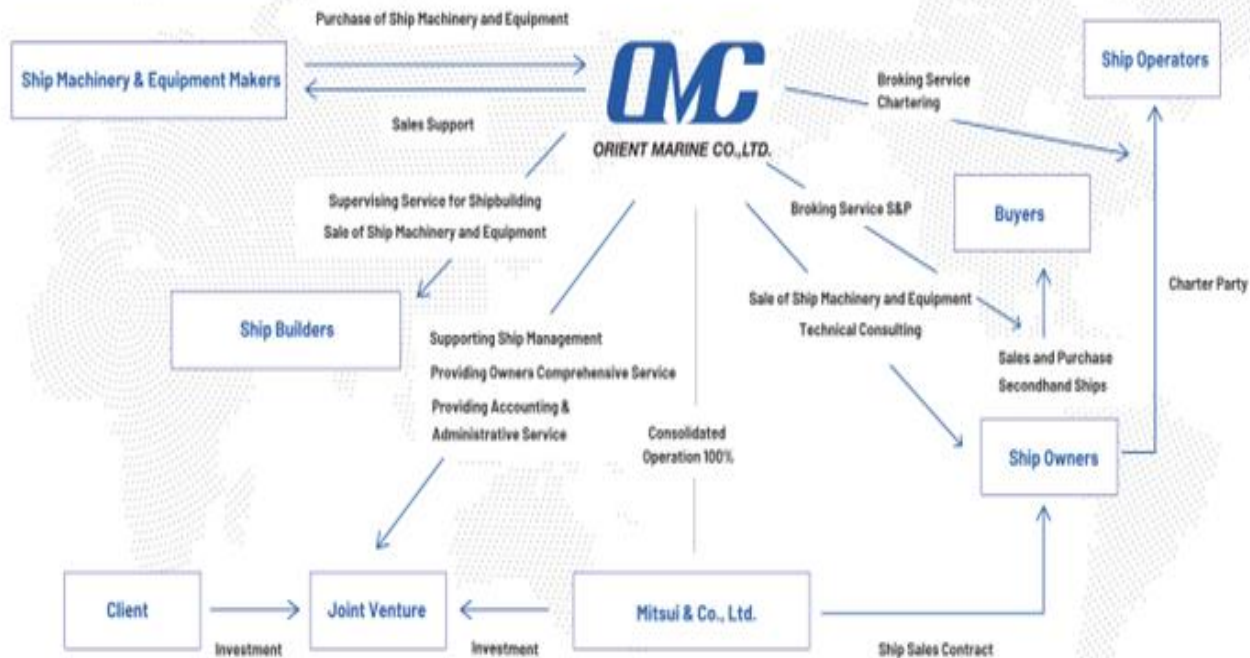
**to provide highly specialized services for ship-related
business. Today, we have grown into a company that
offers a wide range of services, including chartering and
broking, operational services, sale and purchase of
secondhand ships, ship equipment sales, shipbuilding
supervision, technical consulting, finance, auditing, and
IT system support.**

YOUR PARTNER

With

SOLUTION

ORIENT MARINE Co.,Ltd.



Key Figures



Post-fixture Ships in Operation*¹

Around **500** Ships

Secondhand Ships
Handled per Year *¹

Over **50** Ships

Sales of
Ship Machinery & Equipment

Over **30** Years

Employees*²

168

Office locations (Orient Marine) *²

6 Offices in
5 Countries / Regions

Office Locations (Mitsui & Co.) *²

127 Offices in
63 Countries / Regions

*¹ Results of FY 2023/03 *² As of April 1, 2023

Our Parent Company Mitsui & Co. Maritime Footprint

Member of :



GLOBAL MARITIME FORUM

Mærsk
Mc-Kinney
Møller Center
for Zero Carbon
Shipping



JV Shipyard in China



JV with Cargill, NYK, MOL etc.



Ship Owning Business

- 20-30 fully owning
- 70-80 vessels with JV partners

Fuel & Speed optimization
through smart routing led by
deep-learning AI

BEARING.ai



Equipment



Shipyard



Ship owner



Operator

Equipment Trading Business

Seller

- 61 companies – Japanese/Asian

DAIHATSU

NISHISHIBA
NSDK

BEMAC



TAIYO
ELECTRIC CO. LTD.

TERASAKI

Buyer

- 23 shipyards – Japanese, Korean, Chinese
- 30+ Japanese ship owners/operators



Newbuilding/Trading Business

- Buy 70-100 vessels annually
from shipyards
(Japan, Korea and China)



今治造船株式会社



Chartering Broking

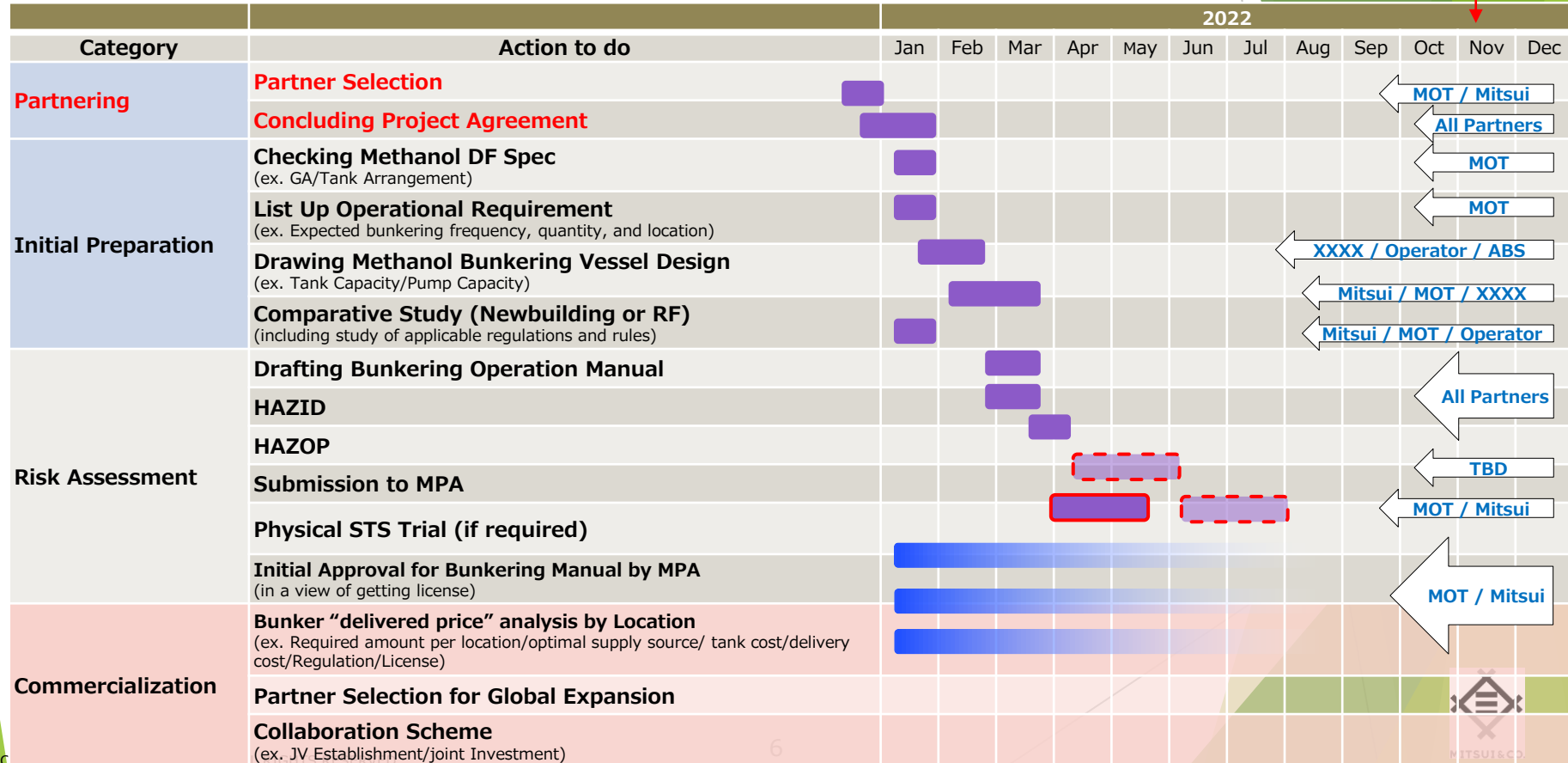
- 540 vessels on the sea

Secondhand S&P Business




- 50-60 vessels annually



Methanol Bunkering – Initial thoughts and discussion on Partnering and forming Consortium in 2022



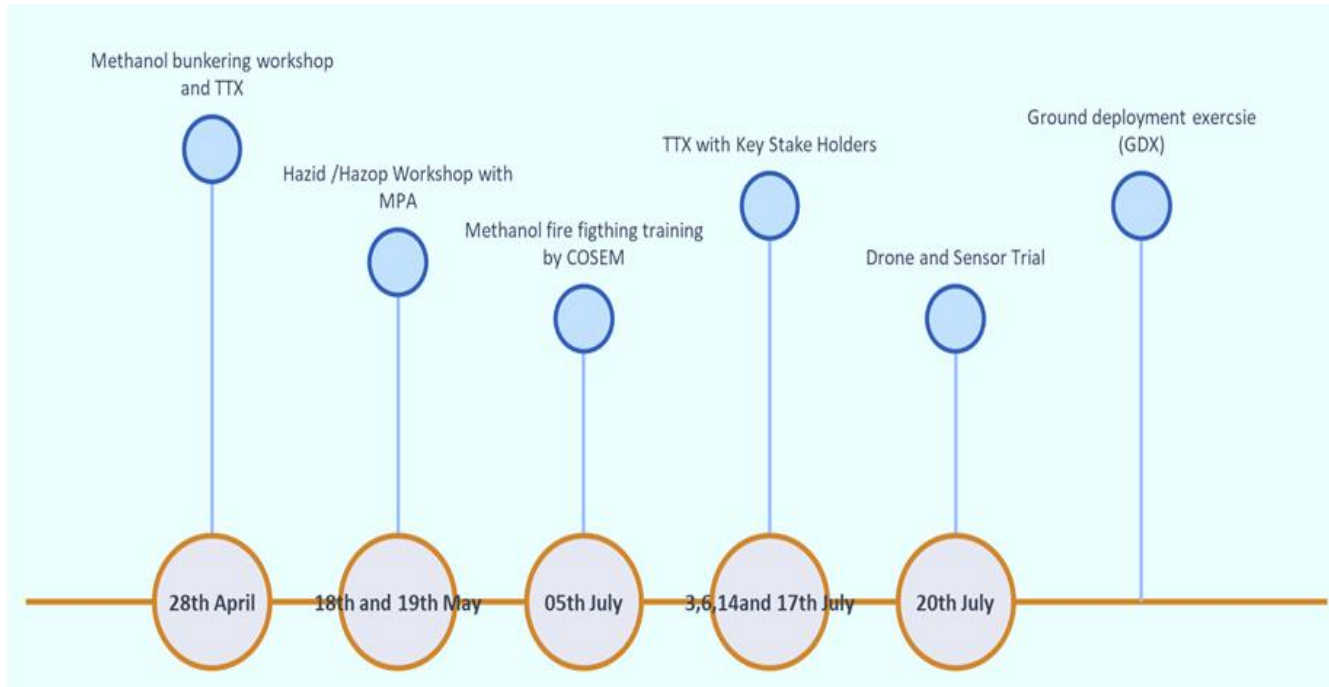
Feedback / preference on partner involvement as of 1st Feb 2023

Candidate Partner	Reason for Selection
<p>[Bunkering Vessels Operator]</p> <ul style="list-style-type: none"> - Roll out in a global scale. - Utilizing existing FO bunkering for conversion. - Establishing methanol bunkering operation manual. - Carrying out HAZID/HAZOP 	<p>TBD</p> <p>Space for collaboration from a perspective of global development. Having a right size of FO bunkering vessels. (need to check a convertibility with methanol DF vessel)</p>
<p>[Engineering Company]</p> <ul style="list-style-type: none"> - Making a design of methanol bunkering vessels. - Carrying out HAZID/HAZOP 	<p>TBD</p> <p>Largest engineering company in Singapore specialized in bunkering vessels.</p>
<p>[Class]</p> <ul style="list-style-type: none"> - Supervisor for risk assessment. 	 <p>Classification society for APMM's DF vessels. Familiar with bunkering requirement.</p>
<p>[Technical + Ship Manager (if necessary)]</p> <ul style="list-style-type: none"> - Establishing methanol bunkering operation manual. 	 <p>(pending as Ship operator yet to be decided) Depends on capability of Bunkering vessel operator.</p>
<p>[Port Authority]</p> <ul style="list-style-type: none"> - Authorizer for this methanol bunkering FS. 	 <p>Willing to be involved from an early stage of the project.</p>

	Category	Item	Responsible Party	Target	Status
1	Meeting	Set up monthly meeting with MPA	Mitsui	Asap	- To be arranged.
2	Receiving vessel (APMM feeder vessel)	Provide the following data to MPA - Certification of exemption - Crew Certificate and COP - Photo of bunkering station - Vessel schedule - Reserve & Stand-by fuel - Quantity of bunkering - Details of safety couplings	Maersk	Once available	- MOT/Maersk to provide the requested information once available.
3	Bunkering vessel (Chemical tanker)	Identify the vessel & operator	MOT/All	Asap	- MOT is discussing with Hong Lam for the details of charter.
4	Ditto	Prepare for mooring plan	MOT/Hong Lam	Asap	- MPA is waiting for Mooring planning with HL vessels.
5	Ditto	Provide Crew Certification	MOT/Hong Lam	Asap	- MPA is requesting to provide Crew certification.
6	Operation Manual	Share dispersal modelling with MPA	APMM	Once available	- Under APMM internal process for sharing information/report.
7	HAZID/HAZOP	Prepare for draft HAZID/HAZOP	Mitsui	March 10	- OMCS/Natarajan is preparing draft and will sharing for comments shortly. - Need to involve HL to HAZID/HAZOP(=> MOT, please confirm with HL).
8	HAZID/HAZOP	Setting workshops and tabletop exercise	Mitsui/MPA	Tbd	- Will fix the workshop schedule with MPA.
9	HAZID/HAZOP	Complete HAZID/HAZOP	All	End April	- Our plan is to send the initial draft to MPA by mid March.
10	Compatibility Study	Identify scope of work	All	Mid March	- Need to discuss among parties.
11	Compatibility Study	Involvement of local partner	MOT	Tbd	- Maybe HL?
12	Methanol procurement	Decide the details of methanol	MOT	End March	- AOT/APMM is discussing with potential suppliers.
13	Tank	Check availability of chemical berth for Taking in Supply of Methanol	MOT/(Mitsui)	Asap	- If necessary, will ask for support by Mitsui Chemical team.
14	Communication	Communication with MPA/HL	All	Asap	- Copying Maersk/Mitsui(each other) to communications with 3 rd party to understand the progress for project management.

Status as of 6 March 2023

MPA- Timeline towards Methanol Bunkering



27th July 2023 First Methanol Bunkering

► Maersk's container vessel - the world's first container vessel sailing on green methanol - was successfully refueled with approximately 300 metric tones of bio-methanol via Hong Lam Marine's Singapore-registered tanker, MT Agility, for its onward maiden passage to Copenhagen.

► MT Agility had earlier taken bio-methanol stored at Vopak Terminals.

