



The
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CHARTERED
SHIPBROKERS

NEWSLETTER

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AI in Shipping: Navigating the Future

by Saunak Rai, FICS

The maritime industry is undergoing a profound transformation as Artificial Intelligence (AI) technologies are being integrated into shipping operations. This wave of innovation is driven by leading tech giants such as Microsoft and Google, which are developing advanced AI solutions to enhance operational efficiency, safety, and sustainability in shipping. This innovation is not limited to the big IT companies, several entrepreneurs and maritime companies are also pioneering the adoption of these cutting-edge technologies, by creating bespoke maritime solutions.

AI Definition :

Artificial Intelligence (AI) refers to the capability of a computer or machine to imitate human intelligence, including tasks such as learning, problem-solving, reasoning, understanding natural language, and recognizing patterns. AI enables machines to perform functions that typically require human intelligence.

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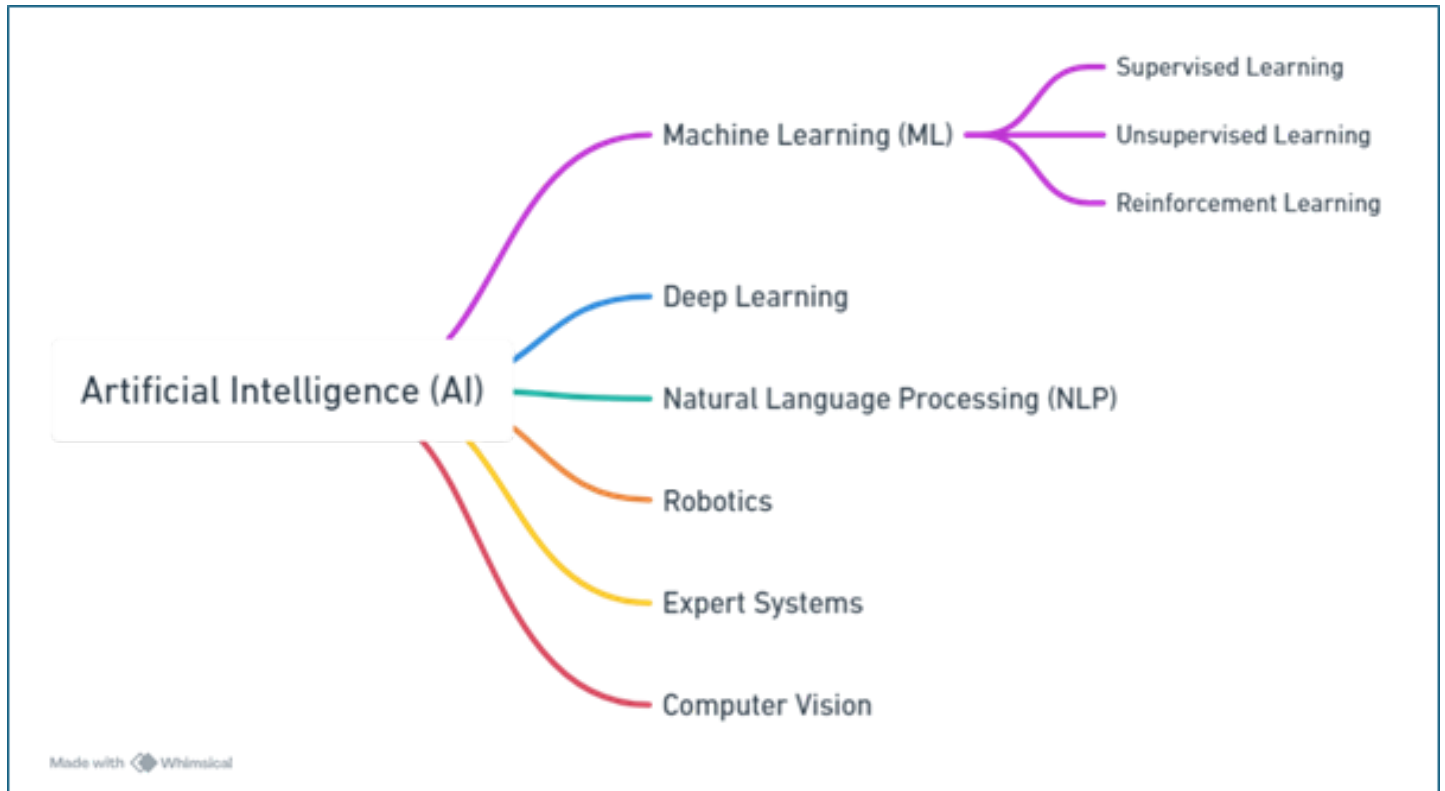


Figure 1: AI definition created using AI tool Whimsical

Recent AI Developments in the Maritime Industry

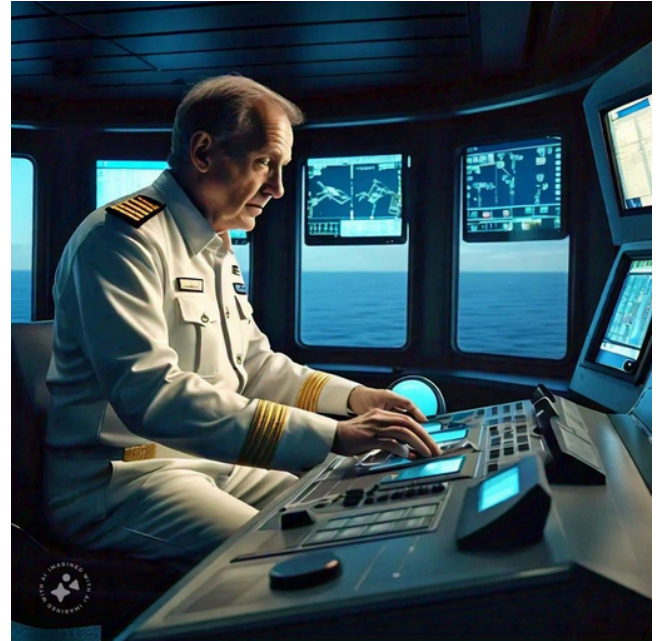
The adoption of AI in shipping is accelerating, with several recent developments highlighting the transformative potential of this technology:

1. **AI-Enhanced Ship Brokering** : AI tools are being used by Ship Brokers for analysing vast amounts of market data to predict optimal charter rates and identify the best routes. For example, AI can process historical freight rates, current market trends, and shipping routes to provide brokers with insights on the most profitable charters and routes, thereby aiding in decision-making and contract negotiations
2. **Autonomous Vessels**: The development of autonomous ships is progressing rapidly. Companies like Kongsberg and Yara Birkeland are launching AI-driven vessels capable of navigating and performing tasks without human intervention, promising safer and more efficient maritime operations.
3. **Smart Ports**: Ports worldwide are integrating AI to streamline operations. AI systems manage cargo movements, predict optimal loading and unloading times, and enhance security. The Port of Rotterdam, for example, uses AI to optimize its operations and reduce congestion.
4. **AI-Enhanced Maritime Logistics**: AI is being used to enhance maritime logistics, from optimizing shipping routes to managing cargo efficiently. These innovations lead to cost savings, improved delivery times, and reduced environmental impact.
5. **AI-Enhanced Technical Vessel Management**: Many ship management companies are implementing AI tools for making vessel management more efficient, this includes AI tools which can automatically prepare answers for all emails, reducing repetitive workload and enhancing efficiency, and also specialized AI solutions e.g., SYIA developed by Synergy which searches all available information from emails, planned maintenance systems, ship and shore company database, class websites etc., to provide on demand support to the superintendents and vessel managers.

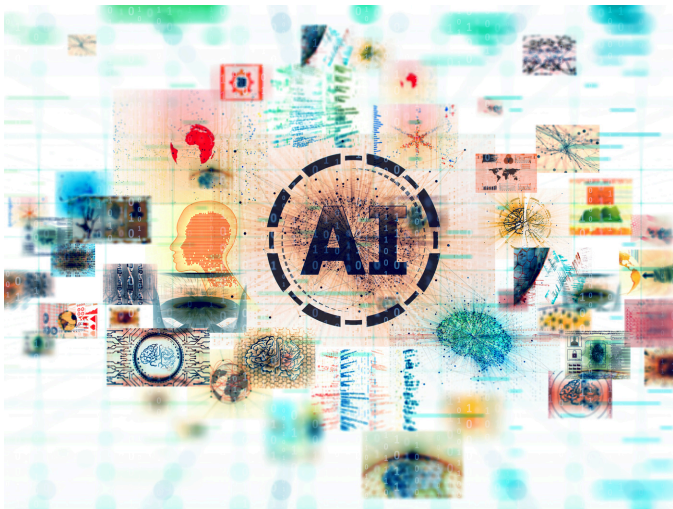
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Maritime Innovations in Singapore

Singapore, as a leading global maritime hub, is at the forefront of integrating AI into the shipping industry. The country's strategic initiatives and investments are fostering a thriving ecosystem for maritime innovation.



1. Maritime and Port Authority of Singapore (MPA): The MPA is promoting AI adoption through initiatives like the Maritime Innovation and Technology (MINT) Fund. This fund supports projects developing AI technologies for maritime applications, including autonomous ships and smart port solutions.
2. AI-Powered Maritime Startups: Singapore hosts several startups leveraging AI to solve maritime challenges. Companies like EnvironSens and Avetics Global are developing AI-driven solutions for environmental monitoring and drone-based inspections, respectively.
3. Collaborative Ecosystem: Singapore fosters collaboration between academia, industry, and government to drive maritime innovation. The National University of Singapore (NUS) and Nanyang Technological University (NTU) are conducting cutting-edge research in AI applications for shipping.



Conclusion

Maritime industry has traditionally been a late starter in adopting new technology. With the benefits of AI, its easy implementation, and possibility of advancements in operational efficiency, safety, and sustainability, the industry has embraced AI whole heartedly. As the industry continues to innovate with the entrepreneurial spirits of the large maritime companies and the new startups, and proactive maritime hubs like Singapore, the potential for AI to revolutionize shipping remains boundless.

About the Author



Mr Saunak Rai is the General Manager of "FuelNG", Chairman of the National Technical Committee for Bunkering (Cryogenic and Gaseous Fuels). He led FuelNG to win the World LNG Award 2021 for Outstanding Contribution to LNG Industry at World LNG Award in Rome in Dec 2021.

Understanding Laytime Clauses

by Capt. Vinod Dubey, FICS

In Voyage charters, when a Vessel has to wait idle at port for a longer duration, demurrage is the only source of earning for the owners. Since the Laytime clause governs the demurrage calculation, this clause has always been a matter of keen interest while drafting a voyage charter party. Any misinterpretation of Laytime clause wording can lead to different calculations and undesired financial impact accordingly. Ship's staff's in-depth understanding of the Laytime clause can be of great financial assistance to the owners.

Laytime clauses consist of certain **interruptions** and **exceptions** which are excluded from counting of Laytime. In this article, let us understand the distinction between the two terms and understand commonly used **interruption** in laytime clauses.

An **interruption** to laytime is a period outside the definition of laytime as expressed in the laytime clause. A common example is the "Weather Working Day" (WWD) laytime period. The interruption is considered valid for the entire period of Vessel's stay in port.

An **exception** to laytime is a period within the definition of laytime but is excluded by an exception clause. Unless specified, the Exceptions clauses will be limited to the periods when cargo operation is going on.

An example for easy understanding to distinguish both is as below :

In Charter Party (C/P) "A" , there can be interruption to laytime expressed in "Weather Working Days".

In another C/P "B", Laytime can be expressed in working days instead of weather working days and an additional exception clause can be inserted to exclude time lost due to adverse weather.



Though both charter parties appear similar in this regard, there will be very different impacts on laytime calculation.

Suppose the Vessel is waiting at anchorage for a berth. If C/P A is in force, rainy periods on working days will be excluded from laytime as agreement is of weather working days. However, if C/P B is in force, the rainy period cannot be excluded because the cargo operation has not yet started and the rain did not delay the cargo operations.

Among numerous interruptions to laytime, the most common are "**Weather Working Days**". In the same port, a period of rain may prevent the discharge of a cargo of rice, but not a cargo of crude oil. Hence, the term "Weather" should be seen as a question of fact.

Though the statement of facts (**SO**F) prepared by the agents and countersigned by the master is used as persuasive evidence in determining weather conditions, it's not a binding document and can be challenged by evidence provided by other sources such as local weather stations.

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Another common interruption to laytime is “**Sundays and holidays excepted**”. There is absolutely no confusion on the interpretation of “Sunday” but the interpretation of the word “holiday” can be conflicting at times. There are national holidays, bank holidays, state holidays, central government holidays, etc. Unless specifically mentioned in C/P, “Holidays” are decided by a local authority and may apply to just the port’s local area. If Port has declared a date as holiday in gazetted letter, it will be considered as Holiday and will be excluded from Laytime irrespective of whether work was done on that day or not.

Interruptions mainly cover these two items as discussed above, however, “Exception” has more number of clauses.



About the Author

Capt. Vinod Dubey, is a Master mariner, MBA from Cardiff Metropolitan, Commercial Operations Manager, Adhart Shipping Pte Ltd. He is a sailor by profession and writer at heart. He has published his novel "Indiyaapa" (a fictional love story of a sailor) followed by his recent poetry collection " Weekend Wali Kavita".



CLASSROOM TRAINING for NOV '24 Exams

DRY CARGO CHARTERING
26 SEP - 7 NOV (THURSDAY)

SHIPPING BUSINESS
25 SEP - 30 OCT (WEDNESDAY)

ECONOMICS OF SEA TRANSPORT AND INT'L TRADE
27 SEP - 1 NOV (FRIDAY)

TANKER CHARTERING
26 SEP - 7 NOV (THURSDAY)

INTRODUCTION TO SHIPPING
25 SEP - 30 OCT (WEDNESDAY)

LEGAL PRINCIPLES IN SHIPPING BUSINESS
23 SEP - 28 OCT (MONDAY)

SHIP OPERATIONS AND MANAGEMENT
23 SEP - 28 OCT (MONDAY)



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Agent or Principal

by Jagannath / NAU

Many a times parties believe that they are acting in one specific role i.e. as Agentⁱ but when the facts or contractual documents are reviewed, sometimes they find that they are also a party to the contract. A party can act in various roles including in a dual capacity – as Principal for some roles and as Agent for other roles. What is the exact role can be gleaned from the surrounding circumstances, the local law, the contract and the custom of the trade at the place where the contract is being performed. The purpose of this article is to highlight some common examples where a party may be contracting as a Principal instead of as an Agent.

1. Difference in Risks: A Principal is a party to the contract while an agent is generally involved in bringing parties to the contract. The common law position is that once the contract is formed, the Agent steps out of the equation and is not personally liable for any claims. However, there is an exception in that if it is established that there was some personal fault or negligence on the part of the Agent, then the party who engaged the Agent could pursue for recovery. Accordingly, the risk exposure for anything going untoward is mainly on the Principal and for which they (Principal) should consider a risk management strategy including contractual transfer and insurance. With respect to an Agent, their exposure is limited given that they cannot be faulted on the performance of the contract. Examples of Principals are Owners, Carriers and agents are Brokers, Ship Agents, Forwarders etc.
2. Legal position: In some jurisdictions, the local legislation provides for the Agent to be liable for acts of their Principal.ⁱⁱ The reason for this is due to the the Principal generally not being found in the jurisdiction. Obviously, an Agent in these jurisdictions must ensure to seek appropriate security/cover for this additional exposure.
3. Contractual:
 - a. Parties may sometimes be unwilling to contract with Principals who are based in a different jurisdiction. The Agent may therefore be forced to sign the contract as a contractual party to facilitate the provision of services to their Principals. Examples of such would be the Terminal Services Agreement signed by an Agent with a Terminal Operator.
 - b. Forwarder/Agents may sometimes be unaware that they are a party to the contract which they facilitated for their clients. Examples of these would be a Forwarder who booked space say with a Carrier contracting either on BIFAⁱⁱⁱ or SLA^{iv} Standard Trading Conditions. While the Forwarder/Agent may be under the impression that their role is purely that of an Agent, due to the contractual provisions in the relevant Standard Trading Conditions, they become a party to the contract such that Carriers could pursue them for any claims arising from the booking made. The reason why Carriers impose such terms is understandable given that they (Carriers) are generally unaware of the details of the Shipper when the booking is made and which results in their inability to conduct any risk assessment. The Forwarder/Agent can always seek an indemnity from their clients but this will be dependent on their client being a going concern and being good for their liability.
4. Risk Management:
 - a. An Agent would generally be aware of their exposures arising in their role as Agent. An Agent should seek appropriate insurance cover for their risks and liabilities provided by either Mutuals or Insurance companies. Depending on the risk appetite of both the Agent and their Insurer, the cover may be capped (limits) and with provision for risk sharing (deductible).
 - b. The greater challenge is when a party/Agent becomes aware only when pursued that they are also a contractual party. If the basis of Insurance cover is on their role as an Agent, then the existing Insurance cover may not extend to deal with the claim being pursued i.e. as a contractual party. To avoid such exposures, Agents should regularly review the wordings of their contract together with developments in law so as to ensure that they are aware of their contractual position and deal with their trading exposures.
5. In conclusion,
 - a. an Agent must ensure to ascertain whether they are contracting purely as Agents and/or in a dual capacity.
 - b. if contracting as Principals/or in a dual capacity, they must ensure to deal with their exposures including appropriate risk transfer mechanism such as insurance.

i. See an article on [Fundamentals of Shipping Agency](#) published by Sea and Beyond.

ii. See an article on [Liabilities of ship owners attaching to agents](#) published by ITIC.

iii. See Clause 3 of the [British International Freight Association Standard Trading Conditions](#).

iv. See Clause 5 of the [Singapore Logistics Association Standard Trading Conditions](#).

Editorial

by Sridev Mookerjee, FICS

We are pleased to bring out our second quarter newsletter of the year 2024.

We are pleased to highlight social networking event with the Singapore Chamber of Maritime Arbitration held at Harry's Boat Quay branch on 27 June 2024.



We continue to cover more and more articles from the different spectrums of the shipping industry to make our Newsletter trendier. We would be glad to receive more articles from our existing and also newly elected members in order to expand the horizon of our newsletter.



Got something to share? Let us hear it!

If you've got an article, a poem, or a story that you'd like to share, here is your chance!

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We like to once again highlight the following local benefits of renewing your membership and inspire other eligible candidates to take membership of this prestigious shipping and maritime institute.



Local Benefits to Members/Fellows



HARRY'S BAR + DINING

15% off for Members and Fellows

Download the app from [App Store](#) or [Google Play](#).

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GRAVY RESTAURANT & BAR

- 10% off the bills on ala carte food items
- All time happy hour on alcohol
- No corkage charge on the first bottle if you are bringing your own

In closing, I like to extend my special thanks to Capt. Vinod Dubey, Mr Nikhil Modak, Mr Saunak Rai, and Mr Jagannath Muthu for contributing their articles to this newsletter.

Material Management in The Island Reef Villas (Concept)

by Nikhil Modak, FICS, PGCSCM, EMBA (Finance)

Background

Recently we were asked to submit any artwork (drawing, photograph, craft, etc) with a write up in Hindi on what remind us about our stay at IIM Trichy campus during our Supply Chain course for publishing in one of the magazines. I am quite poor in literature and hence have submitted the write up in English but as it doesn't meet the requirement doubt, the publishing house will translate it and publish same. So, when Mr. Mookerjee ask me for an article, I had an article waiting to be included Institute of Chartered Shipbrokers publication.

Artwork

I used to have a marine (salt water) fish tank at home and had a dream to have a villa/bungalow with a view to the reef/pond with marine life and corals from basement rooms and COVID lockdown in 2020 gave a perfect opportunity to make a concept model.



Figure 1: front view (for Island reef villas this will become the back side (side facing the sea). Part below the red line would be removed



Figure 2 : side view

Post COVID work resumed as normal, and the model had gone out of my mind until I came across our honourable Prime Minister photo in newspaper promoting Lakshadweep as a tourism destination. It strikes me that there are no 5-star hotels in Lakshadweep and Andaman Nicobar and Indians spend fortunes going to Maldives and other hotspots for vacations. So why not we develop tourist destination which are of international standard.

We have such hotels in Singapore and Dubai where hotel rooms have a view of a reef but have not across chain of luxury seafront villas which offer such tourism experience, plus most of these hotels have single room or maximum two rooms suitable for small families.

Model Villa (concept) has 4 master bedrooms 2 each on level 1 and level 2 along with kitchens on both the levels. Level 3 comes with a study/office room,



Figure 3 : Level 1 with attached to swimming pool and access to marine reef / pond.

multi-purpose room and a master bedroom with attached balcony. There is a terrace on level 2 which can be used for barbeque and other activities. It comes with a living room, dining room and puja room on level 1. Each villa has a swimming pool and a marine reef which can be viewed from 4 bedrooms located in the basement. There is also a garage (for island reef project it can be used to park EV golf cars).



Figure 4 : level 2 with attached terrace

With tourism on rise and Indian's spending fortune on travel Lakshadweep and Andaman Nicobar Island would be an ideal place to develop such project.

Tours can start from backwaters Kerala to Lakshadweep (including cruise/ferry service) and continued until Socrates Island (which has 80% flora and fauna which can be found nowhere else in the world)-Oman-Dubai and from Singapore-Penang-Phuket-Andaman Nicobar.

Such projects might need Public Private Partnership (PPP*) as not only management skills and financial acumen of private sector can create better value for money but be leveraging on funding from private sector Government can mitigate the burden on public resources. sector Government can mitigate the burden on public resources.

Note (PPP*) Such recreational facilities should be affordable to masses. Major cost component is acquisition of land in construction industry. If land is given on lease to develop with royalty per booking back to the Government, stay would be affordable to masses. Also is construction industry building foundation takes time and cost, so for the low-rise villas like this adding up levels 2 and level 3 won't add up much cost bringing down cost per person/family for a group booking).

Material Management

I have tried to link my artwork to Supply Chain learning's which we learned during our stay at IIM Trichy. Supply Chain is a vast field (Statistic and Analysis, R&D, Financing, Forecasting, Manufacturing, Inventory Management, Warehousing, Distribution, Planning, Operations Planning, Procurement, Logistics/Reverse logistics, etc) and starts from the time there is a need for a particular product/service and runs until that product/service is delivered to the user and back to the producer (reverse logistics) with Circular Economy on the rise as part of companies Environmental and Social Governance compliance.

As the project would on island reefs (of each villa) could be interconnected with an outer boundary separating it from the open sea with pumps to maintain flow and filtration of the water.

Unlike western culture where couple or families with kids go on vacations this concept is good for big families and groups vacationing together. Single room chalets can be added in the cluster for nuclear families after doing a proper market survey in the tourism industry and its forecasted growth in the next few decades.



Figure 5 : level 3

For this write up I have limited it with focus on Material Management which is critical for such projects view such projects follow a waterfall project management technique defining a clear path and sequences of execution with project phases.

Material management becomes very critical as delay in one of the components can delay the entire project as project cannot advance to the next stage until the pre-requisites along the path are completed.

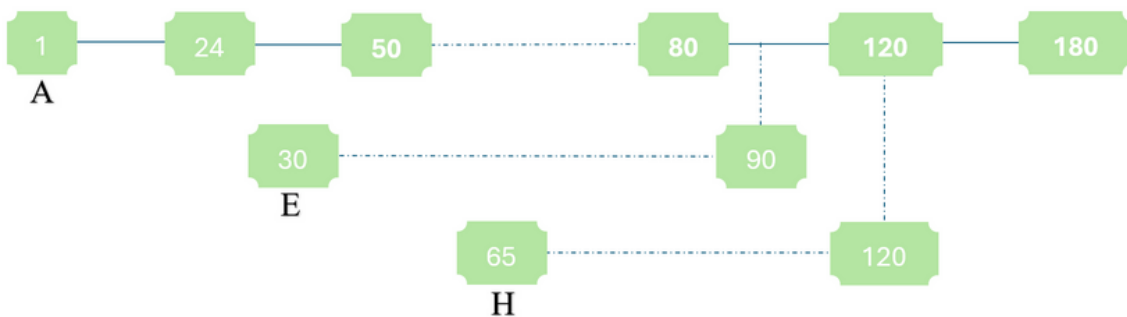
Multiple teams would be needed as during the life cycle of the project it will include material management/logistics during the implementation phase and post deployment. (Post deployment companies who undertake such project should offer single window service to avoid Transactional cost to the customers, i.e. booking of accommodation, air travel / cruise or ferry travel, insurance and other recreational facilities in one complete package.)

Waterfall technique

Requirements would have to be set up at the beginning of the project creating a linear path for the project and from those requirements a sequential plan would have to be created:

- Gathering requirements and market research
- Analysis and modelling/designing
- Implementation
- Testing
- Deployment
- Ongoing maintenance
- Value proposition

Preparing a proper Gantt chart giving timeframe until deployment with sub Gantt charts for various paths in project so the team knows when they must start executing a particular task.



ex. (Gant A) denotes the main path of the entire project which takes 180 weeks to complete from the time of implementation

(sub-Gant E) denotes the sub path for time when manufacturing of housing modules start say in week 30 after receiving all necessary permission's etc and first batch is ready to be shipped out to the site say week 90 onwards for assembly

(sub-Gant H) denotes the transportation part, executing logistics contract might begin in week 65 onwards with first shipment starting from 120 onwards

*** there will be multiple paths (sub-Gants) and a Master Gant giving cash outflows (expected) after every week, so the financial team is aware when they need to influx the capital for different component. Weekly/bi-weekly amended Gants (highlighting) completed task so management has clear idea on the progress of the project.

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Project managers/teams leaders have clear path when they need to start executing their task and by when they will have to deliver to ensure project is not delayed as each stage needs to be completed before starting the next stage which will help in material management and at the same time ensure project completes on time.

Material management would be a key to control the cost and focus should be on managing the entire flow of materials from procurement to distribution/assembly.

- Horizontal teams would be better suited, so the team knows their task and are accountable for the deliverables.

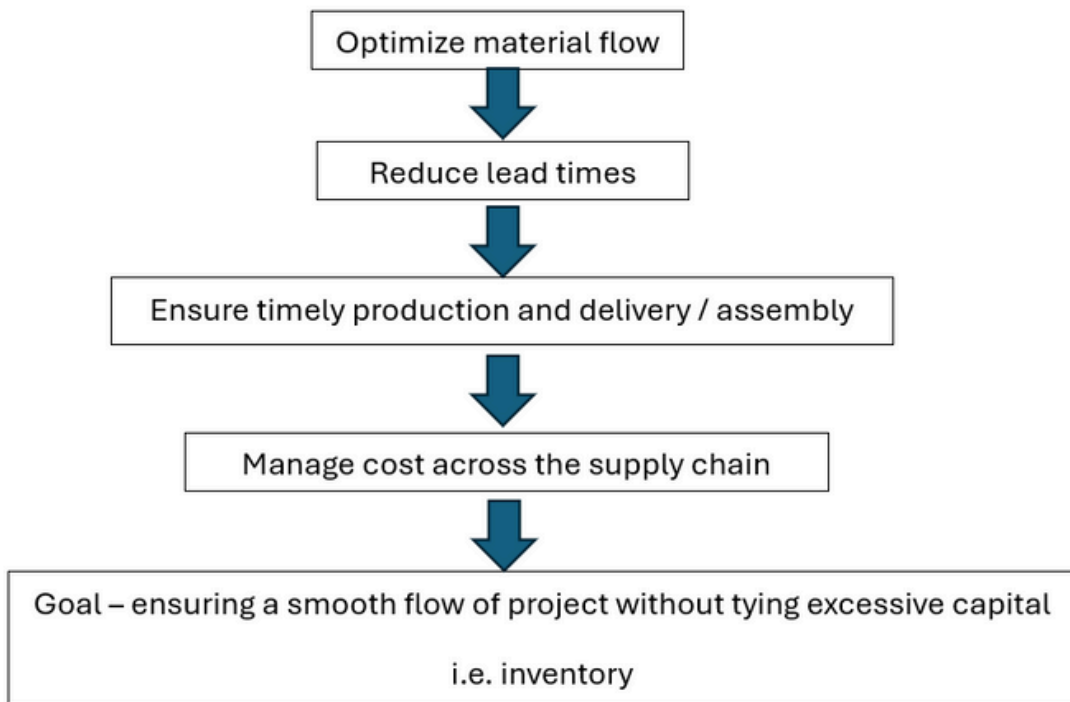
Scope of such projects is broader and would involve sourcing, production, planning and logistics decentralized purchase/material management should be incorporated with roles and reporting structure clearly defined to ensure holding cost is minimize while guaranteeing sufficient inventory.

Alignment of Sourcing to Strategy

Backward, Forward or Horizontal integration

(eg. Construction needs steels, cement and other material, Travel need Airlines, Cruise/Ferry ships, Hospitality industry needs experience or tie up with hotel industry)

Diversification Strategy (should the company get into any new vertical which comes with this project or go for tie up)



Further, for such a project where Environmental and Social Governance plays an important role considering the biodiversity of the sites due consideration would be needed to be given to:

- Product Specification Standardization
Should the construction (i.e. erecting the structures) done on site or prefabricated housing modules be brought and assembled on the site.
- Joint Process Improvement
Should organization go for horizontal integration or have a tie up with a vendor (experienced in manufacturing such housing modules) / have a tie up and jointly improve the process.

Development of a region also requires looking after welfare of the natives and CSR should form a part of such project. Companies who have presence and experience in the entire supply chain during implementation and post deployment (i.e. presence in most of the verticals like construction, projects, hospitality, airlines, shipping, solar and wind power, etc) would have an advantage and would be able to deliver by avoiding transactional cost and keeping the cost low enabling us to compete international tourist destination.

Click/tap to watch the video of the [concept bungalow model](#).



About the Author

Nikhil Modak is a shipping professional with 25 years of experience, starting in ship management and later transitioning into shipbroking. He contributed to the management of K-Line vessels with K-Steamship and shifted focus to commercial roles over the past 20 years. His expertise includes working with commodity traders and dry bulk ship owners, serving as GM of Chartering, and acting as a competitive shipbroker. He has experience with Handy-size to Panamax vessels, most recently managing part cargoes and parcels with the Clipper Group, specializing in steel, pipes, fertilizers, and agricultural products in the Red Sea, Persian Gulf, and Indian Ocean regions.