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Breaking the Capacity Ceiling: A Growth Strategy Study of Ocean Wings, a Rented-Yard FRP Boat Builder in Goa

Damian Pothan[1], Bhojraj Y. Shewale[2]

[1]Amity Business School, Amity University Mumbai, Mumbai, India
[2]Guide, Amity Business School, Amity University Mumbai, Mumbai, India

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Abstract

I investigate the growth potential of Ocean Wings, a partnership, which both manufactures Fibre Reinforced Plastic (FRP) vessels and sells them directly to business and consumer clients throughout India including those on the Andaman and Lakshadweep Islands. As well as this, the surrounding market is also growing. Goa had an unprecedented 1.08 crore tourists in 2025, and India's pleasure craft market is estimated to be worth approximately USD 815 million and its value is set to continue increasing.

However, I have noted in my 30 day internship (15 th June – 17 th July 2026), that the business does not appear to be experiencing significant growth. Drawing upon participant observation, casual interviews with the business owner, and my internship diary alongside secondary information, I analyse Ocean Wings' situation using the Resource Based View, Theory of Constraints and Ansoff matrix. It is proposed that Ocean Wings is supply constrained by factors such as its rented workshop space, labour and the availability of the partners' time. Demand does not appear to be the main area of constraint.

Significantly, the business fails to exploit its Indian Register of Shipping (IRS) certification potential to the greatest extent; at present this is only done retrospectively. Five areas of growth are analysed – proactive IRS certification and institutionalisation, related craft, design, after-sales and electric power.

Firstly, low investment strategies are suggested, before making high investment recommendations. Unfortunately, there was no financial information available so all research has been qualitative, and therefore the growth suggestions constitute hypotheses requiring further investigation.

Keywords: small business growth; FRP boat building; capacity constraint; Indian Register of Shipping; Ansoff matrix; theory of constraints; Goa

1 Introduction

1.1 Background and rationale

Goa has a rich boat-making heritage. Around the mid 20th Century boats made from Fibre Reinforced Plastics (FRP) replaced wooden boats due to their ability to be mass produced from one mould and have waterproof and low maintenance properties. Demand for boats for tourism, coastal areas and Goa's backwaters remains high. In 2023, Goa Tourism Department data shows that visitor numbers grew to approximately 1.04 crore from around 86.28 lakh. In 2025 there was a record number of 1.08 crore visitors, of which around 1.03 crore were from within India.

Ocean Wings is active within this industry. It is a joint venture which makes FRP boats including small pleasure and fishing boats and even extends to its largest so-far project – a 24 metre catamaran.

Ocean Wings does not have an in-house ship building yard and therefore ships are built at Shirodkar Shipyard, Loutolim. The company is registered in Candolim, North Goa. Staff are employed on a project basis.

Clients range from the north to the south of India and also include those from the Andaman and Lakshadweep Islands.

I undertook a Finance Internship at Ocean Wings. Within my internship I also produced a Summer Internship Project (SIP) report detailing the company's governance and business systems. This included a brief expansionary section. This paper solely explores this area, using a formal structure and methodology.

1.2 Problem statement

The firm has capabilities that many small builders lack: IRS-class delivery through a naval architect, multi-brand engine sourcing, and national direct reach. Demand indicators are favourable. But the customer base appears to widen only slowly, and revenue depends almost entirely on one activity, building new boats to order. The problem is to identify what constrains growth and which options can raise the ceiling.

1.3 Research questions and objectives

Ocean Wings enjoys competences (such as provision of IRS class, multi-engine choice and national reach) not widely available for small businesses. There is also good demand. However, it seems that the client base develops slowly. Revenue is predominantly generated via the business' main function – custom boat construction. Thus, it is of importance to determine what is hampering growth and which options will support further growth.

- RQ1 What factors are limiting Ocean Wings' growth? These may include demand; capacity; finance and/or capability and management.
- RQ2 What untapped business assets are there for growth?
- RQ3 In what order are the different growth options appropriate to a small, rented yard, order-led business?
- RQ4 What are the associated financial and legal risks for each option?

The investigation aims to ascertain what is restricting Ocean Wings' growth. It will analyse five growth options in terms of their suitability for the business' assets and then suggest an ordered growth strategy together with decision making guidelines.

1.4 Investigation and originality

This is a single business and internship investigation. It provides previously under-documented insight into the operations of a partnership-managed FRP business – in particular, its pricing, procurement and certification and sales functions. Furthermore, growth theory is applied to a type of environment that is infrequently analysed in the small manufacturing sector literature.

2 Literature review and analysis

2.1 Small business growth

Penrose (1959) claimed that a company's growth potential is more often restricted by its management's ability to organise, control and adapt than by external demand. Limited managerial resources exist and

2.2 Resource-based view

According to the Resource-Based View (Wernerfelt, 1984; Barney, 1991), long-term competitive benefit arises from unique and hard-to-copy valuable resources, which are effectively managed. Teece et al. (1997) further emphasise that companies must adapt their capabilities in response to environmental change. For Ocean Wings, it is necessary to establish whether the business is consciously exploiting valuable competencies (for example, its provision of IRS class) or only does so reactively in response to client or regulatory requirements.

2.3 Theory of constraints

Goldratt and Cox (1984) claim that a system's performance is governed by its most constrained component and that therefore enhancement of non-constrained elements is largely ineffective. Further demand does not significantly increase revenue for Ocean Wings if the constraining factor is the yard, labour or partner time availability. Consequently, this paper analyses supply restrictions before demand ones.

2.4 Ansoff matrix

Ansoff (1957) segments business growth into market penetration, development, product development and diversification in order of increasing risk. This assists in ordering the growth options outlined in section 6. Least risky is intensifying sales of the current product within existing markets. Greater risk is posed by developing new products (for example, alternative boat styles and electric engines).

2.5 Procurement and stockholding

Kraljic (1983) categorised procurement items according to their effect on profitability and associated supply risk. Resin and engines both have significant profitability effects and are subject to fluctuating costs. As Ocean Wings operates on a build-to-order basis and does not maintain stock, it avoids stockholding costs although is exposed to lead times. Therefore, the zero stock policy involves compromise.

2.6 Leadership, delegation and key person reliance

A case study on executive coaching in a public human services body (Fernández, Austin and Weisner) illustrates how a manager evolved from a highly prescriptive and personally-involved approach to a more delegated style, with well-defined delegation. Coaching lasted nine months and cost around

Effective delegation and standardisation can enhance business performance if the key barrier to growth is the leader's personal involvement.

2.7 Client development

Yolcu and Meyer (2023) explored the extent to which 132 Astana-based individuals engage in spontaneous online buying. They discovered that external stimuli, predominantly related to money

2.8 Analysis

A basic analytical model is adopted. Positive demand interacts with the business' asset portfolio (which is strong, but not fully exploited). This is affected by constraints (yard, labour, partner time, information and finance) and further influenced by risks (raw material costs, taxation and legal issues). Growth options are those which either enhance flow or introduce additional revenue streams, whilst abiding by these constraints.

3 Methodology

Qualitative, descriptive research has been undertaken. Key data sources were:

- 30 day internship (Finance Intern, 15 June to 17 July 2026). Responsibilities included client engagement, quotation and invoice production, cost analysis and observing an IRS yard assessment.
- Daily internship diary (Annexure II). This documented induction, client engagement, cost analysis, investigation of the IRS procedure and observation of an assessor's watercraft examination.
- Unstructured conversations with the business owner. Correspondence via WhatsApp was used to record discussion relating to materials, costs, boat styles, clients, engines and labour.
- My SIP report. This was used as primary data to analyse business procedures, policy and constraints.
- Secondary sources comprised governmental and agency information, together with market and media reports (referenced).
- My internship appointment letter confirmed my responsibilities (financial accounting, stock and procurement finance together with tax and legal affairs) and mentorship. As I did not have access to profit data, cost allocation and order acceptance guidelines, quantitative analysis of profitability could not be performed. Observations, inferences and/or hypotheses were therefore drawn. If numerical data was required but unavailable, this was noted in the paper as [to be confirmed with owner]. Estimation was avoided.

4 The firm and its environment

4.1 Business model

Table 1. Business model of Ocean Wings: observed position by dimension

Dimension	Observed position
Legal form	Partnership firm
Yard	Rented (Shirodkar Shipyard, Loutolim); no owned facility
Labour	Hired per job; hard to source at peaks
Design	External naval architect, paid per project

Dimension	Observed position
Products	Passenger and tourist ferry speed boats, parasail boats, net-fishing and sport-fishing boats, catamarans (largest 24 m), yachts, aluminium pontoon boats
Material	FRP only for most work; aluminium for pontoon boats
Customers	Direct B2B and retail buyers across India, including Andaman and Lakshadweep Islands
Certification	IRS class where mandatory or requested; builder certificate otherwise
Engines	Customer choice, mainly Yamaha and Suzuki outboards; Volvo Penta D6-340 inboard with sterndrive (about ₹55 lakh) for parasail boats
Systems	Word, Excel and Outlook; accounting outsourced to an external chartered accountant
Founding year	[to be confirmed with the owner]
Employees and annual output	[to be confirmed with the owner]

Yard space, power and tools are included in a boats price. Labour is charged per project and stock is only ordered once a client has placed and paid for an order. An initial 50 per cent is paid upon receipt of an order. Then 40 per cent is due seven to twenty days later and 10 per cent is payable prior to delivery. So primarily the client finances production.

4.2 Market

Market demand appears strong. Tourist numbers in Goa have reached a record high for 2025 and this in turn stimulates demand for ferry, catamaran and water sports boats. The Indian leisure marine market is estimated to be worth around USD 815 million for 2025. It is predicted to increase by around 5 per cent per annum to 2030 (MarketsandMarkets). However, this figure relates only to leisure marine and fails to recognise the extent of the businesses carried out within the business such as commercial transportation and angling. Therefore whilst not representing our market size, it does provide indication of overall market trend.

Whilst most boats are removed from the water during the monsoon (June – September), demand does not reduce during this period. Indeed it is naturally during the monsoon that both transportation and retail clients order boats so that they are available for use throughout the forthcoming tourism or angling season. Thus demand for ordering is highest at a time when the ocean is unavailable. This subsequently affects staff deployment (see Section 5.3).

4.3 Market competition

Competition exists between small co-operative businesses using rented yard space and bigger companies who own their own facilities. Alongside those mentioned by the owner (Aquarius Marine and Fomar Pvt Ltd) there is a further manufacturer located in Cuncolim. This company employs over 85 people and has been manufacturing IRS approved parasail and rescue boats, as well as catamarans and speed boats for over 20 years. Further, manufacturers in Kerala have secured regional government contracts for both transport and tourism purposes. One such manufacturer has even supplied an IRS-approved marine restaurant boat. Clients seeking larger boats assess potential manufacturers on the basis of product quality, safety and timescale for completion. Unfortunately there was no information available regarding rival manufacturers' pricing and timescales.

4.4 Legal framework

Whilst classification (technical validation by a society, for example IRS) and statutory certification (legally mandated by the relevant flag state, in India this is the Directorate General of Shipping) differ, IRS is both a classification and statutory Recognized Organization. Certain locations, for example the Andaman Islands, require boats to be classed and also fitted with dual engines. Approximately 1.5 months is the certification timescale for smaller boats and between 2-4 months for larger ones. Design is progressively validated by a naval architect. Finally an IRS surveyor examines the finished boat in situ.

5 Analysis: barriers to growth

5.1 Hypotheses

H1. Supply factors including yard, labour and partners' time, rather than demand, are more influential in restricting growth.

H2. IRS is not effectively utilised as a growth tool as it is currently used in a reactive manner. H3. Revenue is restricted as virtually all income is derived from bespoke new boat manufacture.

H4. Disorganised data handling and centralised decision making impede assessment and expansion into new areas.

These hypotheses are based on analysis and have not been subjected to statistical analysis.

5.2 Demand is not the main barrier (H1)

Clients contact the business by telephone, WhatsApp, word-of-mouth and via business-to-business websites such as TradeIndia and ExportersIndia (where the business is recognised as a seller). My internship diary notes daily client enquiry management. Moreover, demand is focused during the monsoon. Filtering also occurs so that enquiries are disregarded if they fail to identify both a working region and a price range. Hence, the business is not in short supply of demand. As previously stated, there is no tracking system for, nor information about, rejected enquiries. Consequently, my conclusion that demand is not the primary barrier is again based on analysis and knowledge of the market.

5.3 Capacity constraints

Applying the Theory of Constraints, four candidate bottlenecks emerge.

Table 2. Observed constraints, their evidence and their effect on growth

Constraint	Evidence	Effect on growth
Rented yard	Capacity and scheduling tied to a facility the firm does not control; renting discourages fixed investment and limits parallel large builds	Caps the number of hulls in progress
Per-job labour	Skilled workers sourced afresh for each project; workers controlled by local groups and not always reliable at peaks	Longer lead time, inconsistent finish
External naval architect	Classed and custom vessels depend on one specialist; IRS stage approvals and survey add one and a half to four months	Delivery delays outside the firm's control

Constraint	Evidence	Effect on growth
Partner time	Pricing, supplier relations, inquiry screening, quotations and regulatory liaison sit with the partners	Key-person risk; partner time becomes the bottleneck as orders rise

The most binding constraint is probably the combination of yard space and peak-time labour, because the monsoon order peak coincides with the period when many builds start together. Reordering the start dates of orders is therefore a no-cost first lever. Which constraint binds most tightly is a hypothesis to test with the owner's data on hulls built per year and yard capacity **[to be confirmed]**.

5.4 Management and records (H4)

The firm has no ERP or inventory system, no per-order costing sheets, and keeps know-how largely in people. The cost apportionment and the rule for accepting an order were not visible to the intern. This matters for growth in two ways. First, new income streams cannot be priced or judged without per-job cost data. Second, as in the Penrose view and the coaching case, scaling depends on moving knowledge out of the partners' heads and into shared records and delegated routines. Lenders will also require formal financial records, a point taken up in Section 7.3.

5.5 Structural revenue ceiling (H3)

Because almost all income comes from building and selling new boats, annual revenue equals the number of boats the firm can build times their price. With capacity fixed by the yard and labour, doing more of the same relieves the ceiling only partly. This is the central structural finding.

5.6 Strengths that growth should preserve

The lean model has real advantages: flexible scale, low fixed overheads, order-funded working capital, specialist capability without a salaried design department, and fast decisions. Any growth route that destroys these, for example buying a yard early or holding large stock, must clear a high bar.

6 Growth levers

The five levers below are drawn from the observed capabilities. Ansoff's categories indicate the risk level.

6.1 Lever 1: deliberate IRS-classed and institutional work (market development)

The firm already builds classed vessels and supplies mandatory-class regions, but uses class reactively. Kerala builders have won state tourism and water-transport orders. A deliberate push, covering tourism departments, water-transport bodies and operators in regulated waters, would open customers less dependent on individual retail demand and the tourist season. **Resource fit:** high, since the capability exists. **Trade-offs:** longer lead time (one and a half to four months for certification), heavier documentation, and dependence on one naval architect. A safety-driven regulatory climate favours this lever: after the Tanur boat tragedy in Kerala in 2023 and a fire on the passenger boat MV K-Cat at Malim Jetty in November 2026, scrutiny of surveys and registration has grown, and survey-ready builders with documentation may gain, although vessels built on a builder certificate alone could face closer questioning.

6.2 Lever 2: adjacent vessel types (product development)

Current work is concentrated in tourist ferries, parasail boats and fishing boats, all tied to tourism or fishing seasons. Rescue, patrol and specialised passenger craft use similar skills; a Goa competitor already builds rescue craft. **Trade-off:** each new type needs its own design and approvals. **Hypothesis:** adding one adjacent type with existing IRS capability gives more diversification per rupee than any other product move.

6.3 Lever 3: paid design and engineering services (product development)

The naval architect already prepares drawings, and the firm charges for design changes and sells drawings separately for custom boats. Packaging design, modification and classed drawing packages as a priced service would earn income without extra yard capacity. **Trade-off:** dependence on one external specialist, so commercial terms with the architect must be agreed. This lever relieves the capacity constraint most directly because it is not yard-limited.

6.4 Lever 4: service, repair and refit (market penetration into the installed base)

Delivered boats are spread across India and its islands, and customers choose engines by after-sales access in their state, which shows how much they value service. At present, repair outside manufacturing defects is chargeable and engine service sits with the distributor. Commercial vessels carry no warranty and personal-use vessels carry three months on the hull for manufacturing defects only. A structured offer of paid repair, refit, spares and maintenance contracts would earn income from vessels already sold and smooth the gaps between new orders. **Trade-off:** the cost of reaching distant customers, which could be met through local workshops or agents.

6.5 Lever 5: electric and hybrid propulsion (diversification)

Policy is moving this way. The Harit Nauka guidelines (January 2024) aim at a full transition to green vessels in Indian waters by 2047. The shipbuilding subsidy policy was amended in August 2023 to give 20 percent to solar-electric boats of 12 metres or more and 30 percent to boats on green fuels such as

methanol, ammonia or hydrogen. Draft National Water Metro Guidelines 2026 were put out for consultation in June 2026, and India's electric boat market is projected to grow at about 28 percent a year from 2026 to 2031, though from a very small base. If tourist and passenger operators are pushed toward cleaner propulsion, builders with only conventional outboard and inboard experience may lose orders. **Trade-off:** the market is small and uncertain today, and whether a firm of this size qualifies for the subsidies was not examined. This is an option to prepare for, for example through a pilot vessel, not a core line yet.

6.6 Comparison

Table 3. Comparison of the five growth levers

Lever	Ansoff type	Capital need	Uses existing capability	Relieves yard constraint	Main risk
IRS and institutional work	Market development	Low	High	No	Lead time, documentation
Adjacent vessel types	Product development	Medium	Medium	No	Design and approval cost

Lever	Ansoff type	Capital need	Uses existing capability	Relieves yard constraint	Main risk
Paid design services	Product development	Low	High	Yes	Single-specialist dependence
Service and refit	Market penetration	Low	Medium	Yes	Distance, cost to serve
Electric propulsion	Diversification	High	Low	No	Small, uncertain market

7 Financial and risk lens

7.1 Input price volatility

Resin is a petroleum derivative, so its price follows global crude oil rather than domestic boat demand. The owner reports that prices rose sharply this year because of war-related disruption. Resin and fibreglass are the largest share of material cost in every hull, making this the most significant and least controllable cost risk. Engine prices are set by distributors, move independently and more often than the firm's costing baseline, and are rechecked at every quotation. Because no stock is held, each order is bought at the day's price. A pre-set costing baseline protects margin only partly. For growth, this means any new line must be costed with explicit price-movement allowances, and forward arrangements are worth testing, such as short price holds with suppliers once the 50 percent advance is received, and a seven-to-fourteen-day validity window on engine-inclusive quotations.

7.2 GST structure

Inputs such as resin, fibreglass and hardware are taxed at 18 percent on purchase, while standard passenger boats are sold at 5 percent (parasail and other adventure-use boats attract 40 percent, as recorded in the SIP). This creates an input tax credit surplus that works as a working-capital buffer and a pricing lever, but ties pricing flexibility to the pace of new orders. Growth plans should track this balance as a recorded item, and the treatment should be agreed with the accountant, because a new service line such as repair may carry a different tax profile.

7.3 Funding growth

Capital-heavy growth, such as moving from a rented yard to owned premises, would be the largest investment the firm could make, yet it holds few fixed assets a lender accepts as security. Policy support exists: the Credit Guarantee Fund Trust for Micro and Small Enterprises has raised its guarantee cover, and in September 2025 the Union Cabinet approved a package for shipbuilding and maritime sectors that includes shipbuilding financial assistance and maritime and shipbuilding development schemes.

These are aimed mainly at larger shipyards, and whether a small FRP builder qualifies was not established. Exact figures should be verified from the cited government documents before publication. Any application would also need formal financial records, which the firm does not yet keep in a form a lender would expect.

7.4 Working capital

The 50/40/10 payment structure and order-based purchasing make growth largely self-funding: more confirmed orders bring more advances. The risks are timing (resin price changes between advance and purchase) and any service or design line that does not follow the same advance-funded pattern. New lines should be designed to carry similar staged or advance payments.

7.5 Liability and dispute risk

The after-sales boundary is clear in practice: no warranty on commercial vessels, a limited three-month hull warranty on personal-use vessels, engine support through the distributor, customer-arranged transport, and the firm covering faults on its side in full. Several pre-delivery inspections are done because returning a boat or sending staff across India would cost far more than catching a fault at the yard. A written warranty annexure and a signed inspection and handover record would protect the firm as volumes and distances grow. A service business would widen the liability surface, so terms must be set first.

8 Staged growth roadmap

The firm's strengths are flexibility and low overhead, so the roadmap puts low-capital steps first and gates capital-heavy steps on evidence.

Table 4. Staged growth roadmap

Stage	Timing	Actions	Evidence needed to proceed
1. Record and cost	0–6 months	Per-job costing sheet with minimum margin rule; shared inquiry log recording source, stage reached and reason for loss; written warranty and signed handover record; stagger order start dates	Estimated vs actual cost per boat; inquiry conversion by channel
2. Secure inputs	6–12 months	Short price holds with resin suppliers; engine quote validity window; core labour crew on repeat terms; agreements with labour groups before peaks; longer lease or priority access at the yard	Margin stability across price movements; reduced build-time variation
3. Use existing capabilities	6–18 months	Deliberate IRS-classed pursuit of institutional orders; priced design packages; paid repair, refit and spares through local agents	Orders and revenue from each line, judged on the Stage 1 data
4. Test new products	12–24 months	One adjacent vessel type; pilot electric or hybrid vessel if subsidies and demand justify	Pilot economics; confirmed subsidy eligibility
5. Capital decisions	After Stage 3 evidence	Consider owned yard, integrated record system, structured apprenticeship, delivery logistics service	Demonstrated demand that exceeds rented capacity

8.1 Indicators to track

Boats delivered per year and hulls in progress; build time by size; quotation-to-order conversion; share of revenue from classed, design, and service lines; estimated vs actual cost per boat; input credit balance; and share of orders delivered on the promised date. No numerical targets are set because no baseline exists.

8.2 Roles of the partners

Following the delegation logic in Section 2.6, the partners should move routine tasks such as inquiry logging, costing-sheet maintenance and supplier price tracking to a junior role or to the accountant's periodic reports, preserving their own time for pricing decisions, key supplier relationships and regulatory liaison. A modest internal role could also reduce key-person risk.

9 The Indian market and Indian customers

Ocean Wings sells to a broad Indian market, not only to Goa, and its growth depends on understanding who buys boats in India and why. This section combines market estimates with what the owner and the internship showed about the firm's customers. Where a point is the author's inference and not a measured fact, it is marked as such.

9.1 Size and direction of the Indian market

MarketsandMarkets values the Indian recreational boat market at about USD 815 million in 2025 and projects about USD 1,147 million by 2030, a growth rate of about 5 percent a year (MarketsandMarkets, India recreational boat market). The same publisher projects India's electric boat market to grow about

27.7 percent a year from 2026 to 2031, from roughly USD 12.4 million to USD 42.1 million (MarketsandMarkets, India electric boats). IMARC estimates the narrower Indian yacht market at about USD 129 million in 2025, and names Goa, Kerala and Maharashtra among the states fuelling it (IMARC, India yacht market).

Three cautions apply. These are commercial market-research estimates with different definitions and are not audited figures. They cover recreational boating, so they understate the commercial passenger, water-sports and fishing craft that make up much of Ocean Wings' work. And a market growing at about 5 percent a year is steady, not explosive, which supports the paper's argument that the firm's limits are in capacity and not in demand.

9.2 The segments Ocean Wings serves in India

Table 5. Market segments served by Ocean Wings in India

Segment	Typical buyer	What the buyer wants	Fit with Ocean Wings
Tourist passenger boats and catamarans	Tour operators, resort and river-cruise businesses, island operators	Seating capacity, canopy or cabin, safety, delivery before the season, IRS class where required	Core line; up to 24 m catamaran
Water-sports and parasail boats	Adventure and beach-activity operators	High-power engines (Volvo Penta D6-340 class), stability, reliability	Core line; 40% GST category per the SIP
Net-fishing boats	Individual fishermen, fishing cooperatives	Low cost, durability, engine service nearby, subsidy eligibility	Existing line; price-sensitive
Sport-fishing boats	Charter operators, enthusiasts	Rod-fishing layout, comfort, outboard power	Existing line

Segment	Typical buyer	What the buyer wants	Fit with Ocean Wings
Yachts and leisure craft	Private owners, charter businesses	Finish, brand, resale	Existing line; small national market
Institutional and government	Tourism departments, water-transport bodies, rescue and patrol agencies	Class certification, documentation, tender compliance	Under-pursued; see Lever 1

The owner confirms that all customers are direct buyers, from northern India to the south, including the Andaman and Lakshadweep Islands, and that the firm has no dealers. The owner did not say which of the business or retail segments is larger; this should be recorded in the inquiry log proposed in Section 8 **[to be confirmed with the owner]**.

9.3 How Indian customers decide

The internship and the owner's statements show five decision factors. The first four are observed, the fifth is an inference.

- **After-sales access decides the engine.** Customers choose Yamaha or Suzuki largely by which brand has better service in their state, not by price or performance. Buyers in distant states therefore reward whoever reduces their service risk.
- **Regulation sets the product.** In the Andaman Islands IRS class and two engines are mandatory, so the buyer's location fixes the specification before price is discussed.
- **Delivery timing matters most for seasonal buyers.** Operators want a vessel ready for the next tourist or fishing season and order during the monsoon to achieve it. Delivery time is one of three points customers compare, with build quality and safety.
- **Trust and direct dealing.** Inquiries arrive by phone, WhatsApp, referrals and B2B listings, and the firm tells customers they are free to compare other builders. Staged payment of 50, 40 and 10 percent means the buyer must trust the builder with a large advance.
- **Price and financing (inference).** Many Indian operators and fishermen are small businesses, and capital is a common constraint. Subsidy schemes and bank finance are therefore likely to shape when and what they buy. This needs testing through the inquiry log.

9.4 The fisheries customer and public schemes

Government schemes shape part of Indian demand. Under the Pradhan Mantri Matsya Sampada Yojana (PMMSY), traditional fishermen can receive assistance of up to 40 percent for the general category, capped at ₹48 lakh per deep-sea vessel, and up to 60 percent for SC, ST and women beneficiaries, capped at ₹72 lakh (Lok Sabha reply on PMMSY). Proposals for 463 deep-sea fishing vessels were approved between 2020-21 and 2023-24. Reporting in 2026 found that fewer than half of 392 approved deep-sea boats had actually been ordered, with high cost, unsuitable designs and delayed subsidies cited as reasons (Pulitzer Center).

Ocean Wings' FRP net-fishing boats are smaller than these deep-sea vessels, so the scheme does not apply directly. The relevant lesson is that Indian fishing customers respond to subsidy timing, and that boats poorly matched to their working needs go unordered. A builder that understands subsidy eligibility for the smaller boat categories, and designs for local fishing practice, could serve this

segment better. Which PMMSY or state schemes cover the firm's boat sizes was not examined and should be checked **[to be confirmed]**.

9.5 Regional differences within India

The industry is regional as well as national. A Goa customer compares Ocean Wings with other Goa yards on delivery time and personal relationship. A customer in a distant state, dealing with the firm directly, is more likely to compare it with builders in Kerala or Maharashtra on price, specification and certification. This suggests different messages for different regions: relationship and local presence at home, certification and after-sales assurance far away.

9.6 What this means for Ocean Wings

Three conclusions follow. First, Indian buyers reward builders who lower their risk: certification, a clear warranty, and after-sales reach. Ocean Wings already does much of this but does not communicate it in writing. Second, the institutional and regulated segments are the least price-driven and the most documentation-driven, which suits the firm's IRS capability. Third, because distant customers cannot

easily inspect the yard, evidence such as delivered-boat references, inspection records and videos is part of the product.

10 Problems of Ocean Wings and their solutions

Eleven problems stand out from the evidence in this paper. Each is stated with its evidence, its consequence for growth, and a proposed solution. They are ordered by how directly they limit growth, with the capacity and cost problems first.

10.1 Problem and solution register

Table 6. Register of problems, their consequences and proposed solutions

#	Problem	Evidence	Consequence	Proposed solution
1	Rented yard limits capacity	Production tied to Shirodkar Shipyard, which the firm does not control; renting discourages fixed investment	Caps hulls in progress; limits parallel large builds	Negotiate a longer lease or priority-slot agreement; schedule builds by yard calendar; consider owning a yard only after demand is proven
2	Skilled per-job labour is scarce at peaks	Workers controlled by local groups, not always reliable; monsoon orders cause overlap	Longer lead time, uneven finish	Keep a core crew on repeat terms; agree terms before peaks; stagger start dates; train apprentices
3	Resin and engine price volatility	Resin follows crude oil and rose with war-related disruption; engine prices set by distributors and rechecked per quote	Margin squeeze between quotation and purchase	Price-variation clause in contracts; short quote validity; supplier price holds after the advance; track the resin price
4	No per-order costing; informal records	Costing apportionment and order-acceptance rule not visible; Word and Excel only	Cannot price new lines or see real margin per boat	Per-job costing sheet with minimum margin rule; monthly review with the accountant

#	Problem	Evidence	Consequence	Proposed solution
5	Key-person dependence	Pricing, suppliers, inquiries and regulatory liaison sit with the partners	Partner time is the bottleneck; absence slows quotes and purchases	Document routines; delegate logging and follow-up; deputy for quotations
6	Single revenue stream	Income almost entirely from new boats built to order	Revenue limited by build capacity; exposed to season	Add priced design, service and refit, and classed institutional work
7	Dependence on one naval architect and IRS timelines	Stage-wise approvals; certification takes one and a half to four months	Delivery delays outside the firm's control	Written service terms with the architect; second designer as back-up; submit early; quote lead time clearly
8	Reactive, untracked sales effort	Inquiries via phone, WhatsApp, referrals, B2B listings; no record of why inquiries are lost	Cannot tell which channels convert; growth looks slow	Shared inquiry log; follow-up routine; reference portfolio of delivered boats
9	Thin after-sales reach and unwritten warranty terms	Customers across India and islands; warranty rules clear in practice but not in writing	Dispute risk; missed service income	Written warranty annexure; signed inspection and handover record; local service agents
10	Tighter safety rules and uneven enforcement	Post-Tanur scrutiny in Kerala; Goa audit calls after the MV K-Cat fire	Longer approvals; builder-certificate-only boats face questions	Offer IRS or survey-ready documentation more widely; keep inspection records
11	Limited access to growth finance and a green-propulsion gap	Few fixed assets for security; records in spreadsheets; only conventional engines supplied	Cannot fund a yard or electric pilot; may lose orders if rules shift	Formalise records for lenders; check MSME guarantee and shipbuilding schemes; supplier relationships for electric propulsion; pilot vessel

Problems 1 to 5 are the binding ones. Solving 6 to 8 raises the ceiling once the first five are under control. Problems 9 to 11 protect what is already earned and prepare for the next phase.

10.2 Problems specific to operating in Goa

Several problems are local. The firm's office is at Candolim while building takes place at Loutolim, so management and production are in different places. Goa's tourism boom brings competition from at least one larger, established Cuncolim builder with over 85 employees. Water-sports and passenger boats operate under the Captain of Ports and the Department of Tourism, and press reports suggest compliance has been uneven, so audits can follow an incident. The monsoon removes every boat from the water from roughly June to September, which compresses deliveries and servicing into the other months. Solutions: use the monsoon deliberately as the build and approval window; keep documentation ready for audits; and position survey-ready boats as the safer purchase.

10.3 Which problems to fix first

Problems 3, 4 and 8 are cheapest to fix and give the information needed to judge everything else, so they should start immediately. Problems 1, 2 and 5 need agreements and delegation and take months. Problems 6, 7 and 11 depend on evidence from the first group before capital is committed.

11 Techniques and ways to implement the solutions

The solutions in Section 10 can be put into practice with a small set of standard management techniques. All are low-cost and fit a partnership firm that uses Excel, Word and Outlook. None needs new software to begin.

11.1 Technique register

Table 7. Register of implementation techniques, costs and start points

Technique	Problem addressed	How to implement at Ocean Wings	Cost	Start
Job costing and minimum-margin rule	3, 4	One Excel template per boat: materials, labour, yard rent, electricity, equipment hire; estimate vs actual at delivery; margin floor for accepting orders	Very low	Month 1
Price-variation clause	3	Add a clause to quotations: resin and engine components adjust if the published price moves beyond an agreed band before purchase; confirm wording with the accountant and a lawyer	Very low	Month 1
Drum-buffer-rope scheduling (Theory of Constraints)	1, 2	Treat the yard as the constraint: keep a yard calendar, release new builds only when a slot and a crew are free, and hold a short buffer for materials	Low	Month 2
Skills matrix and core crew	2	List workers by skill (lamination, finishing, fitting); keep the best on repeat terms; plan training for the weakest skill	Low	Month 2
Simple CRM and inquiry log	8	Shared sheet: source, vessel type, stage, outcome, reason lost; weekly review; reply-time target for WhatsApp inquiries	Very low	Month 1
Reference portfolio and	8, 9	Photos, short videos and customer references for each delivered boat type; use on B2B listings, WhatsApp	Low	Month 3
digital proof		catalogue and replies to distant buyers		
Kraljic supplier segmentation	3	Classify resin, fibreglass and engines as strategic; hardware as routine; seek second sources and price holds for the strategic group	Low	Month 3
Standard work and checklists	5, 9	Written checklists for quotation, order confirmation, pre-delivery inspection and handover; a deputy can then run them	Low	Month 2
Signed warranty annexure and handover record	9, 10	One-page annexure attached to every quotation; customer countersigns the inspection checklist at loading	Very low	Month 1
Modular or catalogue designs	1, 7	Offer 2 or 3 standard designs (for example 8, 12 and 24 seats) alongside custom work, so drawings and IRS approvals can be reused and lead time falls	Medium	Months 6–12
Service partners and agents	6, 9	Agree repair and spares terms with workshops near major customer clusters; the firm quotes and supervises, the partner performs	Medium	Months 6–12
Finance readiness	11	Keep monthly management reports from the accountant; prepare a short lender pack with order book, payment structure and track record	Low	Months 3–6

11.2 Other ways to grow in the Indian market

Beyond the techniques above, five routes are worth testing on a small scale.

- **Regional agents or referral partners.** The firm sells only direct. Commission-based agents in states such as Kerala, Maharashtra or Gujarat could generate inquiries and handle first contact, while the firm keeps pricing and quality control. The risk is that agents weaken the direct relationship the firm values.
- **Operator financing tie-ups.** Many buyers are small operators who need credit. Informal arrangements with banks or lenders that already finance tourist boats could make the firm's boats easier to buy. Which lenders do this was not examined **[to be confirmed]**.
- **Seasonal order campaigns.** Because customers order during the monsoon, the firm could run a deliberate pre-monsoon outreach to repeat customers and operators, with staged-payment terms and a slot-booking system for the yard.
- **Repeat and fleet customers.** Operators who run several boats are the best targets: one relationship brings multiple orders, and a fleet buyer values after-sales support. A record of customers by number of boats owned would identify them.
- **Public and institutional tenders.** Register with relevant tourism and water-transport bodies, track tenders, and prepare a standard IRS-class documentation pack so that tender responses are quick.

11.3 A cautious way to roll out: plan, test, review

Each change should follow a simple Plan-Do-Check-Act cycle. Choose one problem, set one measure, try the change on a single order or season, compare with the previous order, and only then make it standard. For example, the price-variation clause can be tried on the next three quotations and judged by how many customers accept it and how much margin it protects. This keeps the cost of a mistake low and builds the evidence that lenders, partners and the panel will want.

11.4 Risks of implementation

- **Overload on the partners.** Starting everything at once would add to the bottleneck the changes are meant to remove. Start with the four "Month 1" items.
- **Customer resistance.** A price-variation clause may lose price-led buyers. This is acceptable if the firm's stated strategy is to attract buyers who value quality and service, but it should be tested.
- **Cost of standardisation.** Catalogue designs may reduce the custom flexibility that some customers value. Keep them as an addition, not a replacement.
- **Missing data.** Without historical financial data, early measures are baselines, not targets.

12 Conclusion, limitations and further research

12.1 Conclusion

Ocean Wings runs a lean, flexible and commercially disciplined model that has allowed it to serve a national customer base from a rented yard. The evidence gathered in this study points in two directions, and a fair conclusion has to weigh both.

12.1.1 Positive findings

- **A lean, variable cost base.** A rented yard, per-job labour and the absence of idle capacity or fixed payroll between projects keep overheads low and let the firm size its workforce to the order book, up to a 24-metre catamaran.
- **Customer-funded production.** Materials are bought only against confirmed, paid orders and payment follows a 50/40/10 structure, so the firm avoids carrying inventory and the risk of unsold stock.
- **Reach and credibility.** The firm sells directly from northern to southern India and to the Andaman and Lakshadweep Islands, and its IRS-class capability, delivered through a naval architect, gives access to regulated markets that builders without class cannot serve.
- **A deliberate non-price position.** Competing on build quality and service, inviting customers to compare, screening inquiries on feasibility and budget, offering multi-brand engine choice and keeping a clear after-sales boundary backed by several pre-delivery inspections all build trust.
- **A favourable environment.** Record tourist arrivals in Goa, a growing recreational boat market, tighter safety scrutiny that favours documented and survey-ready builders, and emerging policy support for cleaner vessels all point toward rising demand.

12.1.2 Negative findings

- **A capacity ceiling.** The yard is rented, skilled labour is scarce at peaks, classed vessels depend on one external naval architect, and certification adds one and a half to four months. More demand therefore does not translate directly into more output.
- **A single revenue stream.** Almost all income comes from new boats built to order, and orders cluster in the monsoon months, which concentrates labour and yard pressure into one period.
- **Cost exposure.** Resin follows crude oil and rose sharply this year because of war-related disruption, engine prices move independently of the firm's costing baseline, and with no stock held nothing smooths these swings. Reliance on accumulated input tax credit to price orders also makes costing less transparent.
- **Informal management.** There is no integrated system, no per-job costing sheet, and pricing, supplier and regulatory knowledge sits largely with the partners. This creates key-person risk and makes growth hard to measure or scale.
- **Competitive, regulatory and funding pressure.** Larger builders such as the Cuncolim yard with over 85 employees and Kerala yards winning institutional orders are better placed on capacity and capital. A shift to electric propulsion could leave conventional-only builders behind, vessels built on a builder certificate alone may face closer questioning, and a firm with few fixed assets and informal records will find formal finance hard to secure.
- **Limits of the evidence.** Profit, cost apportionment and the order-acceptance rule were not visible, so none of these effects has been sized.

12.1.3 Overall conclusion

Weighing these findings, the firm's strengths are real but they sit inside a ceiling that its own structure sets. The answers to the research questions are therefore as follows. Growth is limited mainly by capacity and management, not by demand (RQ1). The most underused resource is IRS classification, applied reactively where regulation or a customer requires it (RQ2). The feasible routes are those that add income without needing more yard space, namely classed institutional work, priced design services and paid service and refit, with adjacent vessel types and electric propulsion as later

options (RQ3). Each route carries cost, liability or regulatory risks that must be priced before it is pursued (RQ4).

The firm's continued growth is likely to depend less on any single large investment than on the steady formalisation of the practices already in place: clearer cost and warranty communication, consistent management of engine and material prices, and a deliberate, rather than purely reactive, approach to IRS classification. Each of these builds on capabilities the firm already holds and would strengthen its position in a Goa and Indian boat-building industry that is itself entering a period of sustained growth. Capital-heavy steps such as an owned yard or electric vessels should wait until staged, low-cost tests show they are justified. Because this study had no access to financial records, these conclusions are best

treated as well-grounded hypotheses, and testing them with the firm's own data is the natural next step.

12.2 Limitations

- **Single-firm, single-period view.** Findings may not generalise to other Goa builders.
- **No financial access.** Profits, cost apportionment and the order-acceptance rule were not seen, so all growth levers are unsized and the hypotheses are untested.
- **Reliance on observation and informal owner statements**, which may carry bias; the claim that growth is modest is the author's observation, not a measured result.
- **Confidentiality.** Some pricing, supplier and customer details are generalised or omitted at the company's request.
- **Family connection.** Ocean Wings is co-owned by the author's father, as disclosed in the SIP declaration. Observations and recommendations have been made as objectively as possible.
- **Market figures** come from commercial market reports and press sources and should be read as indicative.
- **Conceptual cases** from other sectors (public-sector coaching, online consumer behaviour) are used only as analogies.

12.3 Further research

A study with access to the firm's financial records could measure per-boat profitability, test the constraint hypotheses with capacity data, size each growth lever, and compare Ocean Wings with named competitors on delivery time and price. Research on whether small FRP builders can access shipbuilding and green-vessel subsidies would also be valuable.

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