

Sustainable Diving-Based Marine Tourism Product Development Strategy to Enhance Tourist Experience through a Blue Ocean Strategy Approach

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ABSTRACT

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Indonesia's marine tourism sector is experiencing rapid growth, particularly in diving destinations such as Nusa Penida and Padang Bai. However, increased tourist activity has intensified ecological pressure while many dive operators continue to rely on conventional business models that emphasize recreation rather than sustainability. This study develops a strategic framework for sustainable diving product development using the Blue Ocean Strategy approach, aiming to enhance tourist experience while supporting marine conservation. The study adopts an applied business project research design through field observation, expert interviews, benchmarking of leading conservation-based tourism operators, and review of secondary data. Analytical tools include SWOT–VRIO integration, Porter's Five Forces, Business Model Canvas, ERRC grid, and strategic mapping. The findings reveal that integrating conservation education, coral-reef restoration programs, transparent governance, digital engagement, and community participation can create new value spaces beyond price-based competition, generating meaningful and differentiated marine-tourism experiences. The research proposes a prototype model of a Sustainable Dive Centre that blends tourism, education, and conservation, offering practical guidelines for operators and policymakers. The model demonstrates how sustainability may function not only as ethical responsibility but as a strategic competitive advantage capable of driving long-term ecological and economic benefits.



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Introduction

Problem Identification and Strategic Potential

Indonesia lies within the Coral Triangle, one of the most biologically diverse marine regions in the world, making it a global hotspot for marine tourism development (Wikipedia, 2024). Marine tourism has long been recognized as a sector with significant economic potential, while simultaneously presenting environmental and management challenges (Cater & Cater, 2007; Orams, 1999). This ecological advantage has positioned marine-based tourism, particularly diving, as a key driver of both local and national economic growth. Within this context, Nusa Penida and Padang Bai have emerged as prominent diving destinations. Nusa Penida, in particular, has experienced rapid tourism growth, with visitor arrivals reaching approximately 728,936 in 2023, accompanied by hotel occupancy rates of around 80% (Antara News, 2024; detikcom, 2023). Daily visitor volumes can reach between 3,000 and 6,000 people, reflecting strong market demand but also increasing environmental pressure on marine ecosystems (Tempo, 2024). Events such as the Nusa Penida Festival, attracting over 22,000 visitors, further illustrate both the economic potential and management challenges of the destination (PemKab Klungkung, 2024).

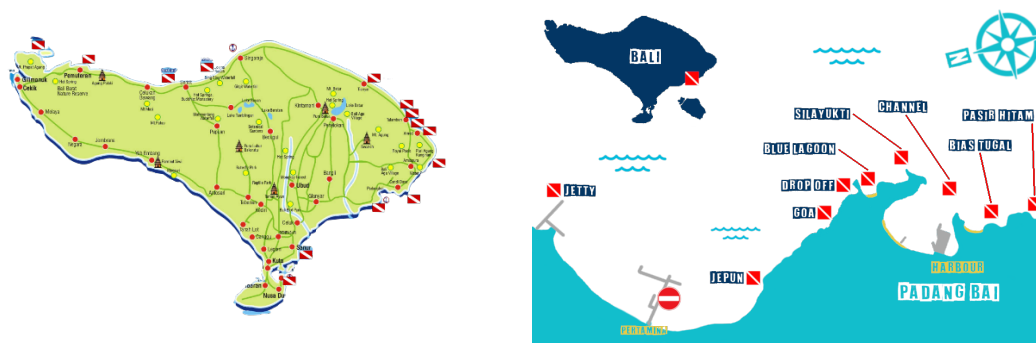


Figure: Location of Business Project – Nusa Penida & Padang Bai

Tourism growth in Nusa Penida has accelerated significantly over recent years. Visitor arrivals exceed hundreds of thousands annually, with daily volumes reaching several thousand during peak periods. High occupancy rates and large-scale tourism events indicate strong market demand and economic momentum. However, this rapid expansion has also intensified pressure on fragile marine ecosystems. Overcrowding, uneven visitor management, and limited innovation in tourism products increasingly threaten coral reefs, the core asset of the diving experience. This condition reflects a broader challenge in marine tourism, where economic growth often conflicts with environmental sustainability (Barker, 2008; Spalding et al., 2017)

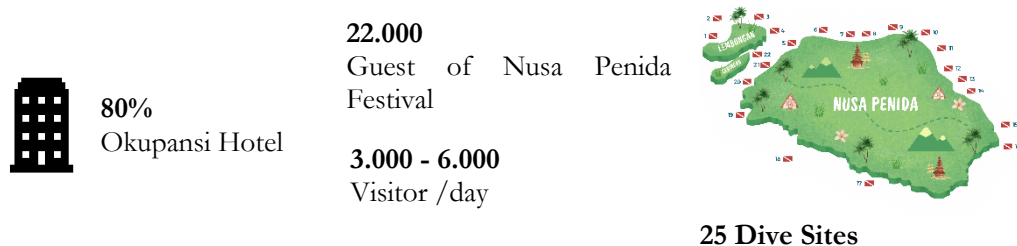


Figure: Visitor Growth and Tourism Pressure in Nusa Penida

At the operational level, many dive operators continue to rely on conventional, volume-driven business models. Services, dive routes, and pricing structures have become increasingly homogeneous, resulting in intense price-based competition. This “red ocean” condition constrains differentiation and encourages short-term revenue strategies that risk long-term environmental degradation and declining experience quality. At the same time, global tourism demand is shifting. Divers increasingly seek ethical, educational, and participatory experiences rather than purely recreational activities. Experiences that allow visitors to understand marine ecosystems, contribute to conservation, and engage with local communities are becoming more valued. Such experience-based tourism has been shown to enhance visitor satisfaction and perceived value, particularly when linked to environmental interpretation and authentic engagement (Barker, 2008). Padang Bai plays a critical complementary role in this opportunity. Compared to Nusa Penida, Padang Bai offers calmer waters, shallow dive sites, and high accessibility, making it suitable for beginners, training programs, and conservation-oriented introductory experiences. Sites such as Blue Lagoon and Bias Tugel support high visitor volumes while remaining conducive to structured education and environmental interpretation (Wikipedia contributors, 2025). In addition, Indonesia’s marine tourism potential continues to expand through diverse diving typologies, including specialized experiences such as muck diving (Prasetia et al., 2023)



Figure: Padang Bai as Entry-Level and Educational Diving Hub

Importantly, Padang Bai also hosts one of Bali's coral reef restoration initiatives. Since 2019, reef rehabilitation efforts have restored significant seabed areas through environmentally responsible methods, with programs open to public participation. These initiatives demonstrate the feasibility of integrating hands-on conservation with tourism activities (Livingseas Foundation, 2024). By integrating Padang Bai and Nusa Penida into a single business ecosystem, this study identifies the potential for a tiered conservation-based diving model. Introductory conservation and education programs can be delivered in Padang Bai, while advanced conservation expeditions and immersive experiences are offered in Nusa Penida. This structure distributes environmental pressure, broadens market reach, and deepens visitor learning trajectories. This strategic direction aligns with global sustainability agendas, particularly the United Nations Sustainable Development Goals, including SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 14 (Life Below Water).



Figure: Alignment of Sustainable Dive Tourism with SDGs

International benchmarking further reinforces the viability of this approach. Conservation-driven tourism models implemented by organizations such as Misool Eco Resort, &Beyond, Inkaterra, Mashpi Lodge, and National Geographic Expeditions illustrate that conservation, education, and premium experience design can coexist with strong business performance (&Beyond, 2023; Inkaterra, 2024; Misool Foundation, 2025; *National Geographic Traveler Vacation Packages* | *National Geographic Expeditions*, n.d.)



Figure: Global Best Practices in Conservation-Based Tourism

Despite these precedents, similar integrated models remain limited in Nusa Penida and Padang Bai. This gap highlights a clear strategic opportunity for value innovation. By applying Blue Ocean Strategy, this study identifies the potential to move beyond saturated competition and create uncontested market space through conservation-centered experience design and stakeholder collaboration (Chan & Renée Mauborgne, 2005; Kim, 2017). Accordingly, the strategic potential explored in this article lies in the development of a Sustainable Dive Centre model that positions marine conservation as a core value proposition. By aligning environmental stewardship, meaningful visitor experience, and community empowerment, the proposed model aims to reposition Nusa Penida and Padang Bai as competitive destinations within the growing global market for sustainable marine tourism.

Method

Research Design

This study adopts an applied business research design aimed at developing a strategic and feasible model for sustainable dive tourism. The research is not intended to test hypotheses, but to generate an integrated strategic solution by combining empirical evidence, strategic analysis, and business modelling. Accordingly, the design emphasises contextual understanding, interpretive analysis, and practical applicability. The research was conducted between January and August 2025, covering two primary diving destinations in Bali: Nusa Penida and Padang Bai. These locations were selected due to their contrasting characteristics: Nusa Penida as a high-demand, advanced diving destination, and Padang Bai as an accessible entry-level site with strong potential for education and conservation-based activities. This dual-location approach enabled the development of a tiered experience and business ecosystem.

Primary data were collected through a combination of field observation, surveys, and in-depth interviews. Field observations focused on dive-site conditions, visitor flow, operational practices, safety procedures, and environmental pressures. A structured survey was administered to 57 diving participants, capturing perceptions related to service quality, safety, learning experience, environmental awareness, and expectations toward sustainable diving practices. To complement this, five key informants—including dive operators, instructors, and local stakeholders—were interviewed to gain deeper insights into operational challenges, competitive dynamics, and feasibility considerations. Secondary data supported contextualisation and triangulation. These sources included tourism statistics, marine conservation regulations, industry documentation, and academic literature related to sustainable tourism, Blue Ocean Strategy, and experience-based value creation. Benchmarking materials from international conservation-oriented tourism operators were also reviewed to identify transferable best practices.

Data analysis followed an integrative strategic logic rather than a single analytical lens. Internal organisational conditions were interpreted using the McKinsey 7S framework, while external dynamics were examined through PESTEL analysis and Porter's Five Forces. These insights informed the redesign of the value proposition and business logic through the Value Proposition Canvas and Business Model Canvas. Blue Ocean Strategy principles—particularly value innovation and the ERRC grid—were applied to identify opportunities for creating uncontested market space. Financial feasibility screening was incorporated to ensure that strategic recommendations remained economically realistic.

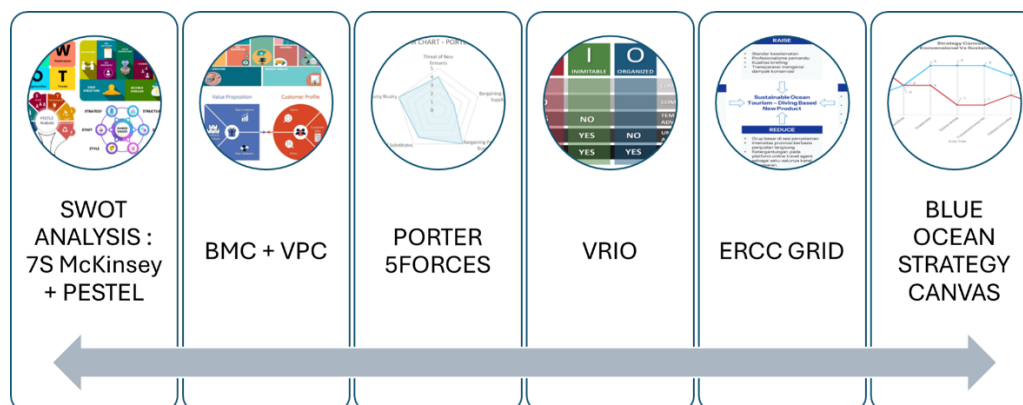


Figure: Integrated Research Design and Strategic Analysis Framework

Throughout the process, findings were refined iteratively by moving between empirical evidence, strategic tools, and conceptual interpretation. This research design allows the study to translate real-world conditions into a coherent strategic model that aligns environmental stewardship, meaningful visitor experience, and long-term business viability.

Business and Market Research

This section presents the findings of the business and market research conducted to understand the competitive landscape, customer behavior, and structural dynamics of the diving industry in Nusa Penida and Padang Bai. The analysis integrates internal organisational conditions and external market forces to identify the strategic context in which a sustainable dive centre model can be developed.

Internal Business Conditions

The internal analysis reveals that the primary strengths of the dive centre are not rooted in physical assets or financial scale, but in organisational adaptability, human capital quality, and experiential capability. Field observations, customer surveys, and in-depth interviews consistently indicate that service quality, safety, and instructor professionalism are the most decisive factors shaping customer satisfaction and perceived value. Survey results show that customer satisfaction levels related to instructor guidance, safety, and overall enjoyment consistently exceed 90 percent. Instructors and guides are perceived not merely as technical facilitators, but as experience shapers who influence emotional engagement, learning outcomes, and trust. This human-centric capability constitutes a strategic asset that is difficult for competitors to replicate, particularly when combined with strong interpersonal relationships and local knowledge.



Figure: Customer Satisfaction Drivers in Diving Experience

Organisationally, the dive centre operates with a flexible, field-based structure that allows rapid adaptation to changing sea conditions, currents, weather, and diver profiles. Decision-making is largely decentralised and situational, enabling operational responsiveness while maintaining service quality. The involvement of local communities such as fishermen and boat operators, within daily operations further strengthens social legitimacy and operational efficiency. Survey responses indicate that trust and local recommendation play a significant role in customer decision-making, reinforcing the importance of social embeddedness in the business model.

Another notable internal strength lies in the organisation's multiskilled capability. Guides often perform multiple roles, including adventure guide, macro spotter, underwater photographer, and instructor. This capability allows the dive centre to serve diverse market segments such as recreational divers, photographers, educational groups, and conservation-oriented participants, within a single operational system, without substantially increasing cost complexity. Such flexibility enables product customisation and experience differentiation beyond standardised dive offerings. Despite these strengths, the research also identifies internal vulnerabilities. Strategic direction, growth pathways, and organisational values remain largely implicit rather than formally documented. Operational consistency is heavily dependent on experienced individuals, creating risks related to scalability, knowledge transfer, and long-term organisational resilience. Digital systems for booking, customer relationship management, and performance monitoring are limited, constraining the ability to systematically manage customer engagement and repeat visitation.

INTERNAL FACTORS	+(STRENGTHH)	
	Strength Analysis	Data Source
Strategy	Experience-based differentiation strategy focused on service quality rather than price competition.	Reflected in high customer ratings on overall enjoyment, instructor guidance, and safety as key satisfaction drivers (Survey Q17: majority rated 4–5 for overall enjoyment; Survey Q10: key selection factors include experience, professionalism, and safety; BOw1).
	Customized dive experience approach (e.g., marine life wishlist, macro photography, educational dives, and adventure segmentation).	Identified as a core strategy to serve diverse diver segments (Survey Q7: main purposes include recreational, educational, photography, and adventure; BOw1).
	Integration of conservation as part of the diving experience rather than a separate program.	Enhances the meaning and value of the customer experience (Survey Q2: respondents highlight environmental education, coral planting, and waste management as added value; BOw2).
Structure	Flexible and field-based organizational structure.	Enables rapid adaptation to weather conditions, currents, and customer characteristics (BOw1).
	Involvement of local communities (fishermen and boat operators).	Integrated into daily operations, strengthening social embeddedness and local support (BOw1; Survey Q10: trust and local recommendations).

INTERNAL FACTORS	+(STRENGTH)	
	Strength Analysis	Data Source
System/Technology	Service system based on direct interaction and informal education.	Appreciated by customers as a personalized and engaging experience (Survey Q1: communication and product explanation rated 4–5; Survey Q2: positive response to educational elements during dives; BOw1).
Staff/People/Employees	Service system based on direct interaction and informal education.	Appreciated by customers as a personalized and engaging experience (Survey Q1: communication and product explanation rated 4–5; Survey Q2: positive response to educational elements during dives; BOw1).
Style (Mgt style, Leadership. Communication)	Service system based on direct interaction and informal education.	Appreciated by customers as a personalized and engaging experience (Survey Q1: communication and product explanation rated 4–5; Survey Q2: positive response to educational elements during dives; BOw1).
Skills (Organization Capability)	Service system based on direct interaction and informal education.	Appreciated by customers as a personalized and engaging experience (Survey Q1: communication and product explanation rated 4–5; Survey Q2: positive response to educational elements during dives; BOw1).
Shared Values (VMVO)	Service system based on direct interaction and informal education.	Appreciated by customers as a personalized and engaging experience (Survey Q1: communication and product explanation rated 4–5; Survey Q2: positive response to educational elements during dives; BOw1).

Table: Summary of Internal Strengths and Structural Gaps

External Market and Industry Dynamics

Externally, the diving industry exhibits a complex mix of opportunity and risk. Market demand is highly segmented, encompassing recreational, educational, photography-based, adventure, and conservation-oriented diving. Survey findings indicate that customers are not primarily price-sensitive; instead, willingness to pay is strongly influenced by perceived experience quality, safety standards, and instructor professionalism. Even in post-pandemic conditions marked by declining purchasing power, customers remain willing to pay premium prices when experiential value is clear and consistent.

EXTERNAL FACTORS	+(STRENGTHH)	
	Strength Analysis	Data Source
Market Demand	Highly segmented market demand.	Covers recreational, educational, photography/videography, adventure, and conservation-based diving (Survey Q7: diverse diving purposes).
	Customers are not price-sensitive when experiential value is high.	Evidenced by high satisfaction levels, repeat visits, and tipping that exceeds service pricing (Survey Q3: price is not the primary factor; BOw1: tipping narratives).
	Consistent and growing interest in educational and conservation-based experiences.	Particularly strong among Gen Z and educational group segments (Survey Q9: environmental education, coral reef restoration, waste management; Cst1, Cst3).

Table: Market Segmentation of Diving Demand

Social dynamics further reinforce this pattern. Word-of-mouth and personal recommendations consistently emerge as the dominant drivers of customer choice, outweighing formal marketing or price promotions. At the same time, there is growing interest, particularly among younger and educational segments in environmentally responsible and meaningful tourism experiences, provided these are delivered in engaging and participatory ways. Technological factors present both opportunity and constraint. Customers increasingly expect digital accessibility, including online booking, clear information, and pre- and post-dive educational content. However, the absence of credible ecological monitoring technologies within conservation practices raises concerns about the long-term legitimacy of sustainability claims, highlighting the need for more structured and transparent approaches.

Environmental conditions remain a defining feature of the industry. The unique marine ecosystems of Nusa Penida and Padang Bai, ranging from manta rays and drift diving to macro life and shallow reefs—constitute natural advantages that are difficult to substitute. Nevertheless, over-tourism, unsustainable practices, and high natural risks (such as strong currents and extreme sea conditions) pose serious threats to ecosystem integrity and operational safety. From a competitive perspective, the industry is characterised by low formal entry barriers but high informal capability barriers. While licensing and capital requirements are relatively accessible, sustainable competitiveness depends on embedded experience, skilled human capital, local legitimacy, and the ability to design meaningful experiences. The presence of illegal operators, freelance guides, and large investors with superior financial resources creates structural distortions that disadvantage compliant small operators and intensify competitive pressure.

Strategic Implications

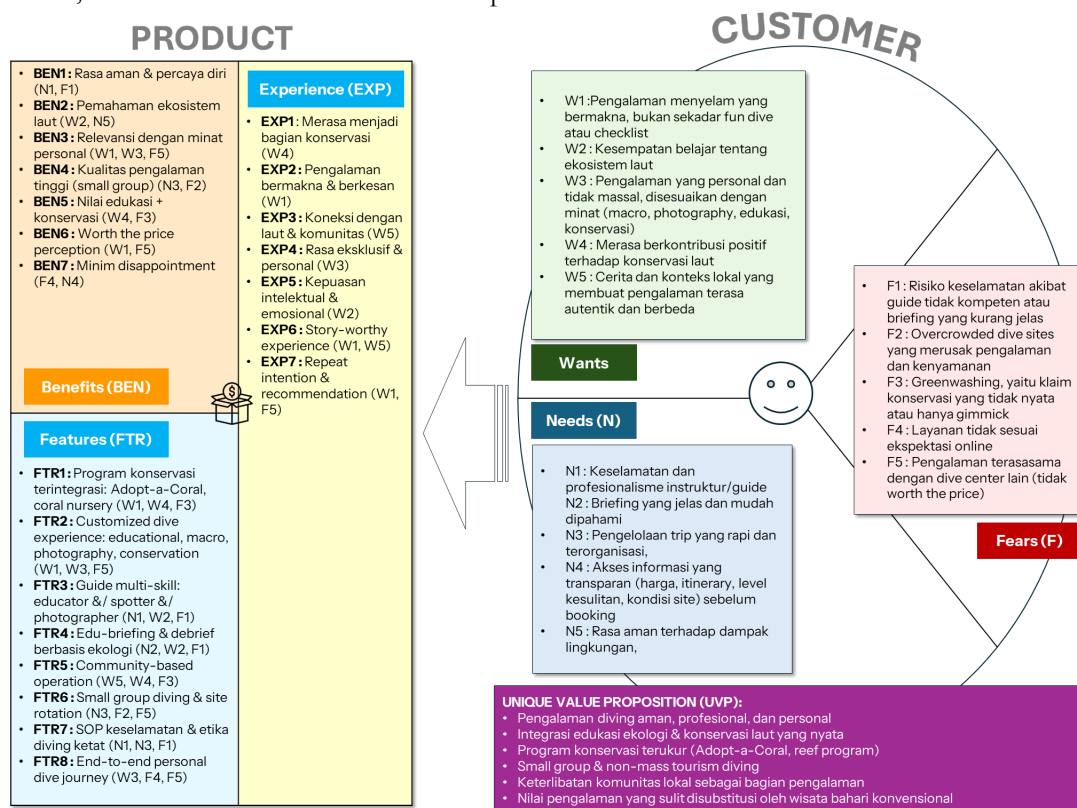
Overall, the business and market research indicates that the diving industry context does not support growth strategies based on volume expansion or price competition. Instead, sustainability and competitiveness depend on the organisation's ability to orchestrate internal capabilities and respond adaptively to external pressures. The findings underscore the need for a strategic shift toward experience-based value creation, capability-driven differentiation, and conservation-integrated business design. These insights form the analytical foundation for the subsequent development of the Value Proposition Canvas, Business Model Canvas, and Blue Ocean ERRC Grid, which translate empirical findings into a coherent strategic and business model framework.

Value Proposition, Business Model, and ERRC Grid Analysis

The findings from the business and market research indicate that the diving industry in Nusa Penida and Padang Bai is characterized by strong demand, yet limited differentiation. Most operators offer similar services, rely on comparable dive sites, and compete primarily on pricing and logistical convenience. As a result, the industry reflects a typical "red ocean" condition, where competition reduces margins and constrains innovation. To address this condition, this study translates empirical insights into a structured strategic design through the integration of the Value Proposition Canvas (VPC), Business Model Canvas (BMC), and Blue Ocean Strategy ERRC Grid. These tools are not applied independently, but as a connected framework to redefine value creation in sustainable dive tourism.

Value Proposition Redesign (Value Proposition Canvas)

The Value Proposition Canvas reveals a clear shift in customer expectations. Diving customers are no longer driven solely by recreational motivations, but increasingly seek meaningful, safe, and immersive experiences. Key customer jobs extend beyond diving itself to include learning, exploration, emotional connection, and contribution to environmental preservation.



Value Proposition Canvas : Sustainable Dive Experience

Customer pains are primarily associated with safety concerns, overcrowded dive sites, lack of guidance, and limited environmental awareness. These issues reduce both comfort and perceived value, particularly for less experienced divers and educational groups. At the same time, customers express strong gains related to enjoyment, instructor professionalism, discovery of marine life, and opportunities to engage in conservation activities. In response, the proposed value proposition integrates three key elements:

- Experience Enhancement through personalized dive journeys (e.g., marine life targeting, macro photography, guided exploration)
- Educational Integration by embedding environmental interpretation and learning within each dive activity
- Conservation Participation allowing customers to actively contribute to reef restoration, waste management, and marine protection

This integrated approach transforms diving from a transactional service into a meaningful experience platform, increasing emotional engagement and perceived value.

Business Model Development (Business Model Canvas)

The redesigned value proposition is operationalized through the Business Model Canvas, which aligns customer segments, value creation, and delivery mechanisms into a coherent system.

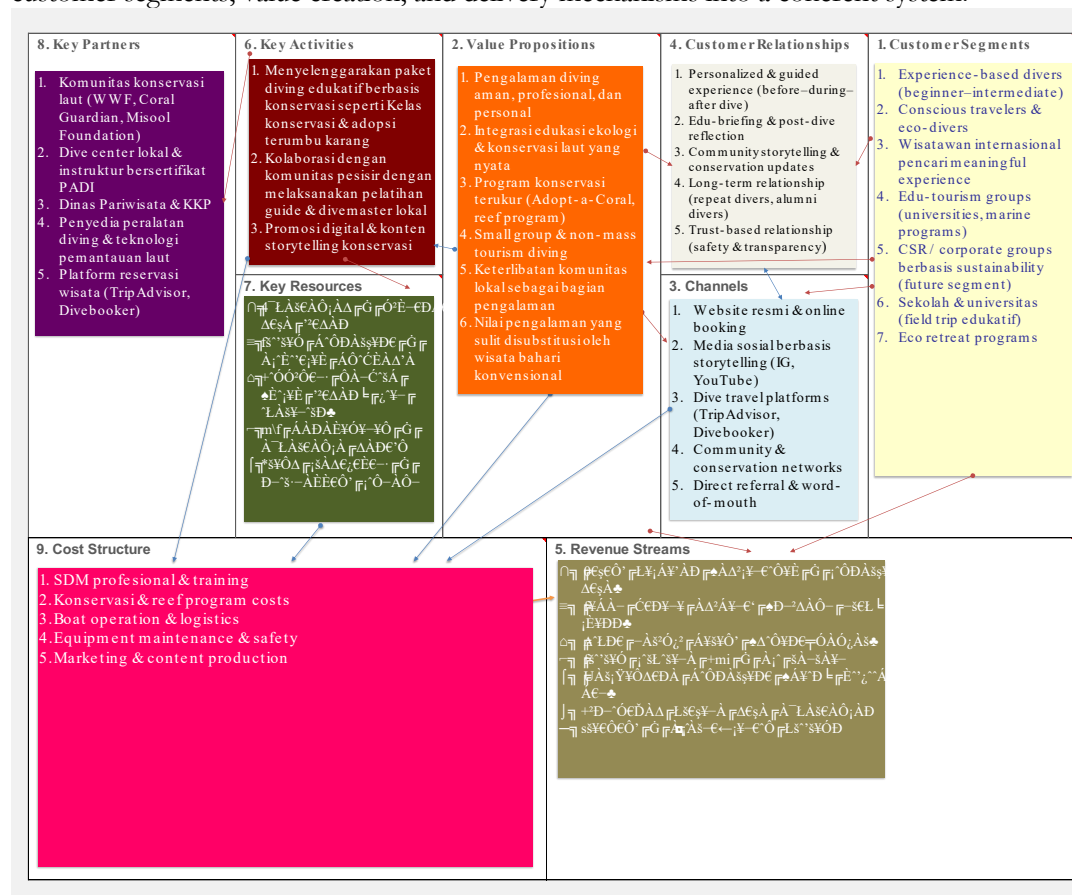


Figure: Business Model Canvas: Sustainable Dive Centre

The business model expands beyond traditional recreational divers to include educational institutions, conservation-oriented travellers, corporate groups, and eco-tourism segments. This diversification reduces dependency on a single market segment and increases resilience. Key activities are redefined to include not only diving operations, but also education programs, conservation initiatives, community engagement, and experience design. This expands the role of the dive centre from a service provider to a facilitator of learning and environmental stewardship. Partnerships become a critical

component of the model. Collaboration with local communities, conservation organizations, educational institutions, and tourism stakeholders strengthens operational capacity while enhancing credibility and impact. Revenue streams are also diversified. In addition to diving services, the model incorporates educational programs, coral adoption initiatives, conservation-based experiences, and customized packages, allowing the business to capture value from multiple dimensions of the customer journey. The integration of these elements results in a business model that is not only economically viable, but also aligned with sustainability principles and long-term ecosystem preservation.

Blue Ocean Strategy (ERRC Grid Analysis)

To move beyond price-based competition, this study applies the Blue Ocean Strategy framework through the ERRC Grid (Eliminate–Reduce–Raise–Create), identifying how the dive centre can redefine industry standards.

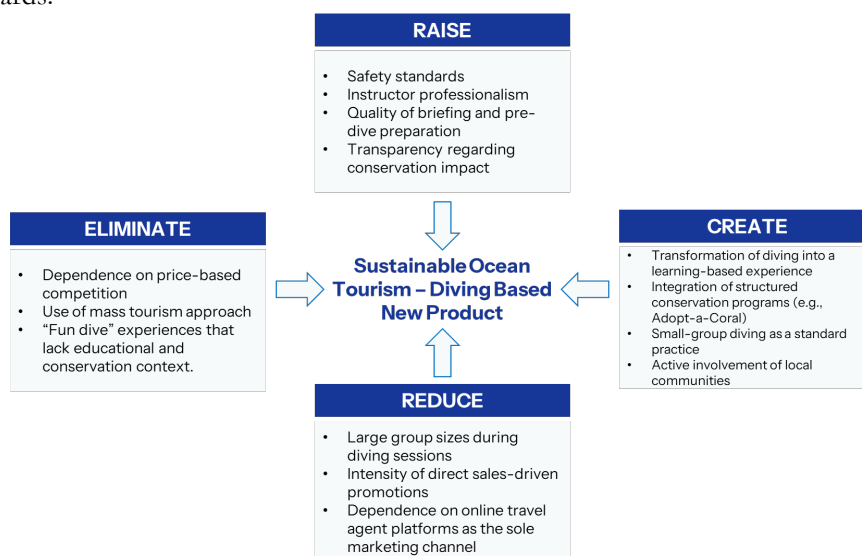


Figure: ERRC Grid Blue Ocean Strategy for Sustainable Dive Tourism

The analysis suggests eliminating practices that do not contribute to long-term value, such as excessive reliance on price competition and standardized, low-differentiation packages. These elements weaken brand positioning and increase environmental pressure. Certain industry factors should be reduced, including volume-driven operations and unmanaged visitor flows, which contribute to reef degradation and declining experience quality. At the same time, several elements must be raised. These include safety standards, service quality, instructor capability, and environmental awareness, all of which are strongly valued by customers and directly linked to satisfaction and trust. Most importantly, the model introduces new value elements that are currently underdeveloped in the industry. These include integrated conservation experiences, structured environmental education, digital storytelling, and transparent impact communication. By creating these new dimensions of value, the dive centre shifts competition away from price and toward experience, meaning, and impact.

Strategic Synthesis: From Diving Service to Experience Ecosystem

The integration of VPC, BMC, and ERRC analysis results in a fundamental transformation of the business logic. The dive centre is repositioned from a conventional service provider into a sustainable experience ecosystem. This ecosystem connects multiple elements:

- marine conservation
- customer experience
- community participation
- and business sustainability

Rather than treating conservation as an additional activity, it becomes a core component of value creation. Similarly, customer experience is no longer limited to the dive itself, but extends across pre-dive education, in-dive engagement, and post-dive reflection.

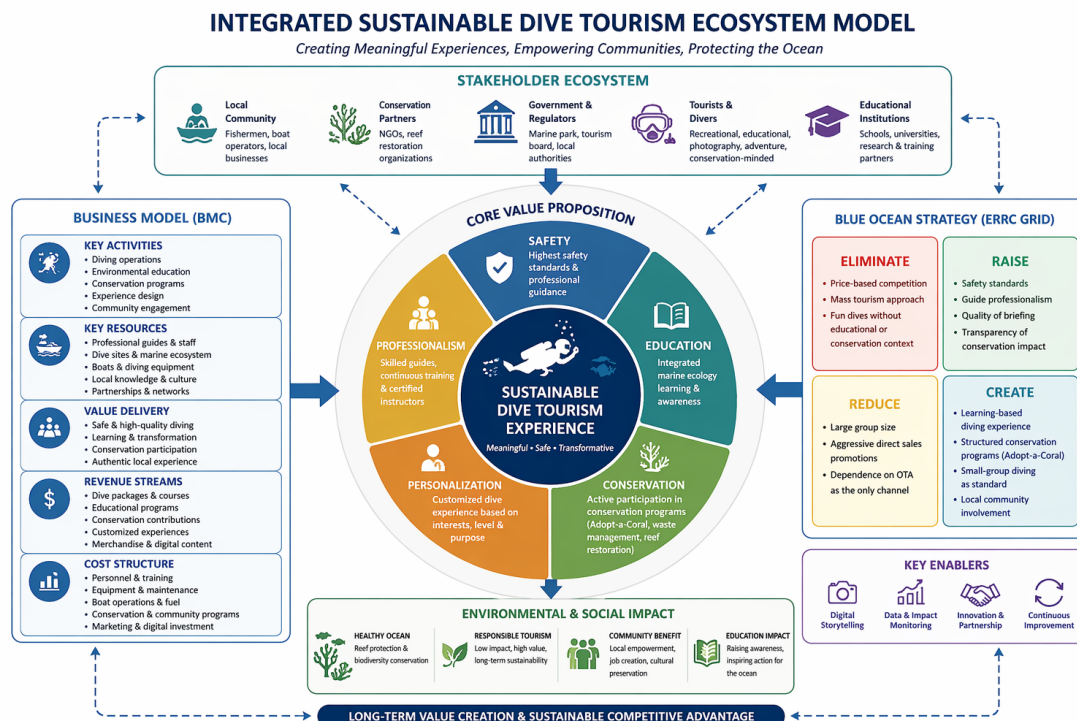


Figure: Integrated Sustainable Dive Tourism Ecosystem Model

This strategic shift aligns with the VRIO findings presented earlier. While natural location and human capital provide initial competitive advantages, long-term sustainability depends on the organisation's ability to structure, scale, and integrate these resources into a coherent system. Ultimately, this section demonstrates that competitive advantage in the diving industry cannot be achieved through operational efficiency alone. Instead, it requires value innovation the ability to simultaneously enhance customer experience, strengthen environmental stewardship, and build a differentiated market position.

Stakeholders, Key Collaborators, and Strategic Resources

The implementation of a sustainable dive tourism model requires a coordinated ecosystem of stakeholders, collaborators, and strategic resources. Unlike conventional diving operations that rely primarily on internal capabilities, the proposed model depends on multi-stakeholder integration to deliver value across environmental, social, and economic dimensions.

Stakeholder Ecosystem

The stakeholder structure extends beyond customers and operators, encompassing a broader network that directly influences operational sustainability and long-term impact.

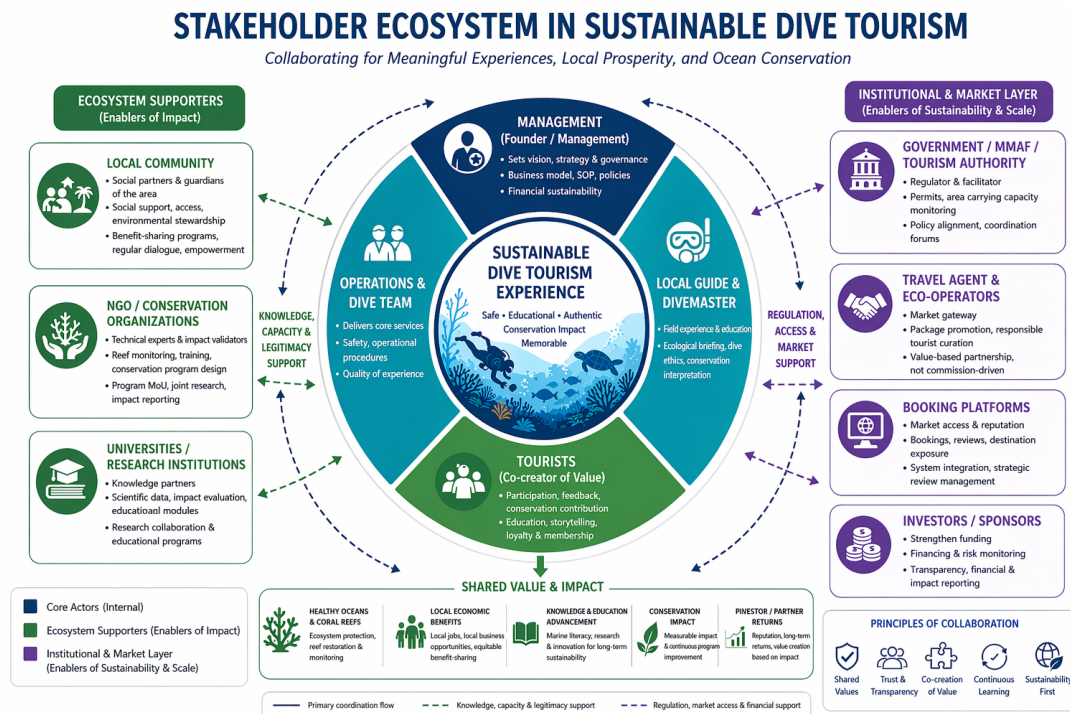


Figure: Stakeholder Ecosystem in Sustainable Dive Tourism

At the center of the ecosystem are divers and tourists, who act not only as consumers but also as participants in conservation and learning activities. Their expectations shape service quality, safety standards, and the overall design of the experience.

- Local communities, including fishermen, boat operators, and coastal residents, play a critical operational and social role. Their involvement strengthens authenticity, supports local livelihoods, and builds trust within the destination. The integration of local actors also enhances resilience by embedding the business within the social fabric of the area.
- Conservation organizations contribute expertise in reef restoration, environmental monitoring, and sustainability practices. Their role is essential in ensuring that conservation activities are credible, measurable, and aligned with ecological objectives.
- Government and regulatory bodies provide the institutional framework that governs marine protection, tourism activities, and safety standards. Compliance with these regulations is necessary to maintain operational legitimacy and long-term access to marine resources.
- Educational institutions represent an emerging and high-potential segment, particularly for structured programs related to marine education, research, and field-based learning. This segment supports the transition from purely recreational diving to knowledge-based tourism.

Key Collaborators

The effectiveness of the model depends on the strength of collaboration among these stakeholders. Key collaborators are not only partners in execution but also contributors to value creation.

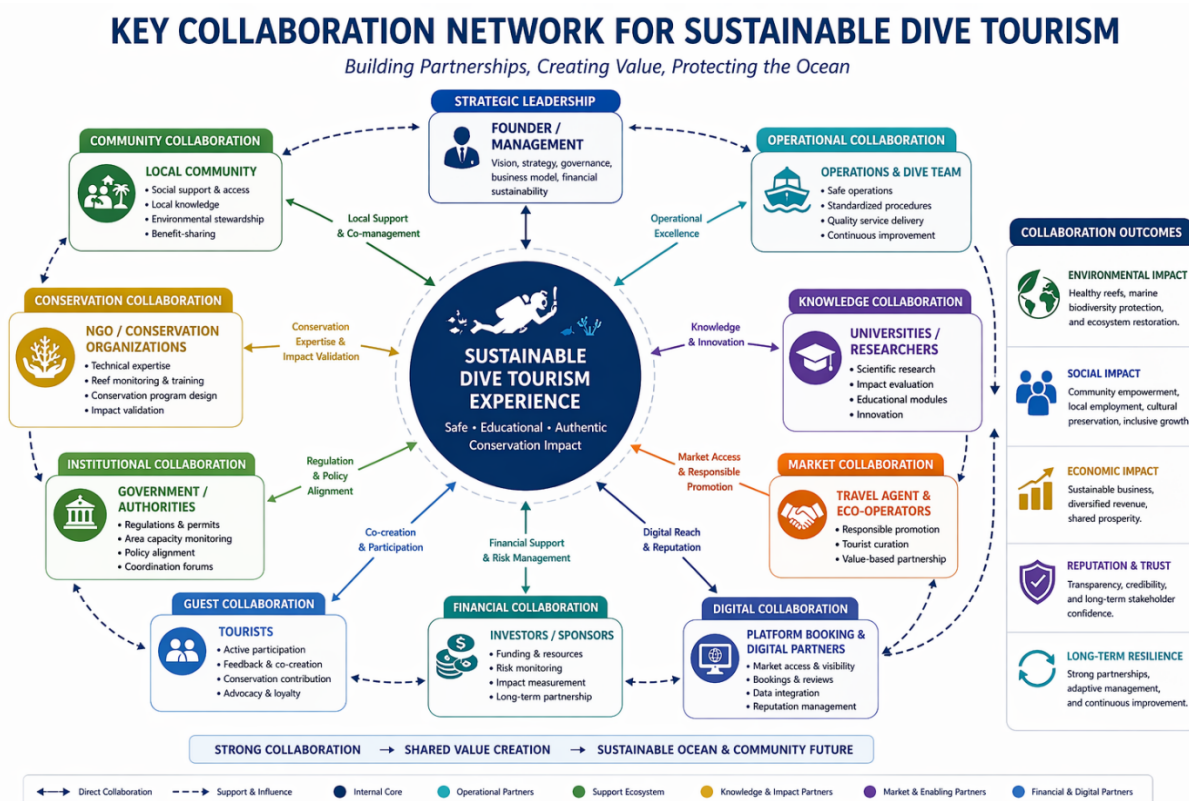


Figure: Key Collaboration Network for Sustainable Dive Tourism

In the collaboration network, key collaborators have their own roles and functions. Local communities and boat operators serve as operational collaborators, enabling access to dive sites and supporting daily activities. Their knowledge of local conditions enhances safety and experience quality. Conservation partners function as knowledge and impact collaborators, supporting the design and implementation of reef restoration programs, environmental education, and monitoring systems. Their involvement increases credibility and differentiates the offering from conventional dive services educational institutions and training organizations act as market and knowledge collaborators, opening opportunities for structured programs, certifications, and research-based tourism experiences. Tourism stakeholders, including travel platforms and accommodation providers, contribute as distribution collaborators, supporting market access and customer acquisition. However, the model reduces overdependence on intermediaries by strengthening direct engagement channels.

Strategic Resources and Capabilities

The sustainability of the proposed model is strongly influenced by the organization's ability to leverage its key resources and capabilities. The VRIO analysis highlights that competitive advantage is primarily derived from natural positioning, human capital, and relational assets, rather than purely financial or technological resources.

Resources Capabilities /	Valuable	Rare	Inimitable	Organized	Strategic Implication
Location within the Coral Triangle	✓	✓	⚠	✓	Sustainable Competitive Advantage (Conditional)
Collaboration with local conservation communities	✓	✓	⚠	⚠	Temporary → Potential Sustainable Advantage
Local stories and coastal culture as part of the experience	✓	⚠	⚠	✗	Temporary Advantage
Marine conservation certification for local guides	✓	✗	✗	⚠	Competitive Parity
Digital promotion and storytelling technology (not yet optimized)	⚠	✗	✗	⚠	Competitive Disadvantage (Strategic Gap)

Table: VRIO Analysis of Key Resources and Capabilities

The location within the Coral Triangle represents a valuable and rare resource that supports long-term attractiveness. However, its sustainability depends on effective environmental management, making it a conditional advantage. Collaboration with local communities and conservation actors provides a pathway toward potentially sustainable competitive advantage, particularly when supported by structured coordination and shared value creation. Human capital, especially guides, instructors, and local operators, emerges as the most critical capability. Their multiskilled expertise, local knowledge, and ability to deliver personalized experiences directly influence customer satisfaction and differentiation. At the same time, the analysis identifies several strategic gaps. Limited digital capability, underdeveloped storytelling systems, and the absence of standardized certification structures reduce the ability to scale and formalize competitive advantages. These gaps represent opportunities for strategic improvement in subsequent implementation phases.

Strategic Implications

The integration of stakeholders, collaborators, and resources demonstrates that the proposed model operates not as a standalone business, but as a collaborative ecosystem. Value is co-created through interactions among actors, rather than delivered unilaterally by the dive operator. This ecosystem approach strengthens three critical dimensions:

- Operational resilience, through distributed roles and local integration
- Market differentiation, through authentic and participatory experiences
- Environmental sustainability, through shared responsibility and measurable impact

Ultimately, this section confirms that the success of the sustainable dive tourism model depends on the organization's ability to orchestrate relationships, capabilities, and resources into a cohesive system, rather than relying solely on internal efficiency or market positioning.

Result And Discussion

Financial Feasibility Study

Financial Model Overview

The financial feasibility of the Sustainable Dive Centre is developed using a conservative and phased approach, ensuring that the business model remains realistic, scalable, and resilient under varying market conditions. Rather than pursuing aggressive growth, the financial model prioritizes controlled expansion aligned with operational readiness, resource availability, and environmental sustainability. Revenue is generated through a diversified portfolio of services, including core diving packages, educational programs, conservation-based experiences, corporate partnerships, and premium customized services. This diversification reduces dependency on a single revenue stream and enhances financial stability, particularly in a tourism sector that is highly sensitive to seasonality and environmental conditions. The pricing strategy follows a value-based approach, where pricing reflects the quality of experience, safety standards, and conservation integration, rather than relying on cost-based competition. As a result, revenue growth is driven not only by volume, but also by increasing value per customer.

On the cost side, the model distinguishes clearly between fixed costs, variable costs, and programmatic costs. Fixed costs are maintained at a lean level during early stages to minimize financial risk, while variable costs scale proportionally with operational activity. Programmatic costs—such as conservation and community engagement—are treated not as burdens, but as strategic investments that enhance brand positioning and customer willingness to pay. The initial capital expenditure (CAPEX) is focused on essential operational assets, including diving equipment, safety systems, basic infrastructure, and digital support systems. The total initial investment is approximately IDR 2.02 billion, financed through a combination of 70% equity and 30% external funding. The resulting Weighted Average Cost of Capital (WACC) is estimated at 13%, which serves as the benchmark for evaluating investment feasibility.

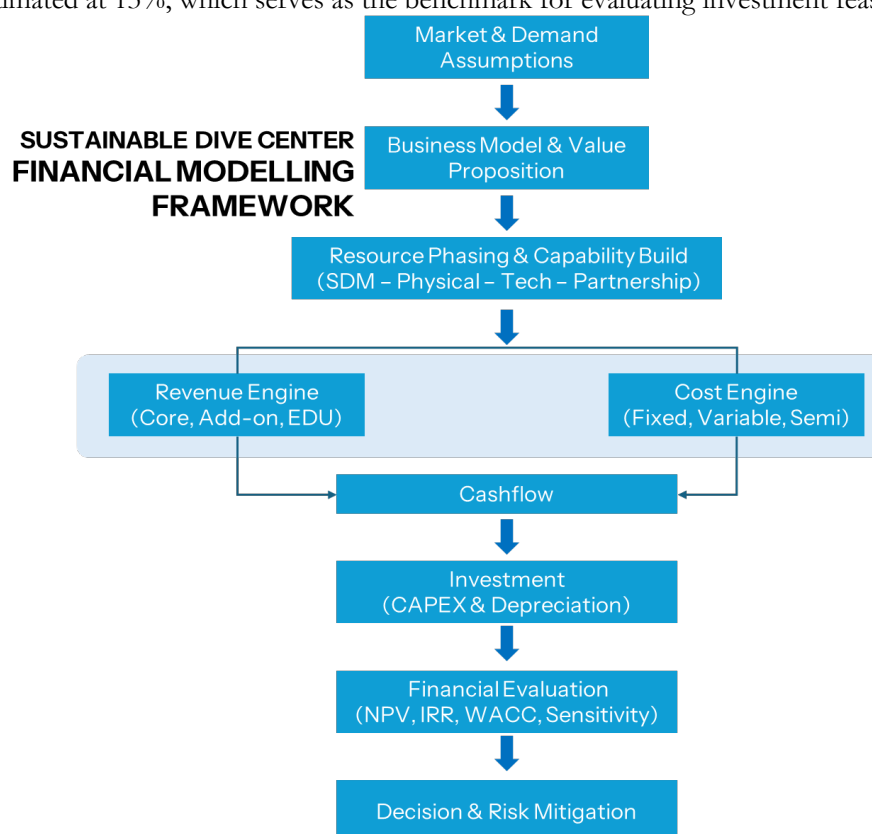


Figure: Financial Model Structure of Sustainable Dive Centre

Financial Performance and Feasibility

The five-year financial projection demonstrates a consistent and positive cash flow trajectory. The business begins generating operational surplus from the first year, with net cash flows increasing steadily as market awareness, operational efficiency, and service diversification improve. Revenue grows from approximately IDR 2.5 billion in Year 1 to over IDR 3.3 billion by Year 5, supported by a balanced mix of diving activities, educational programs, conservation initiatives, and premium services. At the same time, operating costs increase in a controlled manner, reflecting a disciplined cost structure and phased resource expansion. The resulting net cash flow remains positive throughout the projection period, indicating that the business is capable of sustaining operations, supporting reinvestment, and generating returns without requiring excessive financial leverage. To evaluate financial feasibility, the model applies Net Present Value (NPV) and Internal Rate of Return (IRR) using a discount rate aligned with the WACC of 13%. The analysis results show:

NPV: Positive and significantly above zero

IRR: Substantially higher than WACC

These results indicate that the project not only recovers its initial investment but also generates substantial economic value over time. From an investment perspective, the model demonstrates strong financial viability and resilience under conservative assumptions.

PRESENT VALUE (PV) AND FUTURE VALUE (FV) ACROSS TIME PERIODS

KOMPONEN	PV0	FV1	FV2	FV3	FV4	FV5
Initial Investment (CAPEX)	-2.024.000.000					
Operating Costs (OPEX)		-1.435.787.336	-1.500.737.355	-1.568.934.855	-1.640.542.230	-1.640.542.230
Revenue & Profit		2.541.000.000	2.795.000.000	3.080.610.000	3.382.071.000	3.382.071.000
TOTAL	-2.024.000.000	1.105.212.664	1.474.262.645	1.511.675.145	1.741.528.770	1.741.528.770

Table: 5-Year Cash Flow Projection

Investment Attractiveness and Return Structure

From an investor perspective, the Sustainable Dive Centre presents a compelling opportunity characterized by strong return potential, controlled risk, and alignment with sustainability-driven market trends. The investment structure adopts a hybrid approach combining capital payback and profit-sharing (dividends). In the initial phase, cash flow is prioritized for operational stability and gradual capital recovery. Once the initial investment is fully returned—typically within a 3 to 5-year horizon—investors continue to benefit from profit distribution based on business performance. This approach ensures a balanced relationship between investor returns and business sustainability. It avoids excessive financial pressure during early operations while still offering attractive long-term returns. The model also incorporates scenario-based projections (conservative, moderate, and optimistic), demonstrating that even under cautious assumptions, the project remains financially viable. This robustness is supported by diversified revenue streams, controlled cost structure, and the integration of high-value, experience-based services. Ultimately, the financial analysis confirms that sustainability and profitability are not mutually exclusive. Instead, conservation-driven tourism, when strategically designed, can generate both ecological impact and strong financial performance.

A. Conservative Scenario

Focus: liquidity protection, slower payback, dividends only after full capital recovery

Year	Surplus Cash Flow (IDR)	Payback to Investor	Remaining Capital	Dividend
1	17,463,371,279	120,000,000	487,200,000	0
2	19,317,546,279	150,000,000	337,200,000	0
3	21,361,706,279	180,000,000	157,200,000	0
4	23,615,078,154	157,200,000	0 (Fully Paid)	0
5	23,615,078,154	0	0	150,000,000

Notes:

1. Payback completed in Year 4
2. Dividends start in Year 5

In the conservative scenario, capital repayment is carried out cautiously. The early-stage payback allocation is relatively small to ensure sufficient financial flexibility for:

- a) operational stabilization,
- b) cash reserve accumulation,
- c) asset maintenance, and
- d) future reinvestment needs.

This approach minimizes liquidity risk while still ensuring full capital recovery for investors. It is most suitable for low-risk investors who prioritize capital security over rapid returns.

B. Moderate Scenario

Focus: balanced approach. Payback and earlier dividend distribution

Year	Surplus Cash Flow (IDR)	Payback	Remaining Capital	Dividend
1	17,463,371,279	200,000,000	407,200,000	0
2	19,317,546,279	200,000,000	207,200,000	0
3	21,361,706,279	207,200,000	0 (Fully Paid)	0
4	23,615,078,154	0	0	250,000,000
5	23,615,078,154	0	0	300,000,000

Notes:

1. Payback completed in Year 3
2. Dividends increase progressively

The moderate scenario balances business needs and investor returns. Cash flow is allocated between:

- a) capital repayment,
- b) operational reserves, and
- c) reinvestment.

Investors begin receiving dividends after payback completion, typically between Year 3–4. This scenario reflects a realistic operating condition, offering a healthy balance between:

- a) capital protection
- b) and return generation

C. Optimistic Scenario

Focus: accelerated payback and higher dividend distribution

Year	Surplus Cash Flow (IDR)	Payback	Remaining Capital	Dividend
1	17,463,371,279	300,000,000	307,200,000	0
2	19,317,546,279	307,200,000	0 (Fully Paid)	0
3	21,361,706,279	0	0	300,000,000
4	23,615,078,154	0	0	350,000,000
5	23,615,078,154	0	0	400,000,000

Notes:

1. Payback completed in Year 2
2. Dividends increase steadily afterward

The optimistic scenario represents strong financial performance, driven by:

- a) high occupancy rates,
- b) strong program participation, and
- c) efficient operations.

In this case, capital recovery is accelerated, and dividend distribution increases significantly. This scenario highlights the potential upside when:

- a) brand reputation strengthens
- b) customer experience improves
- c) and operational capacity expands

Roadmap and Business Performance Matrix

Strategic Roadmap

The development of the Sustainable Dive Centre is guided by a structured five-year roadmap designed to ensure that business growth remains controlled, aligned with operational capacity, and consistent with sustainability objectives. The roadmap integrates two complementary perspectives: operational development phases (Pre-Flight, Start Engine, and Take-Off) and strategic orientation (Foundational, Growth, and Empowering). Rather than serving merely as a timeline, the roadmap functions as a strategic decision framework—defining when to expand, how far to scale, and how to manage risk throughout each stage of development. In the first year, the business focuses on establishing a strong operational foundation. Key priorities include ensuring legal compliance, implementing standardized safety procedures, building a capable core team, and developing transparent financial and operational systems. At this stage, the emphasis is not on rapid growth, but on stability, discipline, and credibility in the market.

Dimension	Key Target	Expected Output
Governance & Compliance	Business licensing, operational permits, and internal audit standards	Complete and compliant legal documentation
Operational System	Development of safety and operational Standard Operating Procedures (SOPs)	Standardized and fully implemented SOPs
Human Capital	Training of core team and dive instructors	Operational team ready in accordance with safety standards
Financial Control	Implementation of accounting, budgeting, and cash control systems	Transparent and measurable financial reporting
Digital & Booking System	Deployment of website, reservation system, and reporting tools	Functional booking system and operational data tracking
Conservation Integration	Integration of conservation into tourism products	Tourism experience combining education and conservation
Brand & Market Credibility	Positioning as a sustainable dive centre	Initial awareness and market trust established

Table: Year 1 Roadmap Summary - Foundational Phase (Pre-Flight)

Between Year 2 and Year 4, the business transitions into a controlled growth phase. Expansion is carried out selectively and is closely tied to operational readiness and financial performance. Capacity increases only when supported by sufficient demand, efficient resource utilization, and stable cash flow. During this phase, the business diversifies its product portfolio, strengthens market presence through partnerships and digital channels, and enhances customer experience while maintaining strict safety and sustainability standards.

Dimension	Strategic Focus	Implementation	Expected Outcome
Operations	Selective capacity expansion	Additional equipment, boat optimization, and improved scheduling management	Increased service capacity without exceeding operational limits
Product Portfolio	Revenue diversification	Fun dives, certification programs, student trips, coral adoption, and educational programs	More stable and diversified revenue throughout the year
Market	Market expansion	Digital marketing, industry partnerships, and engagement with diving communities	Increased brand awareness and market credibility
Cost Efficiency	Cost control and productivity improvement	SOP standardization, digital systems, and operational cost monitoring	Improved profit margins
Customer Experience	Enhancement of service quality	Guide training, customer journey optimization, and post-activity services	Higher customer retention and repeat visits
Conservation	Strengthening impact-driven programs	Coral nursery development, monitoring, and conservation education	Business differentiation and strengthened sustainability legitimacy

Table: Year 2–4 – Growth Phase (Start Engine)]

By Year 4 to Year 5, the business enters the empowering phase, where the focus shifts from growth to value creation. The Sustainable Dive Centre is positioned not only as a tourism operator, but as a recognized hub for conservation-based marine tourism. Strategic initiatives include developing education programs in collaboration with academic institutions, strengthening community engagement, and expanding through partnerships or scalable models. At this stage, the business creates value not only in financial terms, but also in environmental and social impact.

Dimension	Strategic Focus	Implementation	Expected Impact
Positioning	Strengthening brand as a sustainable dive centre	Certification standards and publication of conservation impact	Increased credibility and brand reputation
Education & Conservation	Establishment of an education centre	Collaboration with universities, schools, and NGOs	Knowledge transfer and applied research development
Community & Social Impact	Empowerment of local communities	Training for local guides and employment opportunities	Improved local welfare and community engagement
Business Model	Expansion of scalable opportunities	Membership programs, coral adoption, and strategic partnerships	Long-term revenue diversification
Governance	Strengthening governance structure	Transparent reporting and simplified audit mechanisms	Increased trust from investors and stakeholders

Table: Year 4–5 – Empowering Phase (Take-Off)

Overall, the roadmap ensures a balanced progression: building a strong foundation in Year 1, achieving stable and controlled growth in Years 2–4, and creating broader impact and long-term value in Years 4 to 5.

Operational Scaling Strategy

To support sustainable growth, the scaling strategy follows a capacity-driven approach rather than a target-driven one. Expansion decisions are based on operational readiness, asset utilization, and financial stability, ensuring that growth does not compromise service quality or increase risk. Human capital development follows a phased approach, beginning with a lean core team in the early stage, followed by gradual expansion of operational roles, and eventually the addition of specialized functions such as conservation experts, educators, and digital support. This ensures that labor costs remain aligned with revenue growth. Similarly, asset acquisition is carefully managed through a staged approach. In early operations, key assets such as boats and equipment are primarily leased rather than purchased, allowing the business to maintain flexibility and reduce capital burden. Ownership is only considered when utilization reaches an optimal level and financial performance supports long-term investment. Market expansion also follows a structured trajectory, starting with local awareness and diving communities, expanding into domestic and niche eco-tourism segments, and eventually targeting international markets and repeat customers. The focus is not solely on increasing volume, but on enhancing value per customer and strengthening long-term relationships. This disciplined scaling approach ensures that growth remains efficient, financially sustainable, and aligned with the core value proposition of the business.

Business Performance Matrix

The Business Performance Matrix serves as a control mechanism that translates the roadmap into actionable decision-making. It functions as a “navigation system” that guides when the business should expand and when it should consolidate. In the foundational phase, performance is measured through operational stability indicators, such as compliance with safety procedures, financial transparency, and consistency of service delivery. Expansion is deliberately limited until these indicators reach acceptable levels. During the growth phase, performance evaluation becomes more dynamic. Management monitors not only revenue growth, but also asset utilization, cost efficiency, customer satisfaction, and repeat visitation. Capacity expansion is triggered only when these indicators demonstrate consistent improvement. In the empowering phase, performance extends beyond operational and financial metrics. The focus shifts toward reputation, stakeholder trust, conservation impact, and long-term strategic positioning. These intangible factors become critical in determining the business’s ability to scale and sustain competitive advantage. A key principle underlying the matrix is the balance between expansion and control—knowing when to accelerate growth and when to pause. This approach prevents over-investment, protects cash flow, and ensures that operational systems remain capable of supporting increasing complexity.

Strategic Implications

The integration of the roadmap and Business Performance Matrix ensures that growth is not driven by market pressure alone, but by organizational readiness. This disciplined approach reduces operational and financial risks while enabling sustainable scaling. From an investor perspective, this framework provides confidence that capital deployment is controlled, growth is evidence-based, and long-term value creation is prioritized over short-term expansion. As a result, the business is positioned not only for profitability, but also for resilience and sustained impact in the marine tourism sector.

Prototype Market Test

The development process was conducted progressively. A dedicated team was formed with a shared interest in diving and marine conservation, followed by the establishment of a supporting organization, The Living Reef Foundation. Through this platform, funding was secured to develop conservation tools, including an innovative reef restoration structure known as the X-Reef Frame, designed based on continuous learning and benchmarking of coral restoration practices.



Figure: Coral Transplantation Activity Using X-Reef Frame

To validate the proposed Sustainable Dive Centre model, a prototype product in the form of a conservation-based diving experience was developed and tested directly in the market. This prototype translates the conceptual framework into a tangible offering, integrating recreation, education, and conservation into a single experience. Unlike conventional fun dives, the prototype incorporates key additional elements, including coral planting activities, structured ecological education, and deeper engagement with conservation narratives. This approach reflects the principles of Blue Ocean Strategy by creating new value dimensions rather than competing within existing market boundaries.



Figure: Coral Transplantation Activity Using X-Reef Frame

Market Introduction Approach

The prototype was introduced not as an experimental activity, but as a new product offering within the dive service portfolio. This approach ensured that customer responses reflected real market behavior rather than experimental bias. Initial awareness was built through email outreach, followed by personalized communication via WhatsApp and direct interaction. This method aligns with the nature of the diving market, which relies heavily on trust, relationships, and recommendations. Before participation, customers received a structured briefing emphasizing:

- a) the integration of diving and conservation,
- b) safety standards, and
- c) the sustainability objectives of the program.

Supporting materials, including visuals, storytelling, and documentation of coral restoration processes, were used to strengthen emotional connection and enhance understanding.



Figure: Prototype Introduction to Participants

8.2 Customer Response and Market Validation

The market test generated strong positive responses across multiple dimensions. Participants consistently perceived the experience as distinct from conventional diving activities. The inclusion of conservation elements created a deeper sense of involvement, transforming the activity from passive recreation into active contribution. One participant noted:

“Usually, a fun dive is just about enjoying the dive site. This experience was different—I didn’t expect to participate in coral planting, and it made the dive much more meaningful.”

This response highlights the presence of value innovation, where the experience delivers unexpected and differentiated value.

From an operational perspective, participants also emphasized safety and organization:

“Everything felt well-organized from start to finish, making the experience both safe and comfortable.”

This finding confirms that conservation-based tourism must be supported by strong operational discipline, not only by environmental ideals.

Key Insights from Market Test

The findings from the prototype testing can be summarized as follows:

Aspect	Key Finding	Business Implication
Product Perception	Viewed as unique and different from conventional diving	Clear differentiation and positioning
Conservation Value	Perceived as authentic, not superficial	Requires transparency and consistency
Emotional Experience	Generates pride and sense of contribution	Drives loyalty and advocacy
Safety & Operations	Considered safe and well-organized	SOP standardization is critical
Education	Enhances understanding of marine ecosystems	Requires structured and scalable briefing
Willingness to Pay	Customers are willing to pay a premium	Supports value-based pricing strategy
Repeat Intention	High interest in repeat participation	Enables membership and adoption programs
Customer Feedback	Need for better digital tracking and documentation	Opportunity for digital platform development

Table: Key Insights from Prototype Market Test

Product Refinement Implications

The market test confirms that the prototype has strong potential but also highlights the need for refinement in three key areas.

First, service design must be standardized. While the experience is positively perceived, operational consistency must be strengthened through dedicated SOPs, clear activity boundaries, and supervision mechanisms to ensure safety and environmental integrity. Second, communication and education must be enhanced. Customers expect clearer and more structured information regarding conservation objectives, environmental practices, and measurable impact. Transparent communication is essential to build trust and credibility. Third, business model alignment must be gradual. Although willingness to pay is evident, monetization should follow a phased approach:

- a) awareness building,
- b) value perception development,
- c) and gradual introduction of premium conservation offerings.

This ensures that pricing reflects perceived value rather than forcing early-stage commercialization.

8.5 Strategic Validation

Overall, the prototype market test demonstrates that conservation-based diving is both market-acceptable and commercially viable. The value proposition extends beyond recreation, incorporating meaning, participation, and environmental responsibility. The results also confirm that:

- a) differentiation is driven by experience, not price,
- b) customer value is shaped by emotional and educational engagement,
- c) and sustainability can be translated into tangible business performance.

These findings validate the core premise of the Sustainable Dive Centre model and provide a strong foundation for scaling the business in a structured and responsible manner.

Conclusion

This study proposes a Sustainable Dive Centre model that redefines marine tourism through the integration of recreation, education, and conservation. By applying a Blue Ocean Strategy approach, the model moves beyond price-based competition and introduces new value dimensions that emphasize meaningful experience, environmental responsibility, and stakeholder collaboration. The findings indicate that current diving tourism markets, particularly in destinations such as Nusa Penida and Padang Bai, are characterized by strong demand but limited differentiation. This creates both competitive pressure and strategic opportunity. Through the application of Value Proposition Canvas, Business Model Canvas, and the ERRC Grid, this study demonstrates how value innovation can reposition diving services into a more differentiated and sustainable offering. Empirical validation through a prototype market test further confirms the feasibility of the model. The results show that customers respond positively to conservation-based diving experiences, with strong indications of perceived value, willingness to pay, and repeat intention. These findings reinforce the argument that sustainability, when embedded into experience design, can generate both customer engagement and economic value. From a managerial perspective, the study highlights the importance of aligning product design, operational systems, and stakeholder collaboration. The proposed roadmap and Business Performance Matrix provide a structured approach to scaling, ensuring that growth is driven by operational readiness and sustainability considerations rather than short-term market pressure. Financial analysis supports the viability of the model, indicating that diversified revenue streams and value-based pricing can generate stable cash flows and attractive returns under conservative assumptions. This suggests that sustainability-oriented tourism models are not only environmentally relevant but also economically feasible. Overall, this study contributes to the growing discourse on sustainable marine tourism by demonstrating how conservation-driven innovation can be translated into a practical and scalable business model. Future research may explore broader implementation across different marine destinations, as well as the long-term impact of such models on ecosystem resilience and community development.

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