

Change lives and protect the planet with an impact investment in a blue ocean market. *gempacs* makes Marine Electric Mobility affordable for professional boat users in Emerging Markets

... a sector worth 0.5 Gigatonnes of CO2e annually.



A huge, yet little known problem

15 tonnes of CO2e on average emitted by each boat every year.

1 Outboard Motor



20 Cars (or more!)



In the next 15-20 years combustion motors will be replaced.

No viable and affordable alternative yet in emerging markets.



Barriers to making Marine Electric Mobility sustainable now

Cost and affordability for poorer users.

Limited autonomy and range while out at sea.

Absence of electric charging infrastructure in ports.



Our 5-step solution as a technology integrator

1. Installing Charging infrastructure in ports 2. Converting (or making new) Legacy boats to 100% electric, or making new electric boats 3. Connecting Software & Comms 4. Facilitating Microfinance to offer \$0 outlay upfront to owners 5. Increasing The boat owners' disposable income through savings on opex



Business Model

Main Revenue Streams

One-off sales

Recurring

Boat conversions/New boats \$20,000/boat (average)

Energy and SaaS sales \$780/boat/year (average)

Paid upfront by financial institutions

40% Gross Margin (\$8,000 on average) Recurring fees paid by owners

60% Gross Margin (\$470 on average)



Why It Matters For The Boat Owners

First 5 years After 5 years

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Upfront Conversion Payment	\$0	\$0 No upfront outlay payment for the conversion.
Current Daily Gasoline Costs	\$20 -	\$20 - Fuel prices are predicted to increase.
Post-conversion loan repayment	\$10 -	\$0 - Microloan repaid from electricity savings vs fuel.
Post-conversion Energy and Fees	\$3 =	\$4 =
Daily disposable income increase	\$7	\$16
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Annual disposable income increase* \$1,750 \$4,000

An owner can increase her disposable income by 58% to 133% from Day 1! **



A Global Market With Exponential Growth Forecast

Marine Electric Mobility Total Addressable Market 2022 - \$5bn 2035 - \$100bn

Focus on Indonesia Serviceable Addressable Market* 2022 - \$0.1bn 2035 - \$26bn

Focus on Indonesia Serviceable Obtainable Market 2022 - \$0.01bn 2035 - \$5bn We target Indonesia: 1.3m boats suitable for electric conversion.



Our B2B Go To Market approach





Current Status

Pilot Projects











Outcomes



5 electric prototypes in Indonesia, with both new and retrofitted motors.



1 Charging station installed.



MoUs with industrial, university and R&D partners.



Conversations to sell 500+ boats to co-operatives and institutional buyers.



Competitive Landscape

	gempacs	TOFQEEDO	EPROPULSION		Candela
Company & Country	gempacs - UK	Torqeedo - DE	Epropulsion - HK	Azura Marine - SG	Candela Boats - SE
Main Activity	Boats conversion and sale of energy	Electric Motors Manufacturing	Electric Motors Manufacturing	Electric Outboards & Electric Boats	Electric Boats
Target Market	Professional users	Mostly Recreational	Mostly Recreational	Professional	Recreational
Geography	Emerging Markets	Global	Global	Mostly in Asia	Global
Pricing	Low - Medium	High	Medium - High	Low Medium	Very High
Revenue streams	Both One-off & Recurring	One-Off	One-Off	One-Off	One-Off
Charging Infrastructure	YES	NO	NO	NO	NO
Microcredit Facilitation	YES	NO	NO	NO	NO
Safety & Tracking	YES	LIMITED	NO	NO	NO



The Team





AGOES SANTOSO

Naval Architecture

He led 100+ advanced projects of ships and boats, for civilian and military purposes. MSc & PhD in Marine Technology.



Chief Engineer

P&L Projections



Scenario for Indonesia alone



What we will achieve

Revenue Generation within 6 months.

Sell 100+ Boats/Kits.

Generate in excess of \$1.5m in sales.

Presence in 2 ports or more.

18-Month Runway.





For all enquiries, please contact:



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Appendix - Case Studies

1. Agung, fisherman in North Java (Indonesia)

"I invested in my boat, but recent restrictions mean I can't go out of port and I'm losing the only source of income for my family".

Gempacs' proposed solution:

"Our solution can make the boat viable again by making it 100% emission-free and doing so without asking Agung to pay anything upfront".

2. Budi, tourist operator in UNESCO reserve in Sulawesi (Indonesia)

"Gasoline and Diesel are increasing their price and legacy boats will soon be forbidden from entering the lagoon where we used to take tourists. I risk losing my business".

Gempacs' proposed solution:

"Our 100% electric boats can give unrestricted access to the lagoon and the savings from using electricity can change Budi's life for the better".

3. Gioele, tourist operator in Sardinia (Italy)

"My village's economy is founded on taking visitors to beaches only reachable via boats. Access restrictions limit us and tourists go by road to other beaches, causing overcrowding there".

Gempacs' proposed solution:

"Converting the local operators' light boats and rafts to electric will allow them to keep operating as before and even out visitors' presence in beaches".

