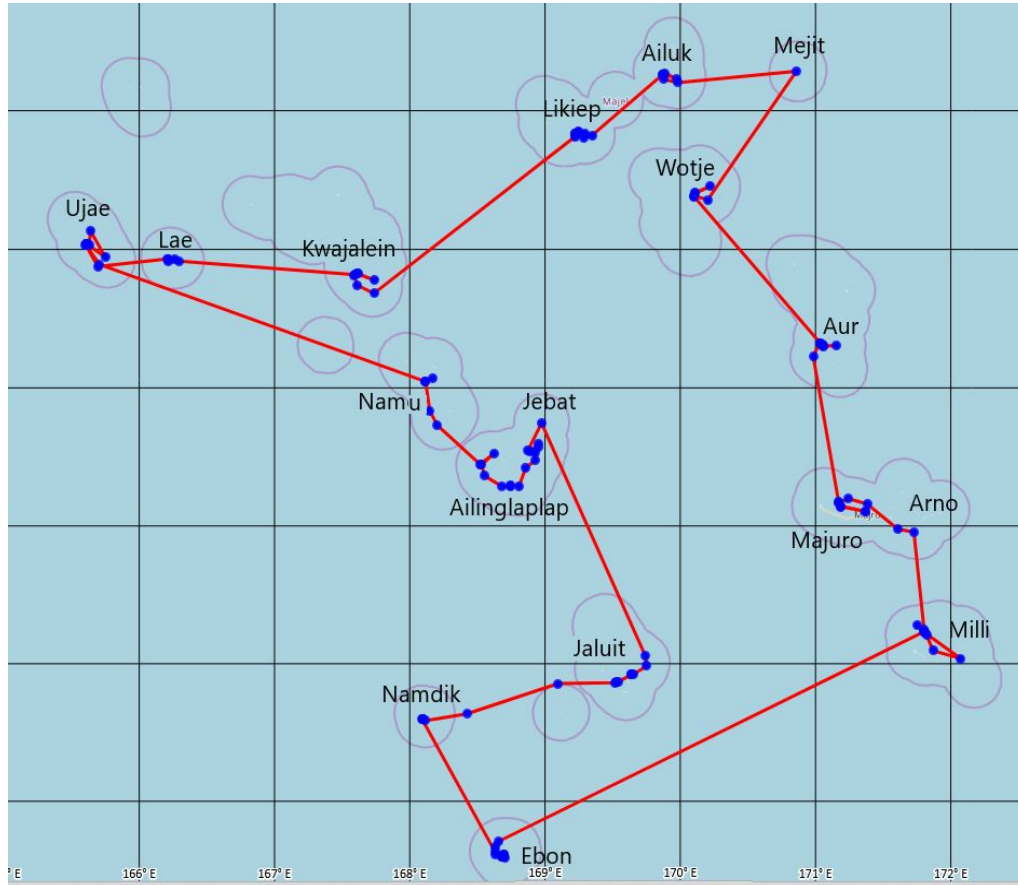


Juren Ae Concept & Operation



Operational Insights*



Preliminary data analysis: Full SV Juren Ae voyage, early 2026:

- 1660 nm (28 days) voyage calling on 17 atolls
- Average speed during sailing 6.2 kts (~52% of top speed)

Total voyage fuel consumption: 13900 l (8.37 l/nm)

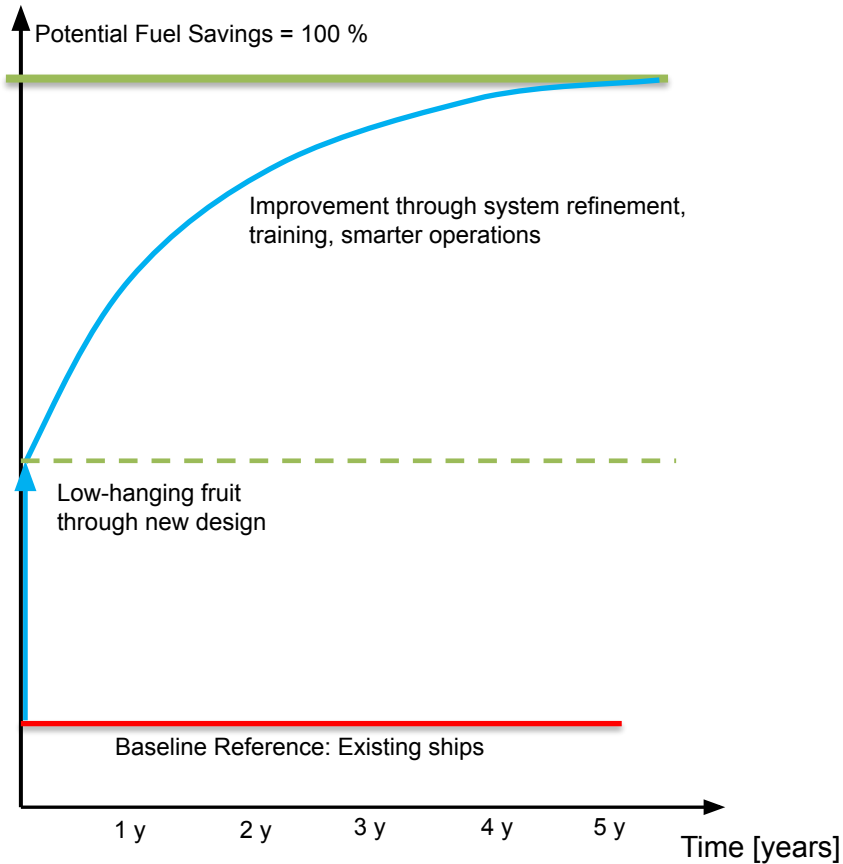
- Inside-lagoon: 3.83 l/nm (41 hrs)
- Between atolls: 4.16 l/nm (275 hrs)
- Anchoring and Drifting: 4.25 l/hr (290 hrs)

* As long-term operational datasets remain limited, the following estimates are intended to illustrate the potential order of magnitude of economic and environmental benefits under typical Pacific island operating conditions.

Operational Insights*



Fuel Savings [%]



- The new hybrid-WASP design has an inherent (low-hanging) fuel efficiency level that is available from commissioning.
- Approx. same number of crew as baseline vessels.
- Reaching the full potential for fuel efficiency (100%) will take some 3 to 5 years as the crew and operators learn to optimize their voyages and technology use through refines, training and smarter operations.
- After 18 months of operation, initial results show a status of 50% to 62% fuel savings from baseline vessels.
- Baseline vessels on RMI routes:
 - *MV Kwajalein* (22.2 l/nm, average)
 - *MV Aemman* (16.7 l/nm, average)

* As long-term operational datasets remain limited, the following estimates are intended to illustrate the potential order of magnitude of economic and environmental benefits under typical Pacific island operating conditions.

ROI Calculation

- **Investment:** €4.4 million per vessel
- **Fuel savings:** up to approx. **70%** compared to a conventional diesel vessel
- **Annual savings:** approximately **US\$1.0 to 1.4 million/year** at current Pacific fuel prices
- **Indicative payback period:** approximately **4 years** (fuel savings only !)
- **Lifetime fuel savings (20 years):** approximately approx. **US\$ 20 - 25 million**
- *Annual emissions reduction: approximately 1,300 tCO₂ per vessel*



Illustrative assumptions:

- Conventional vessel fuel cost: **~US\$4,000/day** in regular operation
- Vessel operational availability: **~80% of the year** (~292 days)
- Current diesel price: **~US\$9 to 10 per gallon**
- Hybrid sailing vessel fuel reduction: **~70%**
- Based on typical Marshall Islands domestic shipping operations, including inter-atoll voyages and cargo services