

UoSM ARUS I

Monaco Energy Boat Challenge World Series • Energy Class



DARWIN ASIA-PACIFIC QUALIFIER • September 2027
MONACO WORLD FINAL • Early 2028, subject to qualification
ENGINEERING SCOPE • RM81,826 | CAMPAIGN RANGE • RM130,000–RM180,000

Prepared by

UoSM ARUS I Team | Marine Engineering Society

University of Southampton Malaysia

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1. Executive Summary

UoSM ARUS I is a student-led marine engineering project under the Marine Engineering Society at the University of Southampton Malaysia. The team is designing, building, integrating, and testing an energy-efficient competition boat for the Monaco Energy Boat Challenge World Series, Energy Class.

The competition pathway has changed. The team must first compete at the Darwin Asia-Pacific Qualifier in September 2027. Participation in the Monaco World Final in early 2028 is conditional on passing the regional qualification stage and receiving the organiser's final confirmation.

SPONSORSHIP REQUEST Financial sponsorship, verified in-kind technical support, manufacturing access, testing support, and competition logistics. The currently costed engineering scope is RM81,826 (approximately US\$20,188). The full campaign is provisionally planned at RM130,000–RM180,000 while remaining quotations are completed.

Why partner with UoSM ARUS I

1. Visible partner recognition across the design, build, testing, Darwin qualifier, and conditional Monaco campaign.
2. Direct engagement with multidisciplinary engineering students and future graduate talent.
3. Technical case-study opportunities across electric propulsion, battery safety, marine systems, telemetry, and manufacturing.
4. Transparent milestone, budget, and testing updates linked to each sponsor's contribution.

Support requested at a glance

Cash sponsorship. Components, manufacturing, testing, safety systems, and event delivery.

Technical partnership. Components, engineering services, software, fabrication, or specialist mentoring.

Testing and logistics. Water access, transport, storage crates, insurance support, Darwin logistics, and conditional Monaco logistics.

Media and outreach. Photography, video, printing, apparel, digital media, and sponsor activation materials.

2. Competition Pathway and Project Case

Qualification pathway

1. Build and validate the Energy Class boat, including technical documentation, safety checks, and local testing.
2. Compete at the Darwin Asia-Pacific Qualifier in September 2027; this is the mandatory first competition target.
3. Proceed to the Monaco World Final in early 2028 only if qualification is secured and final dates are confirmed.

DECISION GATE Monaco travel and final-event expenditure will be committed only after qualification. This keeps the sponsor programme accountable while preserving a clear route to the World Final.

Project case

1. Applies marine engineering, electric propulsion, energy storage, hydrodynamics, controls, and project management to a real competition brief.
2. Develops practical student capability through design reviews, procurement, manufacturing, integration, testing, and technical inspection.
3. Creates a long-term technical platform and handover record for future UoSM teams.
4. Strengthens university and sponsor visibility through a high-profile international engineering programme.

Project objectives

Engineering delivery. Design, build, integrate, and test a working Energy Class boat for Darwin.

Sustainable technology. Develop practical experience in low-emission marine propulsion and onboard energy management.

Student development. Train members in CAD, electrical integration, battery safety, fabrication, testing, project management, and technical communication.

Competition outcome. Pass the Darwin qualifier and progress to the Monaco World Final.

3. Technical Direction and Compliance

The working baseline is a battery-electric Energy Class boat with a compliant stored-energy system, safe cockpit layout, reliable propulsion and steering, protected wiring, telemetry, and a documented inspection pack. Final design decisions remain subject to the competition rules applicable to Darwin and the subsequent Monaco final.

Subsystem priorities

Hull and structure. Confirm the permitted hull interface, cockpit layout, bulkhead, mounting, and structural restrictions.

Propulsion and steering. Select reliable, serviceable components and complete load, alignment, and steering-range checks before water testing.

Energy system. Maintain the stored-energy limit, use a compliant non-fossil source, and protect the battery through BMS, fusing, isolation, and controlled charging.

Pilot and electrical safety. Provide protected enclosures, emergency stop, kill cord, insulation controls, safe cable routing, clear labelling, and monitored temperatures.

Telemetry and controls. Record essential operating data and provide a robust pilot interface without compromising safety-critical control functions.

Testing. Complete bench, dry, low-risk water, fault-response, and final inspection checks before competition travel.

Planned engineering outputs

1. System architecture, technical requirements, and compliance matrix.
2. CAD package for structure, cockpit, mounting, propulsion, battery enclosure, and steering.
3. Electrical drawings, protection plan, BMS plan, emergency controls, and wiring documentation.
4. Bill of materials with sponsor contribution and procurement status.
5. Risk assessments, test procedures, inspection evidence, and sponsor-ready progress reports.

RULE CONTROL The compliance map must be updated when the latest World Series and Darwin technical requirements are released.

4. Delivery Roadmap

The revised programme runs from 18 June 2026 to 30 April 2028. The plan prioritises Darwin readiness, then creates a controlled optimisation window before a conditional Monaco campaign.

Date	Milestone	Sponsor-relevant output
18 Jun 2026	Project restart	Team structure, communication system, and project scope confirmed
31 Aug 2026	Research complete	Technical options, initial budget, and sponsor preparation
30 Sep 2026	Concept selection	Rules matrix and selected technical concept
30 Nov 2026	Detailed design	CAD, propulsion, electrical, steering, safety, and bill of materials
15 Jan 2027	Design freeze	Procurement- and fabrication-ready design package
15 Feb 2027	Prototype complete	Integrated prototype ready for controlled testing
31 Mar 2027	Initial testing	Bench, dry, and first-water tests with corrections recorded
30 Apr 2027	Subsystem validation	Validated baseline and updated risk controls
31 Jul 2027	Full integration	Competition boat assembled and local test campaign underway
31 Aug 2027	Darwin readiness gate	Inspection evidence, transport plan, and team logistics ready
Sep 2027	Darwin qualifier	Qualification attempt and competition report
Oct-Dec 2027	Post-qualifier optimisation	Repairs, performance gains, documentation, and sponsor reporting
Early 2028, TBC	Monaco final, if qualified	Participation subject to qualification and confirmed dates
30 Apr 2028	Final handover	Technical, financial, sponsor, competition, and continuity pack

5. Team and Governance

UoSM ARUS I uses a student-led delivery structure with academic advisory support. The team leader coordinates project direction, sponsor engagement, milestone tracking, and escalation to advisors.

Role	Name	Core responsibility
Team Leader	Omar Ahmed	Overall leadership, sponsor communication, milestones, and reporting
Treasurer	Omar Ahmed	Budget tracking, sponsor records, purchase log, and financial reports
Technical Director	Ahmed Atheek	Technical requirements, design control, integration, and compliance
Secretary & Marketing	Bujee Shinebayar	Records, sponsor materials, media output, and communication calendar
Head of Electrical	Gauthaman Senthil	Electrical architecture, batteries, controls, wiring, safety, and telemetry
Electrical Engineer	Bernard Wong	Electrical assembly, wiring, testing, troubleshooting, and documentation.
Electrical Engineer	Umair Hulwan	Electrical assembly, wiring, testing, troubleshooting, and documentation.
Head of Mechanical	Ng Jen Shen	Mechanical layout, structure, propulsion mounting, steering, and manufacturability
Mechanical Engineer	Christopher Hall	Mechanical design, manufacturing, assembly, testing, and documentation.
Mechanical Engineer	Kuhaneshwara Nadaraja	Mechanical design, manufacturing, assembly, testing, and documentation.

Academic advisory support

• Professor Ehsan Mesbahi • Professor Suan Hui Pu • Dr. Vun Jack • Dr. Ana Mesbahi

Governance controls

1. Weekly project meeting, action log, and owner-based milestone tracking.
2. Shared design, budget, sponsor, test, and handover records.
3. Design review checkpoints before procurement, manufacturing, integration, and testing.
4. Faculty review of safety-sensitive technical decisions and public water testing.
5. Sponsor reporting cycle with progress, budget, photographs, risks, and next actions.

UNIVERSITY SUPPORT The two highest-priority operational needs are faculty supervision and secure storage for batteries, tools, sponsor-provided components, safety equipment, and partially assembled systems.

6. Partnership Opportunity

Every partner receives promotion through the Marine Engineering Society's Instagram account, other official MES channels, and the main sponsorship banner. Frequency, tagging, prominence, access, and physical recognition increase by contribution band.

CAMPAIGN FUNDING POSITION The currently costed engineering scope is RM81,826. The full Darwin-to-Monaco campaign has a working planning range of RM130,000–RM180,000 and a working sponsorship target of RM150,000 while travel, entry, principal hull/platform, insurance, and branding quotations are completed. Flagship begins at RM10,000; it is an entry threshold, not a maximum.

Suggested contribution levels

Partnership level	Contribution / recognition value	Partner capacity and role
Flagship Partner	RM10,000+	2–3 sought • RM20k–RM40k+ named-scope commitments welcomed
Strategic Partner	RM5,000–RM9,999	4–6 sought • major subsystem or competition support
Innovation Partner	RM2,500–RM4,999	6–10 sought • defined engineering or campaign scope
Supporting Partner	RM500–RM2,499	Open • matched to a component, service, or event need

TECHNICAL CONTRIBUTIONS In-kind components, fabrication, testing, software, engineering services, and mixed packages are assigned to the same RM recognition bands using an agreed fair-market value (FMV). For example, RM12,000 of verified motor and controller hardware receives Flagship recognition, plus the Technical Partner designation and a named technical liaison. FMV will be documented from a current supplier quotation, invoice, catalogue price, or agreed local-market equivalent before acceptance.

Partner Benefits Comparison

All partners receive MES-channel and sponsorship-banner recognition. Technical Partner is an additional designation, not a lower tier: benefits are determined by cash plus verified in-kind FMV, with specialist liaison and technical case-study recognition added where relevant.

Benefit	Supporting	Innovation	Strategic	Flagship
Official sponsor listing	✓	✓	✓	✓
Main sponsorship banner	Small logo	Medium logo	Large logo	Premier position
MES event promotion	Selected events	Project events	Major events	All eligible events
Instagram posts / reels	1	2	3	Featured throughout campaign
Instagram story tags	Announcement	Selected milestones	Major milestones	All relevant ARUS I stories
Logo on the boat	Shared panel	Medium logo	Large logo	Main / largest permitted
Direct contact	Standard contact	Standard contact	Direct channel	Priority channel + named liaison
Progress updates	Final summary	General updates	Milestone reports	Tailored monthly updates
Sponsor feature	Acknowledgement	Sponsor spotlight	Dedicated feature	Full collaboration case study
Launch / testing access	General invitation	1 representative	2 representatives	Priority invitations
Custom keychain	—	✓	✓	✓
Custom lanyard	—	—	✓	✓
Collaboration poster	—	—	✓	✓
Collaboration T-shirt	—	—	—	✓

All branding, merchandise, event access, and promotional benefits are subject to competition regulations, University approval, production feasibility, and available placement space.

7. Budget and Cost Schedule

The updated cost model uses one presentation standard across both departments. Malaysian ringgit (RM) is the controlling budget currency; the source schedules' US-dollar values are shown as rounded planning equivalents. Mechanical, Electrical, and Overall totals use the same column order throughout the proposal.

CURRENCY BASIS RM values control the budget. US\$ amounts are rounded source-schedule equivalents for planning and may imply slightly different rates across supplier sources; quotations and exchange rates will be refreshed before procurement.

DEPARTMENT TOTALS

Department	Included scope	Budget (RM)	Equivalent (US\$)
Mechanical Department	Propulsion; chassis/cockpit consumables; steering; safety	RM23,637	US\$5,909
Electrical Department	Electrical and electronic systems	RM58,189	US\$14,279
OVERALL CURRENT ENGINEERING BUDGET	Mechanical + Electrical	RM81,826	US\$20,188

7.1 Mechanical Department

Mechanical scope	Budget (RM)	Equivalent (US\$)
Propulsion	RM13,429	US\$3,357
Chassis & cockpit	RM7,490	US\$1,873
Steering	RM1,170	US\$293
Safety Equipment	RM1,548	US\$387
MECHANICAL DEPARTMENT TOTAL	RM23,637	US\$5,909

MECHANICAL UPDATE The schedule now includes propulsion, chassis/cockpit bonding and tooling consumables, steering, and pilot-safety communications. Principal hull/platform construction and all campaign logistics remain outside the currently costed engineering scope.

7.2 Cost Boundary

Pending budget line	Status	Boundary note
Principal hull / platform structure	Quotation required	Excluded except listed chassis/cockpit bonding, bagging, PPE, and tooling consumables
Competition, compliance, and testing	Quotation required	Entry, inspections, venue, test support, and required documentation
Darwin qualifier logistics	Quotation required	Mandatory transport, travel, accommodation, insurance, and event operations
Monaco final logistics	Conditional	Only if the team qualifies and final dates are confirmed
Branding and outreach	Quotation required	Apparel, banners, printing, website, sponsor boards, and events

PLANNING RANGE NOTE The RM130,000–RM180,000 campaign range is provisional, not a final approved budget. It will be replaced by the completed project budget when quotations are received; RM150,000 is the current sponsor-pipeline target.

7.3 Electrical Department Budget by System

The updated Electrical Department schedule totals RM58,189 with a source-schedule equivalent of US\$14,279. The system subtotals below reconcile exactly to the department total.

Electrical system	Budget (RM)	Source equivalent (US\$)
Propulsion	RM12,468	US\$3,060
Battery & Charging	RM22,826	US\$5,600
HV Distribution & Safety	RM4,792	US\$1,176
Cooling	RM2,119	US\$520
LV Power & Enclosures	RM2,445	US\$600
Control & Sensing	RM1,068	US\$262
Telemetry & Pilot Interface	RM4,119	US\$1,011
Communications & Pilot Safety	RM1,548	US\$380
Cabling & Integration	RM4,156	US\$1,020
Freight & Import	RM1,018	US\$250
Integration Contingency	RM1,630	US\$400
ELECTRICAL DEPARTMENT TOTAL	RM58,189	US\$14,279

ENGINEERING AND CAMPAIGN POSITION Mechanical RM23,637 plus Electrical RM58,189 produces a currently costed engineering scope of RM81,826 (approximately US\$20,188). The full campaign planning range is RM130,000–RM180,000, with a working target of RM150,000 pending quotations for the principal hull/platform, competition and compliance, Darwin logistics and insurance, and branding. Monaco expenditure remains conditional on qualification.

8. Risk, Safety, and University Support

Engineering, electrical, workshop, water-testing, schedule, procurement, and financial risks will be controlled through early documentation, design reviews, training, advisor supervision, test plans, and sponsor reporting.

Risk area	Control approach
Battery and electrical safety	BMS, fusing, isolation, protected enclosures, emergency stop, kill cord, controlled charging, temperature monitoring, and secure storage
Mechanical and structural safety	Design review, load checks, correct fasteners, safe mounts, steering checks, dry tests, and inspection before water testing
Water-testing safety	Approved venue, shore or safety crew, PPE, communications, weather check, test boundary, emergency plan, and test log
Compliance risk	Rules review, compliance matrix, advisor review, technical inspection checklist, and controlled design changes
Funding risk	Phased procurement, in-kind partnerships, sponsor pipeline, quotation comparison, and contingency allowance
Qualification and schedule	Treat Darwin as the mandatory decision gate and commit Monaco expenditure only after qualification and date confirmation

University support required

1. Faculty supervision for project direction, technical risk, safety-sensitive decisions, manufacturing, and testing.
2. Controlled storage for batteries, tools, safety equipment, sponsor-provided parts, and partially assembled systems.
3. Access control so only trained team members handle sensitive electrical and mechanical equipment.
4. Managed design, sponsor, purchase, test, and risk documentation.
5. Advisor-approved workshop and water-testing procedures.

9. Reporting and Next Steps

Sponsor reporting commitments

1. Monthly progress update with milestones, photographs, technical progress, risks, and next actions.
2. Budget update with line-item spending, sponsor allocation, committed costs, and remaining needs.
3. Design-review summary covering subsystem choices, compliance checks, and manufacturing plans.
4. Testing report covering bench, dry, and water tests, issues found, corrections, and readiness status.
5. Final technical, financial, sponsor, competition, and continuity report.

Next steps

1. Sponsor meeting — agree sponsor objectives, support type, priority budget lines, and visibility requirements.
2. Cost-line mapping — match the contribution to Mechanical, Electrical, a pending competition cost, or an in-kind need.
3. Agreement draft — confirm deliverables, reporting, logo use, payment or in-kind scope, and campaign stage.
4. Darwin readiness — complete procurement, build, testing, documentation, inspection evidence, and qualifier logistics.
5. Qualification decision — proceed to Monaco planning only after Darwin qualification and organiser confirmation.

CONTACT Team email: [insert] • Phone: [insert] • Website or social media: [insert]

Appendix A. Mechanical Department Cost Schedule

This schedule reproduces the team's updated Mechanical Department workbook values. RM is the controlling currency; US\$ figures are rounded source-schedule equivalents, so minor implied-rate differences may remain until supplier quotations are refreshed.

MECHANICAL DEPARTMENT DETAILED SCHEDULE

Component / specification	Qty	Cost (RM)	Equivalent (US\$)	Basis / status
PROPULSION				
Pod housing (machined)	1	RM2,000	US\$500	Buy
Shaft seal	—	RM200	US\$50	Buy
Fasteners	—	RM450	US\$113	Buy
Aluminium billet (300 mm)	1	RM600	US\$150	Buy
Motor-shaft coupling	1	RM300	US\$75	Buy
3D-printing materials (PETG)	2 kg	RM140	US\$35	Buy
CNC-milled propellers (aluminium)	2	RM8,000	US\$2,000	Buy
Threadlocker	1	RM59	US\$15	Buy
Washers	—	RM80	US\$20	Buy
Bearings	—	RM500	US\$125	Buy
O-rings	—	RM50	US\$13	Buy
Strut	1	RM1,000	US\$250	Buy
Anti-seize compound	1	RM50	US\$13	Buy
CHASSIS & COCKPIT				
Structural adhesive (ITW Plexus MA310-class)	1	RM450	US\$113	Buy
Sealant adhesive (Sikaflex 292i / 3M 5200)	1	RM300	US\$75	Buy
Wood-joint adhesive (WEST SYSTEM G/flex)	1	RM2,200	US\$550	Buy
Fasteners & bonded inserts (A4/316 stainless)	—	RM700	US\$175	Buy
Vacuum-bagging consumables	1	RM1,700	US\$425	Buy
PPE (respirators, gloves and coveralls)	1	RM140	US\$35	Buy
Tooling (MDF, tooling foam, cutter and release wax)	1	RM2,000	US\$500	Buy
STEERING				
Steering wheel	1	RM120	US\$30	Buy
Steering shaft	1	RM120	US\$30	Buy
Steering drum helm	1	RM50	US\$13	FDM printed in-house

Component / specification	Qty	Cost (RM)	Equivalent (US\$)	Basis / status
Shaft bezel	1	RM20	US\$5	FDM printed in-house
Ropes	—	RM150	US\$38	Buy
Pulleys	—	RM150	US\$38	Buy
Quadrant / circle pulley	1	RM300	US\$75	Buy
Fasteners	—	RM60	US\$15	Buy
Bearings	—	RM200	US\$50	Buy
SAFETY EQUIPMENT				
External radio antenna and mount	1	RM326	US\$82	Buy
Helmet headset and push-to-talk hardware	1	RM1,222	US\$306	Buy
MECHANICAL DEPARTMENT TOTAL		RM23,637	US\$5,909	Updated allocation

Appendix B. Electrical Department Cost Schedule

This schedule reproduces the team's updated Electrical Department workbook values. RM is the controlling currency and reconciles exactly to RM58,189; US\$ figures are rounded source-schedule equivalents for planning.

ELECTRICAL DEPARTMENT DETAILED SCHEDULE

Component / specification	Qty	Cost (RM)	Equivalent (US\$)	Basis / status
PROPULSION				
Liquid-cooled 20–25 kW propulsion motor	1	RM8,108	US\$1,990	Buy
120 V-class motor controller	1	RM4,360	US\$1,070	Buy
BATTERY & CHARGING				
9–10 kWh traction battery, BMS and sealed enclosure	1	RM20,780	US\$5,100	Buy
3.3 kW traction-battery charger	1	RM1,638	US\$400	Buy
AC charge inlet and protection	1	RM408	US\$100	Buy
HV DISTRIBUTION & SAFETY				
Main positive HV contactor	1	RM285	US\$70	Buy
Main negative HV contactor	1	RM285	US\$70	Buy
Pre-charge contactor	1	RM204	US\$50	Buy
Pre-charge resistor	1	RM41	US\$10	Buy
Main HV fuse	1	RM183	US\$45	Buy
Insulated HV fuse holder	1	RM163	US\$40	Buy
Manual service disconnect with HVIL	1	RM281	US\$69	Buy
Sealed HV junction and distribution box	1	RM1,222	US\$300	Buy
Insulation monitoring device	1	RM815	US\$200	Buy
Dual-channel shutdown safety relay	1	RM416	US\$102	Buy
Waterproof emergency-stop switches	1	RM163	US\$40	Buy
Magnetic kill-cord switch	1	RM163	US\$40	Buy
Bonding straps and terminals	1	RM122	US\$30	Buy
HV bus-discharge resistor	1	RM41	US\$10	Buy
HV branch fuses and spare main fuse	1	RM408	US\$100	Buy
COOLING				
12 V coolant pumps	2	RM163	US\$40	Buy if required by motor
Compact coolant heat exchangers	2	RM611	US\$150	Buy if required by motor

Component / specification	Qty	Cost (RM)	Equivalent (US\$)	Basis / status
Radiator fans and control	2	RM204	US\$50	Buy if required by motor
Coolant hoses, fittings and reservoirs	2	RM611	US\$150	Buy if required by motor
Coolant and service hardware	2	RM326	US\$80	Buy if required by motor
Coolant-flow sensors	2	RM82	US\$20	Buy if required by motor
Cooling temperature sensors and harnesses	2	RM41	US\$10	Buy if required by motor
Coolant-leak sensors	2	RM81	US\$20	Buy if required by motor
LV POWER & ENCLOSURES				
12 V auxiliary battery	1	RM326	US\$80	Buy
Isolated HV-to-12 V DC-DC converter	1	RM611	US\$150	Buy
12 V battery charger / maintainer	1	RM245	US\$60	Buy
LV battery isolation switch	1	RM122	US\$30	Buy
Sealed LV fuse and relay distribution block	1	RM245	US\$60	Buy
Waterproof LV electronics enclosure	1	RM611	US\$150	Buy / in-house
Waterproof glands and bulkhead connectors	1	RM285	US\$70	Buy
CONTROL & SENSING				
Microcontroller vehicle control unit	1	RM130	US\$32	Buy
5 V / 3.3 V regulated supplies	1	RM122	US\$30	Buy
Contactor and relay driver modules	1	RM163	US\$40	Buy
CAN transceiver modules	1	RM245	US\$60	Buy
CAN harness and termination	1	RM408	US\$100	Buy
TELEMETRY & PILOT INTERFACE				
Telemetry computer	1	RM611	US\$150	Buy
Data-logging storage	1	RM82	US\$20	Buy
Waterproof dashboard display	1	RM489	US\$120	Buy
Display interface and mounting	1	RM285	US\$70	In-house
GNSS / GPS receiver	1	RM147	US\$36	Buy
Nine-axis IMU	1	RM81	US\$20	Buy
LV current and voltage sensor	1	RM204	US\$50	Buy
Bilge high-water sensor	1	RM244	US\$60	Buy
Cooling pressure sensor	1	RM61	US\$15	Buy
Operator switch panel	1	RM204	US\$50	Buy

Component / specification	Qty	Cost (RM)	Equivalent (US\$)	Basis / status
HV-ready indicators, LEDs and buzzer	1	RM204	US\$50	Buy
Waterproof marine throttle	1	RM1,222	US\$300	Buy / in-house
Watertight panel connectors	1	RM285	US\$70	Buy
COMMUNICATIONS & PILOT SAFETY				
External radio antenna and mount	1	RM326	US\$80	Buy
Helmet headset and push-to-talk hardware	1	RM1,222	US\$300	Buy
CABLING & INTEGRATION				
HV and motor-phase cabling	1	RM2,648	US\$650	Buy
Tinned LV marine wiring and connectors	1	RM1,019	US\$250	Buy
Cable-termination consumables	1	RM489	US\$120	Buy
FREIGHT & IMPORT				
Small-item freight and import allowance	1	RM1,018	US\$250	—
INTEGRATION CONTINGENCY				
Electrical integration contingency	1	RM1,630	US\$400	—
ELECTRICAL DEPARTMENT TOTAL		RM58,189	US\$14,279	Updated allocation

Appendix C. Sponsor Information Form

Complete this form during sponsor discussions and attach the agreed cost-line mapping.

Field	Details
Sponsor organisation	[insert]
Contact person	[insert]
Email and phone	[insert]
Preferred partnership type	Cash / in-kind / mixed / services / testing / media
Recognition band	Supporting / Innovation / Strategic / Flagship
Contribution value	Cash RM [insert] + verified in-kind FMV RM [insert] = recognition value RM [insert]
Department or cost line	Mechanical / Electrical / competition / logistics / outreach
Preferred visibility assets	Boat / apparel / digital media / report / event / case study
Logo files received	Yes / No
Agreement status	Draft / under review / signed
Reporting requirements	[insert]
Notes	[insert]

References and Source Documents

Monaco Energy Boat Challenge. World Series and Darwin Asia-Pacific Qualifier information. [Official event website](#)

Business Insider / GlobeNewswire. Monaco Energy Boat Challenge expands with the launch of the World Series, 14 July 2026; identifies Darwin as the Asia-Pacific qualifier for the 2028 Monaco World Final. [Open announcement](#)

Northern Territory Government. Darwin lands prestigious Monaco Energy Boat Challenge, 15 July 2026; confirms the Darwin event in September 2027. [Open government release](#)

Internal project sources

Direct organiser communication received by the team in July 2026, confirming the September 2027 Darwin qualifier before the Monaco final.

Updated Costs.xlsx — Electrical and Mechanical Department detailed schedules and source-equivalent US\$ values.

Cost reconciliation completed 21 July 2026 — Electrical RM58,189 plus Mechanical RM23,637 equals RM81,826.

UoSM ARUS I revised project roadmap, planning period 18 June 2026 to 30 April 2028.

Marine Engineering Society Club Identity Board, Ocean Core palette and society direction.

VERSION CONTROL Version 2.3 • 21 July 2026 • Updated Electrical and Mechanical cost schedules; RM81,826 engineering scope; RM150,000 working campaign target within a RM130,000–RM180,000 planning range; partner capacity guidance; and FMV-based recognition for technical and mixed contributions.