TECHNICAL PROPOSAL – ENGINEERING OUTSOURCING

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1 Service presentation

1.1 Your Extended Engineering Team in Madagascar

faHR Engineering Consultancy provides flexible engineering outsourcing and technical support to international engineering firms, design consultancies, contractors and project developers. We extend clients' technical capacity by providing qualified engineering resources from Madagascar, working according to the client's standards, methodologies, tools and project requirements.

Our support can cover **engineering studies, technical design, calculations, CAD/BIM production, tender documentation, technical reviews and project-related engineering support**, either for specific assignments or as an extension of an ongoing project team.

1.2 The Need We Address

International project teams often face:

- Peaks in engineering workload and tight deadlines
- Limited availability of qualified technical resources
- The need to scale engineering capacity without increasing permanent headcount
- High engineering production costs
- Multiple projects requiring simultaneous technical support
- Need of additional CAD/BIM and documentation capacity
- Pressure to maintain quality while accelerating project delivery

faHR provides flexible technical capacity when and where it is needed.

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1.3 Type of Clients and Projects

1.3.1 Type of Clients

Engineering & Design Consultancies

Engineering studies, design production, calculations, CAD/BIM and technical documentation.

Construction Companies & Contractors

Technical studies, tender support, design coordination and project engineering support.

EPC Contractors

Engineering production, technical documentation, procurement-related technical support and project coordination.

Infrastructure & Industrial Companies

Additional engineering capacity for complex or multidisciplinary projects.

Project Developers & Investors

Technical studies, project preparation, reviews and engineering support.

1.3.2 Type of projects

The service is designed for:

→ Roads & Transportation
→ Ports & Maritime Infrastructure
→ Buildings & Construction
→ Water & Sanitation
→ Energy & Renewable Energy
→ Mining & Industrial Projects
→ Environmental & Climate-Resilience Projects
→ Infrastructure & Development Projects
→ Engineering Studies & Technical Design

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→ Tendering & Project Preparation

1.4 Objective

To help international project teams increase their engineering capacity, accelerate technical production and deliver projects more efficiently – without the need to build a larger permanent technical team.

faHR acts as **an extension of the client's engineering team**, providing scalable resources that can be mobilized according to workload, project phase and technical requirements.

1.5 Core Value Proposition

EXTEND YOUR ENGINEERING CAPACITY. WITHOUT EXTENDING YOUR PERMANENT TEAM.

faHR combines:

Qualified Technical Talent: Access to Madagascar-based engineers and technical professionals.

Flexible Capacity: Scale resources according to project workload and requirements.

Cost Efficiency: Access engineering capacity from a competitive delivery base.

International Project Experience: Understanding of international project environments, standards and client expectations.

Integrated Delivery: Technical resources work as an extension of the client's existing team.

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Flexible Engagement: From a specific technical assignment to a long-term engineering support.

YOUR PROJECT. YOUR CLIENT. YOUR STANDARDS. OUR ENGINEERING CAPACITY.

From Madagascar to the Indian Ocean, to Africa and beyond.

2 Scope

faHR Engineering Consultancy can provide engineering capacity across the different stages of a project, from technical studies and design through tender preparation and project execution support. The scope is defined according to the client's project requirements, technical standards, expected deliverables, schedule and required level of involvement.

FROM TECHNCIAL STUDIES TO PROJECT DELIVERY – faHR EXTENDS YOUR ENGINEERING CAPACITY.

3 Services

S1-ENGINEERING STUDIES / TECHNICAL ANALYSIS

- Feasibility and technical studies
- Technical assessments and diagnostics
- Preliminary technical investigations
- Engineering calculations and analysis
- Design reviews and technical verification
- Technical reports and recommendation

S2-DESIGN & ENGINEERING PRODUCTION

- Conceptual design
- Preliminary design / APS
- Detailed design / APD
- Structural and civil engineering
- Technical drawings and documentation
- CAD drafting and production
- BIM modelling and technical production
- Design coordination

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S3-TECHNICAL CALCULATIONS & DOCUMENTATION

- Engineering calculations
- Quantity take-offs
- Technical specifications
- Bills of quantities
- Design notes and technical reports
- Method statements
- Technical data sheets

S4-PROJECT TECHNICAL SUPPORT

- Technical coordination
- Design coordination
- Engineering production support
- Technical document management
- Drawing and document review
- Technical reporting
- Technical support to project teams

S5-TENDER & BID SUPPORT

- Technical tender documentation
- Preparation of specifications
- BOQ and pricing support
- Tender drawings
- Technical submission preparation
- Bid document review
- Technical compliance review
- Clarification and response support

S6-CAD / BIM & DIGITAL ENGINEERING

- 2D CAD drafting
- 3D modelling
- BIM modelling
- Drawing production
- Model coordination
- Design documentation
- Digital technical deliverables

S7-QUALITY & TECHNICAL REVIEW

- Technical quality control
- Engineering deliverable review
- Design compliance checks
- Drawing review
- Calculation review
- Technical consistency checks
- Constructability review

S8-DEDICATED ENGINEERING CAPACITY

faHR can provide individual specialists, multidisciplinary teams or dedicated technical resources on a project or ongoing basis.

- On-demand assignments
- Package-based production
- Dedicated technical resources
- Multidisciplinary teams

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4 Service packages

4.1 Package 01 - *SELECT*

One technical study

The SELECT package consists into choosing one of the faHR Engineering Consultancy services.

4.2 Package 02 – *CONCEPT*

Study + APS

The CONCEPT package develops and validates the preliminary design of the project. Building on the initial study, faHR develops design options, prepares the preliminary design (APS), conducts technical and cost analysis, supports stakeholder validation and performs internal QA/QC and preliminary HSE reviews where applicable.

4.3 Package 03 - *DESIGN*

Concept + APD

The DESIGN package takes the project from preliminary design to a complete and validated detailed design. faHR provides detailed engineering design, technical calculations, drawings, specifications, cost estimation and design optimisation, supported by comprehensive QA/QC and HSE design reviews. The package delivers a complete Detailed Design Package (APD) ready for tendering or implementation.

4.4 Package 04 - *TENDER*

Design + DAO/DCE

The TENDER package transforms the approved design into a complete tender-ready documentation package. faHR prepares tender drawings, technical specifications, Bills of Quantities (BOQ), price schedules and tender submission documents, while providing tender strategy support, internal QA/QC review and integration of HSE requirements. The result is a complete and quality-controlled DAO/DCE package ready for procurement.

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4.5 Package 05 - *DELIVER*

Tender + Project Support

The DELIVER package extends faHR's support beyond tender preparation into project implementation. In addition to tender documentation, faHR provides continuous technical support, QA/QC and HSE support throughout project execution, including review of contractor submissions, inspections, compliance monitoring, progress reporting, document control, variation and claims support and project close-out. The package can include dedicated QA/QC and HSE resources depending on project requirements.

4.6 Package 06 - *CUSTOM*

Tailored to Your Needs

The CUSTOM package provides a flexible solution built around the specific requirements of each project. Clients can combine selected services from the different packages, define a tailored team structure and select specific project stages or deliverables. The scope, level of QA/QC and HSE involvement, resources and delivery schedule are defined according to the project's objectives, complexity and requirements.

Each package builds on the previous one, while remaining flexible and scalable to meet your project requirements.

5 Deliverables

5.1 P1 – One Technical Study

Deliverables may vary according to service picked by the Client. But these are delivered if applicable:

- Technical Study Report
- Feasibility Assessment
- Technical, Economic & Social Analysis

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- Risk & Opportunity Assessment
- Key Findings & Recommendations
- Supporting Data & Annexes

Final Output: **Validated Study Package ready for decision-making**.

5.2 P2 – Study + APS

- Preliminary Design Report (APS)
- Preliminary Design Drawings
- Design Options / Alternatives
- Preliminary Technical Specifications
- Preliminary Cost Estimate
- Stakeholder Validation Documentation
- Updated Study Report, where applicable
- Preliminary QA/QC Review
- Preliminary HSE Design Review

Final Output: **Validated Preliminary Design Package (APS)**.

5.3 P3 – Concept + APD

- Detailed Design Report (APD)
- Detailed Engineering Drawings
- Engineering Calculations
- Technical Specifications
- Detailed Quantities / BOQ
- Detailed Cost Estimate
- Design Optimization Documentation
- QA/QC Review Records
- HSE Design Review Documentation

Final Output: **Validated Detailed Design Package (APD)**.

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5.4 P4 – Design + DAO/DCE

- Complete Tender Documentation (DAO/DCE)
- Tender Drawings
- Technical Specifications
- Bills of Quantities (BOQ)
- Price Schedule
- Tender Submission Documents
- Tender Clarification Documents, where applicable
- QA/QC Review Records
- HSE Requirements & Specifications
- Final Quality-Controlled Tender Package

Final Output: **Tender-Ready Documentation Package (DAO/DCE)**.

5.5 P5 – Tender + Project Support

- Approved Tender Documentation
- Technical Support Documentation
- Contractor Technical Review Records
- QA/QC and HSE Reports
- Inspection & Compliance Records
- Progress Reports and Document Register
- Variation & Claims Support Documentation
- Technical Correspondence / Clarifications
- Project Close-Out Documentation

Final Output: **Tender Documentation + Continuous Technical, QA/QC & HSE Support through Project Completion.**

5.6 P6 – Tailored to Your Needs

Deliverables are defined according to the agreed scope and may include:

- Selected deliverables from Package 01-05

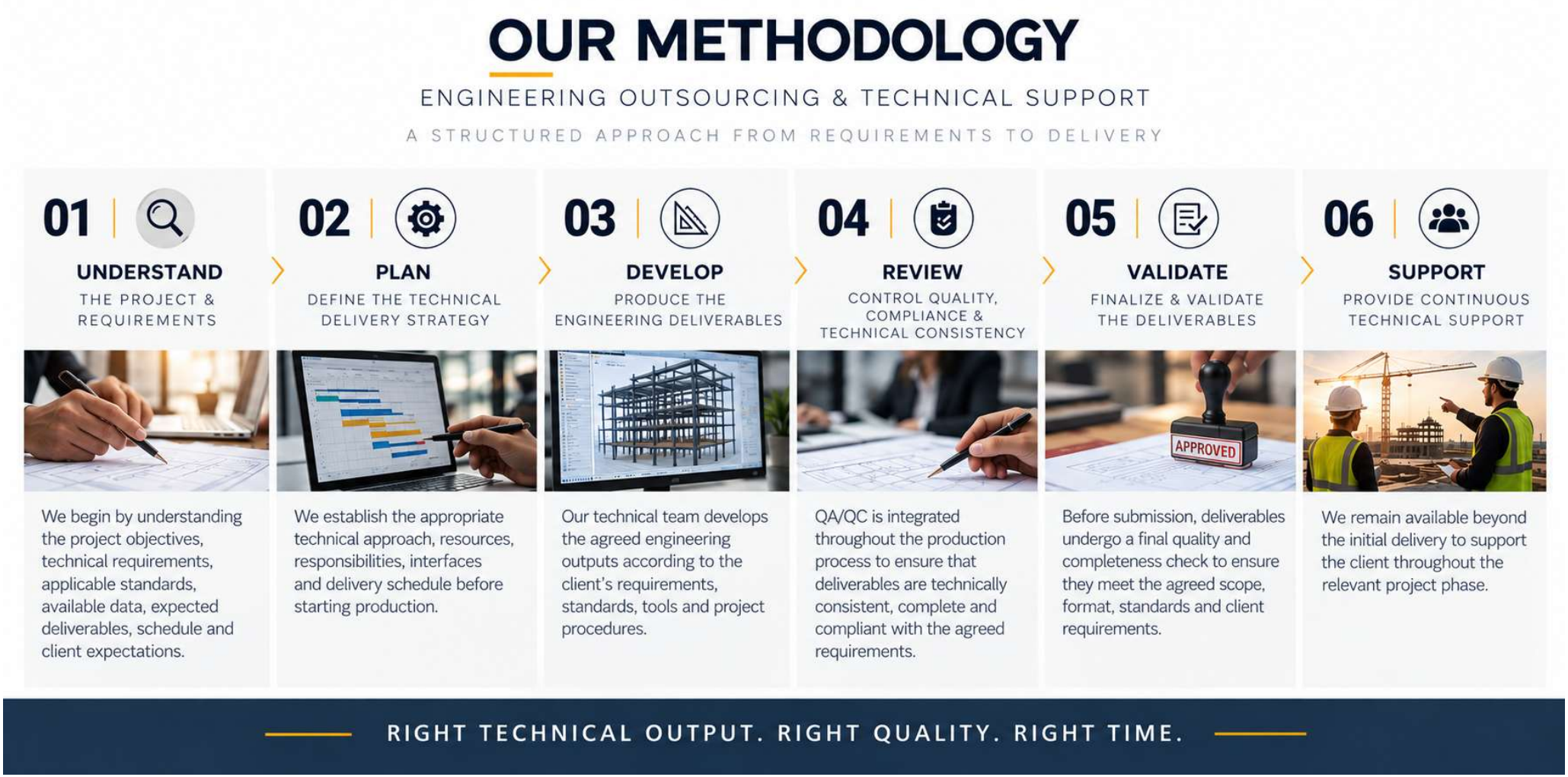
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- Project-specific technical studies
- Specific design stages or disciplines
- Bespoke engineering calculations
- Custom drawings and technical documentation
- Tailored QA/AC and HSE deliverables
- Dedicated technical reports
- Project-specific engineering support

Final Output: **A customized deliverable package aligned with your project objectives.**

Deliverables are defined according to the project scope, technical requirements, applicable standards, project phase and client expectations.

6 Methodology



7 References

7.1 Experience of faHR Engineering Consultancy

7.1.1 04 Bureaux régionaux de la Direction Générale de la Sécurité Civile

Regional Civil Protection Offices – Ngazidja, Ndjuani & Mohéli Comoros

This multi-site project consists of the design of four regional civil protection offices across three islands. The scope includes architectural conception, structural engineering (reinforced concrete and steel variants), and full technical documentation for public procurement. The design integrates operational functionality, durability and adaptability to island environmental conditions. The project demonstrates coordinated engineering delivery under national public standards.



Client : Direction Générale de la Sécurité Civile – Union des Comores

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Contractor: GAACE/ECODEV

Financing: World Bank

Country: Comoros

Project Value: Variant 1: 1 080 000€

Variant 2: 1 299 000€

faHR scope: Multi-site design coordination under public procurement standards.

Refer to: ABOUD Ibrahim – Managing Director

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7.1.2 Centre National de Transfusion sanguine

National Blood Transfusion Center – Moroni – Union des Comores

This project involved the structural design of a public health facility dedicated to blood collection, storage and laboratory operations. The building required reinforced concrete structural systems ensuring durability, safety and compliance with medical infrastructure standards. Particular attention was given to functional zoning, loadbearing capacity and long-term resilience. The project reflects advanced structural engineering responsibility within a sensitive public health context



Client : Ministry of Health & Social Protection

Contractor: GAACE/ECODEV

Financing: Saudi Fund for Development

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Country: Comoros

Project Value: 2 000 000€

faHR scope: Structural design, technical studies, construction follow-up, supervision and technical control.

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7.2 Experience of the Founder

Projet de renovation et d'extension des locaux de la FAPBM – Ankadivato Antananarivo – Madagascar

The project involved the renovation and vertical extension of the existing FAPBM office building from R+3 to R+5, increasing the building's capacity while optimizing the existing structure and facilities. The intervention combined technical studies, structural considerations, design support and construction supervision to integrate the additional floors with the existing building and ensure the proper execution of the renovation and extension works.



Client : Fondation pour les aires protégées et la biodiversité de Madagascar (FAPBM)

Contractor: TRANO Architecture

Financing: FAPBM

Country: Madagascar

Project Value: 450 000€

Scope: Civil Engineer Consultant

Refer to: Joan RAZAFIMAHARO – Architect and Project Manager

Contact: joan.razafimaharo@gmail.com - +261 34 20 172 25 - +261 32 60 403 83

8 Commercial information

8.1 Geographic area of operation

→ Madagascar – Operational Base

faHR's technical and operational base, providing engineering services, technical support and talent solutions from Madagascar.

→ Indian Ocean – Regional Focus

Supporting projects and clients across the Indian Ocean, including **Comoros, Mauritius, Réunion, Seychelles and Mayotte**, depending on project requirements.

→ Africa – Regional Reach

Providing technical capacity, project support and talent mobilization for projects across **East, West, Central and Southern Africa**.

→ International – Beyond the Region

Supporting international companies and project teams through remote engineering delivery, technical outsourcing and project-based talent mobilization.

Based in Madagascar, faHR Engineering Consultancy delivers engineering, technical support and talent solutions across the Indian Ocean, Africa and international projects.

8.2 Indicative Mission Duration

8.2.1 Estimated duration

Package	Indicative Duration
01 – SELECT	**10 - 15 working days**
02 – CONCEPT	**20 - 30 working days**
03 – DESIGN	**35 - 45 working days**
04 – TENDER	**50 - 65 working days**
05 – DELIVER	**50 - 65 working days** for engineering & tender preparation + **project duration** for support
06 - CUSTOM	**To be defined** according to the scope

8.2.2 Additional information

These timelines represent faHR's target delivery periods and are indicative. They may vary depending on project size, complexity, scope and technical requirements. Delivery timelines can be optimised during the project briefing by tailoring the team composition and resource allocation to the project's specific needs. Final timelines are confirmed following project assessment and agreement with the client.

8.3 Contact

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