To:
From: Jamie Conway

Date: 06/06/2025

VQ / QAIB Regenerative Infrastructure Project:

EXECUTION PLAN & CASE STUDY DOCUMENTATION

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Project: Qatuan | Structural Intelligence Series | June 2025

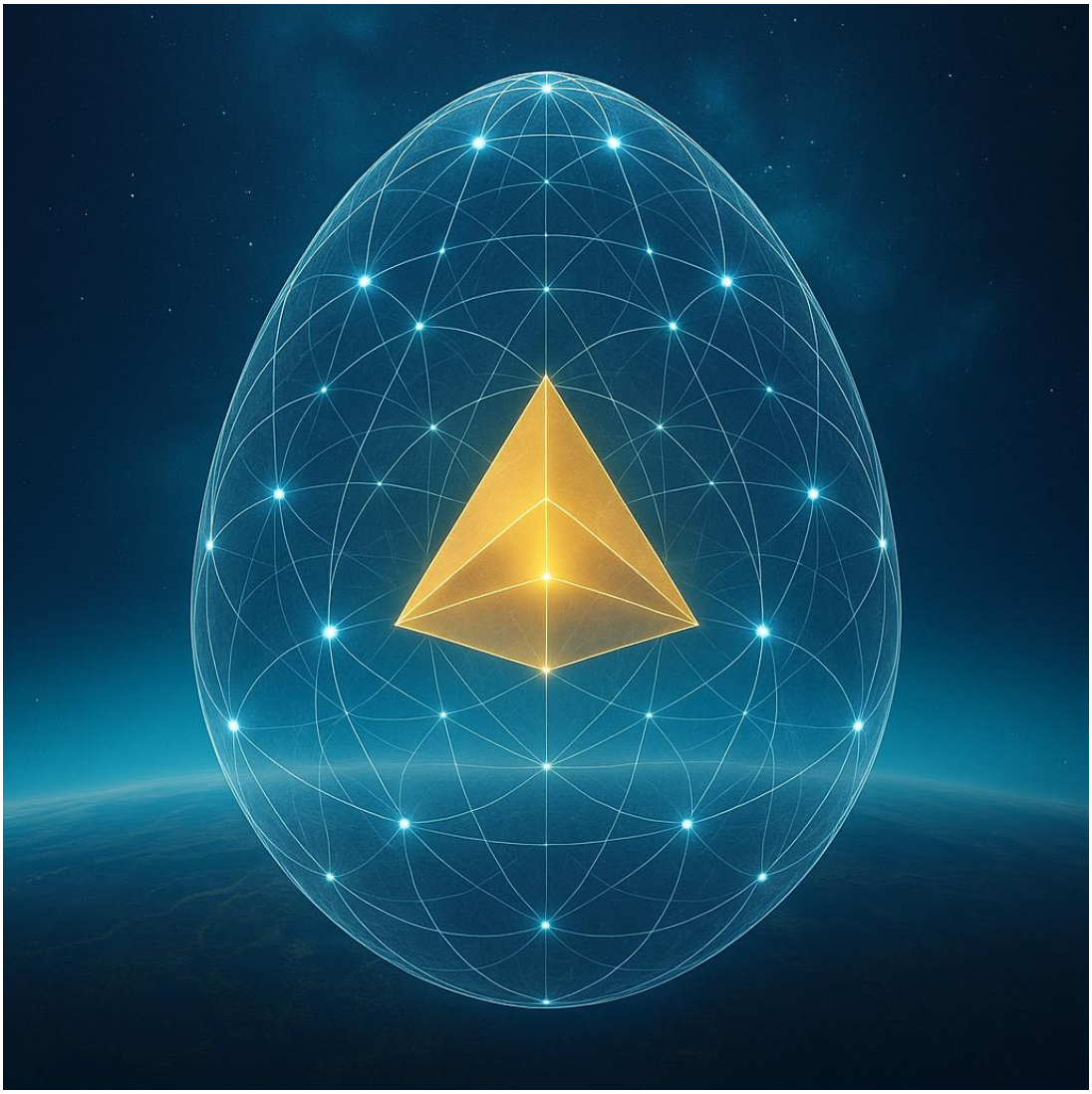


Figure 0. "*Tetrahedral Membrane Logic*"

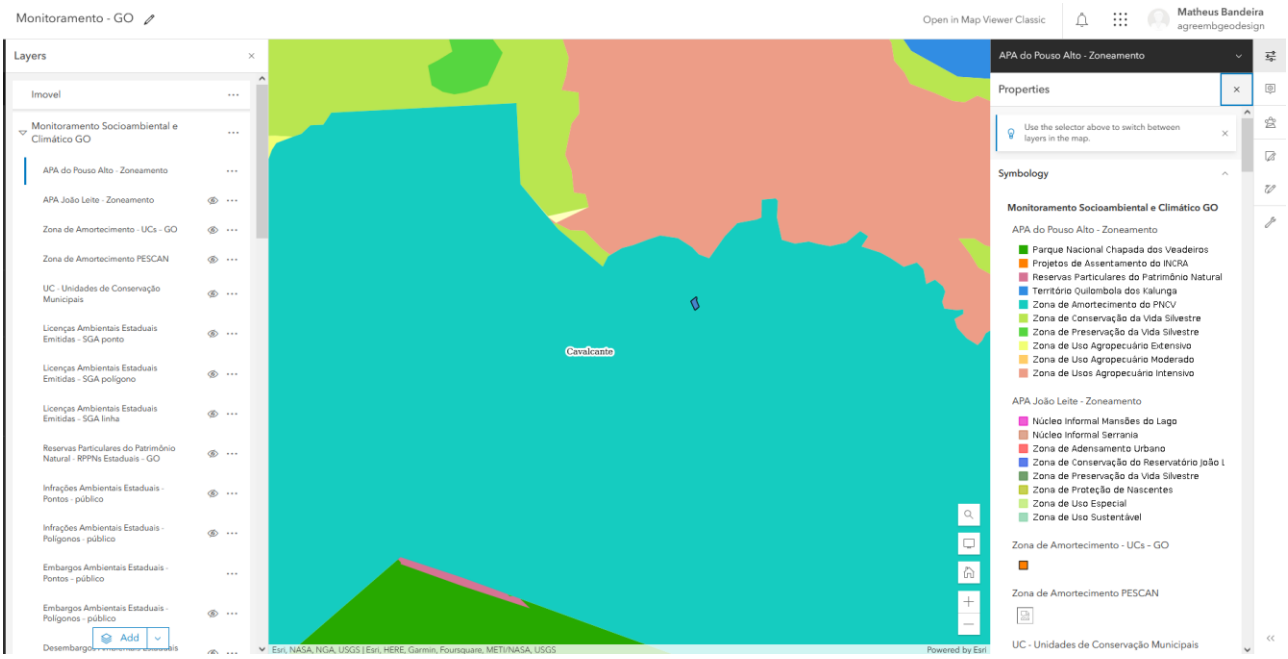
Abstract

This document outlines the full execution plan for the Vila Qatuan (VQ) Regenerative Infrastructure Project, developed under the auspices of the Quantum Archaeoastronomy Institute of Brazil (QAIB). It integrates international project management standards with regenerative design theory, quantum systems thinking, and smart village prototyping. This work spans the project's conceptual origins in 2018 through to active investment proposals in 2025. With a unique focus on ecological intelligence, stakeholder harmonics, and renewable infrastructure, the plan exceeds the academic module framework for construction and completion. Supported by extensive documentation, this paper presents a living blueprint for regenerative development across spatial, temporal, and socio-energetic dimensions.

Contents

1. Project Overview

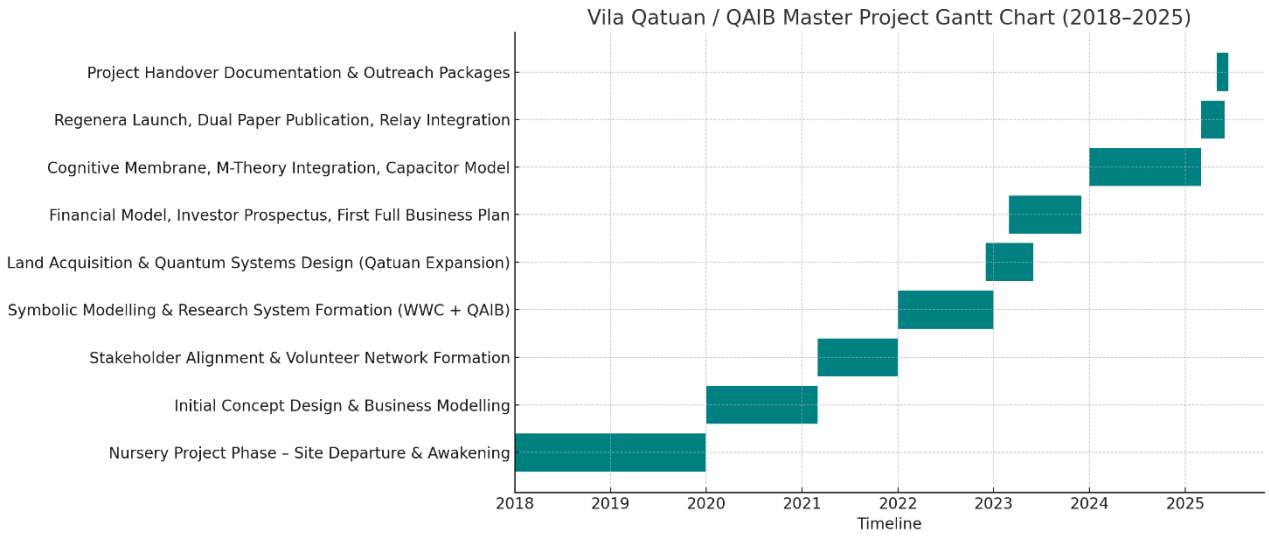
The Vila Qatuan initiative began in 2018 when the need to design a self-sufficient, scalable, and demonstrably sustainable settlement model emerged from prolonged field practice and architectural reflection. Originally envisioned as a permaculture living site, VQ evolved into a regenerative testbed for circular economy, quantum infrastructure design, and distributed energy systems. Its affiliation with NASA GLOBE, UNOOSA, and the World Water Community positioned it as a global prototype.



"Figure 1. Vila Qatuan pilot site – boundary within UNESCO World Heritage zone."

2. Timeline: The Gantt Chart (2018–2025)

The following Gantt chart outlines the key milestones and evolution of the project:



"Figure 2. Project timeline with developmental milestones and institutional partnerships."

3. Work Breakdown Structure (WBS)

The WBS is structured across the following functional categories:

- Preproject Phase (1.x)
- Site Discovery & Zoning (2.x)
- Institutional Strategy & Stakeholder Mapping (3.x)
- Architecture & Material Modelling (4.x)
- Financial Planning & Investment Strategy (5.x)
- Infrastructure Systems Design (6.x)
- Permitting, Safety, and Environmental Control (7.x)
- Construction & Deployment (8.x)

Work Breakdown Structure (WBS) – VQ / QAIB Regenerative Infrastructure Project

Section 1: Foundation & Alignment (2018–2021)

WBS Code	Task / Phase	Category	Description
1.0	Pre-Project Phase	Nursery Phase	Departure from urban HQ; recognition of systemic architectural limits
1.1	Philosophical Foundation	Nursery Phase	Jamie Conway's early thought-leadership and regenerative habitat ideation
1.2	Original Business Plan (VQ 2018)	Nursery Phase	Early value mapping of services, team, and regenerative landscaping activities
2.0	Site Discovery & Land Acquisition	Alignment Phase	Fazenda Canadá identified near Chapada dos Veadeiros; site secured
2.1	Legal Zoning & Compensation Maps	Alignment Phase	Forest compensation study, APA Pouso Alto overlays, suppression area defined

Section 2: Strategy & Structure (2021–2024)

WBS Code	Task / Phase	Category	Description
3.0	Institutional Strategy & Stakeholder Mapping	Structuring Phase	Strategic alignment with NASA GLOBE, UNOOSA, CBPF, CIRAT, WWC
3.1	QAIB Foundation & Global Integration Plan	Structuring Phase	Stakeholder ecosystem formalized; QAIB digital architecture, WWC profiles, LinkedIn
4.0	Architecture & Material Modelling	Field Phase	Reciprocal roof system, ferrocement structures, SketchUp builds
4.1	Timber Procurement & Testing	Field Phase	Eucalyptus testing, NF reports, beam modelling, reciprocal standard exploration
5.0	Financial Planning & Investment Strategy	Structuring Phase	Konnected Holdings MOU, LCF partnership, cost docs, projected ROI sheets
6.0	Energy Systems Design (CCGT / Solar / Biogas)	Structuring Phase	6kW Smart Grid system, case study decks, modular bioeconomic grid setup
6.1	Case Study Integration & Energy Model Presentation	Structuring Phase	University course integration; energy modules structured to academic framework

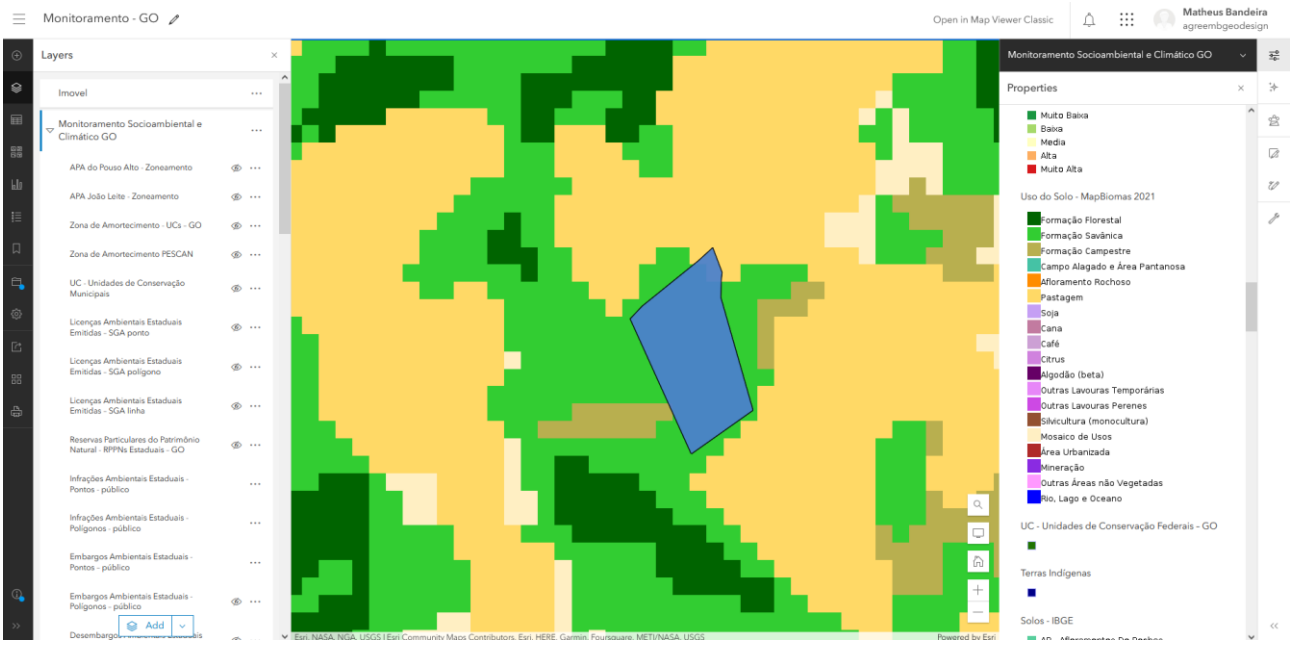
Section 3: Deployment & Reporting (2024–2026)

WBS Code	Task / Phase	Category	Description
7.0	Environmental & Safety Compliance	Governance Phase	ISO 14001/45001 implementation, MAPBiomas overlays, EIS documentation
8.0	Construction & Deployment	Execution Phase	Full modular assembly of Cha é, cabins, green systems and site infrastructure
8.1	Modular Unit Construction (Pavilions + Cabins)	Execution Phase	Circular timber framing, sustainable walls, reciprocal roof fitting
8.2	Commissioning & Systems Testing	Execution Phase	Sanitation systems, biodigester loops, microgrid and water structures tested
9.0	Documentation & Reporting	Compliance Phase	Academic paper writing, investment briefs, final project portfolio integration

"Figure 3. VQ WBS v2.2 with modular cross-domain task structure."

4. Safety & Environmental Compliance (ISO/EIS)

This section includes zoning, soil classification (MAPBiomas), water testing, legal compliance declarations, and adherence to ISO 14001 and ISO 45001 standards.

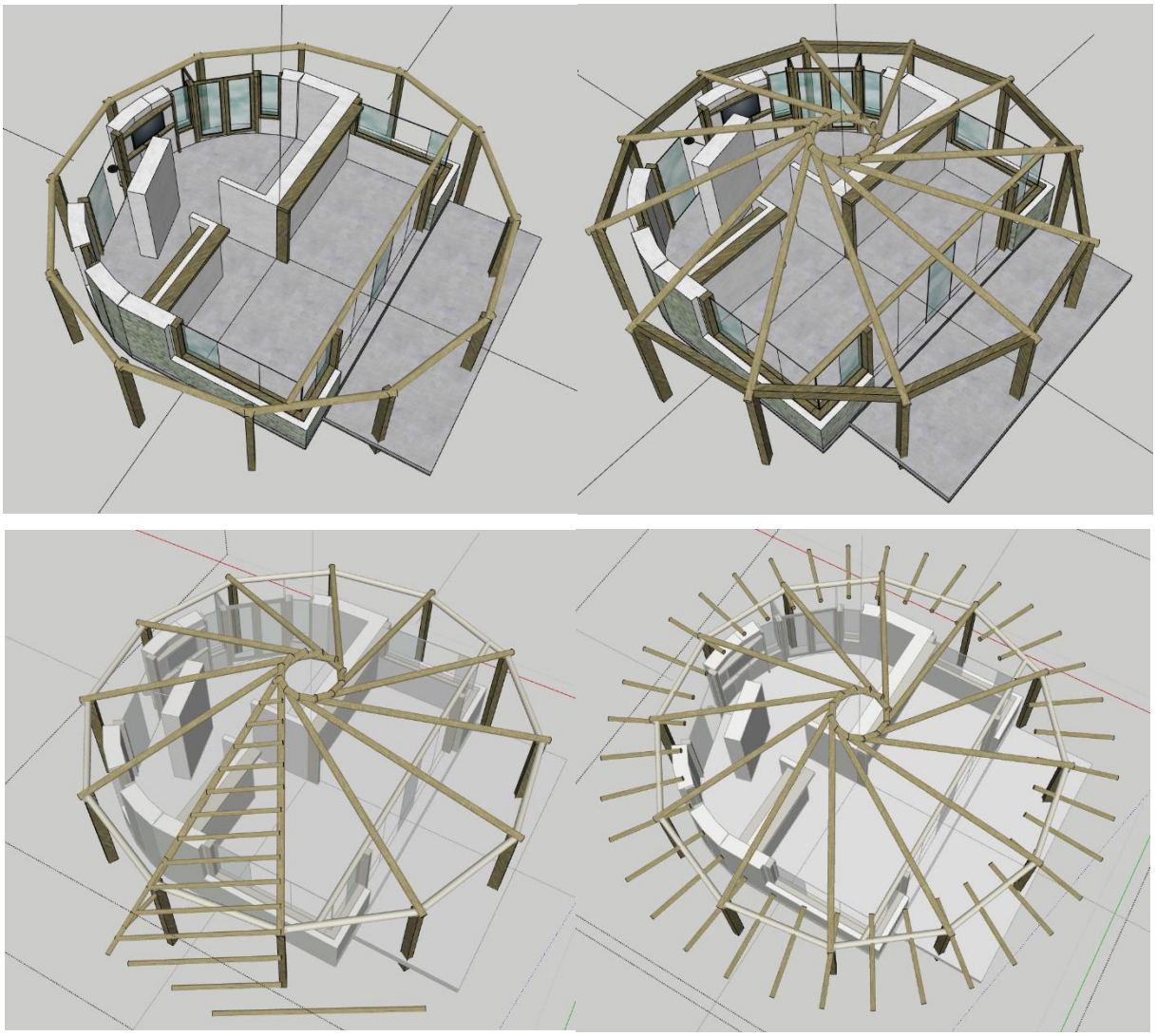


"Figure 4. Zoneamento APA Pouso Alto – ecological constraint mapping."

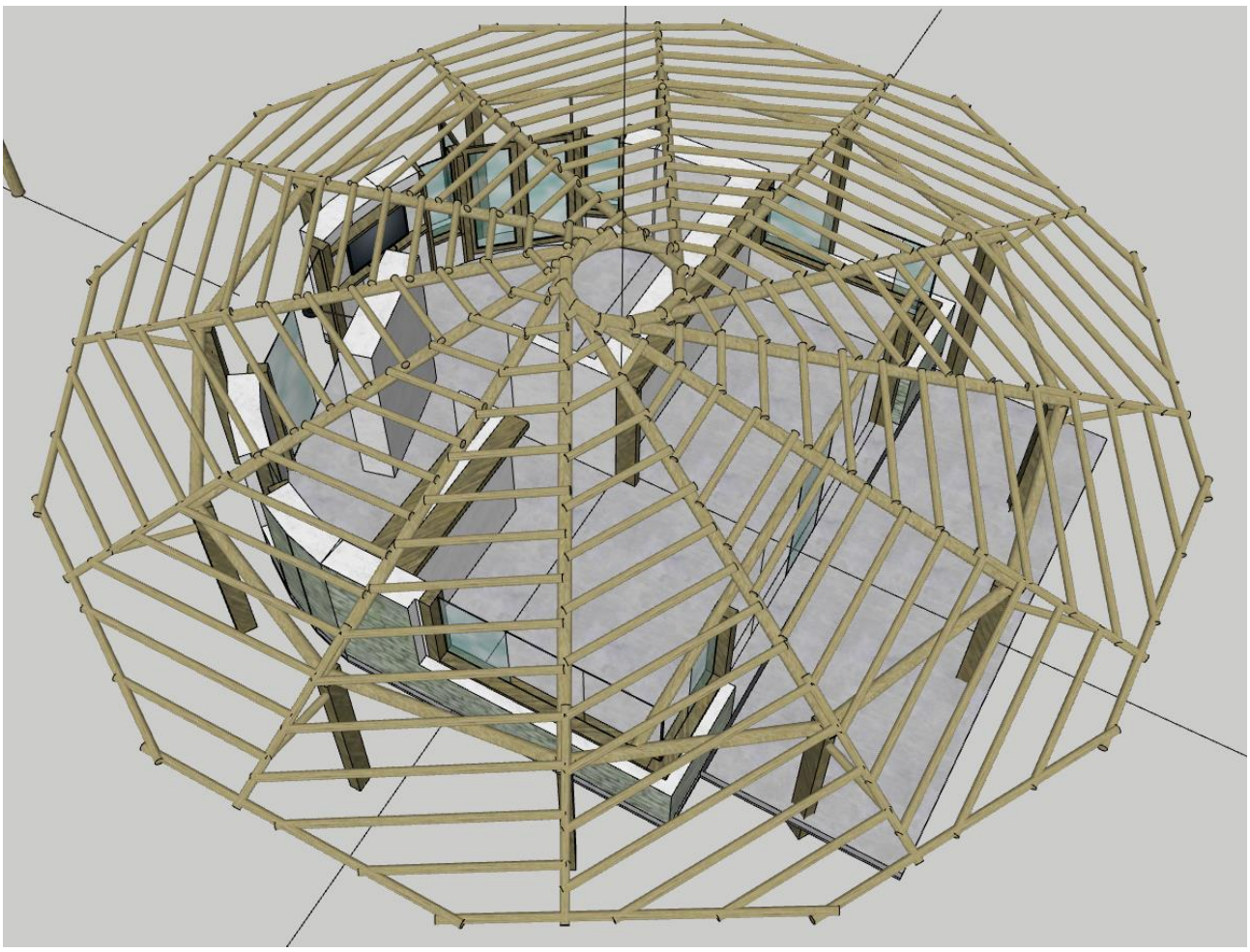
5. Materials & Procurement Framework

All structural materials are locally sourced, with priority on:

- Eucalyptus structural beams
- Recycled iron frames
- Ferrocement systems for tanking
- Reciprocal roofing standards
- Green roofing protocols (ZinCo & Brazilian adaptation)



"Figure 5. Primary and secondary structural system diagrams."



"Figure 5. Primary and secondary structural system diagrams."

6. Construction Task Flow & Scheduling

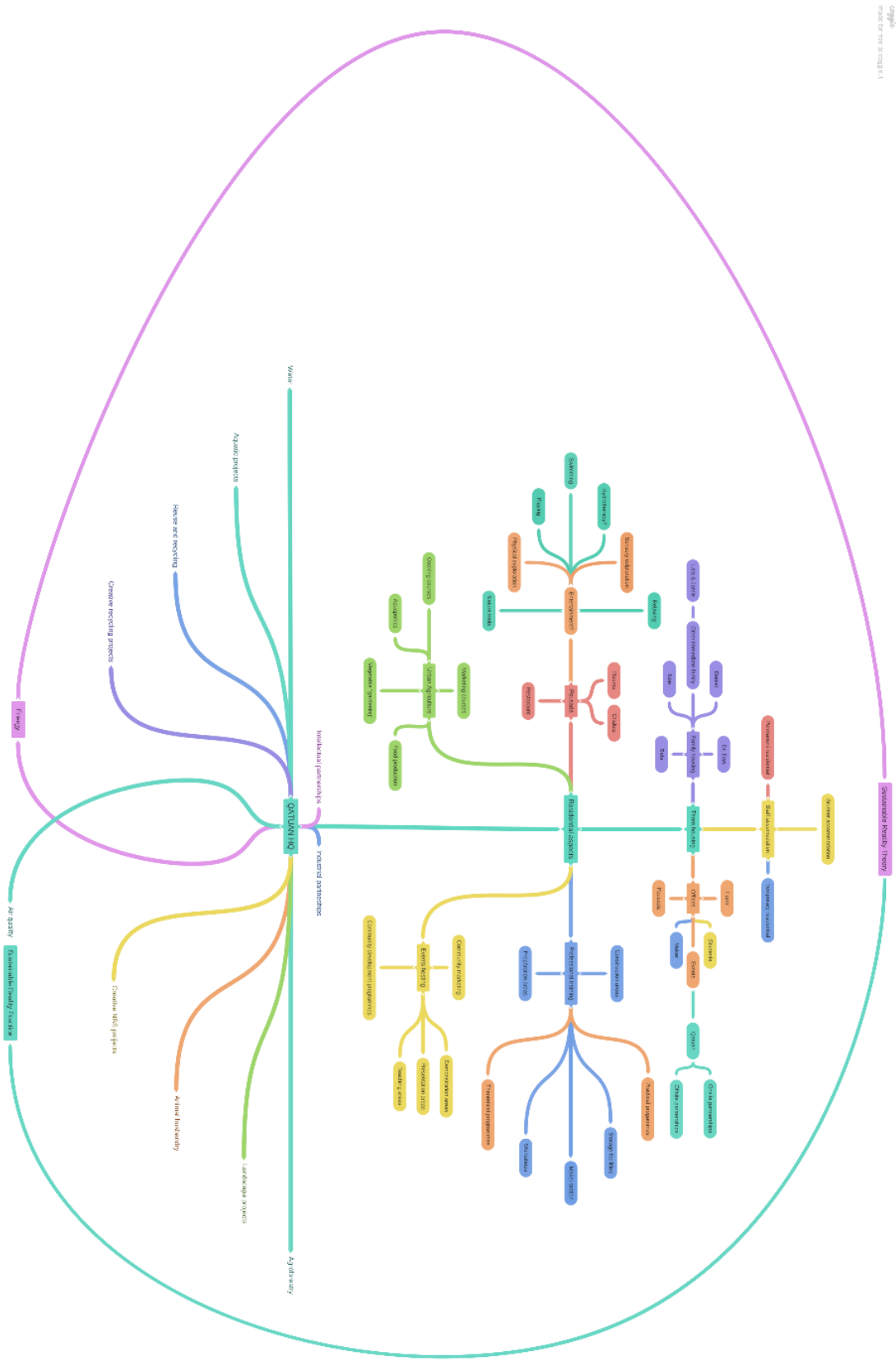
Based on reciprocal structure geometry and field labour capacity, the phased construction plan includes:

- Foundation & beam layout
- Rafter and module erection
- Roof infrastructure
- Interior utility & finishing integration

7. Stakeholder Engagement & Network Mapping

From 2021 onwards, a global engagement strategy was developed, involving:

- NASA GLOBE Program
- UNOOSA & Open Universe
- World Water Community (WWC)
- CIRAT, CBPF, and local Brazilian government stakeholders



"Figure 6. QAIB Institutional Stakeholder Ecosystem."

8. Financial Model & Investment Summary

Includes detailed breakdowns:

- 2023 financial projections and infrastructure estimates
- Expected ROI via Konnected Holdings overview
- LCF investment proposal and strategic planning

9. Case Study Narrative (for Academic Submission)

Vila Qatuan is formally presented as the project site for academic assessment under the Design & Management of Energy Projects program. It fulfils the Case Study requirement by combining:

- Longitudinal development (2018–2025)
- Physical site and stakeholder presence
- Full documentation of costs, risks, design, and community interface

10. Academic Compliance Matrix: VQ / QAIB vs. Module Criteria

Module Element	VQ / QAIB Execution Plan Coverage
1. Pre-Project Planning & Definition	Gantt Chart Phase 1 (2018–2021) — documents the transition from HQ departure to foundational regenerative planning with full justification.
2. Project Organization & Stakeholders	Chapter 7 outlines an integrated stakeholder matrix (QAIB Egg), including WWC, GLOBE, UNOOSA, CIRAT, CBPF, NASA and local governance bodies.
3. Design and Feasibility Analysis	Full architectural documentation: reciprocal frame geometry, green roof design, Eucalyptus timber tests, ZNM overlays, and MapBiomas analysis.
4. Work Breakdown Structure (WBS)	Fully developed WBS v2.2 covering 8 modular stages, aligned to ISO task structuring and matching textbook Work Package logic.
5. Financial Planning & Control	Investment docs from 2018–2025, including forecasts, ROI justifications, MoUs, LCF documentation, and Konnected Holdings overview.
6. Safety and Environmental Management	Chapter 4 with full ISO 14001/45001 context, permitting docs, ecological assessments, compensation plans, and land use zoning overlays.
7. Execution and Supervision	Real-world deployment underway. QAIB Egg model mapped to textbook execution chart. Team roles, site labor, and system supervision strategies.
8. Construction Case Study & Reporting	Full academic case study package: timeline, legal framework, institutional alignment, site visuals, narrative, compliance matrix, and appendix.

11. References

- HarvardX (2024). *Fundamentals of Neuroscience*. edX.
- Pollack, G. (2013). *The Fourth Phase of Water*. Ebner & Sons.
- Caltech (2024). *The Science of the Solar System*.
- Carlson, R. (2020). *Sacred Geometry and Earth Resonance*. CRI.
- Conway, J. (2025). *QAIB Development Strategy*. ThinkMachine.
- NASA GLOBE Program (2025). *Certified Educator Resources*.

12. Suggested Further Reading

- *Stone as a Capacitor: Reframing Matter in Energy Theory* (QAIB, 2025)
- *Quantum Design: Mapping Sustainability Through Non-Linear Innovation* (QAIB, 2025)
- *The VQ Integrated Approach* (QAIB, 2024)
- *Regenera: Horizons Abertos* Campaign Deck

13. Appendices

- A. Environmental Declarations (PDF)
- B. Full Zoning Maps
- C. Procurement Lists
- D. ISO Compliance Documents
- E. Investment MOU Letters
- F. 2023–2025 Presentation Slide Packs

Confirmed Image References & Captions

Figure	Title	File	Section
Figure 1	Vila Qatuan pilot site – boundary within UNESCO zone	Zoneamento APA Pouso Alto.png	1. Project Overview
Figure 2	Project timeline with milestones	Gantt Chart.png (upcoming)	2. Timeline
Figure 3	VQ WBS v2.2 Modular Structure	WBS Table export	3. Work Breakdown Structure
Figure 4	Ecological constraint mapping (MAPBiomas)	Mapbiomas.png	4. Safety & Environmental Compliance
Figure 5	Primary and secondary structural system diagrams	12 Beams.png + Extension.png	5. Materials & Procurement
Figure 6	QAIB Institutional Stakeholder Ecosystem	Qatuan egg.png	7. Stakeholder Engagement