**LAGI 2025 Fiji Narrative Statement**

1. **Concept Narrative**

The project begins by tuning into two essential forces: the path of the sun and the natural contours of the land. These are not mere data sets but lived spatial rhythms that guide everyday activities. The sun’s movement defines one directional axis, while the site’s slope establishes the other, forming a crosswise grid subtly laid across the terrain. This latent structure becomes the foundation for architecture, farming, and infrastructure.

Stone markers embedded along this grid serve as intuitive guides, empowering villagers to adapt and reshape their environment in response to seasonal cycles and communal needs. From this quiet order, a resilient, participatory architecture takes shape—flexible enough to be built, dismantled, and reconfigured over time. The traditional Marou village embodies a unique spatial ethic—one defined not by ownership but by shared, vibrant spaces between their homes. These communal “in-between” areas, alive with everyday life, inspire the design of a central courtyard framed by a looping walkway that mirrors the village’s informal footpaths.

Along this path, three pavilions are arranged with deliberate spontaneity, evoking the dispersed yet purposeful layout of traditional Fijian dwellings. The **main gathering** **shed** offers a large, open hall for community-wide events, while the interstitial spaces—partially enclosed and shaded—encourage casual interaction, cooking, and rest. Together, they form a seamless public realm: flexible, welcoming, and deeply connected to cultural roots for Fijians and visitors.

The design module efficiently collects and stores rainwater during the wet season, while generating solar energy during the dry, sunny months—all while offering shade throughout the year. The module incorporates a tensile canopy system that offers lightweight membranes to disengage easily under extreme weather conditions. This system turns weather events into catalysts for creative renewal. Each act of rebuilding brings fresh rhythms and evolving geometries, enabling the built environment to grow in harmony with its community.

1. **Technical Narrative**

The design incorporates integrated rainwater continuous collection and solar energy generation technologies within a modular architectural system. The structure is designed to collect and store water during the rainy season through sloped surfaces to cisterns, while in the dry days or season, photovoltaic panels generate solar electricity. These technologies were chosen for their ability to respond to the island’s distinct wet-dry seasonal cycle and for their alignment with sustainable, off-grid living. Additionally, the system provides passive shading, reducing heat gain and enhancing comfort— the essential functions in a tropical climate. The system includes inputs like solar radiation (for energy generation), rainfall (for water collection), and community participation (for adaptive rebuilding, engagement and maintenance), while the outputs are electricity, stored rainwater for multiuse, shaded public space for social and cultural use, and evolving architectural forms that respond to climate events and community needs accordingly.

The installation is designed as a modular system, with each unit capable of independently collecting water and generating solar power. At full build-out, the system can generate approximately 484 kWh of electricity per day, while daily energy needs are only about 75-85 kWh. This large surplus allows for energy storage, supports future expansion, and provides resilience during overcast periods or for additional infrastructure such as night-lighting, refrigeration, or digital access points.

Water collection is equally integrated into the design. Based on local weather patterns of 7 to 8 large scale rainfall events per year, each delivering 40–50 mm approx. of rain, a single module with a 33 m² catchment area can collect around 8000 to 10,000 liters of rainwater storage annually. With multiple modules distributed across the site, this scales up to meet communal needs for drinking, washing, and irrigation during the dry season.

The modular nature of the system means it can be adapted to changes in population, climate, or community priorities. Units can be added, relocated, or reconfigured without disrupting the overall system, ensuring long-term sustainability and community control over resources.

1. **Prototyping and Pilot Implementation Statement**

Our team will adopt a phased, collaborative approach that begins with off-site prototyping and transitions into a full-scale, community-led implementation. Initially, we will design and test the modular prototype over a few months in a controlled environment after the announcement of results. This phase will focus on refining construction techniques, validating performance (water collection, energy generation, structural integrity and flexibility), and ensuring ease of assembly and disassemble.

Once the prototype has proven successful, we will move to on-site implementation in Marou. At this stage, collaboration with the local community becomes central. We will conduct hands-on workshops to train residents in assembling the modules using materials, primarily metal and concrete framing and bases, tensile fabric installation and photovoltaic panels. The system is intentionally designed for simplicity and modularity, allowing villagers to participate in both construction and ongoing adaptation.

Through co-building, knowledge sharing, and long-term engagement on-site, the community becomes not only the beneficiary but the co-creator of the pilot projects ensuring that the architecture evolves with their needs, and climate demands.

1. **Operations and Maintenance Statement**

The design is intentionally low-tech, modular, and easy to maintain, ensuring long-term sustainability with minimal external support. Key systems—such as rainwater collection, storage tanks, tensile fabric and solar panels—are designed for durability and ease of access. Routine tasks like cleaning filters and fabric, checking panel connections, and clearing debris from gutters and channels can be managed through simple protocols established during the training phase.

From the outset, local community members will be involved in construction, giving them hands-on familiarity with each component. This knowledge will be deepened through ongoing workshops that build capacity in maintenance, basic repair, and system upgrades. A rotational system can be set up within the village to share responsibility for routine checks and upkeep, reinforcing collective ownership. Over time, the community becomes the steward of the system—able not only to maintain it but also to adapt it in response to changing needs, making the project truly participatory and self-sustaining.

1. **Environmental Impact Assessment**

The installation is designed to work in harmony with the local environment, but careful attention is still needed to minimize ecological impact. Potential effects include soil disturbance during construction, minor disruption to surface patterns, and localized habitat displacement.

To mitigate these issues, the design uses minimal excavation and avoids permanent foundations wherever possible, relying instead on lightweight modular components that can be anchored with minimal ground intervention. Materials such as locally sourced concrete and recycled metal reduce transportation emissions and ecological footprint. Rainwater usage and solar energy generation lessen dependency on external resources, reducing pressure on natural streams and forested areas mainly.

Before full installation, an environmental assessment will be conducted to ensure sensitive areas are identified and avoided on-site. Additionally, vegetation buffers will be preserved or reintroduced around the installation to maintain biodiversity and manage runoff naturally. By engaging the community in ecological stewardships such as tree planting and habitat monitoring, the project not only limits harm but also fosters a deeper local investment in protecting the surrounding ecosystem.