COMMUNITY PROJECT: GILIGIL RESOURCE CENTRE, VIVIRAN, ENB, PNG
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PROJECT DESCRIPTION: MANAGED VSAT SATELLITE INTERNET DELIVERY, ICT SERVICES AND SUPPORT AND COMPUTER INSTALLATIONS

Project Proposal – Provisioning of Internet Services and Associated Infrastructure, Computer Installations and Off Grid Solar Power for Education Support, Vocational Training and Community Services in Toma Valley rural villages.

1. Project Background

This project is part of a two-staged community development project started in 2024 being a building infrastructure as Stage 1 and Stage 2 for technology-based services. Stage 1 was a fully self-funded project with personal and family resources, completing the multipurpose hall and resource centre with the objective for community use and educational support to students from the villages attending nearby primary, high schools and secondary schools. The rural community service area is Viviran village and neighbouring villages in the Toma valley of East New Britain Province, PNG. The community hall-resource centre is located on private land with an area allocated for the community services project. The building is completed and was officially launched for community use on the 7th of January 2025.
The completed Stage 1 building infrastructure has dimensions of 18m x 6.6m has three (3) main services areas with 2 open areas and an enclosed area with two rooms.

1. Market Section (6m x 6.6m) is allocated for local people to sell their fresh produce, garden foods, cooked food, homemade tailoring and sown clothing, second hand clothing, handicraft and general local trading.
2. General Use Section (9m x 6.6m) is allocated for community meetings, training workshops, awareness from government authorities, relevant church meetings, choir practice sessions, small church fellowship and pastoral care sessions.
3. Offices Section (3m x 6,6m) is divided into two rooms one being for internet services with four computer terminals in Room 1 connected to VSAT satellite connectivity and a local area network for printing, copying and scanning services in Room 2 on office equipment and stationary supplies.

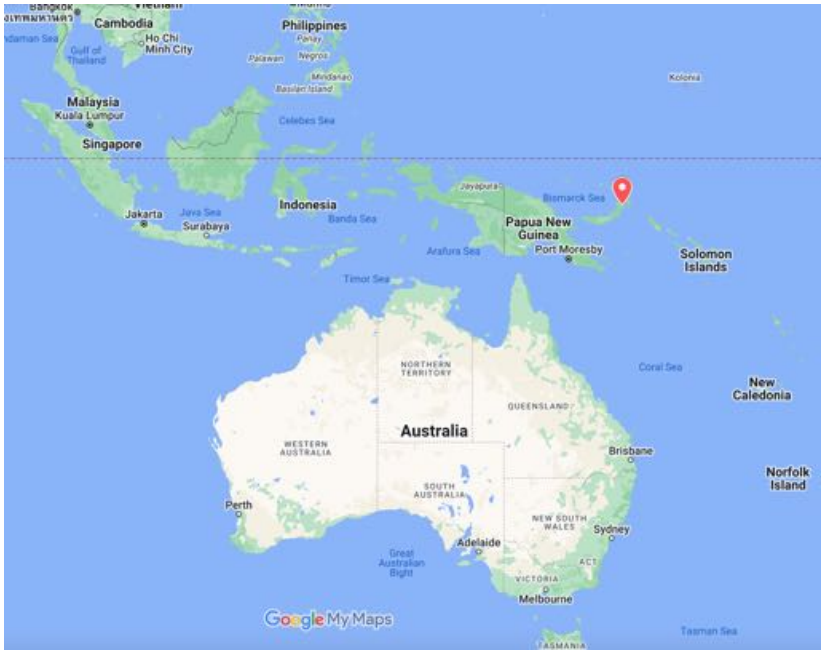
As Stage 1 was self-funded and the completed Multipurpose Hall building photographs are in Attachment 1. Stage 2 is the proposed project focused on technology and power services for the community resource centre located in the two offices and fundraising efforts and assistance to implement this project is registered for 2025-26.

2. Project Overview

Internet services infrastructure and connectivity in Papua New Guinea is provided by local telco operators through domestic terrestrial and fibre optics circuits from Port Moresby to other regions. However, due to regular outages and delayed restoration times with regional trunk providers and power outages, such system unreliability and service availability is not guaranteed and unacceptable for any internet services.

Due to the geographical location of East New Britain and regular outages on domestic telecommunications and constant grid power outages, the solution for the Giligil Resource Centre is a standalone VSAT system for satellite internet services with ICT services online 24/7 powered by an off grid solar system for on-site power supply. The internet link is therefore not dependent of local and domestic PNG network infrastructure but directly serviced from Australia. The Centre's on-site router will manage the VSAT satellite internet service delivery for traffic control and remote management.

The location of the project site, Giligil Resource Centre at Viviran Village of East New Britain Province of New Guinea Islands region of Papua New Guinea.



3. Project Scoping

Based on desktop design and engineering, technology and power solutions, the project scoping has been undertaken where the proposed implementation is guided with preliminary costings for budgetary purposes. Site surveys and inspection by suppliers/service providers and project support for hardware, logistics and installation services and training will determine detailed costs to the ballpark estimated costings that will become the Scope of Works (SOW).

The scoping and costings for Internet Services, LAN & Wi-Fi, Computers and Off Grid Solar Installations will be outlined and any detailed project costs after site surveys, scheduling and plans will be subject to arrangements with hardware suppliers, service providers and

contractors upon approval of the project. The budgetary estimates are provided as a guide and fundraising target purposes for a Rotary/RAWCS project in 2025.
Data cabling to PCs and Wi-Fi Network Coverage setup.

3.1 Systems Schematics

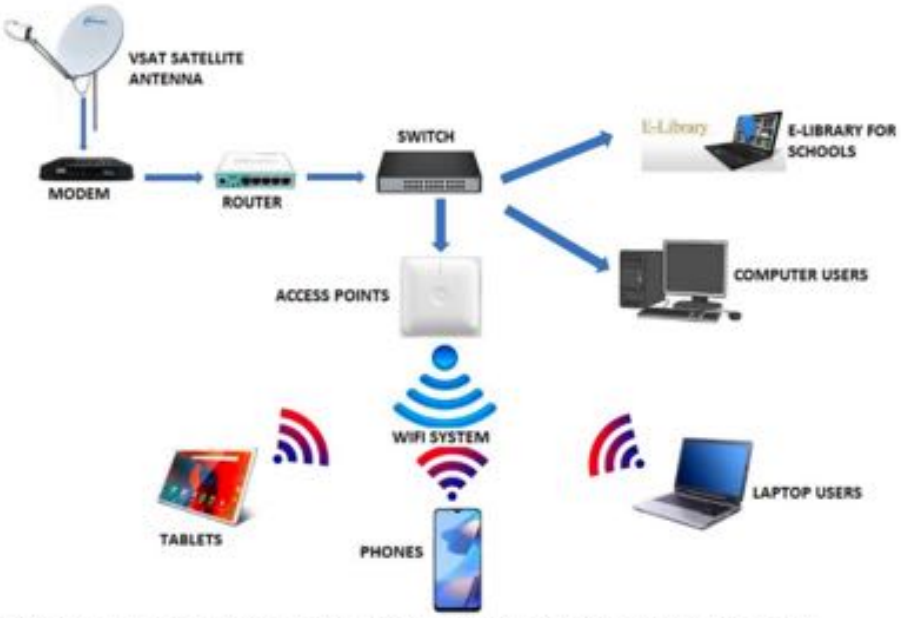


Fig 1 – ICT Services comprising of a VSAT Satellite Internet System, Wi-Fi System.

1) VSAT Satellite Internet System
2) Local Area and Wi-Fi Network
3) Site will have remote access for remote management and support

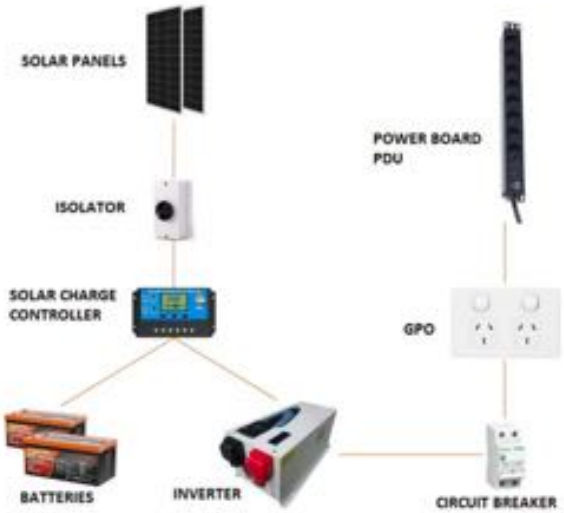


Fig 2 – Off Grid Solar System to power the ICT Equipment.

1) The Off Grid Solar System will be designed after the initial site survey and scoping
2) Will be designed according to the power consumption of the ICT equipment

3.2 Hardware & Scope of Works (SOW)

Fig 3: Hardware & SOW– Satellite internet, ICT LAN, Wi-Fi, Computers, Off Grid Solar

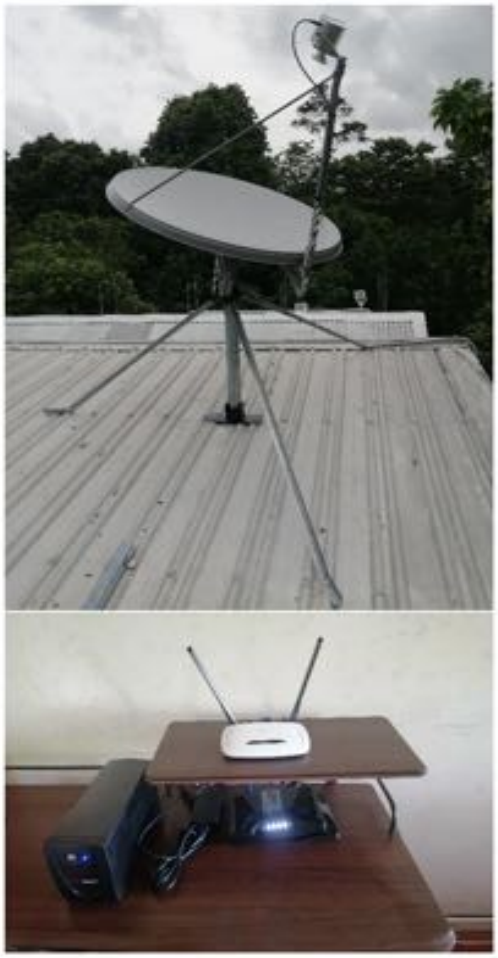


Fig 3a – Satellite internet system

VSAT WAN - A Ka-band satellite dish antenna that uses the Ka band (frequency range 26-40 GHz) to transmit and receive signals. Ka-band VSATs are used for satellite internet access and are used in a variety of satellite systems.

Hardware - Satellite Kit, Modem and Transceiver

SOW - Site Survey and marking out of location for VSAT installation spot,
Installation of VSAT Internet Links.
Router and access point, configurations and testing,
Commissioning and Acceptance Testing and Sign Off,
Handover of Documentation

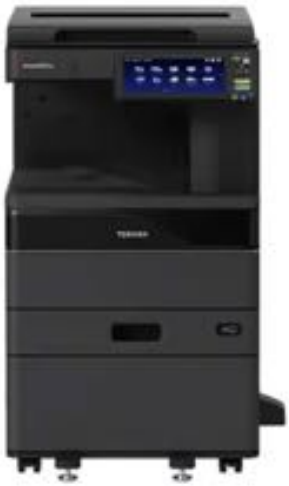


Fig 3b – ICT, LAN, Wi-Fi, Computer networks

Hardware - Router, Switch, Access Points, Data cables and accessories

SOW - Data Cabling Works, Wi-Fi setup,

4 off Desktop Computers Package Hardware Installation and Software Configuration

Network Printer Setup, Driver Installation and Network Integration

Fig.3c – Off Grid Solar system

5KW Off Grid Solar power - complete with PV Solar Panels, Inverter, Batteries, Cables, Connectors and Accessories

Hardware - 8 off 590W solar panels, 12V-150AH lead acid Battery, 48V-520W-135A Inverter with accessories.

SOW - Site assessment & preparation, solar panel mounting & installation, battery bank installation & wiring, inverter & charge controller setup, electrical wiring & connections, testing and commissioning, User training and handover.

4. Project Costings & Budgets

Item #	Hardware/Services Description	Cost PGK	Cost AUD
	Scope of Works for Suppliers & Service Providers	PGK-AUD Ex-rate	0.40
1	Internet Ka Band VSAT Satellite System - Site Survey and marking out of location for VSAT installation spot, Installation of VSAT Internet Links. Router and access point configurations and testing, Commissioning and Acceptance Testing and Sign Off, Handover of Documentation and 12 months annual subscription with satellite service providers of internet Ka band and VSAT system. Installation, operations and maintenance training and support provided.	30,000	12,000
2	Data Cabling and Wi-Fi Network Setup - Router, Switch, Access Points, Cabling Works. Installation, operations and maintenance training and support provided.	25,000	10,000
3	Desktop Computer Package (Qty 4) Hardware Installation and Software Configuration. Installation, operations and maintenance training and support provided.	35,000	14,000
4	Network Printer - 3in1 (Printer, Copier, Scanner) Printer Setup, Driver Installation and Network Integration. Installation, operations and maintenance training and support provided.	35,000	14,000
5	5KW Off Grid Solar System - Site assessment & preparation, solar panel mounting & installation, battery bank installation & wiring, inverter & charge controller setup, electrical wiring & connections, testing and commissioning and handover. Installation, operations and maintenance training and support provided.	40,000	16,000
6	Local Sub-contractors' installation works, logistics and support services on facility and training recipients.	20,000	8,000
7	Project Contingency (8%)	15,000	6,000
8	**Total Project Costs (PGK/AUD)**	**200,000**	**80,000**

Notes#

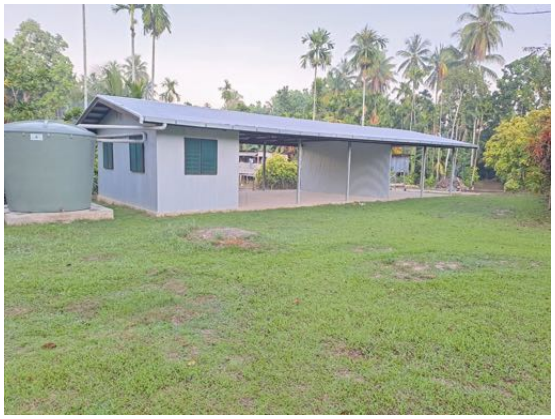
1. PNG Contractor/Project Partner is responsible to design & engineer, supply & deliver, install & commission and manage satellite services.
2. Gagau & Associates owns the project site and facility under Resource Centre Manager and will be responsible for operations and maintenance of services.
3. The PNG Contractor/Project Partner is responsible for training local nationals at sign-off commissioning acceptance and handover documentation to Gagau & Associates.
4. Gagau & Associates is responsible for the long-term project sustainability.

5. Project Plan and Schedule

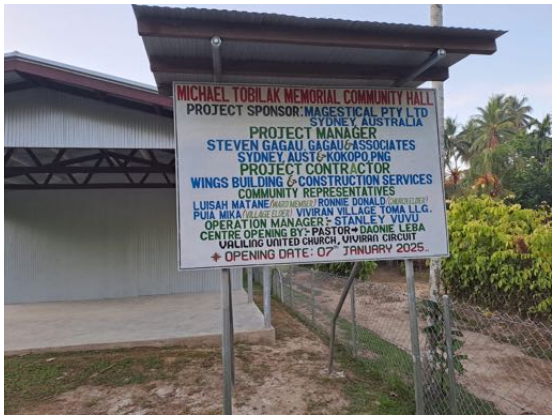
Since the completion of Stage 1 building infrastructure in January 2025, it is planned that fundraising of the Stage 2 technology services project with the target budget of AUD$80,000 to be undertaken during the year. Sources of funding is being sought from charity organisations, NGOs, corporate sponsorships, community groups, aid donors and development agencies including crowdfunding support.

Should fundraising efforts meet the target budget during 2025, scheduling for implementation can immediately proceed at the earliest opportunity. A project fundraising plan towards the implementation would be to secure 50% to the total budget of $40,000 by third quarter of 2025 so that site survey can proceed to confirm SOW requirements and deposits and downpayments are committed with suppliers and service providers whilst we continue the fundraising efforts for the remaining 50% of project costs to the total budget of $80,000.

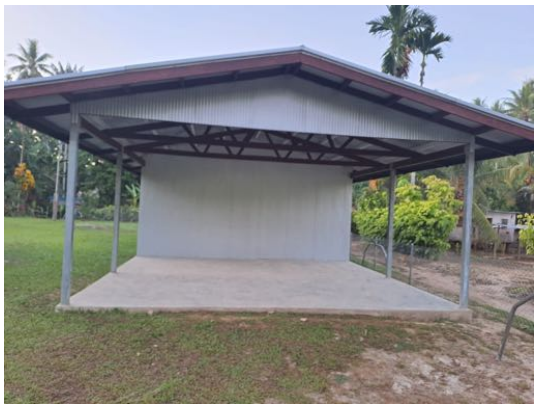
ATTACHMENT 1: Multipurpose Hall Building infrastructure photos (Stage 1).



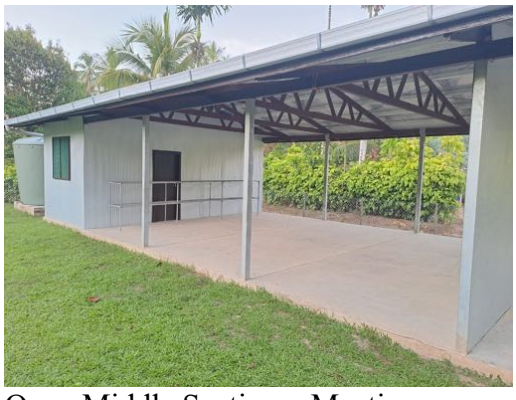
Community Hall-Resource Centre



Resource Centre Front Signboard



Front Market section



Open Middle Section – Meeting area

Giligil Resource Centre – Back section with Rooms to be completed and equipped with solar powered satellite internet, computer installations, office equipment (printer-copiers) and furniture.