RECOMMENDATION REPORT - 2021 UAS PROJECTS FROM THE UAS BOARD TO THE MINISTER

NATIONAL INFORMATION AND COMMUNICATIONS TECHNOLOGY AUTHORITY

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1 INTRODUCTION

Under Section 108(1) of the National Information and Communications Technology Act 2009 (NICT Act), NICTA is engaged to undertake a number of tasks relating to UAS Projects, including:

"(a) identify, develop and estimate the indicative cost of UAS Projects;

(d) estimate the proposed aggregate budget for all UAS Projects to be undertaken under this Part for the relevant period identified by the UAS Board;

(e) rank the UAS Projects identified and developed under Subsections (1)(a) or (b) in order of priority with regard to –

(i) their affordability within the proposed budget; and
(ii) the remaining factors listed in Subsection (4);

(f) prepare for consideration by the UAS Board, a report which summarises the UAS Projects under consideration, their respective indicative costing, their proposed ranking (and the reasons for their ranking), and the proposed aggregate budget, as identified above."

NICTA has undertaken these tasks, and now provides the UAS Board with the 2021 UAS Projects Report, pursuant to Section 108(1)(f)

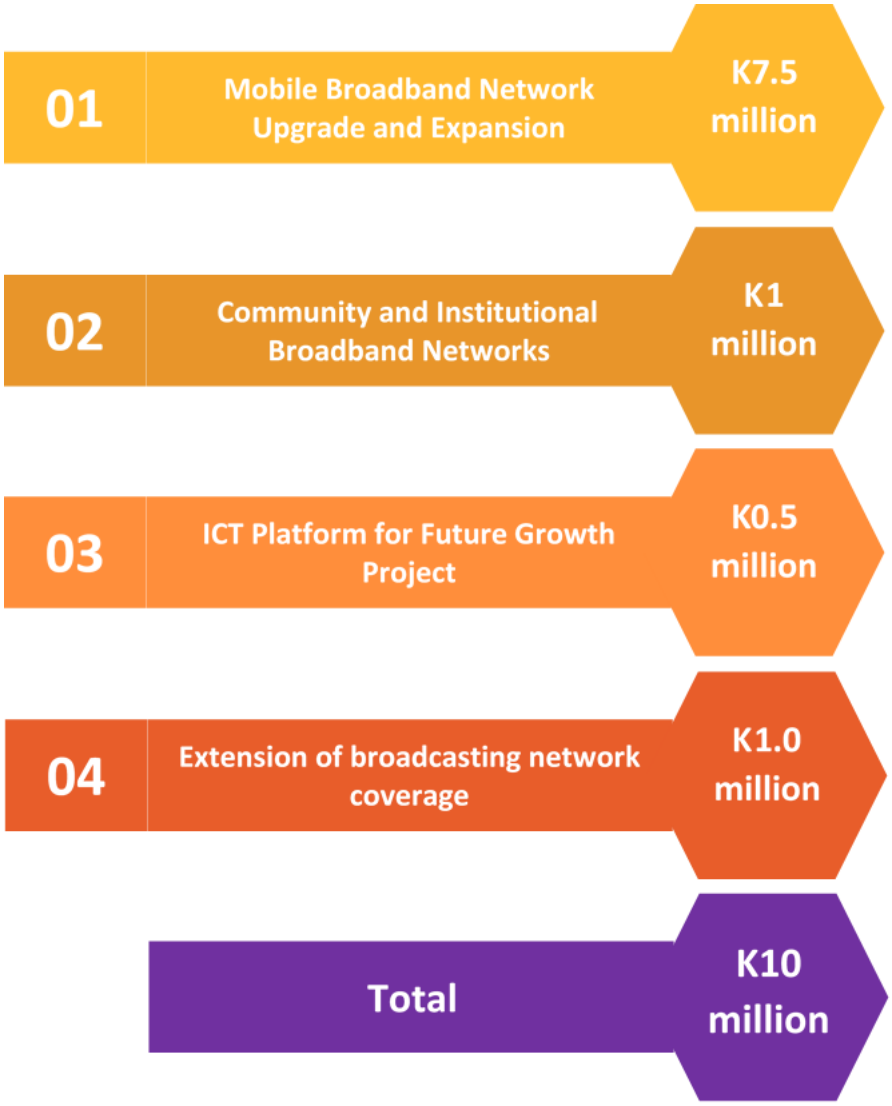
Sections 108 (2) - (3) of the NICT Act provide for the UAS Board to undertake certain tasks, namely:

"(2) The UAS Board shall consider the report prepared by NICTA under Subsection (1) and prepare a UAS Project report which identified the UAS Board's recommendations for UAS Projects, their ranking and the reason for such ranking

(3) The UAS Board shall submit the UAS Project report (as prepared under Subsection (2)), to the Minister, at least once in every calendar year, for the Minister's consideration."

This Report recommends for approval by the UAS Board, five (5) Universal Access Services Projects for 2021. These recommended Projects have been evaluated and ranked on the criteria in NICT Act. The 2021 recommended UAS Projects, and their ranking are as follows:

PROJECT RANKING



Details outlining the way in which each Project fulfils the criteria, and the reasons for the ranking, are provided below after the descriptions of each Project.

2 PROJECT 1: MOBILE BROADBAND NETWORK UPGRADE AND EXPANSION

This Project is designed to extend the coverage of advanced broadband wireless mobile communications services (at least 3G/HSPA+, 4G/LTE, or other advanced systems) as far as possible into all areas of the country. The objective is to deliver reliable, high quality access to Internet and "smart" mobile applications and capabilities to as many PNG citizens as possible, where access to such services is not adequately present, and where existing licensed operators are unwilling or unable to expand their networks, due to commercial or other constraints. The ultimate objective of this program is to achieve virtually 100% mobile broadband service coverage throughout PNG.

These goals can be achieved under the Fund through support for projects that invest in advanced mobile network infrastructure and service expansion by licensed mobile operators. UAS Projects under this program would provide financial support for build-out of local broadband mobile network coverage into unserved and underserved areas, to fill identified gaps and ensure signal access for all target communities.

There are two types of work included in this Project: (1) new BTS sites in areas currently with no mobile service, and (2) upgrades to existing 2G BTS sites. Implementing contractors/operators will be in charge of installing and operating wireless voice and broadband data/Internet telecommunications networks and services within specified locations where such service is currently non-existent. Priority locations for each separate Project have been selected by NICTA, based on market analysis and stakeholder consultations.

2.1 Indicative Budget and targets for 2021

To assist the UAS Board in considering this Project, and funding needs, NICTA provides below an indicative 2021 budget and target outcomes. This project is planned for implementation in the second quarter of 2021. Refer to indicative timeline provided in 2.4.

- Budget allocation = 7.5 million PGK
    - **4G New Greenfield** = 6 million PGK
        - Estimate of Approx. [1] K1,000,000/site = 6 (60m) towers to be constructed;

[1] Amount calculated from previous similar project, revised subsidiary cost to fund one 60m tower

- **4G Upgrade** = 1.5 million PGK
  - Estimate of Approx. [2]K150,000/site = 10 2G sites to be upgraded.

- **Target outcome:**
  - **New 4G Service:** Approx. [3]146,157 populations to be covered by newly 4G service, reducing the national's uncovered population access gap from 1,078,802 to 932,645;
  - **4G Upgrade:** Approx. [4]170,382 populations to be covered by newly 4G upgraded service decreasing the national's 3G uncovered population access gap from 1,576,658 to 1,406,276;
  - This is deemed satisfactory improvement for both projects in reducing the uncovered population gaps.

2.2 Indicative Implementation approach

- **Procurement strategy:**
  Licensed operators will be invited to bid to provide 4G service upgrade or new service within the identified areas, for a fixed subsidy per project. Bidders will be selected based on qualification and minimum subsidy proposed to cover the required areas, or alternatively based on the maximum number of persons to receive coverage for the fixed subsidy amount.

- **Main requirements:**
  Project RFPs will identify location boundaries and minimum service requirements. These will generally include construction of backhaul and tower infrastructure and network connectivity, installation or upgrade of Base Stations, establishment of local electrical power and all other necessary facilities, and operation of broadband mobile services on a commercial basis within the identified areas. There may also be mandates for minimum customer take-up of the services. UAS subsidized operators will be required to provide open access and infrastructure sharing for all facilities, including towers, base stations and backhaul network, as well as mobile roaming to other licensed operators for users within the project locations.

- **Bidding parameters:**
  Bidders must be licensed mobile telecom operators, with qualifications and capabilities to provide the services, including existing presence in locations to be upgraded. Bids must include detail on proposed network deployment to ensure

[2] Amount taken from previous similar project, revised subsidiary cost for one 2G to 3G/4G site upgrade
[3] Figure taken from 2021 Access Gap Analysis Model
[4] Figure taken from 2021 Access Gap Analysis Model

minimum coverage. Contracts will be awarded to the operator proposing the least total subsidy bid per project, or proposing to cover the largest unserved population for the fixed subsidy amount.

2.3 Specific Projects

- **Number of projects:**
  4G Upgrade = 10 projects
  New 4G service = 6 projects

- **Size, scope:**
  Based on the UAS Secretariat's "Gap Analysis," (this Project is proposed to include:

(i) **4G Upgrade projects:** Approx. 1 LLG within each Districts for each project selected from one or more of the following geographic locations, in descending order of priority:

1. East New Britain
2. Eastern Highlands
3. Morobe
4. Madang
5. East Sepik
6. Chimbu
7. Enga
8. Milne Bay

The priority sequence has been based on the UAS Secretariat's Access Gap analysis, with locations (Provinces) of largest uncovered population (no 3G/4G) access gap being given the highest priority.

(ii) **New 4G service projects:** Approx. 1 LLG within each District for each project selected from one or more of the following geographic locations, in descending order of priority:

1. Western
2. West Sepik
3. Hela
4. AROB
5. West New Britain
6. Enga
7. Manus
8. East Sepik

The priority sequence has been based on the UAS Secretariat's Access Gap analysis, with locations of largest uncovered population (no 2G/3G/4G services) gap being given the highest priority. Furthermore, the locations proposed in the submissions during the call for proposals were considered and given high priority.

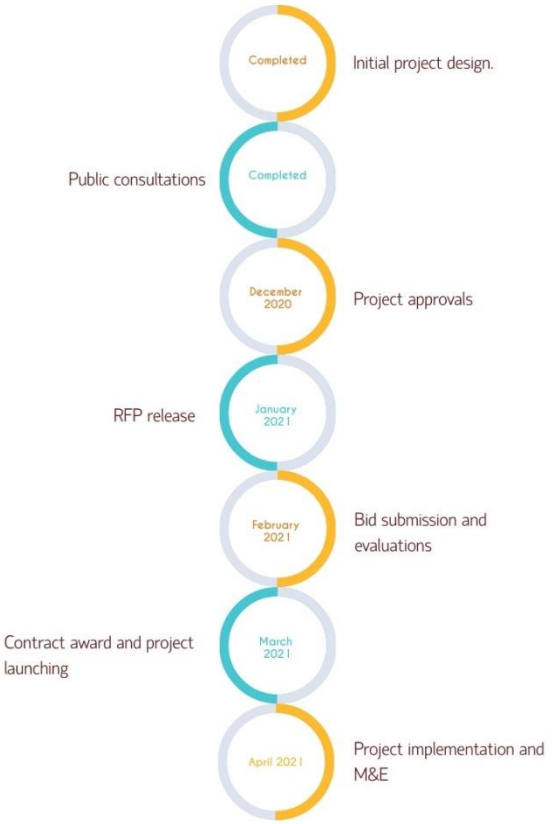
The uncovered population of +10,000 has been proposed as the preferable benchmark for location identification using the Access Gap analysis for the highest uncovered population, which is sufficient to cover ample number of sites (4G Greenfield and 4G upgrade) within the allocated budget.

Locations:

Specific locations (districts, LLGs) within the priority Provinces have been determined through consultations with the public, operators, and local officials and will be expanded in the bidding documents during the tender process.

2.4 Indicative Timetable of key milestones

These projects may be rolled out in one phase, as follows, and the likely funding requirements have taken into account the requirements for 2021:



2.5 Assessment of Project against Section 108(e) criteria

Criteria	Assessment
(a) whether the proposed UAS Project would promote the objectives of the Universal Access and Service Fund	This Project meets the UAS Fund objective set out in Section 90(1) of the Act. It directly relates to the improvement of ICT services within PNG, and to rural communities in particular
(b) the net benefits of the UAS Project to Papua New Guinea, taking into account any costs and detriments to any person	There are clear net benefits to the communities in the locations in which 3G service will be provided through the provision of services that will underpin economic development and greater social cohesion.
(c) whether the UAS Project is sustainable with a one-time capital subsidy	In each of the chosen locations the Project will be sustainable with a one-time capital subsidy and continued operation of the services and related costs will be provided by the successful bidder.
(d) whether the UAS Project would not otherwise occur but for a subsidy payment under this Part	This Project, in the locations identified, would not otherwise occur except for the subsidy provided from the UAS Fund.
(e) the likely efficiency and effectiveness of the proposed UAS Project and whether it is financially and technically feasible	The Project will be undertaken efficiently and effectively, and this will be guaranteed through an arms-length public tender process. The project is financially and technically feasible as shown by similar projects in other locations and by the business programs of PNG licensed mobile operators.
(f) any other information the UAS Board considers relevant	Other relevant information is contained in this report and in the associated Access Gap Analysis.

(g) (shall ensure that) any UAS Project does not include services under a mandatory coverage obligation	The Project does not include services subject to a mandatory coverage obligation.
(h) (shall ensure that) any UAS Project is not otherwise provided by a pre-existing UAS Project	The Project and its constituent elements are not covered by a pre-existing UAS Project.

As shown by the Table above, this Project fulfils the section 108 criteria.

This Project is ranked first since it ranks highest on criteria (a), (b) and (e). This Project provides the largest net benefits due to providing expanded network coverage and service delivery capability. It also is based on well-known technology that is efficient in delivering such services. Currently, extending such network coverage and services ranks higher on these criteria than Projects 2 and 4, which focus on service usage and assisting communities to derive more benefit from services.

3 PROJECT 2: COMMUNITY AND INSTITUTIONAL BROADBAND NETWORKS

This Project is designed to help deliver high-speed, full-service fixed broadband Internet connections to selected communities, with services and capacity widely available to public institutions as well as local businesses and households, on an affordable basis throughout each designated local service area. To achieve these outcomes, the Community Broadband Program would support comprehensive implementation projects in a limited number of designated locations, consisting of three integrated components:

- Broadband Network Access and Service: Extending broadband network links into areas unserved by sufficient high capacity signals;
- Institutional Connectivity: Providing broadband connections directly to identified local public institutions, including schools, health facilities, local government offices, and community centers;
- Community ICT Centres (CICs): Establishment of public access CICs within each designated community.

To achieve the multiple, inter-related goals of this Project, the implementing partners and contractors/operators will be required to provide the full range of specified outputs simultaneously within each defined service area.

For 2021, NICTA will provide broadband connectivity to five (5) institutions within the country focusing on Education, Agriculture and Health. All project locations under these

project will be determined following consultations with the Department of Education (DoE) and Department of Higher Education Research and Science Technology (DHERST), the Department of Agriculture & Livestock (DAL) and the National Department of Health (NDoH) respectively.

3.1 Indicative Budget and targets for 2021

To assist the UAS Board in considering this Project, and funding needs, NICTA provides below an indicative 2021 budget and target outcomes. This project is planned for implementation in the second quarter of 2021. Refer to indicative timeline detailed in 3.4.

- Budget allocation = 1 million PGK
  - **Institutional Broadband Connectivity (0.8 million PGK)**
    - Estimate of Approx. [5]K200,000/institution = 4 Institutions to be connected (0.8 million PGK)
  - **Community ICT Centres (0.2 million PGK)**
    - Estimate of Approx. K200,000 to pilot the Community Networks Project

- **Target outcomes:**
  Launch of broadband community networks and services in the pilot locations identified, connecting major public institutions, and providing public community access points.

3.2 Implementation approach

- **Procurement strategy:**
  For each location, NICTA would issue a request for bids from qualified licensed telecom operators, identifying the locations and scope of facilities and services required, and the available subsidy amounts. Local SMEs involved in Internet Service provision (ISPs) are highly encourage to participate. Bidders will propose the range of infrastructure, network configuration, technologies, and other features to be offered for the available budget. NICTA will select the most responsive proposals that will deliver the broadest and most cost-effective services.

[5] Amount taken from CSP project in subsidizing to connect one teachers' college

- **Main requirements:**
  At a minimum, contractors must establish broadband (fiber) access network links into the designated communities, and connections to the identified public institutions (schools, government offices). They must also establish some form of public broadband ICT access facility (community ICT center, public WiFi, or equivalent). The contractor must ensure continuous operation of public Internet service at these locations. Options for other services, including fixed and wireless broadband, may also be included.

- **Bidding parameters:**
  Bidders will define in their proposals the specific scope and configuration of infrastructure and services to be provided in the designated locations, and all other required and optional features. The amount of subsidy available will be disclosed to bidders, who must design their projects to meet this budget. NICTA and the UAS Board will select the qualified bids that best meet the requirements, and that provide greatest value for the communities.

3.3 Projects to be funded

- **Number of projects:**
  A total of 5 projects will be funded under this program which may consist of four (4) institutions from various sectors such as Education, Agriculture, Health and organisations that submitted proposals during the public consultation for 2021 UAS Projects, and the pilot Community Networks Project.
  .

Locations for the institutional broadband connectivity project will be identified during the consultation with the Department of Education, Department of Higher Education Research Science and Technology, Department of Agriculture and Livestock, the National Department of Health and those institutions that submitted proposals during the consultation process of the 2021 UAS Projects. Successful projects will be subsidized by one-off capital assistance within the project duration of 12 months and implemented in one or more identified geographic locations based on the UAS Secretariat's Access Gap analysis, in descending order of priority.

Identified locations will have been confirmed to have 3G/4G for the purpose of the project as for the community centres to be able to operate as they are likely to require cellular mobile broadband internet access in the first instance. The priority sequence will be based on the UAS Secretariat's Access Gap analysis for new 4G services or existing 3G, with locations of highest gap being given the highest priority.

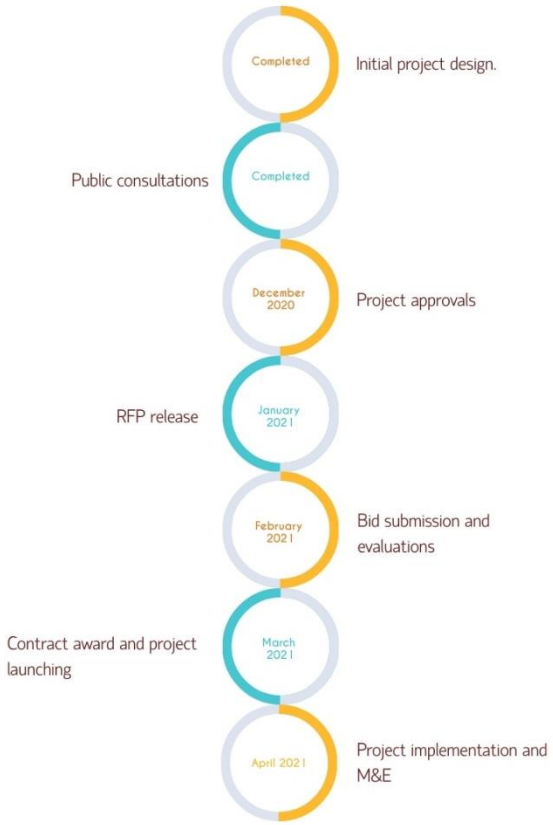
The Community Networks Project will be piloted in Gabagaba Village, Central Province. In an effort to address the connectivity gap in PNG, NICTA reached out to the Internet Society (ISOC) Asia Pacific with a view to initiating a pilot project on community networks in PNG. PNG will be the first in the Pacific Islands States to trial the community network concept once the project is off the ground.

- **Size, scope:**

  Pilot deployments of community broadband connections in 1 - 2 locations (LLGs) per project. Connections and broadband service to major public institutions, plus public ICT access facilities in each location.

- **Locations:**
  Specific locations (districts, LLGs) to be determined through consultations with the public, operators, and local officials.

3.4 Indicative Timetable of key milestones



3.5 Assessment of ranking against Section 108(e) criteria

Criteria	Assessment
(a) whether the proposed UAS Project would promote the objectives of the Universal Access and Service Fund	This Project meets the UAS Fund objective set out in Section 90(1) of the Act. It directly relates to the improvement of ICT services within PNG, and will be implemented to prioritise potential broadband users in rural communities without other access to these services.
(b) the net benefits of the UAS Project to Papua New Guinea, taking into account any costs and detriments to any person	There are clear net benefits resulting from the provision of services in this Project. They will underpin economic development and greater social cohesion. In particular, the community broadband networks from the Project will provide very important local economic infrastructure supporting online transactions that enable the economic reach of the communities served to be extended.
(c) whether the UAS Project is sustainable with a one-time capital subsidy	In each of the chosen locations the Project will be sustainable with a one-time capital subsidy and continued operation of the services and related costs will be provided by the successful bidder.
(d) whether the UAS Project would not otherwise occur but for a subsidy payment under this Part	This Project, in the locations identified, would not otherwise occur except for the subsidy provided from the UAS Fund.
(e) the likely efficiency and effectiveness of the proposed UAS Project and whether it is financially and technically feasible	The Project will be undertaken efficiently and effectively, and this will be guaranteed through an arms-length public tender process. The project is financially and technically feasible as shown by similar projects in other locations and by the business programs of PNG licensed mobile operators.

(f) any other information the UAS Board considers relevant	Other relevant information is contained in this report.
(g) (shall ensure that) any UAS Project does not include services under a mandatory coverage obligation	The Project does not include services subject to a mandatory coverage obligation.
(h) (shall ensure that) any UAS Project is not otherwise provided by a pre-existing UAS Project	The Project and its constituent elements are not covered by a pre-existing UAS Project.

This Project is ranked second because it ranks second on criteria (a), (b) and (e). This Project is designed to provide network capability and services, and in that respect similar to Project 1, and superior on these criteria to Projects 3 and 4. This Project ranks behind Project 1 because the delivery of services is to a more limited target population, and achievement of net benefits, UAS objectives and efficiency, is not as high as for Project 1.

4 PROJECT 3: ICT PLATFORM FOR FUTURE GROWTH PROJECT

4.1 Summary of Projects and Program

The purpose of this Project is to help develop a platform for future, long-term development of ICT utilization and opportunities across Papua New Guinea society. It would support the development of creative, innovative, and high value ICT activities within PNG communities, which will tap into the resources and knowledge of the local populations.

There are two main components to this Project: (1) Content Development and e-Applications, and (2) ICT Apps Development projects. Specific individual projects will be designed by NICTA and the UAS Board, in consultation with appropriate public officials and other stakeholders.

NICTA has identified projects based on proposals received during the public consultation to be piloted with the available Fund budget (together with other resources). Local SMEs involved in the ICT are highly encouraged to participate. NICTA and the UAS Board will enter into agreements with selected organizations to define and implement the projects deemed most appropriate, cost-effective, and valuable.

4.2 Indicative Budget and targets for 2021

To assist the UAS Board in considering this Project, and funding needs, NICTA provides below an indicative 2021 budget and target outcomes. This project is planned for

implementation in the second quarter of 2021. Refer to indicative timetable provided in 4.4.

- Budget allocation: K500,000 PGK
  - **ICT App Development** = 0.25 million PGK
    - Estimate of Approx. K250,000 for ICT Apps development to be delivered.

- **Target outcomes:**
  Initial pilot projects, reaching target populations with valuable ICT Apps, while providing helpful lessons for scaling up similar projects, and developing further partnerships.

4.3 Implementation approach

- **Procurement strategy:**
  NICTA will consult with potential partners and solicit proposals for introductory ICT content and digital literacy projects, which can be scaled up where appropriate. Priority will be given to proposals that are likely to have a large number of potential beneficiaries at the earliest time.
- **Main requirements:**
  Content Development & e-Applications project: Design of a preliminary plan and implementation strategy to encourage development of locally relevant ICT content for e-Applications.
  ICT App Development project: Design of a preliminary plan and implementation strategy to enhance or improve the efficiency of new and existing Government services through the development of ICT Apps for general public use.
- **Bidding parameters:**
  NICTA has received proposals from potential partner organizations that are qualified to offer the needed resources. These includes universities, local governments, small entrepreneurs, social service organizations, training institutes, and community groups. Proposals have been selected for innovation, cost-effectiveness, and capability and resources of the partners.

4.4 Projects to be funded

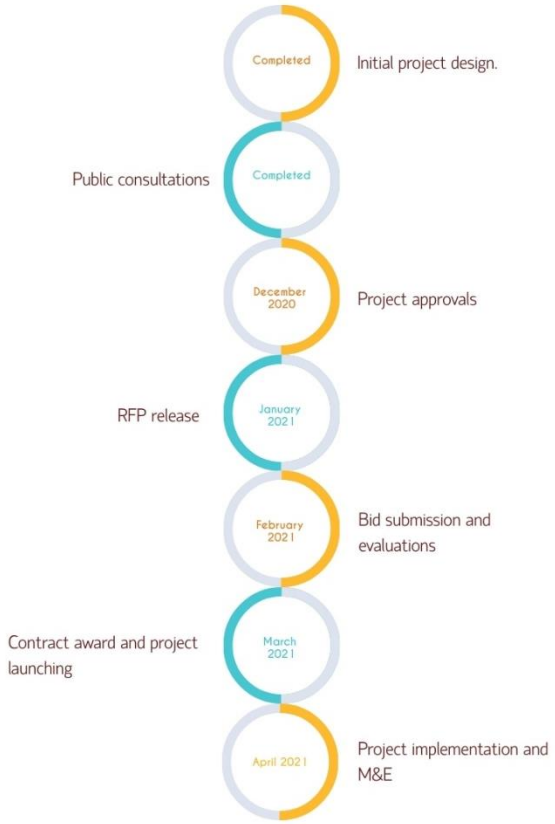
- **Number of projects:**
  ICT App Development = 1 pilot project

A t least a maximum of two (2) pilot projects will be funded under this program for ICT Apps development.

Under this program, stakeholders' proposals submitted during the Public Consultations have been considered. Successful projects will be subsidized by one-off capital assistance and implemented in one or more identified geographic locations based on the UAS Secretariat's Access Gap analysis, in descending order of priority.

- **Size, scope:**
  The projects identified from stakeholder proposals will be supported from the total allocated fund for this project. Digital Literacy projects provides capacity building programs for communities within existing UAS projects under the Community and Institutional Broadband program. ICT Content project provides content development for institutions that require information in education, health and other sectors for knowledge purposes.
- **Locations:**
  Specific locations and target beneficiaries of the pilot projects have been determined by NICTA through a public consultation calling for proposals.

4.5 Indicative Timetable of key milestones:



4.6 Assessment of ranking against Section 108 (e) criteria

Criteria	Assessment
(a) whether the proposed UAS Project would promote the objectives of the Universal Access and Service Fund	This Project meets the UAS Fund objective set out in Section 90(1) of the Act. It directly relates to the improvement of ICT services within PNG, and will encourage greater ICT usage and therefore sustain further investment in ICT infrastructure.
(b) the net benefits of the UAS Project to Papua New Guinea, taking into account any costs and detriments to any person	The ICT platforms and practical innovations envisaged will have net social and economic benefits for PNG and the specific proposals that are accepted for funding will be selected on that basis.
(c) whether the UAS Project is sustainable with a one-time capital subsidy	Yes, there will be a one-time contribution from the UAS Fund and the specific proposals that are accepted for funding will be selected on the basis that they will be commercially sustainable after that contribution.
(d) whether the UAS Project would not otherwise occur but for a subsidy payment under this Part	Proposals accepted for funding under this Project will be selected on the basis of their merit and that they would not be progressed but for the subsidy.
(e) the likely efficiency and effectiveness of the proposed UAS Project and whether it is financially and technically feasible	The Project will be undertaken efficiently and effectively, and this will be guaranteed through an arms-length public tender
	process. Financial and technical feasibility will have to be proven by the proponents of proposals that are accepted for a subsidy.
(f) any other information the UAS Board considers relevant	Other relevant information is contained in this report.

(g) (shall ensure that) any UAS Project does not include services under a mandatory coverage obligation	The Project does not include services subject to a mandatory coverage obligation.
(h) (shall ensure that) any UAS Project is not otherwise provided by a pre-existing UAS Project	The Project and its constituent elements are not covered by a pre-existing UAS Project.

This Project is ranked third because it ranks third on criteria (a), (b) and (e). It is a project directed to increase the ability of the communities to use and derive benefit from the services. This is, in terms of the criteria, not as highly ranked as providing network infrastructure to deliver the services at all. As a usage – oriented Project, this ranks above Project #4 because the platform and literacy project can be applied more broadly and are likely to have greater impact in terms of meeting the UAS objectives.

5 PROJECT 4: EXTENSION OF BROADCASTING NETWORK COVERAGE

This Project addresses the objective of extending coverage of radio and television broadcasting to all citizens and communities in PNG. NICTA aims to support growth of the broadcasting sector through targeted use of UAS Fund resources to close gaps and assist low income consumers where the broadcasting market may not reach. This activity will focus on support for infrastructure expansion, primarily through enhancement or installation of broadcast antennae on existing or new towers.

For 2021, this Project is intended to improve broadcasting coverage to two (2) selected Provinces identified following submissions made during the consultation phase. NICTA will solicit bids from qualified contractors for a single, integrated project to be rolled out within the 2 provinces.

5.1 Indicative Budget and targets for 2021

To assist the UAS Board in considering this Project, and funding needs, NICTA provides below an indicative 2021 budget and target outcomes. This project is planned for implementation in the second quarter of 2021.

- Budget allocation = 1 million PGK
  - **Improve Broadcast Service** = 1 million PGK
    - Estimate of Approx. [6]K500,000/site;

[6] Amount taken from a proposal submitted during the call for proposals consultation in 2019

- Target outcomes:
  Expand coverage of broadcasting signals and or upgrade and restore broadcasting services in the selected geographical locations providing access to broadcasting services.

5.2 Implementation approach

- **Procurement strategy:**
  NICTA will solicit bids from qualified contractors to construct and install the necessary infrastructure, facilities, and equipment to expand broadcast signals within the designated areas. Contractors do not have to be licensed operators, but must have the capability to provide all necessary planning, equipment, and resources. NICTA will coordinate with broadcasters to identify the required locations, and contractors will propose how best to build and install the needed facilities.

- **Main requirements:**
  Survey existing infrastructure and transmission network, determine scope of needs. Install broadcast antennae and related equipment and facilities to link to existing radio and TV broadcast networks. Wherever possible, use available towers and similar structures that are capable of supporting broadcast antennae.

- **Bidding parameters:**
  Bidders will be asked to propose the technical approach and requirements for expanding broadcast coverage within the designated areas. Contractors need not be licensed operators/broadcasters, but must demonstrate capability to construct the necessary facilities and link them to existing broadcast networks. The amount of available subsidy will be disclosed by NICTA, and bidders will identify the maximum scope of coverage they can achieve for that budget. The qualified contractor proposing the widest population coverage for the available budget will be awarded each project. Bidders must also propose a plan for distributing subsidized set-top-boxes to low-income households.

5.3 Projects to be funded

- **Number of projects:**
  2 projects

- **Size, scope**:
  Districts within a selected province, where broadcast signals are not sufficiently available, to reach all unserved LLGs within the defined area.

The project will be in one of the following geographic locations, in descending order of priority:

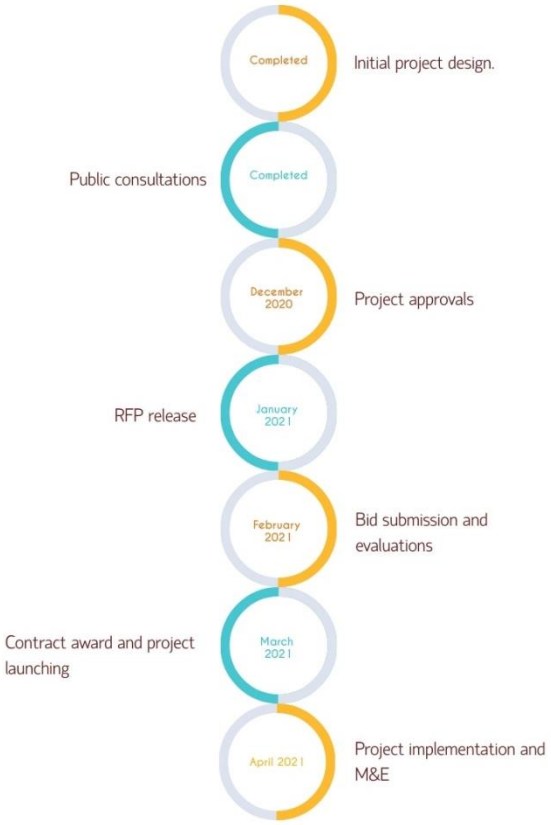
1. Eastern Highlands
2. East New Britain

The priority sequence has been based on the UAS Secretariat's Access Gap analysis, with locations of largest unserved population gap being given the highest priority. The priority is based on the absence of broadcasting coverage as shown by the access gap analysis. Furthermore, locations proposed in the submissions during the call for proposals have been considered and given the highest priority.

- **Locations:**

Specific locations (districts, LLGs) to be determined through consultations with the public, broadcasters, and local officials.

5.4 Indicative Timetable of key milestones:



5.5 Assessment of ranking against Section 108(e) criteria

Criteria	Assessment
(a) whether the proposed UAS Project would promote the objectives of the Universal Access and Service Fund	This Project meets the UAS Fund objective set out in Section 90(1) of the Act. It directly relates to the improvement of ICT services within PNG, and will encourage greater ICT usage and therefore encourage further investment in ICT infrastructure. Improved broadcasting service coverage is critical to informing economic and social transactions.
(b) the net benefits of the UAS Project to Papua New Guinea, taking into account any costs and detriments to any person	Improved information distribution through increased broadcasting service coverage will provide net social and economic benefits through a better-informed community in the areas the Project covers.
(c) whether the UAS Project is sustainable with a one-time capital subsidy	Yes, there will be a one-time contribution from the UAS Fund and the specific proposals that are accepted for funding will be selected on the basis that they will be commercially or otherwise sustainable after that contribution.
(d) whether the UAS Project would not otherwise occur but for a subsidy payment under this Part	Proposals accepted for funding under this Project will be selected on the basis that they would not be progressed but for the subsidy.
(e) the likely efficiency and effectiveness of the proposed UAS Project and whether it is financially and technically feasible	The Project will be undertaken efficiently and effectively, and this will be guaranteed through an arms-length public tender process. Financial and technical feasibility will have to be proven by the proponents of proposals that are accepted for a subsidy.

(f) any other information the UAS Board considers relevant	Other relevant information is contained in this report.
(g) (shall ensure that) any UAS Project does not include services under a mandatory coverage obligation	The Project does not include services subject to a mandatory coverage obligation.
(h) (shall ensure that) any UAS Project is not otherwise provided by a pre-existing UAS Project	The Project and its constituent elements are not covered by a pre-existing UAS Project.

This Project is ranked fourth because it ranks fourth on criteria (a), (b) and (e). The reasons for this are summarized already in the ranking discussion for Project # 1 – 3.