PUBLIC CONSULTATION REPORT

Response to Comments
on
Proposed 2025 UAS Projects

27 November 2024

Contents

Public Consultation for the Proposed 2025 UAS Projects

1. Overview of Consultation

As part of the public consultation for the proposed 2025 Universal Access and Service (UAS) Projects, NICTA engaged with key stakeholders through consultation meetings and written feedback submissions. The aim was to align the projects with the government's ICT policies, particularly the Medium-Term Development Plan IV (MTDP IV), focusing on mobile broadband and radio broadcasting initiatives.

Stakeholders included ICT operators, government agencies, academia, development partners, and the general public. This report summarizes the key comments and recommendations from stakeholders and provides NICTA's responses.

2. Consultation Meetings with Stakeholders

2.1. Meeting Summaries

PNG FM (31 October 2024)

- **Key Comments**:
    - Emphasized the importance of collaboration for rural broadcasting expansion.
    - Highlighted high co-location costs, unreliable power, and access issues as operational challenges.
    - Cited procurement barriers as reasons for low participation in past tenders.
- **NICTA Response**:
    - NICTA has committed to sharing coverage data to support PNG FM's participation in future tenders.
    - The procurement process will be reviewed for greater inclusivity and transparency.

Vodafone PNG (4 November 2024)

- **Key Comments**:
    - Identified challenges in securing rural investments due to low commercial returns and spectrum access limitations.
    - Requested detailed guidelines on co-location processes and fees.
    - Suggested UAS funding prioritize blackspot coverage and cost-effective rural solutions.
- **NICTA Response**:
    - NICTA will explore policy measures to facilitate spectrum access and review co-location fee structures.
    - Blackspot coverage will be emphasized, with consideration for innovative rural solutions such as satellite backhaul.

National Broadcasting Corporation (NBC) (5 November 2024)

- **Key Comments**:
    - Stressed the high costs of infrastructure and operational challenges, including outdated studios and co-location resistance.
    - Proposed Digital Radio Mondiale (DRM) as a potential technology to enhance rural broadcasting.
    - Requested technical training for broadcast operators.

- **NICTA Response**:
    - Feasibility studies for DRM pilot projects will be conducted under the UAS program.
    - NICTA will support training initiatives and assist with co-location opportunities.

3. Written Comments and NICTA Responses

3.1. Vodafone PNG

1. **General Observations**
    - **Comments**: Emphasized the need for 900MHz spectrum access and highlighted challenges from proposed spectrum fee increases.
    - **Response**: As it stands currently, the 900MHz Band is fully exhausted with no spectrum available for allocation.
2. **Feedback on Proposed Projects**
    - **Comments**: Supported broadband initiatives but raised concerns about insufficient budgets and operational challenges.
    - **Response**: Budget allocations and project costs will be reviewed to ensure feasibility and scope alignment.
3. **Recommendations**
    - **Comments**: Requested detailed co-location guidelines and operational support for remote areas.
    - **Response**: NICTA will look into the development of comprehensive co-location guidelines and facilitate stakeholder consultations on rural operational challenges.

3.2. Telikom Limited

1. **General Observations**
    - **Comments**: Highlighted challenges such as vandalism, power supply issues, and landowner disputes.
    - **Response**: NICTA will coordinate with relevant government stakeholders to address these systemic challenges.
2. **Project Feedback**
    - **Comments**: Recommended reducing the number of Greenfield sites and prioritizing community-focused projects.
    - **Response**: NICTA will assess the feasibility of site adjustments and prioritize community-oriented initiatives.
3. **Recommendations**
    - **Comments**: Called for in-person consultations with operators and stressed stakeholder collaboration.
    - **Response**: NICTA will host follow-up consultations to refine the 2025 UAS project strategy.

4. Common Themes and Action Plan

1. **Operational Challenges**
    - Action: NICTA will explore solutions to mitigate high operational costs, improve power reliability, and address co-location issues.
2. **Collaboration**
    - Action: Strengthen partnerships between stakeholders to enhance project design and implementation.

3. **Technological Advancements**
   - o Action: Evaluate innovative technologies such as DRM and rural-star solutions for inclusion in future projects.
4. **Procurement and Policy**
   - o Action: Simplify procurement processes and align UAS funding with policy frameworks to encourage participation.
5. **Capacity Building**
   - o Action: Provide technical training and support for operators to enhance project sustainability.

5. Conclusion

NICTA acknowledges the valuable feedback from stakeholders and is committed to addressing the identified challenges. These responses will guide the refinement of the 2025 UAS Projects to ensure they align with national ICT goals and deliver sustainable outcomes for rural communities.

6.   Detailed Response to Written Comments

Stakeholder	Stakeholder Comments	NICTA's Response
Vodafone PNG (Digitec Communications Limited)	Vodafone PNG considers that it is important to consider plans for UAS Projects in light of the general market context for network deployment.	Noted
	As NICTA is aware, Vodafone PNG has invested heavily in network deployment as part of its entry as a mobile network operator. This has transformed the market in PNG with 80% reductions in mobile retail prices, thereby contributing significantly to NICTA's vision of increased affordability and connectivity.	Noted. NICTA acknowledges Vodafone PNG's significant contribution towards achieving increased connectivity and affordability of services in PNG
	Vodafone also wishes to highlight that there are significant challenges and complexities in extending and upgrading coverage in rural areas. These complexities have been accentuated by:	
	• Vodafone's continued lack of access to 900MHz spectrum — a key low bandwidth spectrum that is most suitable to providing wide mobile network coverage. Vodafone emphasizes that fair access to 900MHz or other low band spectrum is critical for mobile operators to maximise the benefits of the solution deployed. Without a level playing field for spectrum allocation, Vodafone expects that it would not be able to put in compelling bids for UAS projects, and that the issue of fair access to spectrum would need to be resolved on a timely basis to provide an opportunity to bid for UAS Projects for 2025.	Noted. As it stands currently, the 900MHz Band is fully exhausted with no spectrum available for allocation.
	• Current proposals to increase fees paid by Vodafone for numbering services and spectrum. Both kinds of fees will harm Vodafone's ability to increase its network coverage.	Noted. NICTA will continue working with all operators including Vodafone PNG to assess the impact of fee changes on UAS participation. Any increase in fees or charges is carried out through public consultations and is aligned with the current trends and developments in the ICT sector.

			Annual numbering fees proposed by NICTA through consultation process with MNOs as telecom numbers are important resource that should be utilized efficiently.
	• The lack of connection between policies designed to enhance coverage, such as licence obligations, UAS funding and infrastructure sharing. Further collaborative discussions between Government and key industry stakeholders are required to maximise coverage using existing infrastructure and funding.		Noted. Existing ICT policies are closely aligned with national goals, and NICTA continues to enhance its regulatory functions to ensure the effective implementation and realization of these policies.
	Overall, we are satisfied with the direction of the projects that NICTA intends to implement, in the sense that we support devoting most of the funds towards the "Broadband Initiative" and specifically mobile network extensions and upgrades, as these are likely to get broadband to end users most quickly.		Noted. NICTA maintains that Mobile Broadband is still the priority initiative given its mobility and ability to provide wider coverage compared to other technologies.
	Vodafone encourages NICTA to consider how UAS funds can be used to address blackspots in existing network coverage. Coverage quality is a key issue for customers but is not easy to address in all circumstances.		Noted. NICTA issued project tenders for Mobile Blackspots Project in 2024. Vodafone did not submit a bid. NICTA is open to utilizing UAS Funding to support mobile blackspot and encourages active participation from operators. Furthermore, NICTA encourages mobile network operators (MNOs) to submit proposals addressing blackspots within their networks for consideration in upcoming projects.
	While NICTA has understandably focused on larger-scale projects like new mobile towers, Vodafone also considers there is a role for other smaller-scale options in enhancing rural connectivity in areas that are not economically viable. For example, through greater use of satellite backhaul, and through lower cost, smaller footprint, fit for purpose solutions, especially to cover smaller groups of people. Another option is to consider targeted areas to provide coverage first, such as community centres, schools, health centres, etc rather than broader mobile coverage.		Noted. During various consultations, NICTA has encouraged innovative approaches to address last-mile connectivity challenges; however, responses from mobile operators have been less than enthusiastic. Under the existing licensing framework, NICTA is exploring alternative solutions for last-mile connectivity, including the deployment of smaller mobile towers to serve sparsely populated areas effectively.

		In alignment with the government's Connect PNG agenda, NICTA remains committed to expanding broadband connectivity to key institutions such as health and education facilities, as well as to local communities and micro, small, and medium enterprises (MSMEs).
	Vodafone appreciates NICTA's efforts in providing improved clarity about the particular areas where the projects are to be located, including the use of GPS references for the areas to be covered.	Noted. NICTA will continue its efforts to ensure clarity for stakeholders involved in the UAS Projects.
	Vodafone is encouraged by the proposed partnership between the Morobe Provincial Government (MPG) and NICTA for constructing 20 new towers. Allowing ICT service providers to share these towers should encourages broader access to services and fosters competition, which can lead to better service delivery for residents in Morobe.	Noted. NICTA will continue to ensure effective partnerships with stakeholders to optimize the use of resources to achieve better service delivery through UAS Projects.
	Vodafone understands that the 20 sites proposed in collaboration with MPG will have a structure whereby MPG will fund and build the towers, including acquiring sites. Bidders will install active components including power and provide 4G services to the proposed areas, while co-locating and paying a colocation fee to MPG. Vodafone is uncertain exactly what costs are sought to be re-covered with the proposed colocation fee. For example, is it designed to recover operating expenses, or acquisition and build costs for the site?	Noted. Proposed co-location fees will be negotiated between the access provider and access seeker based on commercial arrangements/terms to be agreed to. NICTA welcomes suggestions to enhance and improve these arrangements.
	Vodafone observes that the colocation fee will be an important determinant of the bidding process, as well as any further decisions by Vodafone to co-locate if Vodafone is unsuccessful in bidding or elects not to bid. Vodafone therefore seeks further details on how the co-location fee is to be set. Moreover, while the NICTA contribution is suggested to cover infrastructure costs associated with power, it is unclear what requirements there will be to power not only the successful bidders' equipment, but also others that wish to co-locate.	Noted. Operators/bidders are expected to engage in commercial terms to share the tower infrastructure. NICTA's contribution is a subsidy and will contribute to cover infrastructure costs including power only for the successful bidder. Other co-locating operators will make their own arrangements with the MPG. This process will be refined further as the co-location exercise continues to progress and evolve.
	In situations such as Morobe, where the towers are constructed by provincial governments, NICTA should also consider models for providing ongoing	Noted.

		caretaker support to the towers being built rather than leaving this to operators to manage. The recurring costs associated with running a mobile network are substantial, particularly in remote areas where there are issues with power and security. While noting the requirements of s. 108(4) of the NICTA Act ("whether the UAS Project is sustainable with a one-time capital subsidy"), Vodafone notes that if ongoing operation of sites in unviable then bidding is unlikely.	NICTA will continue to ensure the requirements of s. 108 (4) of the National ICT Act 2009 are satisfied. Operators will make their own assessments on the viability to bid for projects. Furthermore, NICTA recognizes the challenges involved in maintaining mobile network services, particularly in rural and remote areas. As such, it remains open to further discussions to explore and identify viable solutions for addressing these issues.
		Vodafone's view is also that there is a significant risk that the current Indicative Budget allocation of K 10.65 million is insufficient for the type of tower infrastructure widely rolled out today. This may result in a smaller number of towers being funded than proposed.	Noted. The budget allocation is only the proposed budget. Operators, including Vodafone PNG are encourage to propose budget allocations based on assessments. The number of towers to be funded will be determined based on details in proposals or bids received.
		For the 7 Towers not co-funded by MPG, bidders will be required to factor capex for the tower build, site acquisition, and power systems, and also requirements associated with colocation. With respect to other aspects of colocation, Vodafone consider that it is important that the proposed approach is clearly spelled out prior to award and construction. For example:	Note; NICTA is open to exploring various options for consideration.
		How many collocated tenants should a bidder factor in for a UAS tower?	Noted. Three (3) mobile operators and three (3) broadcasters
		Will there be any guidance provided on power capacity required to be provided and available to each operator (in kW)?	The winning bidder may provide power for each access seeker or allow each co-locating operator to provide their own power supply. Each co-locating operator should naturally provide their power capacity requirements (kW) to the access provider.
		What will be the process for an operator to request for colocation?	Noted. Operator may consult the Tower Sharing Guideline developed by NICTA.

		Will there be a guidance provided for colocation fees that will have to be paid to the operator that won the bid and built the site?	Noted. Currently, colocation arrangements are left to the industry to negotiate mutually, as this area remains undeclared in terms of wholesale access services. Furthermore, any Infrastructure Access Services established using UAS funds will be governed by the provisions of the NICT Act 2009. We encourage all stakeholders to engage in transparent discussions to establish fair and equitable agreements that align with existing regulations and foster collaboration in the industry.
		Will there be guidance provided on tower design to specify the heights for all operator antenna mounts?	Noted. Tower design requirements will be specified in the tenders issued for projects and generally should cater for three (3) mobile operators and three (3) broadcast operators allow for infrastructure sharing.
		Who will determine the tower technical specifications? is there any consideration for feedback from operators on what their requirements are for colocation?	Noted. Tower design requirements will be specified in the tenders issued for projects and generally should cater for three (3) mobile operators and three (3) broadcast operators allow for infrastructure sharing. Operators are encouraged to provide feedback on their colocation requirements to NICTA.
		What are the current ICT needs and challenges in your area? Between the 3 large operators (and other ISP's), PNG population coverage is about 80%, however mobile penetration is sub 37%. This suggests it may also be relevant to prioritize increasing mobile penetration to address existing gaps in existing coverage versus expanding coverage in rural/remote areas. The significant challenges of deployment in rural areas include:	Noted. NICTA is open to exploring various options for consideration.
		Most of the rural areas do not have access to grid or reliable/affordable power and affordable backhaul solutions, which in is impacting adoption of mobile	Noted.

		phone services. We suggest that NICTA work with Government, power providers, other authorities and aid agencies to prioritise expansion of grid or other reliable and affordable power solutions/electrification and licensing affordable satellite solutions, especially for backhaul purposes.	NICTA will continue to work with relevant partners in Government and other sectors to address the challenges around power supply for the end user.
		Frequent damage to critical infrastructure including fibre, telecoms towers, etc.	Noted.
		R&M costs are high, especially refueling, security, satellite backhaul, access, etc, which hinders faster expansion.	Noted.
		A lack of access to spectrum to roll out services, especially in challenging rural terrain, where both Capex and Opex are significantly higher.	Noted.
		High taxes and duties on telecommunications equipment necessary to expand coverage, especially in UAS and uneconomic areas.	Noted. NICTA is currently looking at its memoranda of understanding with PNG Internal Revenue Commission (IRC), and PNG Customs Service (Customs) with a view to engaging with IRC and Customs to develop guidelines on how to support ICT operators capitalize on exemptions in respect of the Income Tax Act 1959, Goods and Services Tax 2003, Stamp Duties Act 1952, Custom Tariff Act 1990, and Excise Tariff Act (Chapter 107).
		Other barriers to competition which can be addressed by NICTA, including infrastructure sharing, mobile number portability and lower interconnect rates.	Noted. NICTA is in the process of looking at introducing MNP in PNG
		What are your views on proposed ICT Projects? "Vodafone's view is that more could be done to facilitate UAS and ICT deployment. Some ideas include:	Noted.
		Consider all options to extend coverage, especially in areas which are not economically viable. For example; explore satellite backhaul with access point infrastructure; explore low cost, smaller footprint, fit for purpose solutions, especially to cover smaller groups of people; and explore creating targeted areas to provide coverage first, such as community centres, schools, health centres, etc.	Noted. Most of the proposed options are already captured within the current UAS strategy. NICTA has observed little interest from existing/established operators to participate in the small-scale projects targeting communities.

		Greater priority should be given to increasing mobile penetration, especially where coverage is available. This is where digital literacy programs are required to help with greater adoption	Noted. NICTA acknowledges that need to improve digital literacy. The UAS has programs/projects targeting improvement digital literacy particularly in rural areas where coverage is available.
		Once more people are connected, other applications such as mobile money, m-health, m-agriculture, etc, can be rolled out. Private sector will develop these verticals; however, Government and the Regulator must continue to provide a conducive regulatory environment	Noted. NICTA will continue efforts to provide a conducive regulatory environment for the ICT sector.
		Prioritise access to affordable/reliable power solutions for both the users and providers.	Noted. NICTA will work with relevant agencies to address the issue of power supply for both users and service providers.
		What are your views on the proposed UAS Projects budget for 2025? Vodafone can provide a more developed response once we have received the final scope; working on the certain assumptions, we can provide an indicative costing. As noted above, the biggest costing challenges are the operating costs including repairs and maintenance, re-fueling and security. Vodafone also notes that there may be other cost-effective solutions that could work; however, these smaller footprint solutions will not be able to support co-location or other providers. We would be happy to discuss this NICTA.	Noted. NICTA is happy to discuss innovative and cost-effective solutions with operators including Vodafone PNG.
		Do you have any other suggestions for improving ICT services in rural areas? Project area or site identification. We suggest that:	
		NICTA seek to identify reasons why despite coverage, mobile penetration is low and put in corrective action to address this as a matter of priority.	Noted.
		Look at the various options and select fit for purpose solutions for different use cases. One size will not fil all. NICTA could fund the pilot project to evaluate results.	Noted.

	Partnership Opportunities	
	We note that there is a role for NICTA to work with power providers, aid agencies and Government to fast-track grid or other electrification projects.	Noted.
	Vodafone also notes that it can use our Roadshows to conduct education and awareness drives. We are already in the process of rolling out value adding applications such as mobile money, which will help with adoption and financial inclusion.	Noted. NICTA encourages operators and all relevant entities to explore innovative partnership opportunities with the UAS to conduct education and awareness drives to roll out value adding services to improve service adoption.
Telikom Limited	*What are the current ICT needs and challenges in your area?*	
	Telikom continues to maintain the view that provision of rural ICT remains to be seriously challenging not only in building up the network infrastructure but also in providing services in a sustainable manner over the infrastructure including affording the cost of sustaining operations.	Noted.
	Affordability is a need not only for the customer but is a concern for the operator. While customers expect ICT services to be affordable, the operators find it challenging to afford the cost of expanding the network and maintaining the services particularly in commercially nonviable sections of the market. Ongoing and challenging cost issues such vandalism and lack of reliable power supply continue to affect affordability of costs of maintenance directly. Landowner issues also pose another challenge and add to the cost of maintenance. What is NICTA and the UAS Board doing to address these concerns with the other government stakeholders responsible for these service sectors?	Noted. NICTA, through the Universal Access and Service (UAS) regime, addresses affordability and operational challenges by supporting through subsidies cost-effective solutions such as shared infrastructure and solar-powered ICT systems to reduce operational expenses. Recognizing the success of similar approaches by other operators who have rolled out extensively, NICTA will continue seeking to collaborate with government stakeholders to resolve landowner disputes and improve site security. By fostering partnerships and leveraging limited available resources, NICTA seeks to ensure affordable ICT services while supporting operators in overcoming the challenges of network expansion and maintenance.
	What are your views on the proposed ICT projects?	

	Telikom supports the proposal by NICTA for the locations chosen in Morobe and Eastern Highlands Provinces, as indicated in the consultation paper. Telikom also considers that 27 Greenfield 4G sites seem too many hence raises the project cost. We request that the number of these 4G sites be reduced to below 20 sites. Telikom notes that the Morobe Provincial Government will be executing the site acquisition and tower construction. Telikom therefore requests NICTA to clarify what the cost implications are; including if there is a cost limit per site.	Noted. The 27 sites along with cost estimates are only proposed and subject to stakeholder deliberations. Operators feedback on the number of sites will inform project scoping. UAS subsidy support for the sites in Morobe to be tendered will cover costs required to establish and provide the required services (power and electronics).
	What are your views on the proposed UAS Budget for 2025?	
	Telikom cannot comment on the reasonableness of the Budget 2025 at this juncture	Noted.
	Which projects should be prioritized and why?	
	Telikom considers that network expansion projects are priority. However, usage of these services is also important in order for the networks and operations to be used and sustained. User development through awareness and training could therefore be prioritized as well. More community user connectivity projects for schools and villages could be initiated with communities, government and other organizations who share the stakes in ICT development in rural areas.	Noted. NICTA acknowledges that need to improve digital literacy and service uptake/adoption. The UAS has programs/projects targeting improvement digital literacy particularly in rural areas where coverage is available to help drive service penetration.
	Telikom requests that prior to deciding on the UAS projects for 2025, one to one in-person consultation be held with major operators and licensees to further discuss any other details.	Noted. NICTA maintains and encourages meaningful engagement with operators individually and collectively to deliberate on the UAS projects
	In concluding, Telikom appreciates the continued efforts of NICTA and the UAS Board in ensuring the government's universal access policies are implemented. The challenges faced by operators in expanding and maintaining the network and services in remote rural areas of the country require ongoing	Noted.

	collaboration by all stakeholders in order for benefits to be enjoyed sustainably by all.	