Policy Brief:

Recommendations To Accelerate Digital Transformation In Indonesian Rural And Disadvantaged Areas

Transforming access through meaningful connectivity paves the way for inclusive digitalization.

The significant increase in internet penetration in Indonesia from before the pandemic in 2018 (64.80%) to today, namely in 2022 (77.02%) should not go unnoticed. It shows the direct result of universal access that is provided by the Palapa Ring sky highway project which connects nearly all cities and regencies in the country. Yet, this achievement must be complemented by other types of connectivity that is meaningful for communities living in rural, remote, and disadvantaged areas as well as for vulnerable groups. Here, we are referring to community networks.

This is a step forward towards inclusive digital transformation so that no one will be left behind in the Indonesian digitalization project. The focus on communities also corresponds with Sustainable Development Goals, especially goals no. 9, 10, and 11, which promote inclusivity in the society and the building of infrastructures and reduce inequality within and among countries. Meaningful access for communities celebrates the "multiplicity" of micro-scale internet use which will stimulate the growing numbers of various context-specific applications of digital technology.

To reach this objective, policy makers should consider following issues:

- The lack of support for community networks in terms of their legal status;
- Human resource and institutional capability of the community;
- The locality and ownership issue of digital technologies, including the debate over the use and ownership of data (data sovereignty and security);
- The agency, without which community networks would not sustain;
- Funding sustainability for these community-led initiatives.

Helpful Hint:
The legalization of community networks is important to inclusively accelerate Indonesian digital transformation as a whole.

Special license, financial and tax schemes for community networks guarantee their sustainability.

Funding for community-based internet operations in rural areas can be allocated from the village fund as regulated in the Village Law No. 6/2014. However, village funds or other sources managed by the government cannot be relied on to fully finance rural ICT development for several reasons.

First, the provision of digital technology is not always the village's priority, which usually prioritizes financing for other basic sectors such as health, education, clean water supply, and the development of physical infrastructure such as village roads or public facility buildings. Second, the sovereignty of the village to draft the Village Revenue and Expenditure Budget (RAPBDes) in accordance with the priorities of the village development program cannot be fully implemented as mandated by the Village Law because in certain situations, such as during the COVID-19 pandemic for the last three years, the central government issued regulations (e.g., the Presidential Decree No. 104/2021 and the Regulation of the Village Ministry No. 8/2022) that regulate the priority of using village funds. Third, the Regulation of the Communication and Informatics Ministry No. 25/2015 on the Implementation of Universal Telecommunications and Information Service Obligations does not explicitly mention the village or village administration as a party that can submit proposals for implementing universal telecommunications and information service obligations for both the provision of ICT infrastructure and ecosystem. Fourth, there is no regulation that guarantees financing for multi-year community network development programs.

In addition, the current regulations regarding telecommunication networks and services do not specifically discuss special licenses for community-based internet operations, whether for profit or non-profit purposes. The Government Regulation No. 46/2021 on Post, Telecommunications, and Broadcasting does mention the resale of telecommunications services, especially in areas where network infrastructure and/or telecommunications services are unavailable. However, this regulation and its derivative orders have not regulated tax exemptions for micro-scale businesses providing internet access, as well as for non-profit-oriented community networks. The existing regulations also do not specifically define a "community" (including village community and indigenous community) or even village-owned enterprises as entities that can become a telecommunications operator for community networks. The Law No. 36/1999 on Telecommunications and its amendments in the Law No. 11/2020 on Job Creation only implicitly categorize such entities into the "special telecommunications provider" group.

The definition of community, community licenses, and community network are crucial in addition to providing the community with greater opportunities to access existing sources of funds, both from the state and non-state budget, but also to provide protection for community networks from commercial interest and market-led network providers if this type of business enters an area that is already served by a community network.

Some examples that have been implemented in several countries for similar initiatives include:

- **Argentina**: The Roberto Arias Program, which was created in June 2021, addresses the connectivity needs of rural and indigenous communities using community networks. The funds in the program are only available to those holding a community networks license or having applied for one. Funds are made available as non-refundable grants for projects of maximum 18 months.[1]

- **United Kingdom**: The Gigabit Voucher Scheme (GVC) is a funding scheme provided by the UK government up to £210M as vouchers to help people experiencing slow broadband speeds in rural areas.[2]

- **Canada**: Broadband Communications North Inc. (BCN) is a not-for-profit regional Indigenous broadband provider that supports local CNs in Manitoba First Nations (FNs). BCN provides broadband services to over 50 rural, northern and remote communities in Manitoba and was launched with an initial investment from a Canadian government funding program but is now a sustainable operation. All operations are paid for by the revenue that BCN generates as an Internet Service Provider. Initial funding for BCN came from a universal service fund managed by the Canadian communication regulator.[3]

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[1] Redes Comunitarias Roberto Arias
[2] https://gigabitvoucher.culture.gov.uk/
[3] https://www.gobcn.ca/about-us/

Policy and Advocacy Recommendations

To ensure the realization, legality, and sustainability of community networks, several legislative and regulatory measures must be taken. Especially on the verge of drafting the new Telecommunications Bill, decision-makers must take the following actions:

● The provision of universal internet access does not necessarily solve the problem of information and communication at the local level. Therefore, instead of replication, the recommended policy is multiplicity, namely more meaningful access for the community concerned, so that digital technology is more contextual and differentiated. The government needs to be more supportive to rural initiatives who, together with NGOs, operate in niche markets not touched by established ISPs because, businesswise, they are not profitable enough.

● Rural communities need certainty and regulatory guarantees to implement development ideas and their life goals. This brief recommends that the government considers to issue a special license for community networks that would make its holder eligible to (1) access separate funds (e.g., Universal Service Funds or USF) to finance a range of community initiatives from the building of adaptive internet infrastructure, local content development, until the increase of local capability and (2) be exempted from the obligation to pay taxes due to their micro-scale operations and/or not-for-profit orientation.

● Improve the quality of brainware, or human resource capacity, of rural communities who will take advantage of the digital technology (software and hardware) being built. This approach is important to note because the increase in HR capabilities is one of the benchmarks for a country's Human Development Index (HDI) score. The improvement of human capabilities for the purpose of their meaningful interaction with digital technologies is key, so that no one is left behind within the world's digital transformation process.

● Affirmative policies for vulnerable and marginalized groups, including rural communities, indigenous people, and other underserved communities need to be undertake, apart from being in accordance with Jokowi's development principle of "building from the periphery," also to prevent the formation of new "losers" or new problems as a result of the provision of digital technologies in the Indonesian rural communities.

● Digital literacy programs have to be contextualized to solve local problems, not detached from local values and knowledge, which need to be respected and should not be negatively compared to modern-day knowledge. This is important so that rural communities who master traditional knowledge are not forced to abandon their value system for the adoption of digital technologies. Instead, these new technologies should help them to preserve what they think they have reason to value.

- In relation to the debate over the government's policy over One Data Indonesia (ODI) versus the village's ability to supply context-specific data from the bottom-up, it is necessary to consider that the policy pays attention to the issue of data/technology locality and its aspect of ownership. If rural communities are given the freedom to collect and process their own data, decisions taken at the village level would be more accurate to tackle local problems. Such policy confirms "an agent-oriented view" of development and supports the sovereignty of the village in the process of development as mandated by the Village Law No. 6/2014. Both parties need to find a technical solution to integrate and aggregate data in a certain stage of data collection as a reflection of a participatory e-governance process that empowers all stakeholders.

- All stakeholders need to pay attention to the issue of agency and human centered approach. First, individuals must be given the freedom to develop a leadership model that fits in with the sociocultural conditions in which the development project is implemented. Individuals should not be treated as passive recipients of the benefits of development programs, but as independent and sustainable agents. The government as a policymaker needs to positively recognize the role of local/traditional leaders and engage as well as manage them, along with the traditional values and rituals that they adhere to, to make digital transformation programs in rural areas sustainable and meaningful.

- Address underlying social and cultural problems at the local level to prevent the amplification of such problems to the digital realms, such as low quality of modern education, high cost of adequate healthcare, and the unequal treatment of women, youth, elderly, people with disability, or any other vulnerable groups.

- Ensure the access and supply of reliable, affordable, environmentally friendly and renewable energy sources for community networks infrastructure development, especially for communities with low-income levels living in off-grid regions.

- Because community networks are context-specific by nature, which differs from one area to another, their implementation needs to be preceded by research activities that concentrate on the needs and rights of the community (needs-based and rights-based community networks). Therefore, it is necessary to guarantee and regulate the availability of research funds and their application, apart from the village fund allocation, to ensure that the digital technology to be built is right on target and effective.

- Engage diverse stakeholders in discussions on drafting the new Telecommunications Bill. Foster policy dialogue to formulate the best definition of community networks.

- Assess the need to initiate a special Task Force at the national level that will be given the authority to coordinate and mobilize various government and non-government bodies and agencies nationally and regionally in order to accelerate a more inclusive Indonesian digital transformation project.

- Compose modules of related laws and regulations in a simple and easy-to-understand communication style and engage intermediaries to communicate them to the beneficiaries.

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