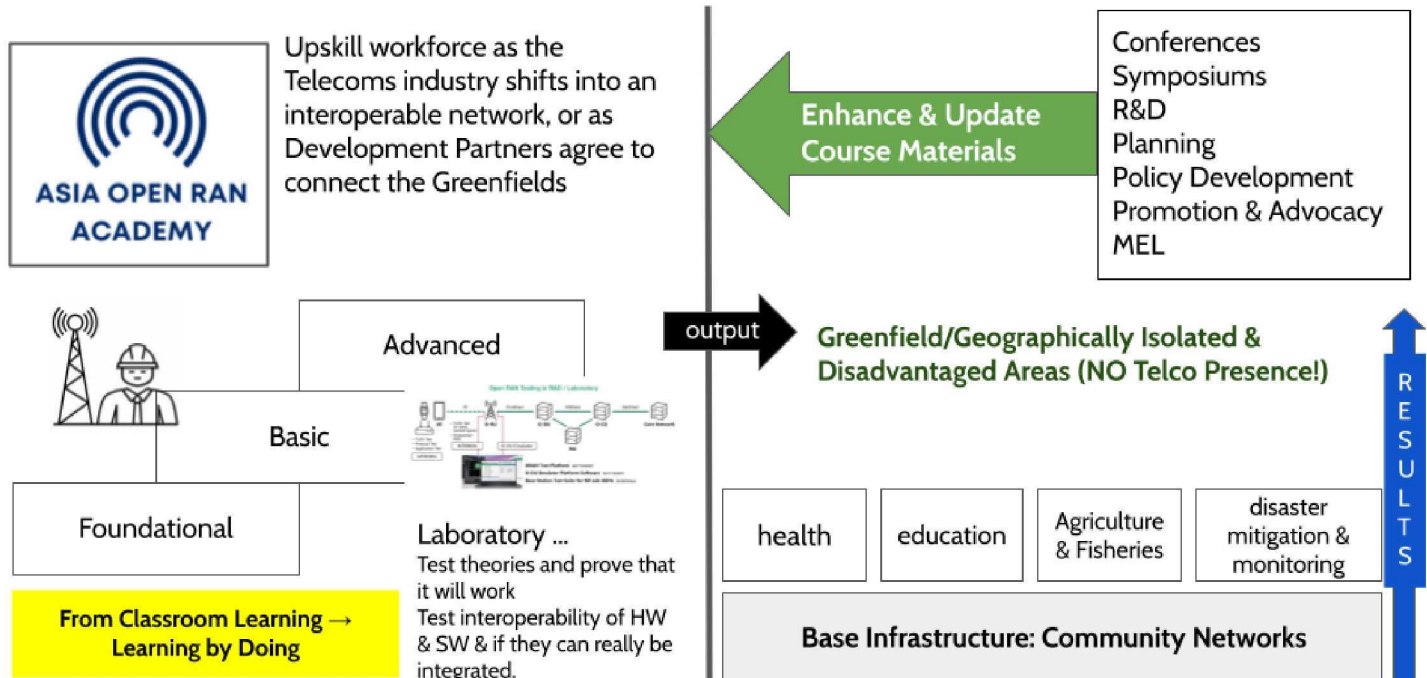


RoadMap 2024-2026



Use Cases

AORA will be the platform for engendering partnerships to deploy use cases where ecosystem players in a sector are ready to take on the challenge.

The pandemic shifted services related to education and employment, health and wellness, government services, financial services, and other vital needs to an online environment. Digital access emerged as a necessity to connect to these various services. The assumption is that citizens, workers, and students are connected with suitable devices and skills. Unfortunately, many Filipinos have limited assets and low income, needing help to acquire internet access, computer devices, and training to succeed in this new, technology-driven world.

AORA has started exploring the efforts of multiple sectors to enhance access to technology that connects people to foster inclusion. Exploring digital access is necessary because so many things are moving online, from communicating to shopping, banking, and studying. Moreover, the “Internet of Everything (IoE)” ecosystem unites people, things, data, and processes. IoE requires connectivity to realize the sectoral possibilities at the individual, community, and national levels.

During the anniversary event in July 2023, AORA explored the interconnected opportunities offered by academia, professional organizations, industry, nonprofits, government, and the media. These stakeholders were invited to speak about how they plan to move the needle on access to digital technology, what the challenges are, and suggest options that include opening the RAN. This knowledge informs AORA of opportunities to bolster these efforts collaboratively and to locate funding sources.

Kayang-kaya kung sama-sama.

Base Infrastructure: Community Network vs Private Network

Base Infrastructure: Community Network vs Private Network

What is a Community Network?

A community network is a telecommunications network built, operated, and used by a local community in a specific geographic area to provide its members with internet access and other communication services. These networks are set up to respond to the lack or inadequacy of internet services offered by commercial operators in the area. They are usually managed on a not-for-profit basis. Community Networks are open to anyone in the community, although there may be some restrictions on access or usage,

Key characteristics of community networks include:

- Local ownership and control
- Collaborative efforts
- Affordability
- Open Access
- Capacity Building

What is a Private Network?

Like a Community Network, a private network is created to facilitate communication and sharing of resources among a group of users.

A Private Network is usually smaller in scale than a community network, often limited to a single organization or campus, and may have a few to several hundred users. A Private Network is usually restricted to members or individuals explicitly authorized by the organization.

A Private Network is owned and managed by a single organization or individual. The primary objective is usually to support the organization's operations and to meet the specific needs of an organization. The organization is responsible for funding, managing, and maintaining the network.

Both Community Networks and Private Networks often require some form of access control to restrict unauthorized users from accessing the network. This can include using passwords, access lists, or other authentication methods. Both can be built using similar hardware and software infrastructure such as routers, switches, servers, etc. Both can benefit from wireless network technologies, such as open RAN.

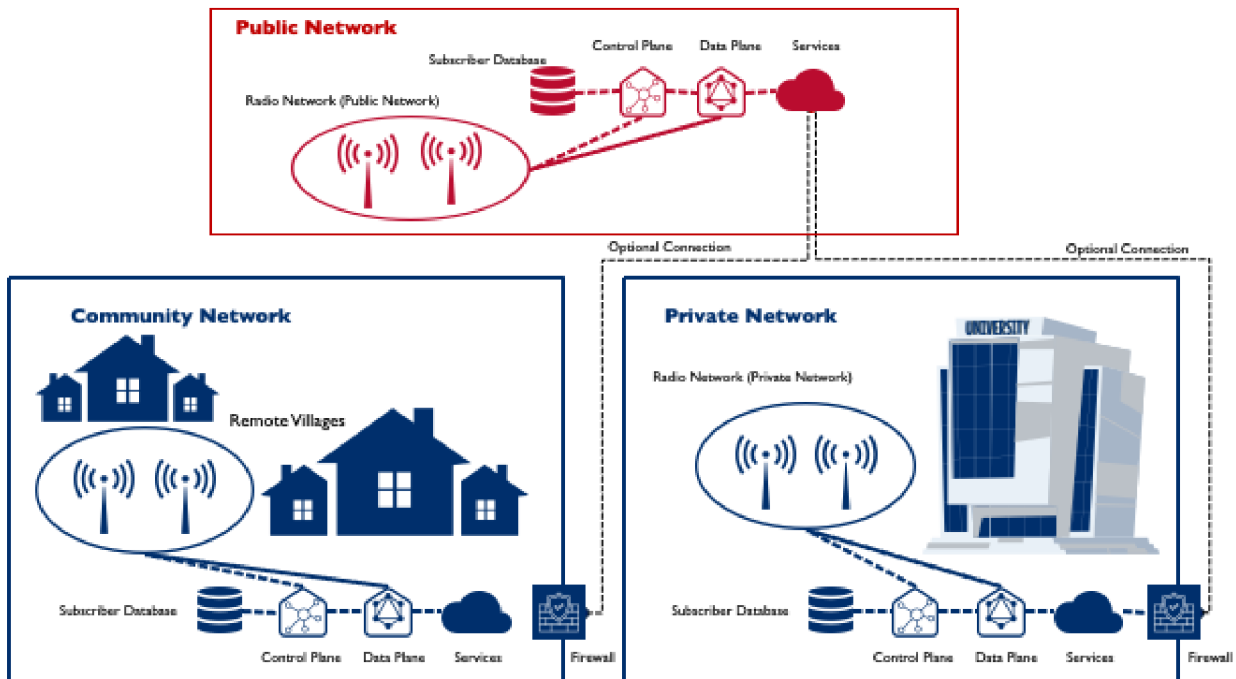
By opening the RAN, community networks and private networks can leverage various vendors and solutions, which can help lower costs, increase network performance and resilience, and facilitate innovation. Moreover, Open RAN allows for increased programmability and flexibility, which can be beneficial for serving the community's or organization's specific needs.

Wireless connectivity requires spectrum. Wireless communications signals travel over the air via radio frequency, aka spectrum. TV broadcasts, radio programs, GPS devices, and the wireless phone service you use to make phone calls and check Facebook from your smartphone -- all use invisible airwaves to transmit bits of data through the spectrum. To reimagine RAN supply chains, spectrum policy, and investment must address all wireless use cases, not just a subset.

Community Network vs Private Network

Comparison

Feature	Community Network	Private Network
Ownership & Governance	Owned and operated by a community or non-profit. Decentralized.	Owned by a single entity like a business or individual. Centralized.
Purpose	Serve a local community, often with a focus on public access.	Serve the specific needs of an organization or individual.
Accessibility	Often public, sometimes free or low-cost. May have restricted areas.	Restricted to authorized users, often with strong authentication.
Scale	Local, confined to a specific geographical area.	Can be small (e.g., home network) to large (e.g., global corporate).
Security	Varies; may have fewer security layers.	Typically includes advanced security features like encryption.
Firewall	Possible but varies; may be less robust or comprehensive.	Commonly includes robust firewalls with advanced filtering options.
Examples	Rural broadband, Municipal networks.	Campus Network, Factory Private Network



Community Networks, Private Networks, and Spectrum

The Internet Society suggests spectrum approaches for Community Networks. These approaches could benefit Private Networks, too.

What can community networks do?

Community networks can help shape a more innovative policy and regulatory environment to enable and support their efforts:

1. Reach out to existing Community Networks for advice.
2. Identify regulations and policies to be changed.
3. Engage with the Regulator or Department to learn how to change current policies and regulations.
4. Attend local, regional, and international Community Network events.
5. Work with Existing Anchor Institutions:
6. Engage with Internet exchange point (IXP) and network operator group (NOG) communities.

What can network operators do?

Network operators should help community and private networks access the spectrum and use that spectrum to connect the unconnected.

1. Enter into roaming agreements at fair and reasonable rates.
2. Build stronger future communities through training or equipment partnerships.
3. Share spectrum and define each party's rights and obligations.
4. Make their backhaul available to community and private networks at fair and reasonable rates.
5. Offer community and private networks minimal interconnection fees that are fair and reasonable.

What can policy-makers and regulators do?

Policy-makers and regulators can shift mindsets to consider community networks a viable form of connectivity.

1. Include Community Network experts in regulatory proceedings.
2. Increase regulatory transparency.
3. Ensure regulatory fairness.
4. Lower costs of spectrum based on special circumstances.
5. Increase spectrum allocation transparency and availability.
6. Consider public funding for Community Networks.
7. Consider non-traditional spectrum management tools to better utilize scarce spectrum, such as:
 - Utilizing and offering unlicensed or licensed-free spectrum
 - Spectrum sharing, for example the US Citizen's Band Radio Services (CBRS)
 - Innovative Licensing, such as "social purpose" license
 - Trading
 - Leasing spectrum from existing licensee

References:

Internet Society. Policy Brief: Spectrum Approaches for Community Networks (October 20, 2017).
<https://www.internetsociety.org/policybriefs/spectrum/>

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