School of Community Networks and The Digital Divide Challenges In Indonesia

Local Community-based Internet Infrastructure Development and Utilization in Rural Indonesia
Follow-up Meeting With Ministry of Communication and Information (KOMINFO) | December 14th, 2023

Gustaff H. Iskandar | Common Room Networks Foundation (Common Room)

Background

- Since the COVID-19 pandemic outbreak, internet connectivity has become an important tool to support daily communication, including for carrying out public administration, health services, education, economic activities, etc.;
- Although in recent years there has been a significant growth in internet penetration in various regions in Indonesia, currently the digital divide challenges still exists among the general public, particularly in rural areas & remote places;
- These challenges are mainly faced with a number of issues, ranging from vast and diverse geographical challenges, insufficient supply of electricity sources, inadequate internet infrastructure, significant disparities in bandwidth costs (both within and outside Java Island), the unavailability of suitable and affordable devices, the inability to generate local content and knowledge, a lack of digital skills and literacy, including the gender gaps and limited funding resources available to expand the project outreach.

Digital Transformation Challenges

- Infrastructure and digital connectivity;
- Digital skills and literacy gap;
- Internet security and personal data protection;
- Adaptive digital access policy and regulation;
- Inclusive digital connectivity.

HARIAN UMUM

PikiranRakyat

DARI RAKYAT - OLEH RAKYAT - UNTUK RAKYAT

No. 89 Tahun LV
Eceran
Rp 3.800
LANGGANAN Rp 85.000/bulan
16 Halaman
16 Halaman E-paper
INDEPENDEN DAN TEPERCAYA

DEWAN PERS

BANDUNG RAYA
Normalisasi Sungai Cikijing Tutup Irigasi
HALAMAN 4

JAWA BARAT
Ikan Asin Karangsong Legit
HALAMAN 5

GELORA
Kim Menjaga Penampilan
HALAMAN 12

BANDUNG, JUMAT (WAGE) 17 JULI 2020 — 25 ZULKAIDAH 1441 H - HAPIT 1953 - HALAMAN 1

42.000 Siswa di Jabar Tak Dapat Layanan Internet

SISWA kelas IX SMP Plus Pasawahan mengerjakan tugas sekolah di pos kamling Desa Pasawahan, Kabupaten Cianis, Kamis (16/7/2020). Pelajar di desa terpencil terpaksa mengerjakan tugas sekolah di luar rumah lantaran keterbatasan jaringan internet, padahal sekolah hanya memfasilitasi kegiatan belajar-mengajar daring.

BANDUNG, (PR).-
Setidaknya terdapat 42.000 siswa SMA/SMK dan SLB se-Jawa Barat yang diperkirakan tidak dapat menikmati koneksi internet secara memadai. Hal itu lantaran mereka berdomisili di daerah yang tidak terjangkau akses internet. Jumlah 42.000 siswa itu setara dengan 17,8% dari total jumlah siswa SMA/SMK dan SLB yang sebanyak 238.584 orang.

Berdasarkan data Pemerintah Provinsi Jawa Barat, provinsi ini setidaknya memiliki 1.300 *blank spot*. Daerah-daerah itu tersebar di wilayah selatan Jabar, seperti Cianjur selatan, Sukabumi selatan, dan Garut selatan. Di sanalah 42.000 siswa itu bermastautin, tersama di desa-desa hutan yang belum memiliki infrastruktur pendukung internet yang baik.

Kepala Dinas Pendidikan Jawa Barat Dedi Supandi mengatakan, untuk memberikan pelayanan materi pembelajaran dari rumah untuk siswa-siswa yang bermukim di desa-desa hutan di Jabar tersebut, pihaknya menggelar belajar luar jaringan (luring). Nantinya, pihak sekolah akan mengirimkan bahan pembelajaran atau modul melalui kantor pos. Sebaiknya pula, ketika mengumpulkan tugas, mereka juga menggunakan jasa yang sama.

"Selain itu, mereka yang tidak dapat mengakses internet bisa melakukan KBM di satu titik terdekat, dengan didatangi guru. Bisa juga (tempatnya) ditentukan (oleh para) siswa yang (bermukim di) *blank spot*. Kumpul satu titik ini, belajar berbarengan, misal di (kantor) desa, gurunya datang atau pakai TV besar. Namun, ini tidak setiap hari. Ini hanya untuk tats cara belajar di era pandemi sehingga ketika guru dan anak kembali ke sekolah, anak sudah bisa belajar mandiri," katanya, Kamis (16/7/2020).

Untuk melancarkan kegiatan belajar bagi siswa yang berada di *blank spot area* tersebut, mereka akan mendapatkan kompensasi kuota internet yang dikonversi dalam tiga elemen, yaitu untuk administrasi, operasional, dan modal, yang dikelola oleh sekolah.

Anggaran tersebut sama halnya dengan kompensasi kuota internet dari bantuan operasional sekolah (BOS) ataupun bantuan operasional penyelenggaraan (BOP) pendidikan yang diberikan kepada siswa di wilayah yang dapat mengakses internet dengan baik.

"Di sekolah ini, ada dana dari BOS dan ada dari BOP pendidikan. BOP ini dari APBD Jabar yang menggratiskan SPP bagi siswa SMA dan SMK negeri. Jadi, mereka ini, SPP dibayar oleh Pemprov Jabar," ujarnya.

Berkat survei

Ia mengungkapkan, total dana disediakan untuk keperluan itu mencapai Rp 774 miliar. Perumpamanya ada dua, yakni untuk membayar SPP siswa dan penyediaan kuota internet senilai Rp 150.000 per siswa per bulan, hingga Desember 2020 mendatang.

(Bersambung ke hal. 10 kol. 1)

Dua Solusi untuk Atasi Kemiskinan

BANDUNG, (PR).-
Gubernur Jawa Barat Ridwan Kamil mengaku tidak kaget dengan adanya kenaikan jumlah warga miskin di Jabar. Saat ini, Pemerintah Provinsi Jabar berupaya untuk menanggulangi kemiskinan itu. Sebagaimana rilis Badan Pusat Statistik Jabar, pada Maret 2020, jumlah penduduk miskin di Jabar mencapai 3,92 juta jiwa, naik 7,88% dari data sebelumnya (September 2019) yang mencapai 3,38 juta jiwa.

> Bahwa, secara fisik, WFH-nya benar, tapi *output* kerjaan tidak memperkuat. Salah satunya penyerapan anggaran kita *nih* masih belum maksimal.

"Pertama, tidak kaget (jumlah penduduk miskin bertambah). Oleh Covid-19, semua terdampak," ujarnya di Gedung Pakuan, Kamis (16/7/2020).

Kedua, kata dia, bantuan sosial provinsi jadi salah satu instrumen untuk meningkatkan daya beli. "Jadi, si miskin baru itu, dia datang dari perbatasan. Kan dulu miskin lamanya 25%, nuwun itu di angka 10% (DTKS). Gara-gara Covid-19, jatuh ke kelompok (miskin) itu."

Ia mengungkapkan bahwa terdapat dua solusi yang akan ditempuh. Pertama, pemberian bantuan sosial. Kedua, mempekerjakan warga yang tergolong miskin baru tersebut. Saat ini, sedikitnya terdapat 30.000 warga miskin baru yang sudah dipekerjakan. "Ada datanya, melalui pembangunan padat karya di desa. Jadi, itu strategi kedua yang *fatoh-jatoh* (warga kelompok miskin baru) agar diserap untuk proyek padat karya," tuturnya.

Dengan demikian, selama Covid-19, dengan bantuan dana be-

(Bersambung ke hal. 10 kol. 1)

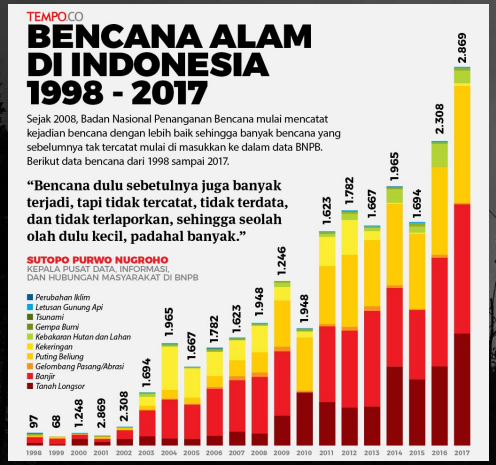
Report From West Java

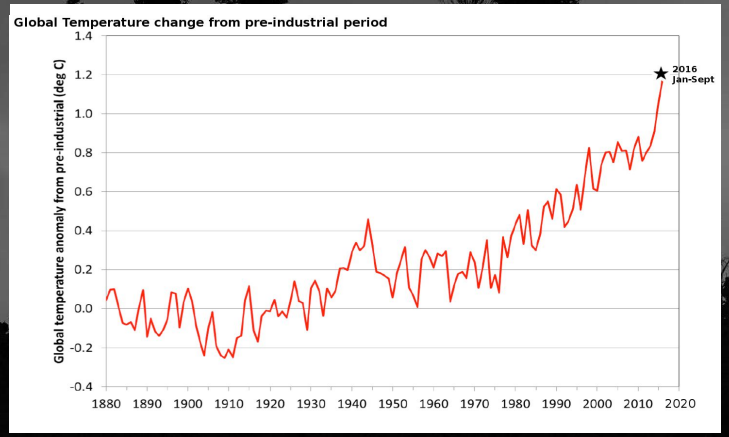
42,000 Students in West Java Can't Get Internet Service

"Based on data from the West Java Provincial Government, there are at least 1,300 blank spots in this province. These areas are scattered in the southern part of West Java, such as southern Cianjur, southern Sukabumi, and southern Garut. That's where 42,000 students live, mainly in forest regions that do not yet have a good internet supporting infrastructure."

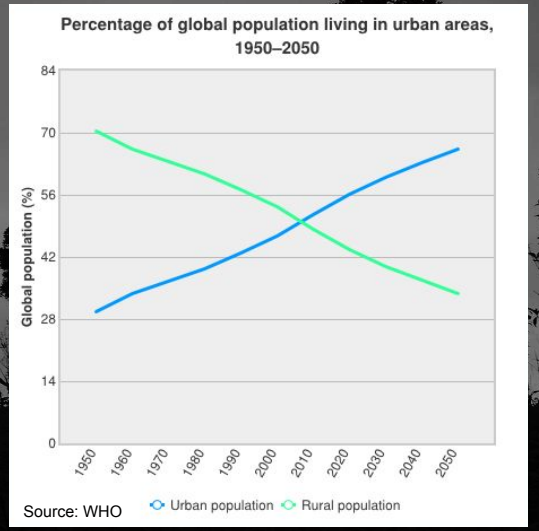
Pikiran Rakyat Daily, July 2020

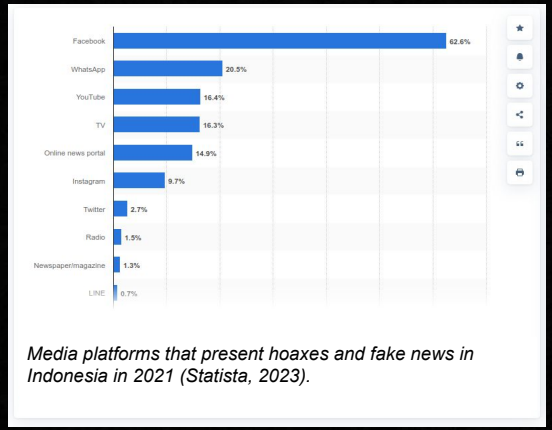
Glocal Challenge & Complexities



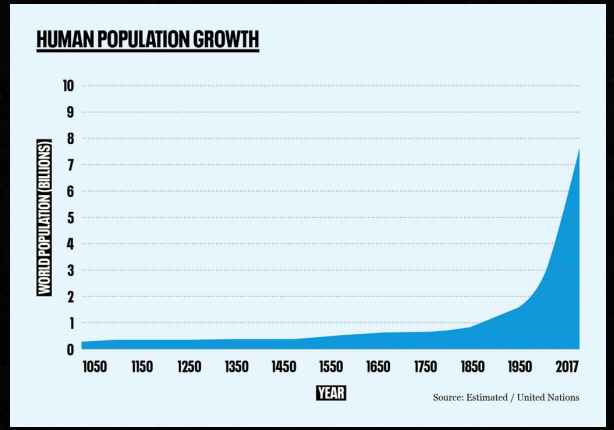


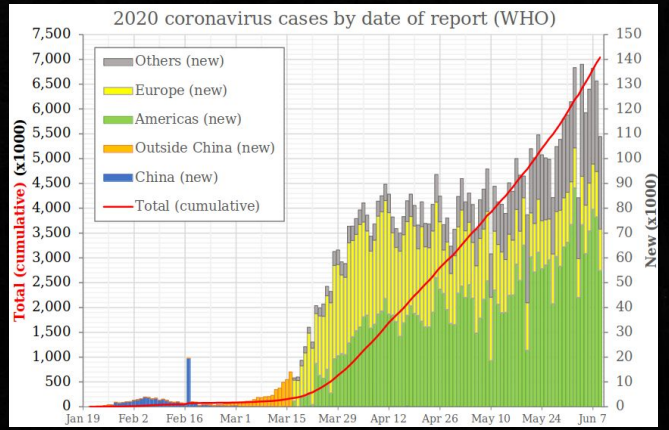
Data: NOAA, NASA, UK Met Office/Climatic Research Unit



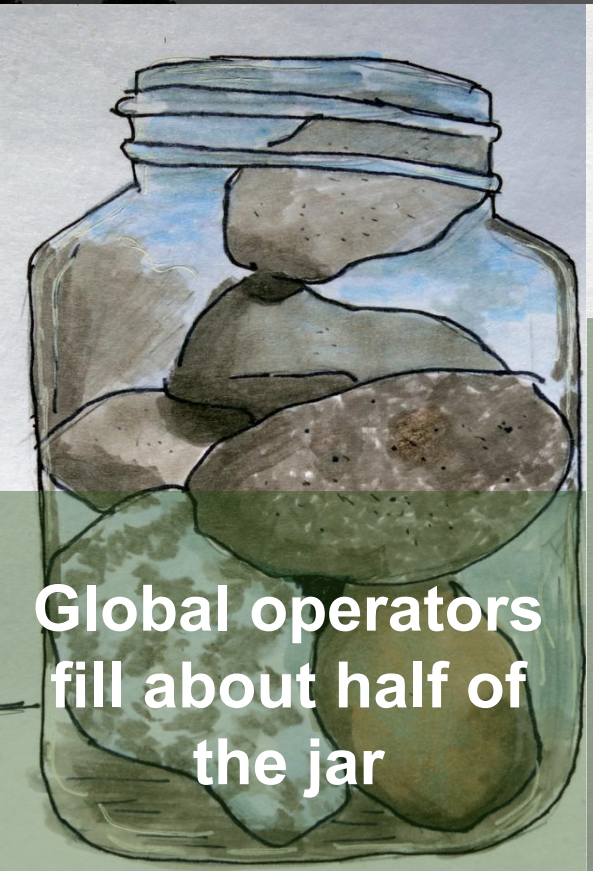


Media platforms that present hoaxes and fake news in Indonesia in 2021 (Statista, 2023).

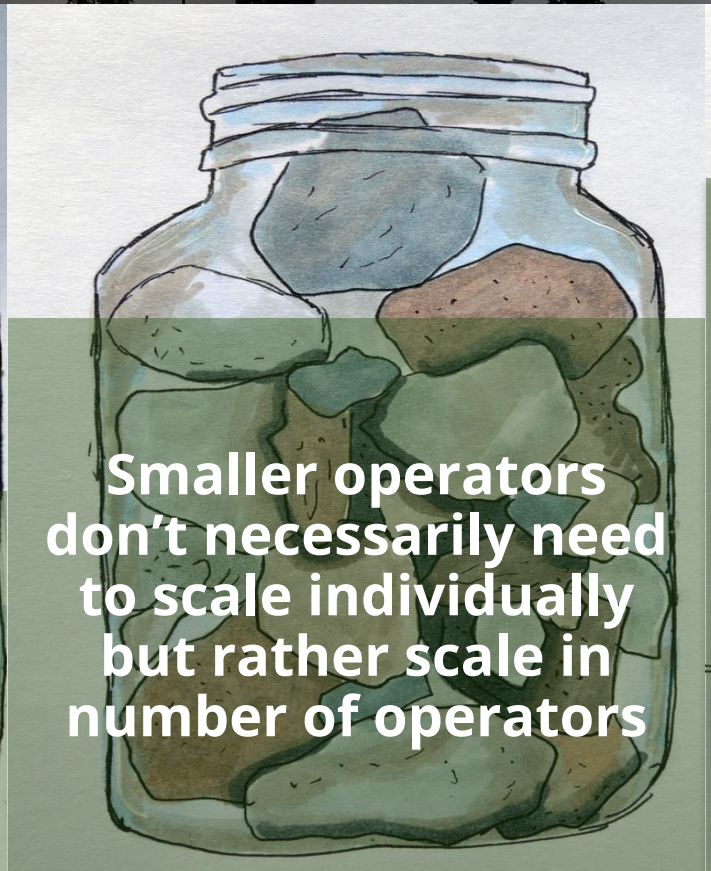




Jar of Stones - a metaphor



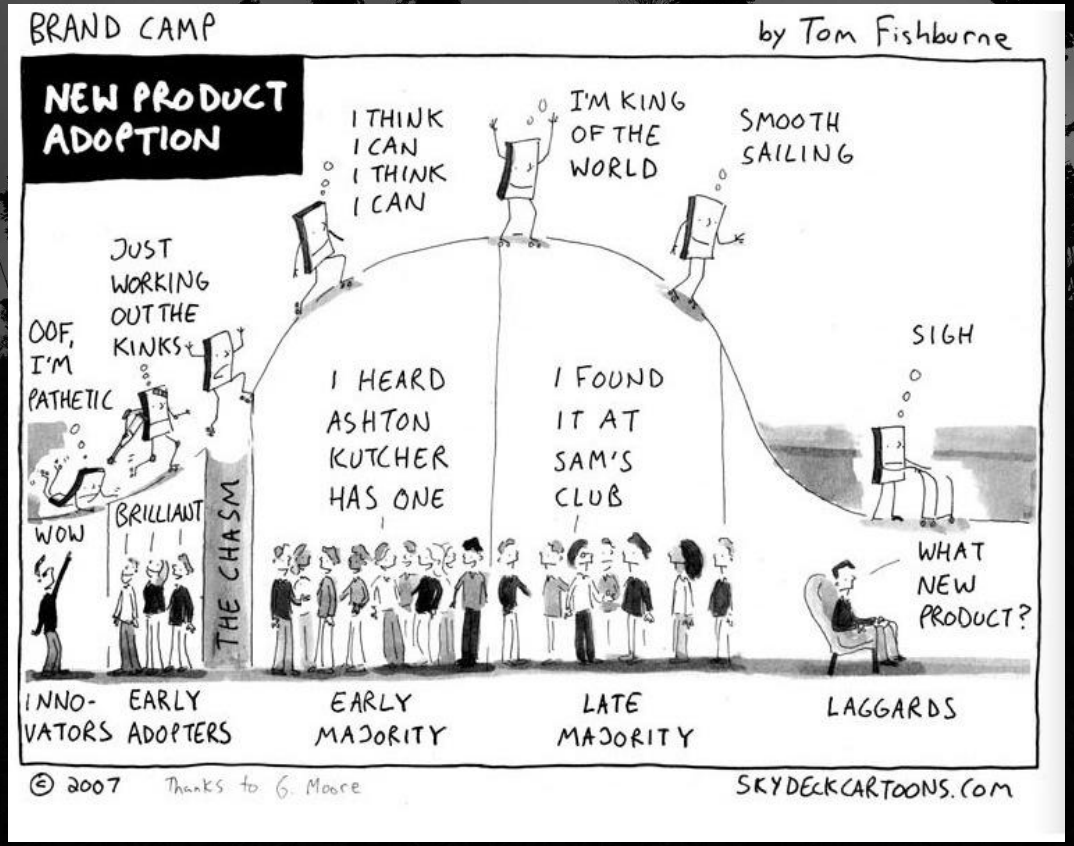
Global operators fill about half of the jar



Smaller operators don’t necessarily need to scale individually but rather scale in number of operators

Community models may create sustainable access where commercial models fail.

A Theory: Diffusion Of Innovation



Community Networks?

Legal

Safety & Security

Affordability

Meaningful Connectivity

Community-based Internet Infrastructure

5L

Low Tech

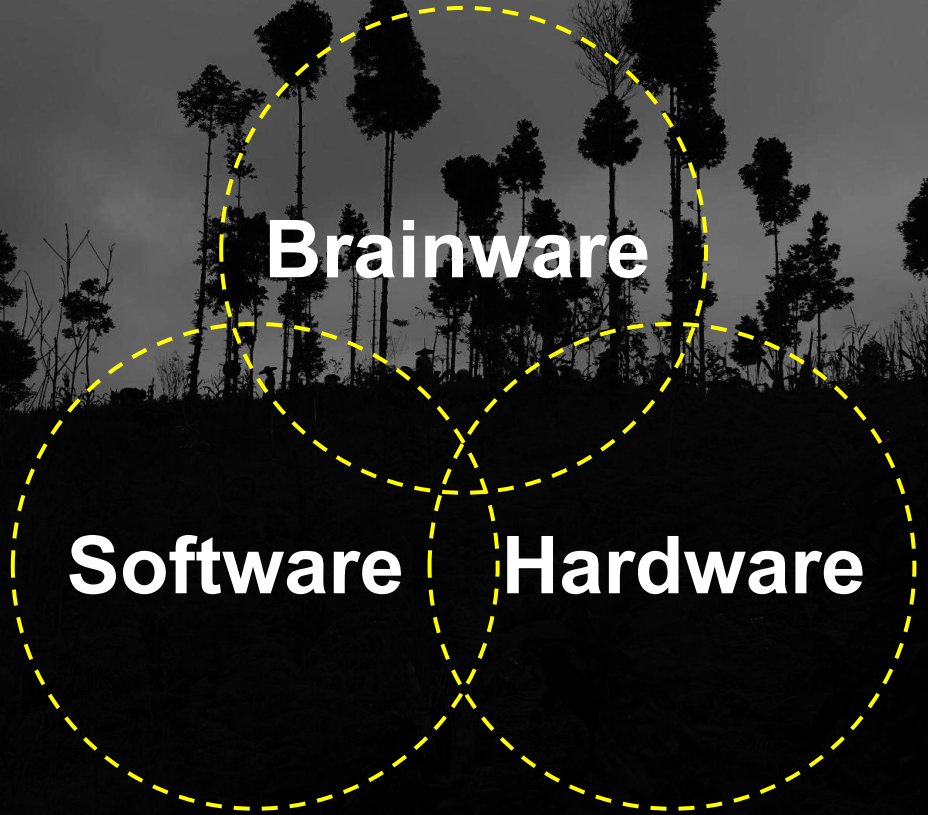
Local Support

Low Energy

Low Maintenance

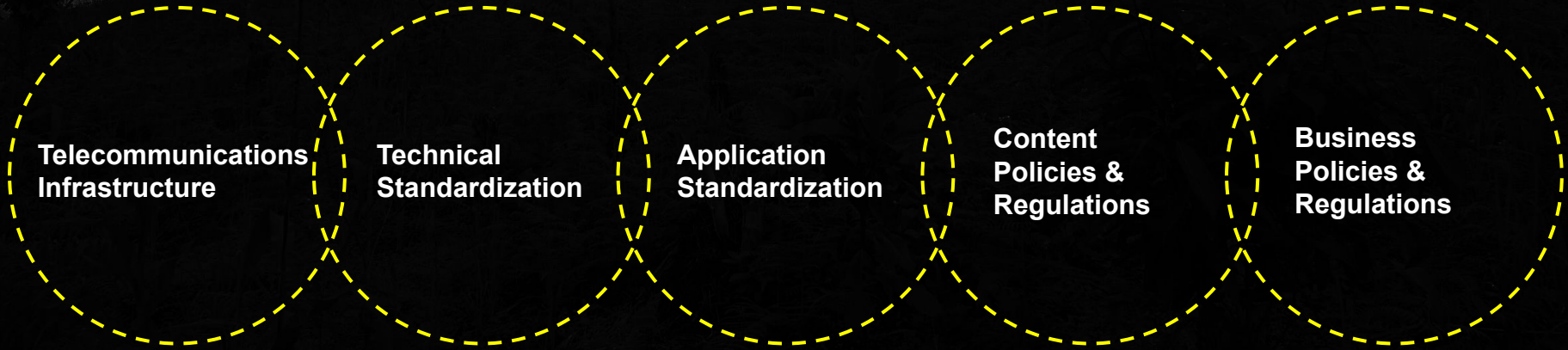
Low Learning Curve

Core Components

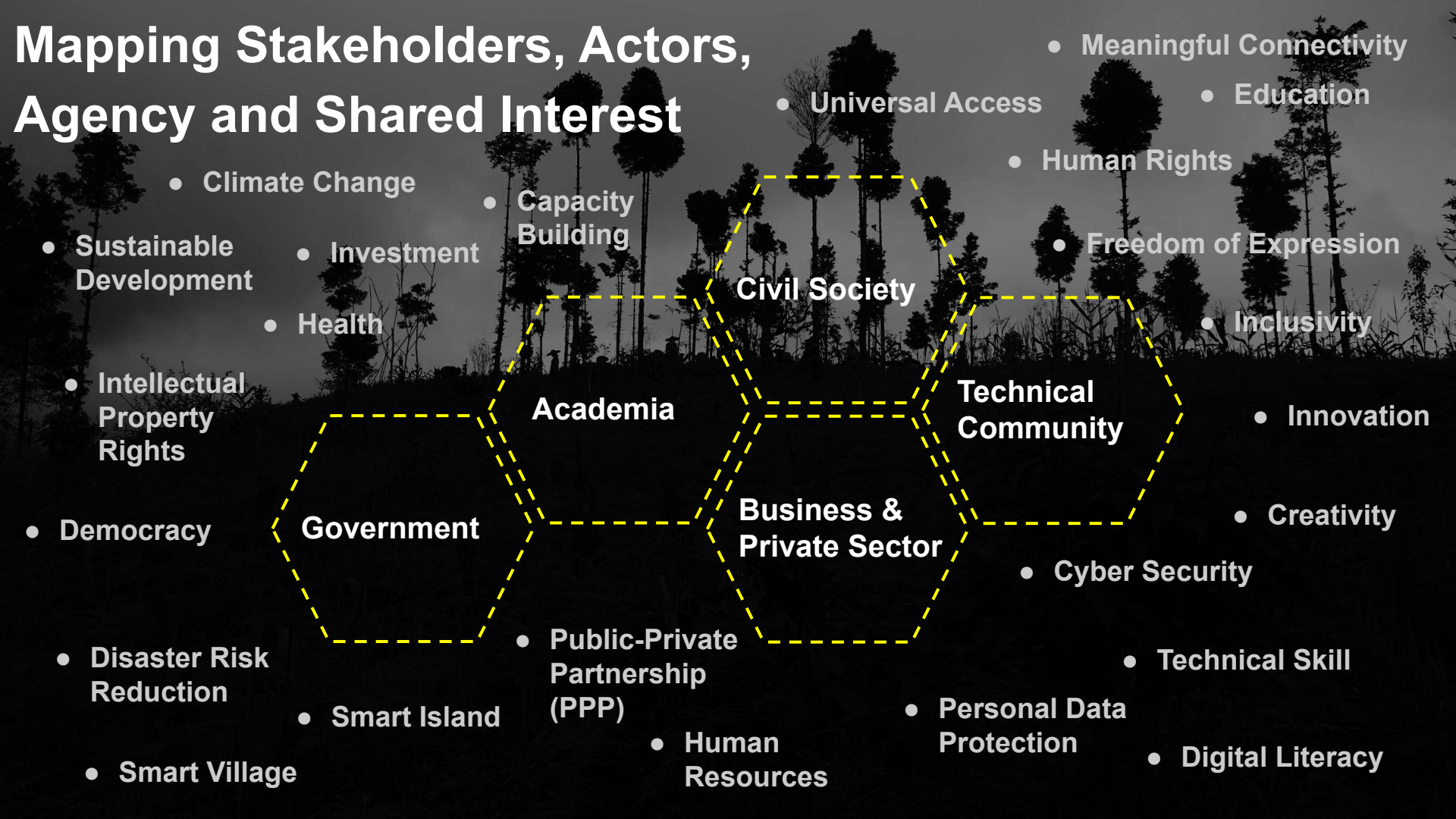


Future education in the context of internet and media culture.
~Dr. Tom P. Abeles, 2009

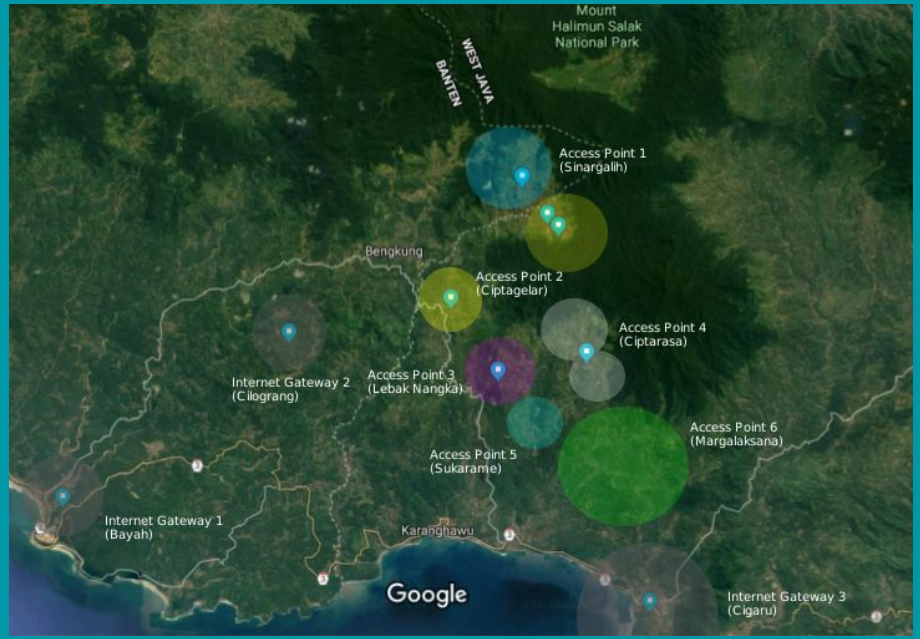
Internet Governance Policy Ecosystem in Indonesia

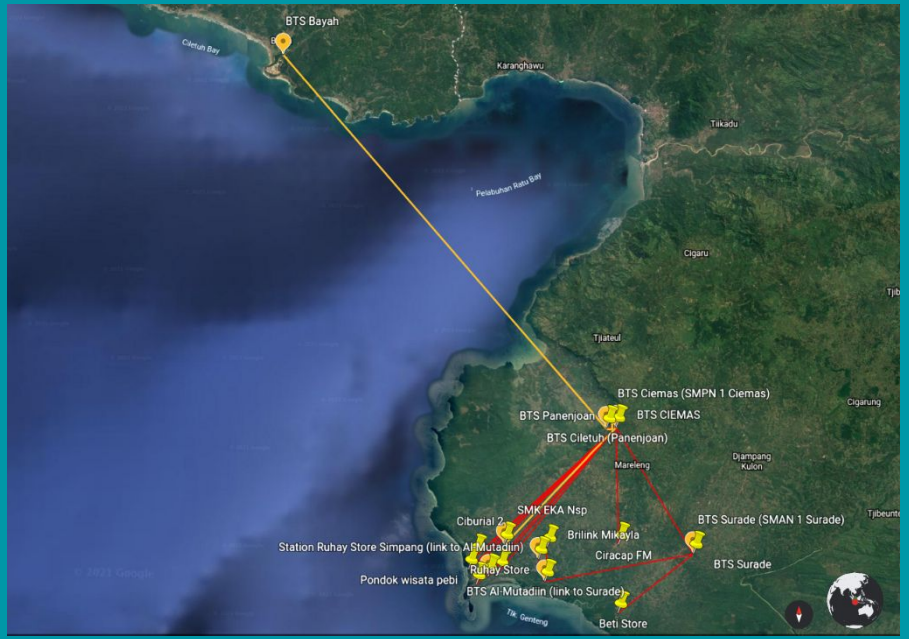


Mapping Stakeholders, Actors, Agency and Shared Interest



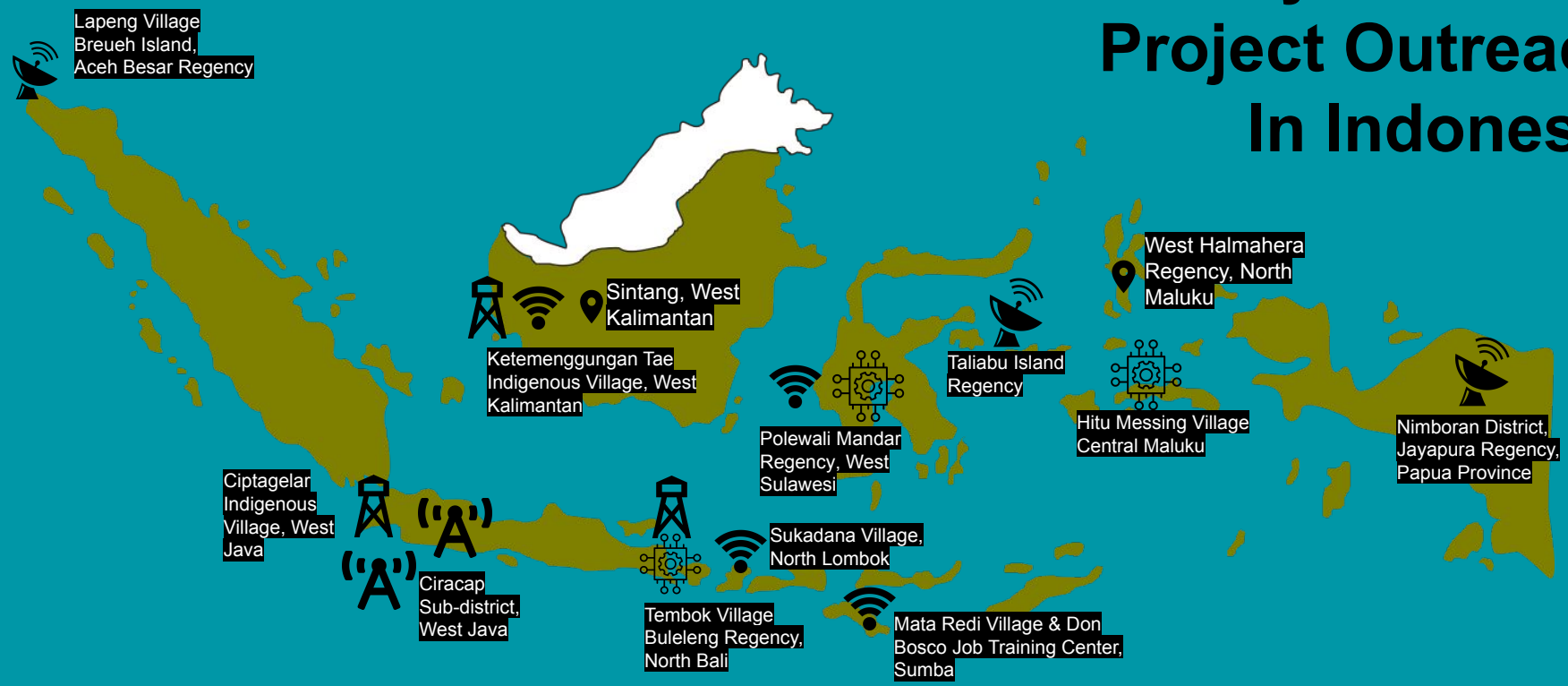
Pilot Projects





Pilot projects & prototyping for the development, management & utilization of local community-based internet infrastructure were initiated in the Ciptagelar indigenous community region in mid 2019 and Ciracap sub-district in late 2020. Both are located in Sukabumi Regency, southern part of West Java Province.

Community Networks Project Outreach In Indonesia



VSAT Based Infrastructure

GSM Based Infrastructure

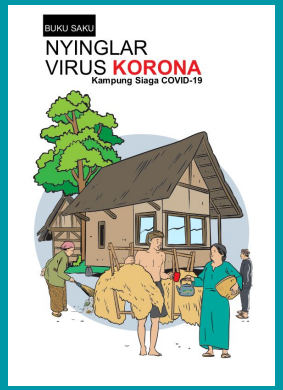
Advanced Stage CN Infrastructure Development

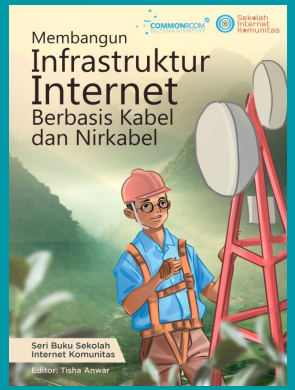
Bamboo Tower Prototyping & Development

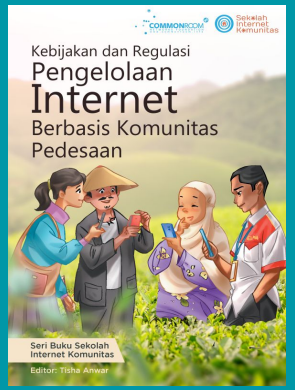
IoT Sensor Prototyping & Government Service Application

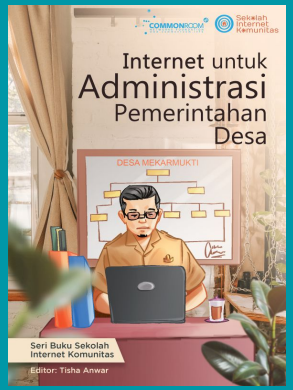
Digital Literacy

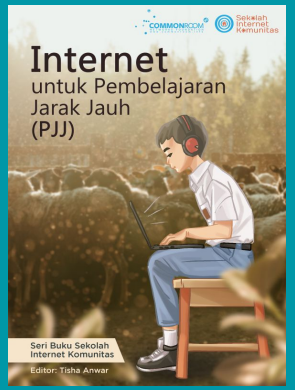
Curricula & Training Materials

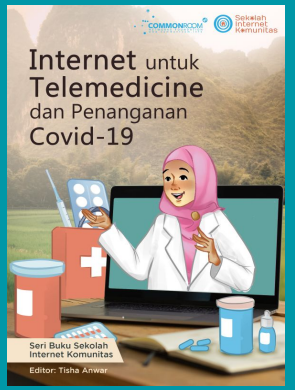


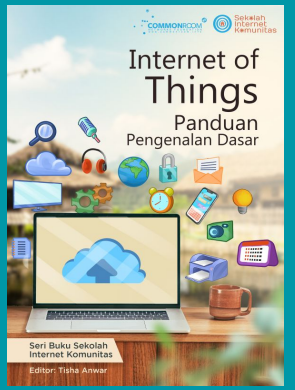


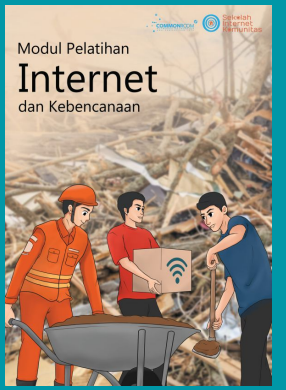






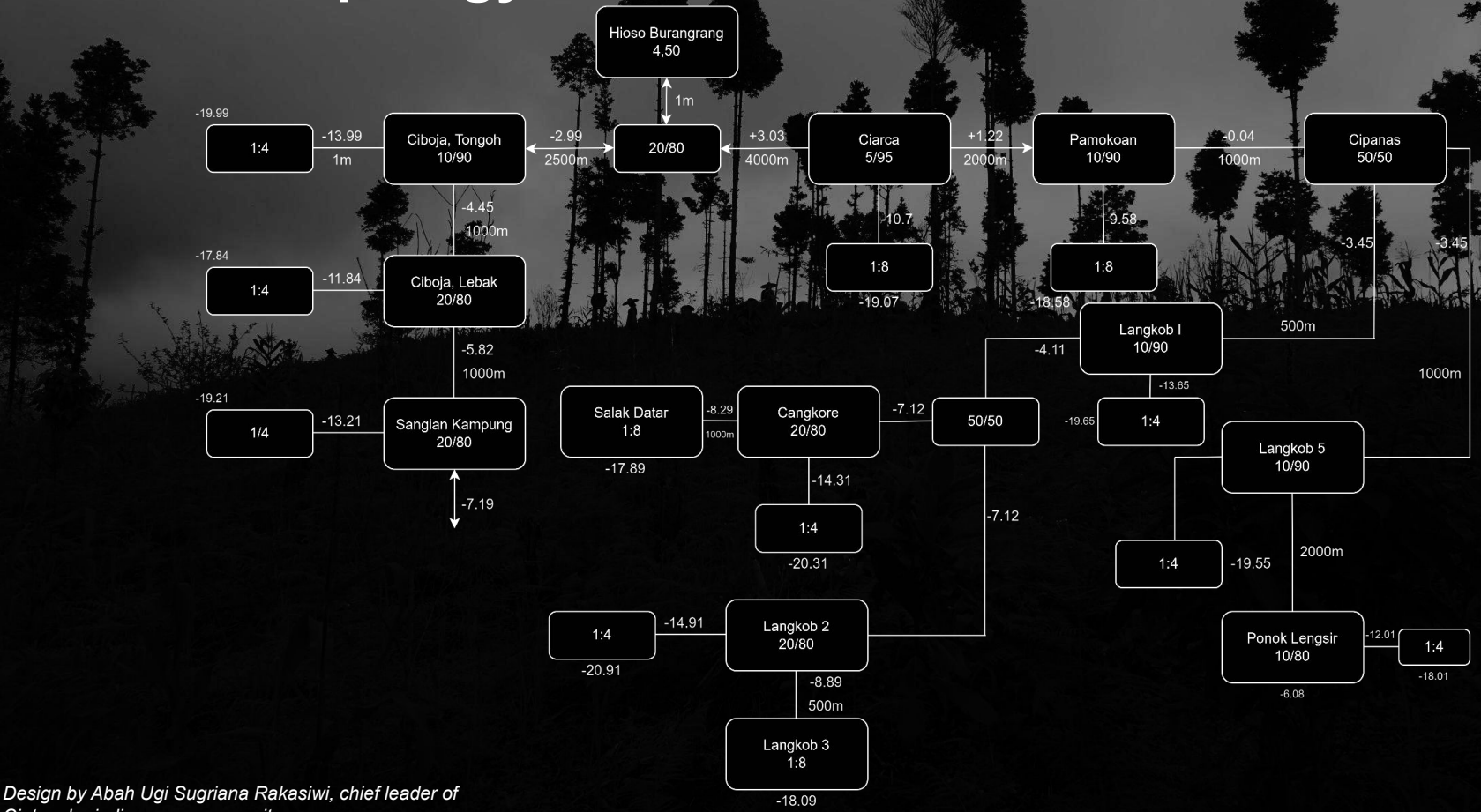






Lesson Learn From Community Networks Development In Ciptagelar Indigenous Community, West Java - Indonesia

Network Topology



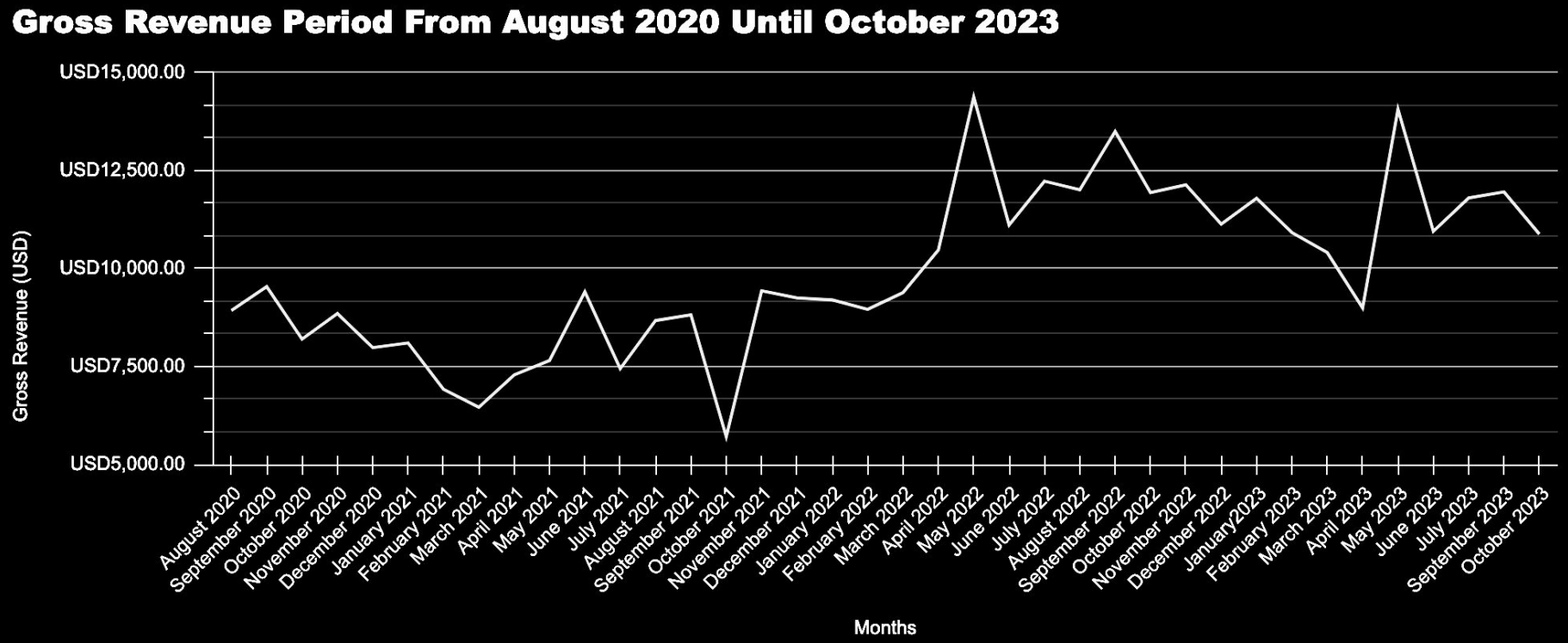
Design by Abah Ugi Sugriana Rakasiwi, chief leader of Ciptagelar indigenous community.

Ciptagelar Hotspots In Numbers

No.	Data Collected	Total
1.	Number of Hamlets Connected	37
2.	Number of Villages	11
3.	Number of Voucher Sales (in 1 year)	238.320
4.	Number of Voucher Agents	86
5.	Number of Public Wifi Hotspots	520
6.	Number of Private Wifi Hotspots	10
7.	Number of Technicians	10

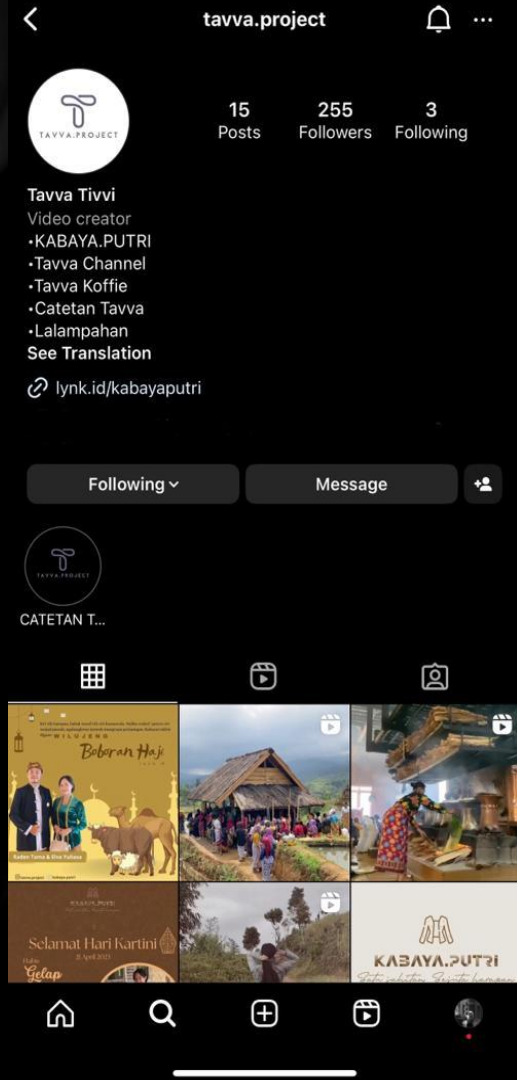
Internet Voucher Sales In Ciptagelar Indigenous Community Region

(Total gross revenue: USD376.734.12)



Potentials and Risks

Potentials	Risks
• Business opportunity; • Job creation; • Introducing local culture using social media; • Disseminates information & knowledge about public health; • Facilitates communication between teachers & students outside schools; • Financial transactions; • Widening access to information & knowledge.	• Online fraud; • Illegal loans; • Game addiction; • Exposure to pornography & illicit content; • Online gambling; • Online-based gender violence; • Hoax news, misinformation and disinformation.



Value Added Services

- Technical skill and capacity building of Ciptagelar Hotspot technicians;
- Routine monitoring on the installed devices (twice a month in each hamlet);
- Maintenance and repair of internet tools and devices;
- Peer to peer training for School of Community Networks participants in Ciptagelar Hotspot Basecamp in Burangrang (will open classes soon for the general public who want to learn);
- Free internet access for teachers who need to upload basic education data (DAPODIK);
- Podcast and local content workshop;
- Workshop and training on documentation of traditional knowledge and technology in Ciptagelar indigenous community (local content development);
- Workshop on the management and administration of community-based internet infrastructure;
- Workshop and sharing session on healthy and safe use of the internet.

Documentation

Documentation

Documentation

Documentation

Documentation

Documentation

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