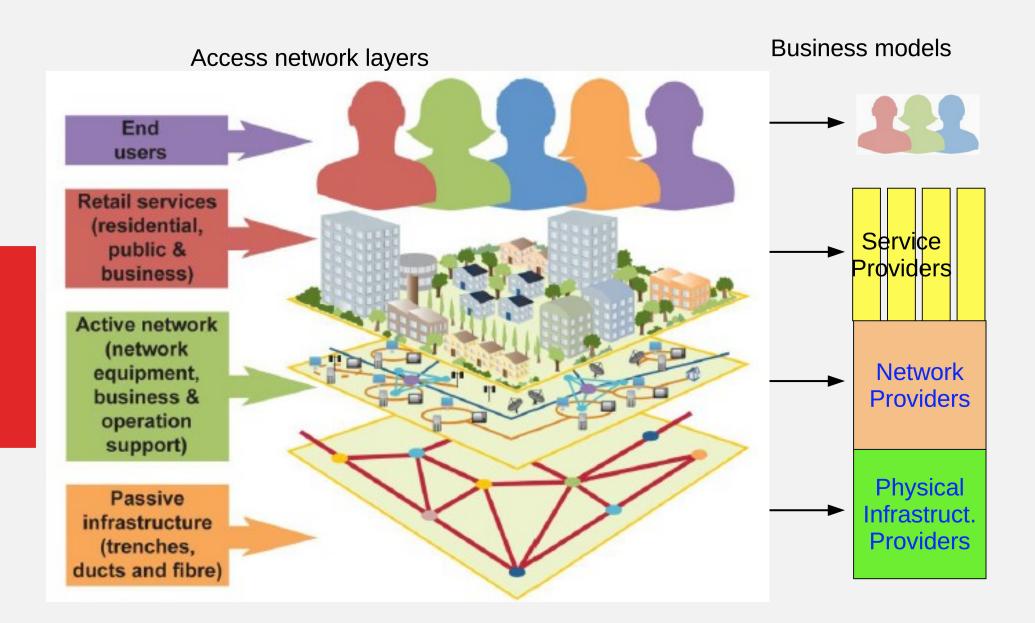# Self-service connectivity: feasibility, business models and sustainability

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Access network layers

Business models

End users

Retail services (residential, public & business)

Active network (network equipment, business & operation support)

Passive infrastructure (trenches, ducts and fibre)

Service Providers

Network Providers

Physical Infrastruct. Providers

Self-service connectivity

- Connectivity (local+global) not everywhere

- Connectivity expensive to have (bring)

- Sometimes not feasible in commercial terms:
  the formal "restaurant model"

- Self-provided connectivity:
  the informal "homemade model"

- Both meet at some point:
  retail, wholesale & backhaul

Feasibility

- A critical infrastructure for
local socio-economic development

- Connectivity not symmetric ...

  - Wireless from the farm (guifi.net), feasible
way before Wireless to the farms (incumbents)

  - Fibre to the Home (FTTH), more expensive than
Fibre from the Farm (FFTF) ?

- Initial & ongoing investment: locals, external help ...

- Crowdfunding: collecting contributions!

Business models

- Who does it?
  - One for all: a large operator
  - Wireless ISP (WISP): a local operator
  - Community networks: anyone in a community

- Differences in costs *(e.g. right of way, deployment, maintenance, local staff)* & ownership

- Technology comes bundled with business models: *Ethernet, ATM, GSM, WiFi, mesh, bitcoin ...*

- Infrastructure sharing: + complex, - expensive: *Open Access Networks, Internet eXchanges*

Sustainability

- "Compensation" of CAPEX, OPEX and usage fees

- The beneficiaries of connectivity should pay for it
  - Who contributes, who pays => Who benefits?

- Cost oriented: margin goes to reinvestment

- Profit oriented: margin extracted & returned to…

- Multiparty: all involved in an inter-network

  - Consumers (citizens, orgs, gov), producers (volunteers, professionals), facilitators (gov, regulator, rights of pass)

  - Content & service providers

To remember

- Commons: cooperative or competitive development of infrastructures and services
  - Stakeholders: efficiencies, inefficiencies, limits
  - Sustainability → crowdfunding (payments)

- Let locals create local efficiencies & local benefit
  → Digital sovereignty, critical infrastructures
  → Social + economic benefits → local development

- Business, governance, critical for sustainability

- Unbundling (vertical integrated): open & separate hardware, software, network, coord, service, apps

- What part is a commons? what is a market?

Towards BCP

- Document critical choices of any kind: organizational and business models, methods, tools that work in context, situations: patterns and anti-patterns, metrics for evaluation

- Diversity is key for universal connectivity: one model cannot fulfill all needs *(commons, market, WISPs, community networks, GSM, WiFi ...)* and things come in "bundles"

- Knowledge is key: BCP *(learn from ...)*

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