USF as a Financing Mechanism for Community Networks - Case Studies

Dr. Carlos Rey-Moreno
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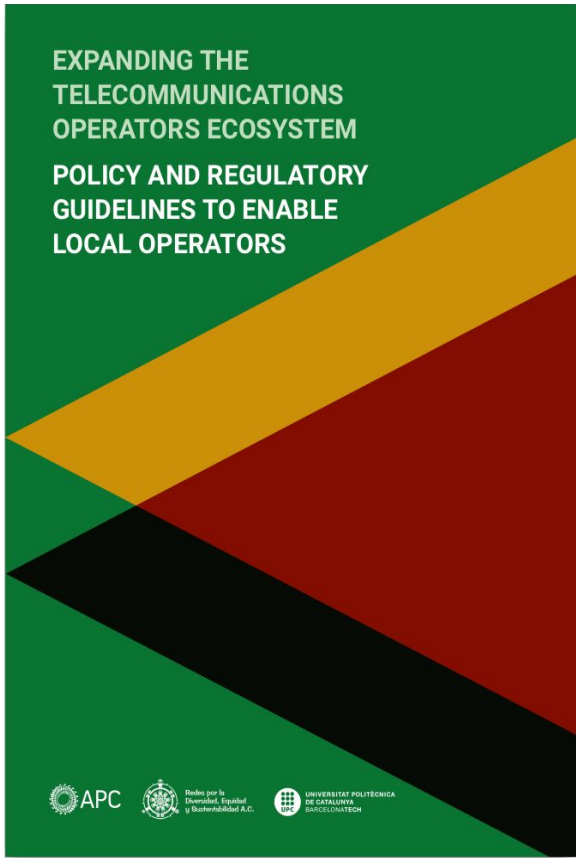
Enabling environment for Community Networks



International good practice regarding:

- Operator Licensing
- Spectrum Licensing and Fees
- Backbone and backhaul Infrastructure
- Financial support
- Access to network information

https://www.apc.org/en/pubs/expanding-telecommunications-operators-ecosystem-policy-and-regulatory-guidelines-enable-local

WTDC - Recommendation ITU-D 19

630 Rec. 19

RECOMMENDATION ITU-D 19

Telecommunications for rural and remote areas

3 that community access to ICT facilities and services is particularly important in rural and remote areas: business models which can achieve financial and operational sustainability can be operated by local entrepreneurs supported by a variety of initiatives, and these facilities, where necessary, should also be supported by universal service funds as an essential component of rural communications;

ITU Global Symposium for Regulators

ITU Global Symposium for Regulators

ITUGSR
SHARM EL-SHEIKH2023

Best Practice Guidelines

Regulatory and economic incentives for an inclusive sustainable digital future

- **Innovative regulatory last mile connectivity solutions:** Policy makers and regulators are encouraged to consider facilitating last mile solutions to connect the unconnected, through means such as municipal, community and mesh networks and social enterprises, as well as spectrum and infrastructure sharing and co-investment to extend networks and services to unserved and underserved areas.

USF in Papua New Guinea

NICTA

Universal Access and Service (UAS)

Strategic Plan 2023-2027

DRAFT

(i) Fixed Broadband Projects

The distribution of Fixed Broadband Projects over the five-year period is summarised in the Table below. The specific location of projects will be identified through a consultative process with all relevant stakeholders prior to approval by the Minister for implementation each year.

Table 3: Fixed broad projects.

Project	Year1-2023	Year2-2024	Year3-2025	Year4-2026	Year5-2027	Total
Connect our Schools	4	4	4	4	4	20
Connect our Medics	4	4	4	4	4	20
Connect our Farmers	4	4	4	4	4	20
MSME ICT Hubs	4	4	4	4	4	20
Community Networks	1	1	1	1	1	5
Local Government Offices	4	4	4	4	4	20
	21	21	21	21	21	105

Voucher Schemes in the United Kingdom

GIGABIT BROADBAND VOUCHER SCHEME

PROJECT GIGABIT

https://b4rn.org.uk/

WTDC/ITU Digital Trends in Africa 2021

Box 6: Possible consideration for the Africa region to address affordability and meaningful connectivity

- Review universal service fund (USF) models and approaches, including exploring new community network access models and public community access points (Wi-Fi hubs) for underserved and rural communities.

USF for Community Networks in Malawi

Measure	Key Performance Indicator by 2027	Target
ICT Development and Innovation	Number of schools connected	125
	Number of TTCs connected.	10
	Number of PWD institutions connected to the internet	25
	Number of Community based ISPs supported	30
	Number of RAN Sites installed	76
	Number of health institutions connected to the internet and/or provided with ICT equipment and /or digital skills	40

USF for Community Networks in Kenya

COMMUNICATIONS AUTHORITY OF KENYA

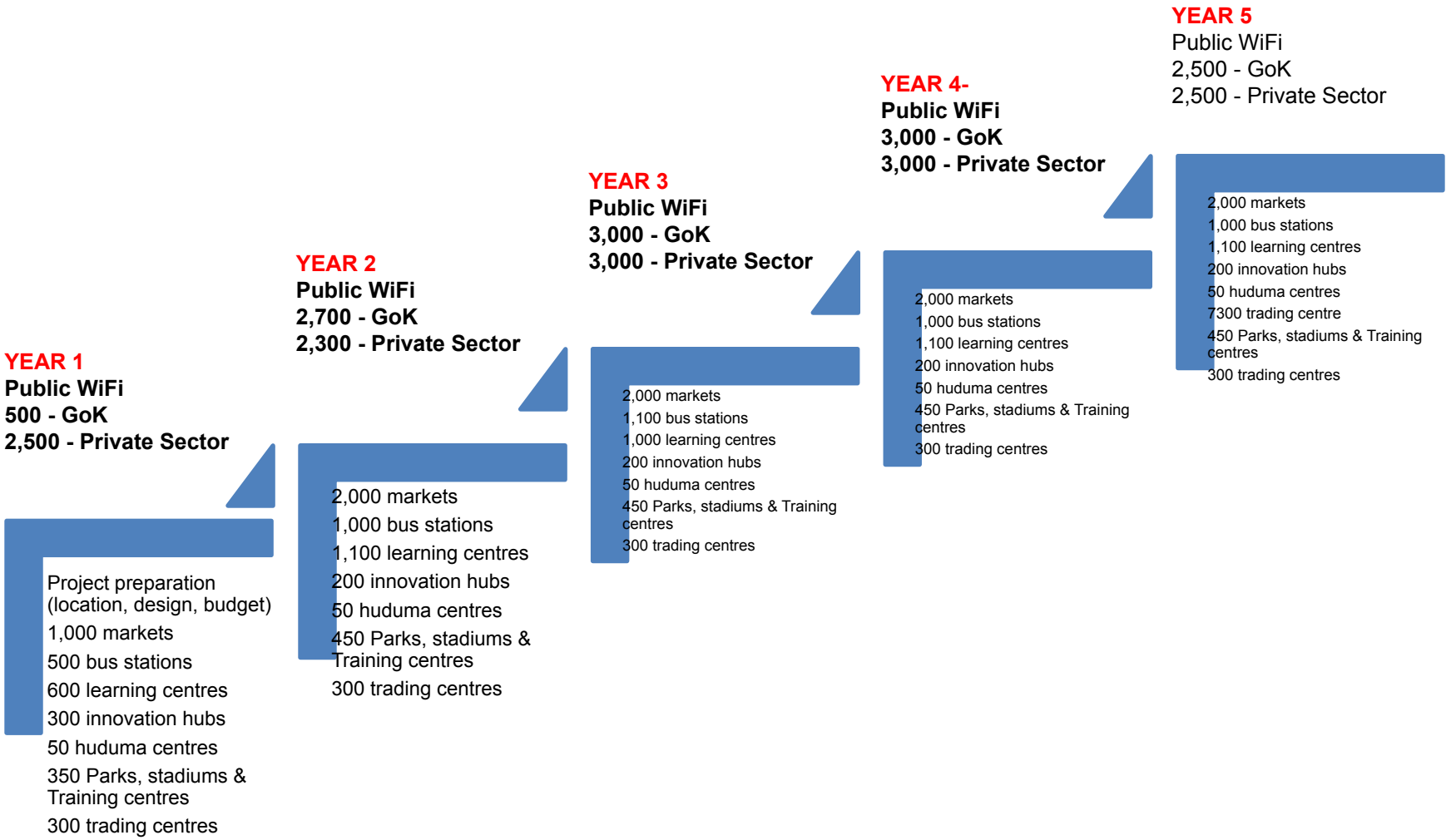
Opening Your World

Draft 3

USF STRATEGIC PLAN 2022 – 2026
April 2022

Key Result Area (KRA)	Strategic Objectives	Key Performance Indicator (KPI)	Baseline	Target
ICT Infrastructure and Services rolled out in telecommunications infrastructure voice and connectivity services, Broadcasting, and Postal services in unserved and underserved communities.				
1. **Telecommunication (Voice & Data**	1.1. To ensure quality voice and data coverage, in the remaining 4 % of the unserved and underserved communities in Kenya	% coverage	96 %	100%
	1.2. To enhance the quality of service within the already served areas by the Phase 1 project	% Quality of Service for Phase 1	TBD	TBD
	1.3. To facilitate the provision of sufficient support such as devices and complementary services to promote the use of Voice and data services	% increase on baseline support for devices and airtime	TBD	TBD
	1.4. To ensure that unserved and underserved attain coverage from all operators	% increase on baseline coverage by service providers	TBD	TBD
	1.5. To facilitate the establishment of a 100 community Network in the unserved and the underserved communities	No. of Community Networks established	TBD	TBD
	1.6. To facilitate the adoption of new technologies and innovative solutions in helping address affordability, availability and accessibility of ICT services among the unserved and underserved	No of new technologies and solutions adopted by USF to enhance coverage of the unserved and the underserved	TBD	TBD

USF for Free Internet Access in Kenya



USF for Community Networks in LAC

dpl news

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Home › DPL NEWS › Gustavo Petro firma decreto para que comunidades autogestionen su Internet fijo

Gustavo Petro firma decreto para que comunidades autogestionen su Internet fijo

Las comunidades de conectividad podrán ofrecer hasta 3 mil conexiones de Internet de última milla.

Violeta Contreras García – Jul 4, 2023

COLOMBIA | COMUNIDADES DE CONECTIVIDAD | CONECTIVIDAD RURAL

Crédito: Presidencia Colombia

https://dplnews.com/gustavo-petro-firma-decreto-para-que-comunidades-autogestionen-su-internet-fijo/

Agência Nacional de Telecomunicações

O que você procura?

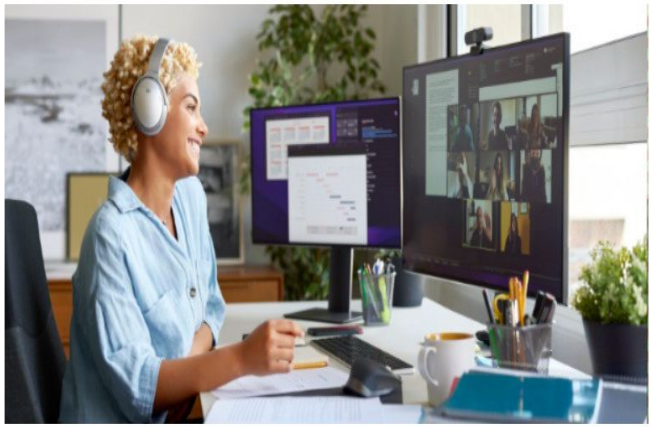
PARTICIPAÇÃO SOCIAL

GT Redes Comunitárias realiza sua primeira reunião

O grupo vai mapear as redes existentes no país, buscar informações sobre ofertas de acesso à internet nessas áreas e identificar as demandas nessas regiões

Publicado em 23/06/2023 09h40 | Atualizado em 29/06/2023 16h24

Compartilhe:



Na quinta-feira (22/6), ocorreu a primeira reunião do Grupo de Trabalho "Redes Comunitárias", que é presidido pelo conselheiro Vicente Aquino. O grupo reúne representantes de diversas áreas técnicas da Anatel, do Ministério das Comunicações (MCom), de entidades de classe de prestadoras de telecomunicações de grande e pequeno porte, além de representantes de Redes Comunitárias.

https://www.gov.br/anatel/pt-br/assuntos/noticias/gt-redes-comunitarias-realiza-sua-primeira-reuniao

USF in Argentina

República Argentina - Poder Ejecutivo Nacional

2021 - Año de Homenaje al Premio Nobel de Medicina Dr. César Milstein

Proyecto de resolución

Número: IF-2021-51847456-APN-DNFYD#ENACOM

CIUDAD DE BUENOS AIRES

Miércoles 9 de Junio de 2021

Referencia: Proyecto de Resolución - Redes Comunitarias

ARTÍCULO 2°.- Destínase a los fines de la ejecución del Programa aprobado en el Artículo 1° hasta la suma de PESOS TRESCIENTOS MILLONES ($300.000.000.-), del Fondo Fiduciario del Servicio Universal, previsto en la Ley N° 27.078.

3 mill USD from USF for CN projects
0.63% Enacom budget 2020-2022 budget

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Case Study: Argentina

- The goal of Argentina’s USF is to guarantee access to the provision of Internet service to all the country's inhabitants in quality conditions and fair and reasonable prices
- The access to this right cannot be left to the discretion of the market
- USF run by ENACOM, and funded by 1% of the gross revenue
- Argentina has a Community Network license

Development

- Establishment of the Special Projects Office started in June 2020 to with the aim of working specifically to address the needs of popular neighborhoods, rural communities and indigenous peoples.
- Special Projects Office developed three programs applicable to Community Networks:
  a. Barrios Populares (Popular Neighbourhoods) Program - not exclusive to Community Networks
  b. Roberto Arias Program for Community Networks
  c. ICT Hubs
- a. & b. operate via an open-ended Call for Projects.

b. Roberto Arias Program

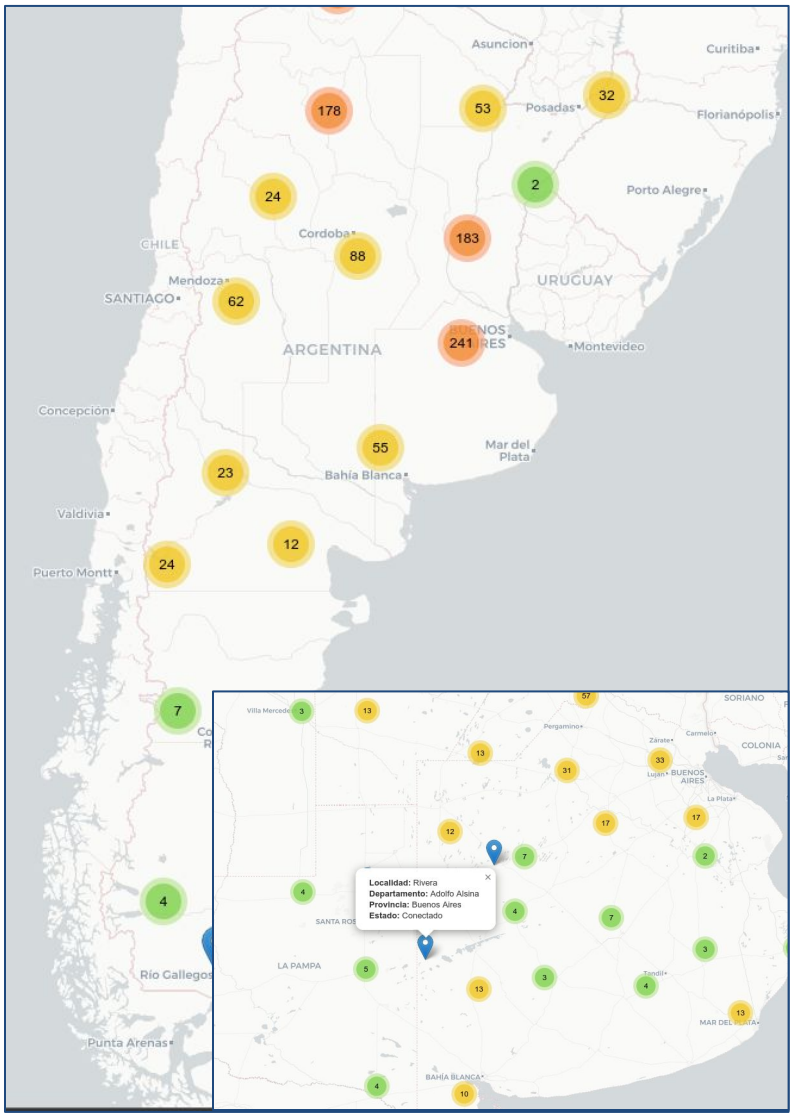
The Roberto Arias Program is an open call for projects that began in February 2021. It is intended to address the connectivity needs of rural and indigenous communities.
Priority is given those in national registries for Family-based Agriculture (ReNAF and ReNOAF) and for Indigenous Peoples (RENOPI / RENACI)
Established through a dialogue at Argentinian *Summit on Community Networks*
Funds only available to those holding a Community Networks licence or having applied for one.
Available for 2 years and with budget of 300 million pesos (~3 million USD)

b. Roberto Arias Program - Scope

- Available funding per project ranges from 300,000 ARS (30K USD) to a maximum of 10 million ARS (100K USD)
- Funds are available as non-refundable grants for projects of maximum 18 months may cover:
  - CAPEX: active and passive infrastructure, inclusive of the office equipment required to run the network;
  - Personnel for the installation, training and operation during the length of the project;
  - 6 months of upstream wholesale internet connection to help with the sustainability of the initiative;
  - Consultancy fees for efforts in crafting the application.
  - Project management fees (max 80,000 ARS)

b. Roberto Arias Program - Backhaul

- Where possible internet backhaul should be provided via ArSat the public backhaul company.
- A map of their Points of Presence in the National Fiber Network (REFEFO) is made available to facilitate design.
- REFEFO is similar to NOFBI)



https://carc.libre.org.ar/refefo/

b. Roberto Arias Program - Application

Application Requirements (in addition to Community Network license)

Administrative

a folder containing all the documentation required to perform due diligence of the organization.

Technical

a folder containing technical and financial aspects of the submission, including:

- map with planed connections and coverage
- diagrams of installations at each site
- bill of materials
- gantt chart of the planned activities
- project team.

All technical documents signed by a certified engineer.

Supporting documents

Any additional administrative and technical documentation relevant to the project, as may be requested by ENACOM

b. Roberto Arias Program - Phases

Phase 0

ENACOM takes 3 months or more to approve each project

On approval 30% of the funds are disbursed

Phase 1

Once those funds are reported and approved by ENACOM, 10 days later another 35% is disbursed.

Phase 2

Once those funds are reported and approved by ENACOM, 10 days later another 35% is disbursed.

Phase 3

Once all funds are spent and the project finished, a final report is submitted.

b. Roberto Arias Program - Progress

- As of Nov 2023, 11 applications have been approved

- Many more are coming thanks to project implemented by two APC members in Argentina: Altermundi and Nodo Tau, that are building the capacity and accompanying the project application for 16 communities.

More information

Details of the open call for projects:
https://enacom.gob.ar/multimedia/noticias/archivos/202106/archivo_20210625022117_4017.pdf

Website to Enacom's Roberto Arias Program where template for the administrative, technical and financial documents required are made available:
https://enacom.gob.ar/redes-comunitarias-roberto-arias_p5049#contenedorSite

a. Barrios Populares

- The Barrios Populares was created in June 2020 (call for projects opened in August 2020) to bridge the digital divide in barrios populares, also referred to as informal settlements, which are included in an official registry.
- Argentina has a national register for informal settlements with 5,687 entries. More than 1 million families (5.5 million people - 10% of the total population) without basic services and in precarious conditions. 60% of these people do not have connectivity.
- Try to go beyond MNOs as their connectivity doesn't quite solve the problem: FTTH, fixed wireless.

a. Barrios Populares (cont)

- The program has a budget of 5B ARS (~32 million USD)
- The amount available per project ranges in between the minimum of 300 thousand ARS (30K USD) and the maximum of 40 million ARS (400K USD) and it is open to all ICT licensees.
- When the applicant is a Community Networks licensee, special conditions are included so different costs, such as maintenance and 6 months of the upstream internet connection can be considered.
- The program has been running for 18 months

a. Barrios Populares - Impact

- 49 projects approved in 696 informal settlements
  - 27 by small ISPs
  - 12 by cooperatives
  - 6 by community networks (first time they access to funding)
  - 3 by state companies
- Awarded: ~4.3 billion ARS (USD 28 million) / Executed: ~2.1 billion ARS (USD 13.5 million)
- More than 225K families benefiting and 842 public spaces connected.

More information
Details of the open call for projects:
https://www.boletinoficial.gov.ar/detalleAviso/primera/234666/20200908

Website to Enacom's Barrios Populares Program:
https://enacom.gob.ar/programa-barrios-populares_p4615#contenedorSite

c. ICT Hubs

- Approved in July 2022 as a complement to the Roberto Arias program, as it is understood that not all communities will have the organizational capacity to apply and implement successfully projects under the other two programs
- 1 million ARS for 40 hubs in selected communities
- ArSat provides satellite connectivity to the ICT Hubs

Lessons Learned

- It was necessary to have a Community Network license so a program could be created to support them;
- Incentives matter: From 2 CN licenses in 2019 to 70 CN license today;
- The program over-delivered in urban areas (expected 300 informal settlements) but under-delivered in rural due to lower levels of organization;
- Community media (radio and television) played an important role as a platform to raise awareness; and,
- Capacity building and support throughout the process is essential, rural and excluded communities are unlikely to have the skill to produce the documents required.