NEW PARTNERSHIPS AND NEW TECHNOLOGIES IN DEPLOYING LAST MILE CONNECTIVITY IN GHANA
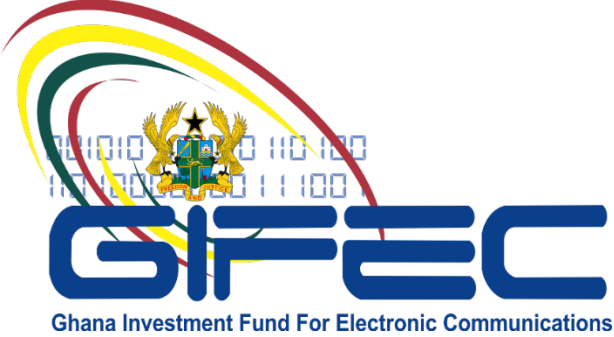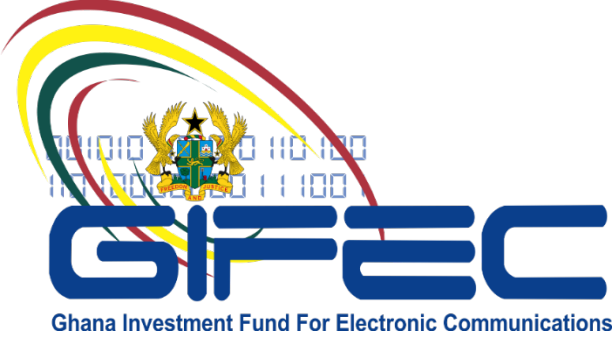
LESSONS AND OPPORTUNITIES

OUTLINE

- Overview of GIFEC & Partnership Objectives

- Our Projects _ Last Mile Solutions

- Some Lessons and Opportunities Innovation in Rural Coverage

- Way Forward

INTRODUCTION

- A universal Access Fund _ Ministry of Communications

- Against the backdrop of the Sustainable Development Goal (SDG) 17 and its impact on socio-economic development, GIFEC achknowledges the need to build strategic partnerships especially for Rural ICT development to achieve the Fund's objectives.

- Public-Private Partnerships (PPP) critical for accelerated connectivity in unserved and underserved communities.

OUR VISION

- *To innovatively manage a Universal Access Fund collaboratively with stakeholders to achieve Universal access through the use of ICTs in Ghana*
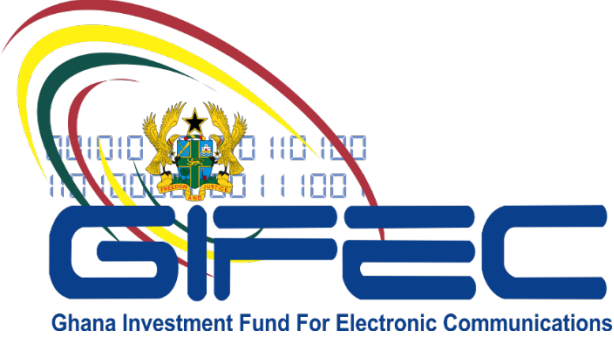
OUR MISSION

- *To facilitate the provision of Universal Access to all persons through the use of affordable Information and Communications Technology for Socio-economic development.*
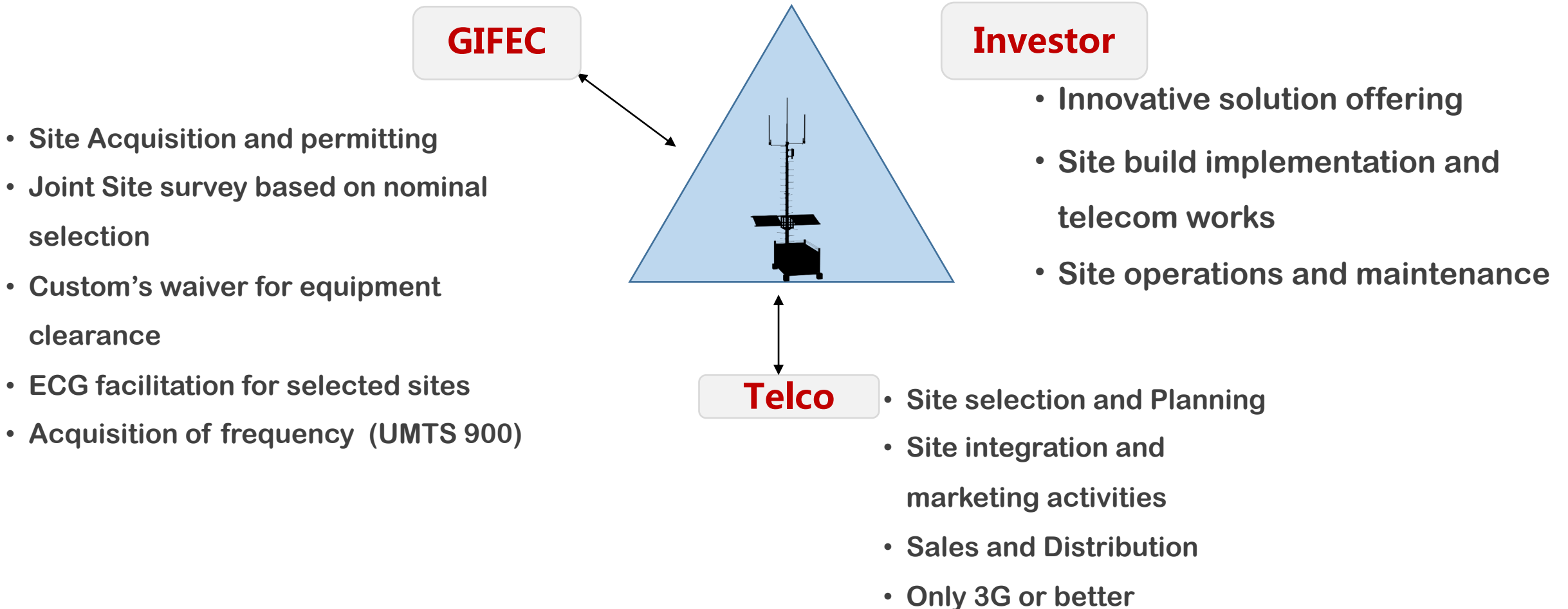
PARTNERSHIPS

❖ GIFEC has established significant partnerships with both public and private Stakeholders in its quest to fulfill its mandate.

❖ These partnerships are key enablers for GIFEC to meet global challenges and generate sustainable change and long-lasting impact in the underserved communities.

❖ These partnerships are also firmly embedded in GIFEC's way of working at global, regional and national levels.

❖ As partners, we leveraged on our resources, expertise and competencies to promote the Fund's principles and values to achieve common development goals, and to strengthen visibility and impact of its action.

PARTNERSHIPS
GIFEC-TELCO-INVESTOR
TRIPARTITE PARTNERSHIP MODEL

GIFEC

Investor

Telco

- Site Acquisition and permitting
- Joint Site survey based on nominal selection
- Custom's waiver for equipment clearance
- ECG facilitation for selected sites
- Acquisition of frequency (UMTS 900)

- Innovative solution offering
- Site build implementation and telecom works
- Site operations and maintenance

- Site selection and Planning
- Site integration and marketing activities
- Sales and Distribution
- Only 3G or better

THE RURAL STAR SOLUTION

- The Rural Star solution provides an energy efficient and economical solution to connectivity problems.

- It allows rural networks to provide cost-effective mobile broadband services as well as traditional voice services in remote areas.

- This solution combines Relay Remote Node (RRN) wireless backhaul, a simple pole tower, and a green solar energy.

- It also supports multiple RATs, multiple frequency bands, and multi-level cascading

COMPARISON OF RURAL STAR AND OTHER TECHNOLOGIES

	Rural Star	Macro Site	Satellite Site
Cost of Tower	Very Low	Very High	High
Cost of Backhauling	Very Low	High	Very High
CAPEX	Very Low	Very High	High
OPEX	Very Low	High	Very High
Capacity	High	Very High	Very Low
QoS	Good	Very Good	Average
Time to Deploy	Very Short	Long	Short
Power Source	Solar	Grid	Solar

GIFEC
Ghana Investment Fund For Electronic Communications

SMART COMMUNITY PROJECT (Partnership with "BLUETOWN")

❖ The "Smart Community Project" is a project designed to provide affordable/free WIFI internet service to connect the unserved or underserved communities across the country.

❖ The Smart Community is a base/access point for providing all other broadband services to these communities including but not limited to Digital for Inclusion (D4I), Content, entertainment, e-Services (eUtilities, eTransform, eHealth, eLearning, ePolice, eAdministration etc.)

OBJECTIVES OF THE SMART COMMUNITY PROJECT

❖Provision of affordable Broadband connectivity

❖Creation of inclusive societies

❖Improvement in Financial Inclusion

❖Creation of Employment opportunities

AERIAL FIBER FOR BROADBAND SERVICES

❖ This is a project designed to leverage on the value of existing planned investments in infrastructure of utility service providers, ISPs and MNOs to extend broadband internet via fiber optic cables to unserved/underserved communities across the country.

❖ The project also seeks to provide all other broadband services, improve universal access to telecommunications in the selected communities and allow utility companies and MNOs, ISPs etc. to leverage on the system for their services.

AERIAL FIBER (Cont.)

- The project is set to last for a maximum duration of **five (5) years** for a total fiber optic length of **5000km** to be deployed to provide aerial fiber broadband solutions. An estimated length of **1000km** of aerial fiber will be deployed each year. Priority will be given sites or beneficiary communities not more than 20km from an existing fiber point.

- **The adoption of Aerial Fiber solution to provide broadband service is highly due to its low cost of deployment and fast implementation period**. Thus, this will be achieved by leveraging on the value of existing planned investments in infrastructure of utility service providers.

Implementing model for Aerial fiber project.
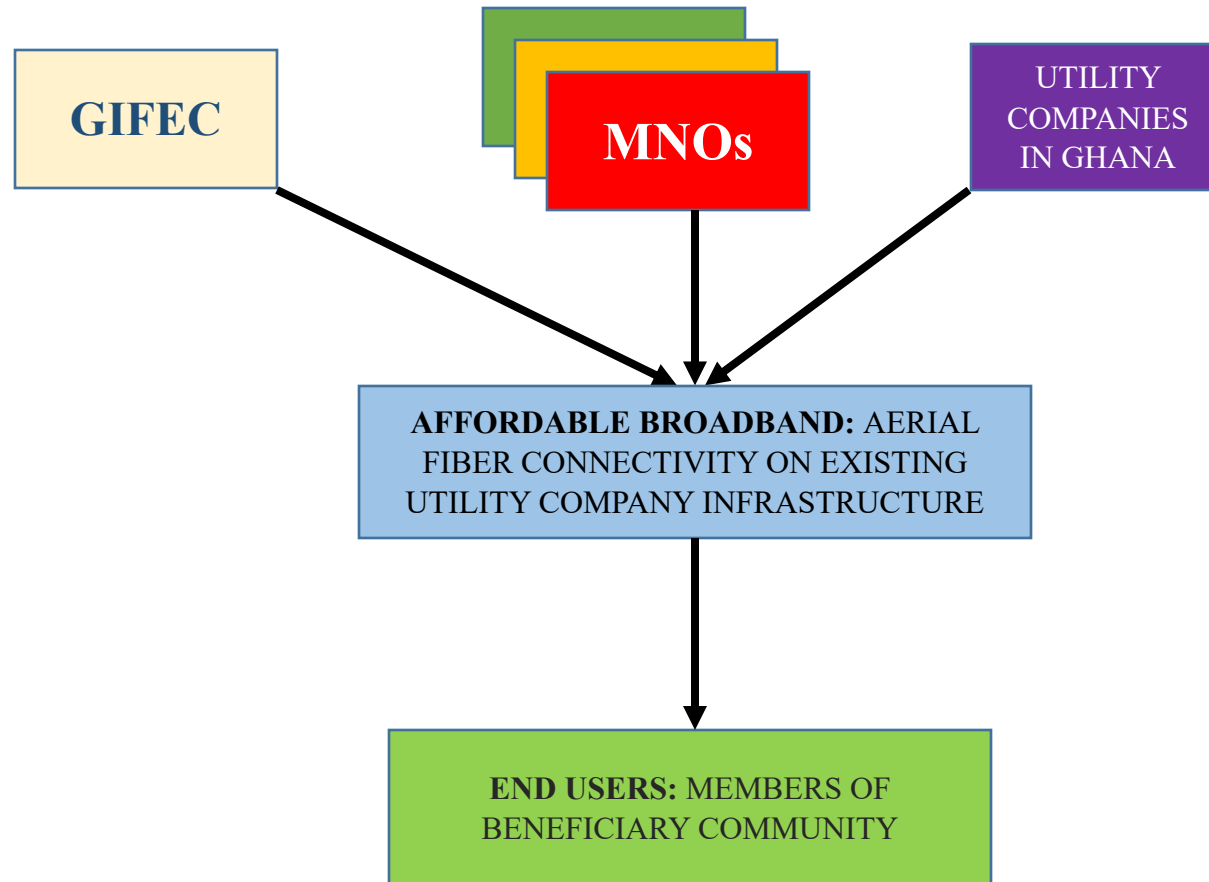
The table below shows a comparison between Aerial Fiber and Underground Fiber deployments.

Description	Aerial Fiber Deployment	Underground Fiber Deployment
Construction Costs	Very Low	Very High
Cost Of Fiber	Low	High
Time to deployment	Fast Deployment	Very Slow
Existing Infrastructure	Yes	No. Ducts
State Laws	Permits required from Utility Companies	Permits required from many entities
Local Influences	No	High
Destruction Of Services	Low	Very High

IMPACT OF PPP ON THE DIGITIZATION EFFORTS

GIFEC from 2007-2016 built 107 RTP sites that is average of 10 per year.

- **2017 – 185** RTP sites were built, commissioned and activated

- **2018 – 200** sites were built, commissioned and activated

- **2019 – 200** sites are being constructed

- **2020 – 2, 016** to be constructed

3 million communities have been covered through the PPP arrangements

- Policy framework.
  - The policy goal in areas that remain unserved is to create a business case that will encourage ISPs to build or extend service to areas where the costs of deployment are high.
- Funding and operations
  - Less cost on investment due to cost sharing
- Planning and capacity building
  - communities have the knowledge and tools to use it to support their economic development or other goals
- Program evaluation and evolution
  - Evidence that communities are leveraging network investments to make their economies stronger
- Stakeholder outreach and engagement
  - To avoid duplication of efforts and co- location

MNOs

THE DIGITIZATION EFFORTS – *Way Forward*

1. Provide affordable and reliable services

2. To collaborative with GIFEC to improve broadband infrastructure and services to the Rural Ghana

NCA

1.To make regulations that favour Rural broadband deployment.

2.Support the new technology for the Rural communities

Partners

To provide funding, new technologies and sustainable management of the deployed services to the Rural Ghana