Financing of Electronic Communications Infrastructure

WATRA Working Group on Infrastructure Development

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1 Introduction

Electronic communications infrastructure constitutes a critical foundation for economic growth, technological innovation, and inclusive access to essential digital services, including e-education, telemedicine, and digital financial services.

Despite its strategic importance, infrastructure deployment across WATRA Member States remains constrained by significant financing challenges. Internet penetration in Sub-Saharan Africa remains relatively low at approximately 29% (GSMA, 2023), while nearly half of rural populations lack reliable connectivity (ITU, 2022). These gaps underscore the urgency of scaling investment in resilient and inclusive digital infrastructure.

There is therefore a compelling need to harmonise policies and regulatory frameworks across the electronic communications sector to create a predictable and transparent environment that attracts investments.

2 Key Financing Challenges

The following key challenges continue to hinder infrastructure financing in West Africa:

2.1 High Capital Expenditure

Deployment of telecommunications infrastructure requires substantial upfront investment. Experiences within WATRA members states indicate that the cost of terrestrial fibre optic deployment for example is typically estimated above **USD 10,000 per kilometre**, depending on terrain, security conditions, and logistical constraints.

Additional infrastructure components such as submarine cables, data centres, and 4G/5G base stations, are similarly capital-intensive, creating high barriers to entry and expansion.

2.2 Geographic and Economic Inequalities

Rural and sparsely populated areas are often deemed commercially non-viable, resulting in limited private sector investment and a persistent digital divide between urban and rural regions.

2.3 Sustainability of Economic Models

Financing requirements extend beyond initial deployment to include ongoing operational costs such as maintenance, network upgrades (including transition to 5G and cloud-based systems), and compliance with environmental and energy efficiency standards. Ensuring long-term financial sustainability remains a key challenge.

3 Sources of Financing

3.1 Public Sector Financing

Governments play a central role, particularly in underserved areas where commercial returns are limited. Public financing mechanisms include:

- Direct budgetary allocations and targeted subsidies;
- Strategic national broadband and digital infrastructure programmes;
- Universal Service and Access Funds (USAFs);
- Sovereign and special-purpose funds.

Notable examples include Nigeria's mobilisation of approximately USD 70 million for rural connectivity initiatives and Côte d'Ivoire's universal service framework implemented through its national agency.

3.2 Private Sector and Public-Private Partnerships (PPPs)

The private sector, including telecommunications operators, infrastructure companies, and institutional investors, remains a primary driver of infrastructure investment. Financing mechanisms include:

- Build-Operate-Transfer (BOT) models;
- Concessions and joint ventures;
- Leasing arrangements and co-investment models;
- Infrastructure sharing frameworks (passive and active).

Public-Private Partnerships (PPPs) are particularly effective in enabling risk-sharing, accelerating deployment, and improving cost efficiency. Infrastructure sharing, in particular, has demonstrated strong potential to reduce capital expenditure and extend coverage in low-density areas.

3.3 International Development Partners

Multilateral and bilateral development institutions play a critical catalytic role through:

- Concessional financing and co-financing arrangements;

- Loan guarantees and risk mitigation instruments;
- Technical assistance and regulatory support.

Key partners include the World Bank, African Development Bank (AfDB), International Finance Corporation (IFC), Agence Française de Développement (AFD), and other development finance institutions, which have supported regional backbone and cross-border connectivity projects.

3.4 Innovative Financing Mechanisms

Emerging financing models are gaining traction and offer additional opportunities for resource mobilisation:

- Digital and infrastructure bonds;
- Green financing linked to renewable energy-powered telecom infrastructure;
- Blended finance structures;
- Community-based financing and crowdfunding initiatives.

These mechanisms can complement traditional financing sources and support scalable, sustainable infrastructure development.

4 Recommendations

To attract sustainable and scalable financing for electronic communications infrastructure, WATRA Member States are advised to consider the following measures:

a. **Promote Regulatory Harmonisation**

   Align national policies and regulatory frameworks to reduce uncertainty, facilitate cross-border investments, and create a unified regional investment climate.

b. **Strengthen Infrastructure Sharing Frameworks**

   Encourage both passive and active infrastructure sharing to reduce costs, optimise resource utilisation, and accelerate network expansion, particularly in underserved areas.

c. **Enhance Public-Private Partnership (PPP) Frameworks**

   Develop clear, transparent, and bankable PPP frameworks to attract private capital and ensure effective risk allocation.

d. **Mobilise Diverse Funding Sources**

   Expand the range of financing instruments, including development finance, sovereign funds, and innovative mechanisms such as digital and green bonds.

e. **Optimise Use of Universal Service Funds**

   Improve governance, transparency, and efficiency in the utilisation of Universal Service and Access Funds to ensure targeted and impactful investments.

f. **Prioritise Digital Infrastructure in National Development Plans**

   Integrate digital infrastructure financing into national and regional development strategies, recognising its role as a key economic enabler.

g. **Strengthen Governance and Transparency**

Enhance institutional frameworks to improve accountability, reduce investment risks, and build investor confidence.

h. **Invest in Capacity Building and Research**

Support skills development, technical expertise, and academic research to strengthen the region's ability to design, implement, and manage complex infrastructure projects.