Key enablers to Rural Coverage Expansion:
Regulatory & Policy Considerations

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About the GSMA

THE GSMA WAS FOUNDED IN 1987

15 OFFICES WORLDWIDE

SHANGHAI • SAN FRANCISCO • BEIJING • SAO PAULO • NAIROBI • NEW DELHI

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Connecting Everyone and Everything to a #BetterFuture

The mobile industry is the first to formally commit to the UN Sustainable Development Goals

The GSMA represents the interests of mobile operators worldwide

MORE THAN 750 MOBILE OPERATORS

WITH OVER 350 COMPANIES in the broader mobile ecosystem

The world's leading mobile industry events, MWC Barcelona, MWC Shanghai and MWC Americas, together attract nearly

192,000 people from across the globe each year

The GSMA works to deliver a regulatory environment that creates value for consumers by engaging regularly with:

MINISTRIES OF TELECOMS

TELECOMS REGULATORY AUTHORITIES

INTERNATIONAL & NON-GOVERNMENTAL ORGANISATIONS

CONNECTING 23,000+ Industry Experts

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GSMA Working Groups provide frameworks and standards in commercial, operational and technical matters that help maintain and advance mobile industry ecosystems
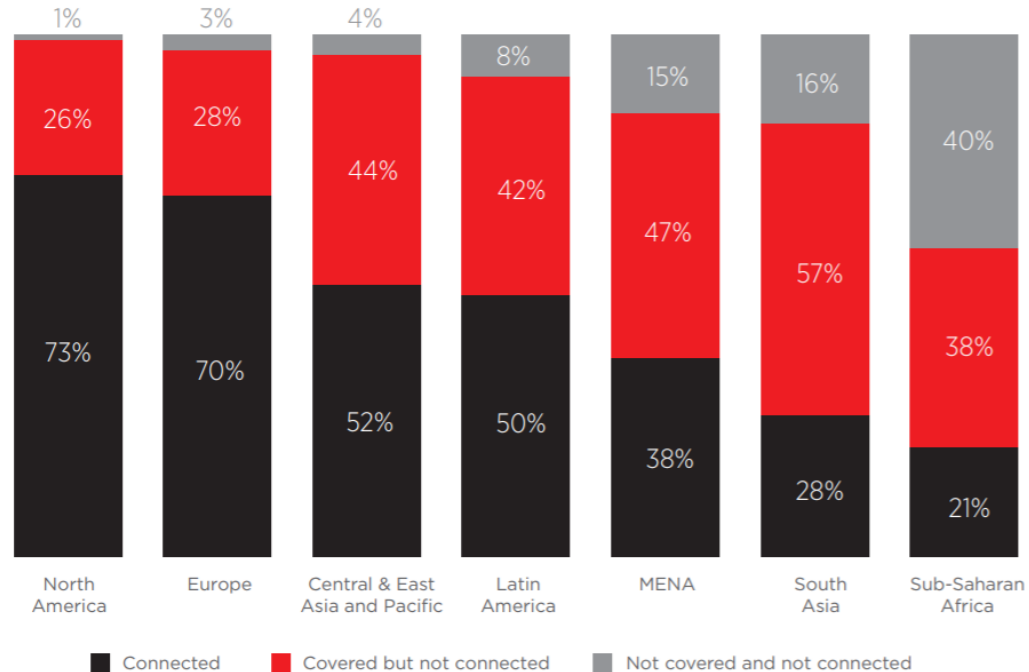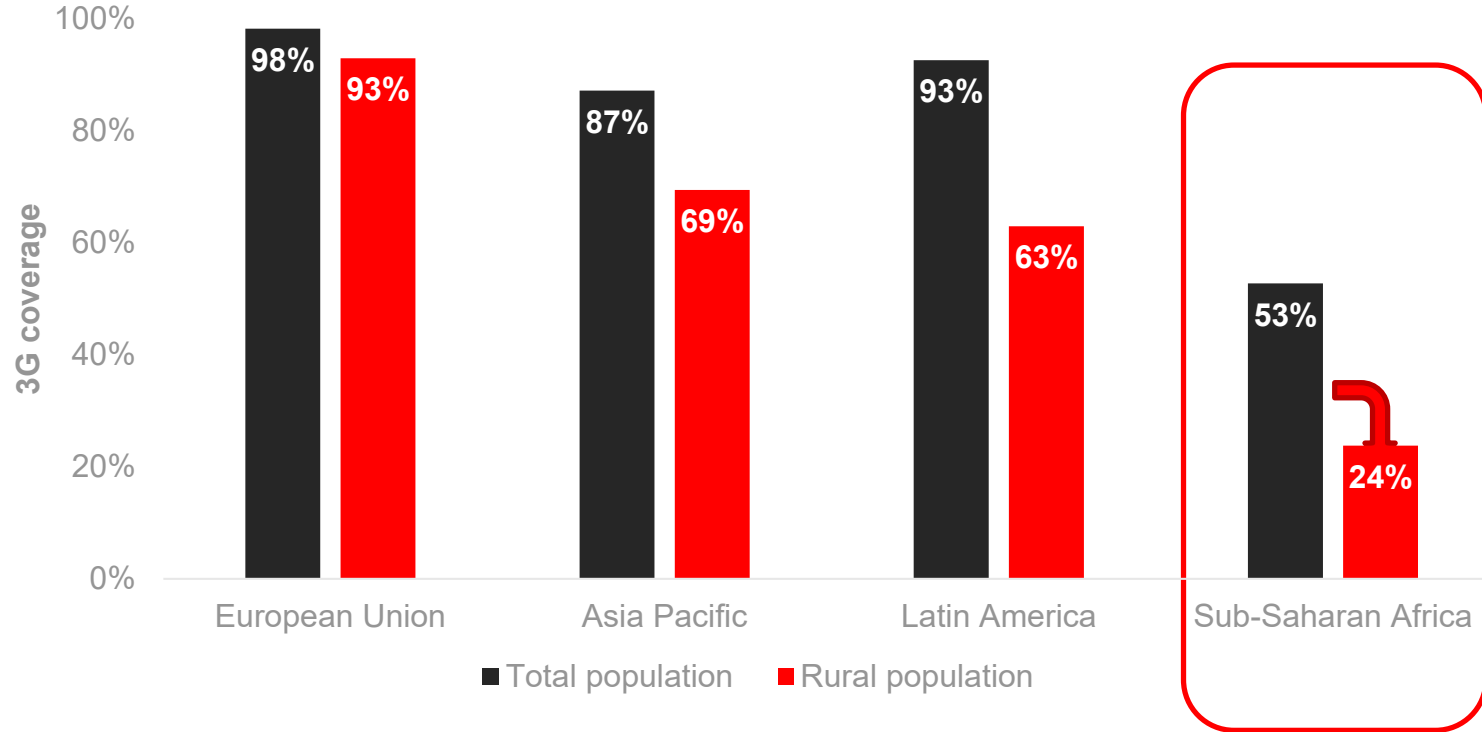
8.7 bn+ MOBILE CONNECTIONS WORLDWIDE

In Sub-Saharan Africa the number one barrier for connectivity is the 40% of uncovered population

Source: GSMA Mobile Connectivity Index 2018

Lack of coverage is more acute in rural areas

3G coverage

	European Union	Asia Pacific	Latin America	Sub-Saharan Africa
Total population	98%	87%	93%	53%
Rural population	93%	69%	63%	24%

■ Total population ■ Rural population

Source: GSMA 2017

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Factors impacting service extension in uncovered areas

Lack of basic infrastructure

Difficult Terrain

Low levels of literacy

Low Population Density

Low Per Capita Income

Unfit Spectrum Policy
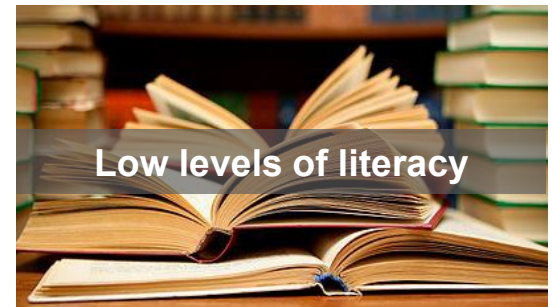
These factors have negative implications for the business case in rural areas

FACT #1

1.3x more
Required **CAPEX** per site
Remote site vs urban site

FACT #2

2x more
Required **OPEX** per site
Remote site vs urban site

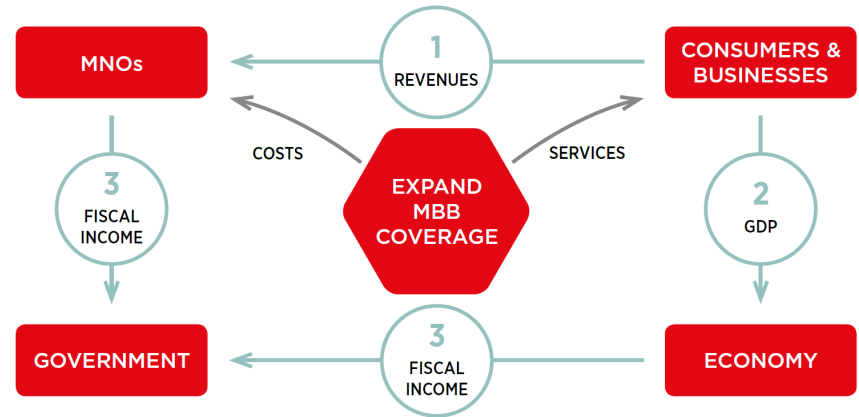**FACT #3**

10x less Revenues per site
Remote site vs urban site

But Improving connectivity is key to supporting the economic growth in emerging economies

➢ New Services

➢ New Jobs

➢ New Business Opportunities

➢ Better Integration at National Level

➢ GDP growth

➢ Increased Direct and Indirect Fiscal Income

+10% MBB Adoption = +1.4% GDP growth

MNOs

CONSUMERS & BUSINESSES

1 REVENUES

COSTS

SERVICES

EXPAND MBB COVERAGE

3 FISCAL INCOME

2 GDP

GOVERNMENT

3 FISCAL INCOME

ECONOMY

A purpose-built regulatory and policy framework is needed to help bridge the coverage gap

Components of an investment-friendly Framework

| Infrastructure sharing | Spectrum policy | Administrative efficiency | Cross-sector deployment coordination | Regulatory governance |

Infrastructure sharing

Coherent regulatory framework

- Regulatory governance
- Cross-sector deployment coordination
- Administrative efficiency at local level
- Spectrum policy
- Infrastructure sharing

- Infrastructure sharing allows mobile operators to decrease the costs and risk of covering rural areas.

- Active and passive infrastructure sharing should be allowed under primary legislation and encouraged by regulators on a **voluntary basis**.

Element of network shared	Passive sharing	MORAN	MOCN	Roaming
Site + mast	X	X	X	X
Power	X	X	X	X
Antennas + BTS + RNC + Backhaul		X	X	X
Spectrum			X	X

Spectrum policy

Coherent regulatory framework

- Regulatory governance
- Cross-sector deployment coordination
- Administrative efficiency at local level
- Spectrum policy
- Infrastructure sharing

- A spectrum policy that facilitates rural coverage must:
  - ➤ Release sufficient spectrum below 1 GHz.
  - ➤ Follow an established roadmap.
  - ➤ Facilitate secondary spectrum markets.
  - ➤ Use technology-neutral licences.
  - ➤ Adopt a Universal-access-friendly spectrum pricing policy.
  - ➤ Review Backhaul Spectrum pricing and licensing practices.

Administrative Efficiency

Coherent regulatory framework

- Regulatory governance
- Cross-sector deployment coordination
- Administrative efficiency at local level
- Spectrum policy
- Infrastructure sharing

- Local authorities play an important role in facilitating the deployment of mobile infrastructure.

- National authorities should play an active role in homogenising the processes across municipalities.

- Four priority areas of work:
  - Planning regulations.
  - Health and safety regulation (exposure to RF radiation).
  - BTS deployment permit procedures.
  - Rules for access to land and public infrastructure.

Cross sector deployment coordination

Coherent regulatory framework

- Regulatory governance
- Cross-sector deployment coordination
- Administrative efficiency at local level
- Spectrum policy
- Infrastructure sharing

- Coordination across different sectors aids in the reduction of the costs of deploying mobile infrastructure in rural areas.

- Considerations to facilitate coordination:
  - Creating a single point of information for granting permits
  - Promoting initiatives to map infrastructure
  - Enforcing advance notification of civil works for infrastructure deployment (roads, sanitation, energy, telecom).

Regulatory Governance

Coherent regulatory framework

- Regulatory governance
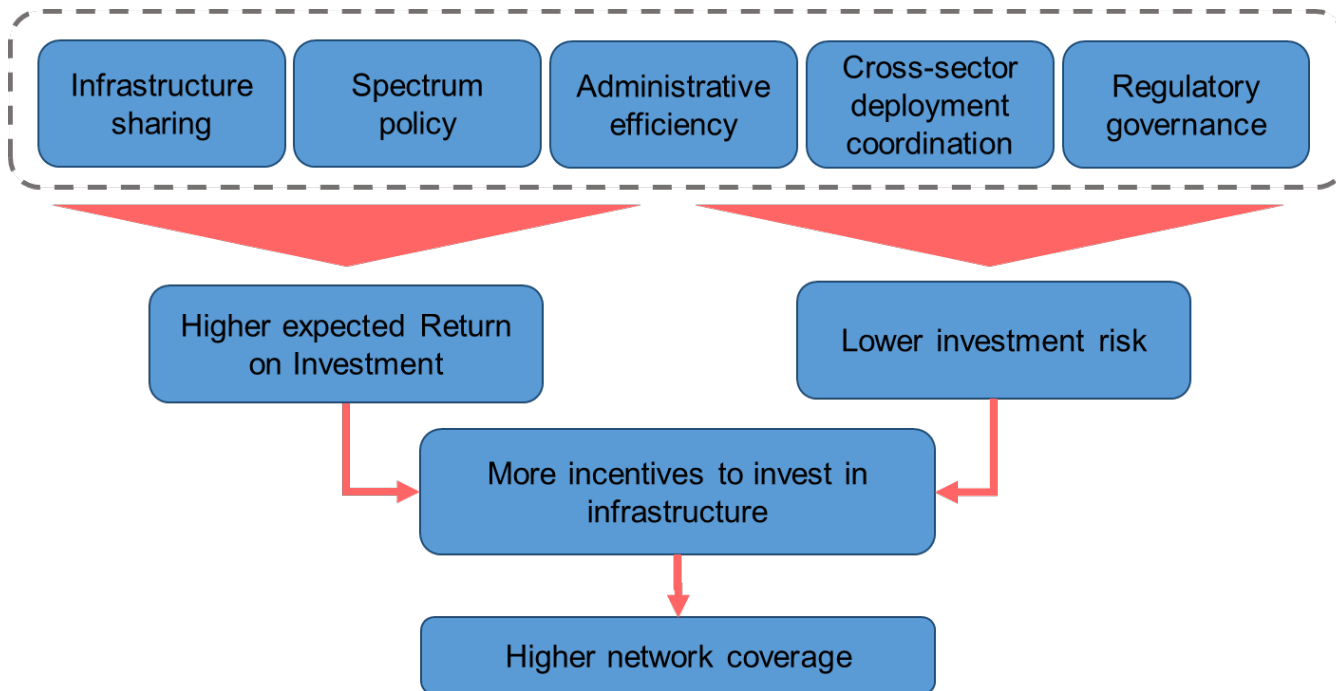- Cross-sector deployment coordination
- Administrative efficiency at local level
- Spectrum policy
- Infrastructure sharing

- Predictable and consistent regulation is crucial to giving operators the confidence to make long-term investments in rural areas.

- Ensuring consistency and predictability requires an independent regulator focused on long-term objectives.

- Regulator independence
  - Institutional
  - Functional
  - Hierarchical
  - Financial

An investment-friendly regulatory framework will boost coverage

Infrastructure sharing | Spectrum policy | Administrative efficiency | Cross-sector deployment coordination | Regulatory governance

Higher expected Return on Investment

Lower investment risk

More incentives to invest in infrastructure

Higher network coverage

In summary

- Sub-Saharan Africa requires large investments to bring Mobile broadband to rural communities.

- Mobile operators are already investing in Infrastructure sharing agreements in rural areas and innovative cost-reducing technology. But they can invest more.

- Making these investments will rely on having an investment-friendly regulatory framework that provides certainty of reasonable returns over the long-term.

- Closing the digital divide in Sub-Saharan Africa depends on the capacity of governments to make the required adjustments and create a regulatory framework aligned with their digital objectives.

Thank You

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