Solutions for Youth Employment (S4YE)

How Innovative Ways To Expand Broadband Connectivity Can Create Youth Employment Opportunities

March 5,2020| 9:30 – 11:30am ET| WebEx

Welcome & Introductions

Namita Datta
Coalition Manager, S4YE

Solutions for Youth Employment (S4YE)
A Multi-stakeholder Coalition in the World Bank Group

S4YE is a vibrant multi-stakeholder coalition based in the <u>World Bank Group</u> that brings together **public sector, private sector, civil society actors and youth themselves** and aims to provide leadership and resources for catalytic action to increase the number of young people engaged in productive work.

S4YE is a part of the World Bank Multi Donor Trust Fund with:

NORWEGIAN MINISTRY OF FOREIGN AFFAIRS

AUSTRIAN DEVELOPMENT AGENCY

BMF FEDERAL MINISTRY OF FINANCE

Federal Ministry for Economic Cooperation and Development

Department for International Development

Sida SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY

S4YE Private Sector Advisory Council
A Growing Network of Private Sector Companies

Promote peer to peer learning , sharing ideas and best practices

Combine the strengths of private sector (innovation, growth) with that of World Bank (scale, technical expertise, policy dialogue)

Facilitate deeper engagement and partnership between the private sector and the World Bank on major corporate initiatives

'Insights from the Private Sector' Series
Facilitates dialogue between youth employment practitioners and private sector companies

❖ **Launched monthly webinar series last year to highlight lessons from youth focused <u>private sector led</u> initiatives**

❖ **Audience includes colleagues at the World Bank Group and S4YE's partner network (***150 WB youth employment projects, 44 innovative youth employment projects, 35 private sector companies, other bilateral donors, governments and foundations***)**

❖ **Opportunity for the S4YE community to share experiences, ask questions and learn from each other**

❖ **Please let us know if you would like to be featured next!**

Georges V. Houngbonon

International Finance Corporation (IFC)

- A member of the World Bank Group

- Provides investment, advice, resource mobilization

- AAA credit rating; owned by 184 countries

- Present in nearly 100 countries

- Invested and mobilized $19 billion in FY19

IFC is the largest global development institution focused on the private sector in emerging markets.

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IFC invests in digital infrastructure and technology to support connectivity in Emerging Markets

Broadband infrastructure

| Submarine cables | Satellites | Terrestrial networks | Telecom towers | Mobile operators |

Technology

| Data Centers | Mobile phones |

Significant employment opportunities, but often hard to track

Employment opportunities from connectivity may appear limited

- **Typical mobile operator in EM employs 1,000 - 10,000 workers (GSMA)**
- **Direct jobs per million dollar invested is typically much smaller than in other sectors (e.g. retail, manufacture)**
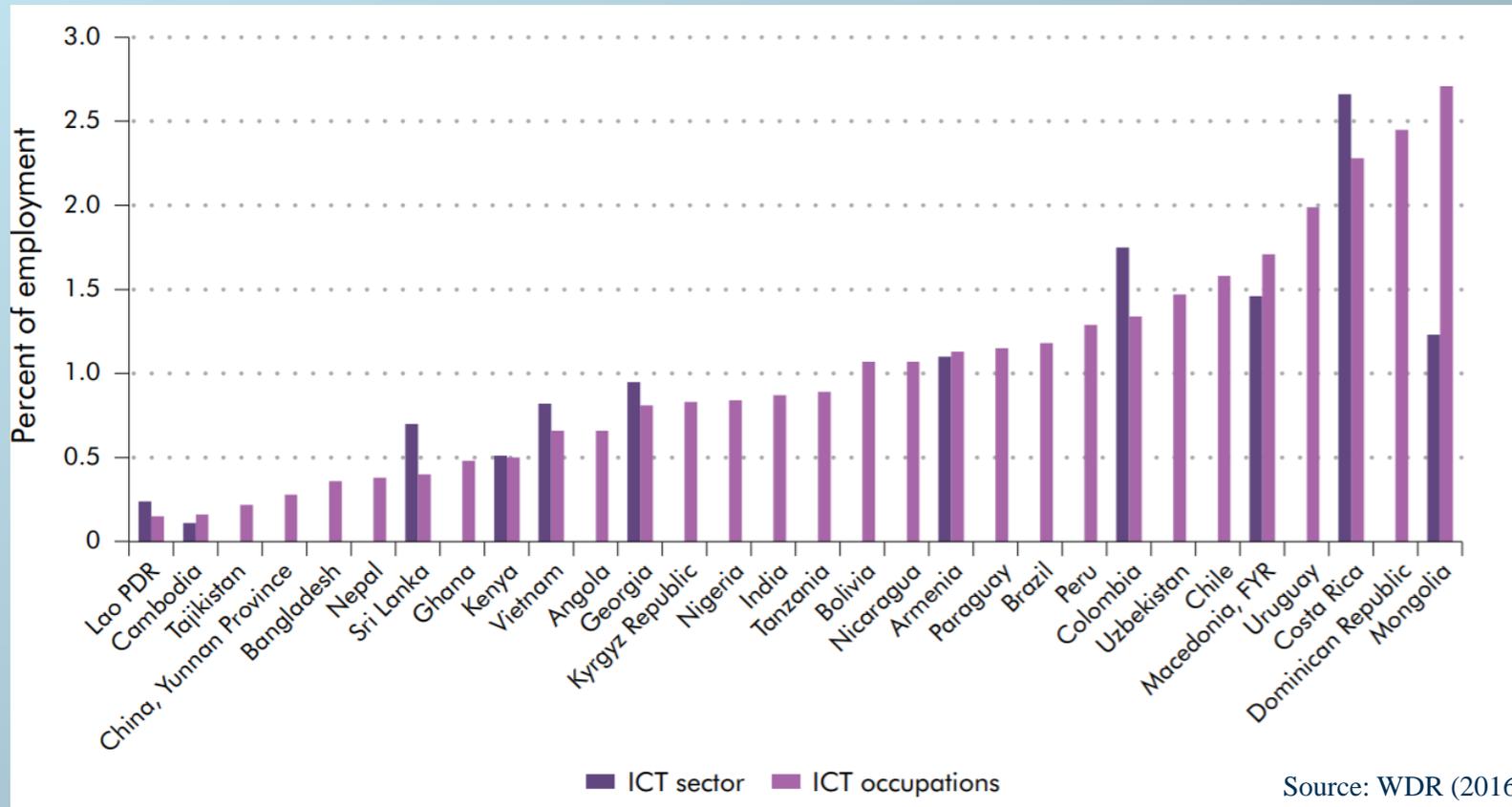
Source: WDR (2016)

More indirect employment opportunities

- **Recent studies suggest large employment opportunities: Increased connectivity from the arrival of submarine cables on African coasts (Hjort & Poulsen, 2019):**
  - **Employment rate increased by 2-8 percentage points**
  - **Opportunities across all levels of education**
  - **Stemming from increased entry of firms, improved productivity and higher exports**

- **Internal IFC's estimates suggest that indirect jobs may represent 10-20 times the number of direct jobs**

- **Number of full-time equivalent jobs often surpasses employment opportunities from traditional sectors**

Sources of employment opportunities

Outsourcing: construction and maintenance	**Entrepreneurship in urban 'informal' ICT sector**	**Entrepreneurship across verticals in rural areas**

Outsourcing: enabling effects for other industries

Broadband infrastructure sharing through independent operators

Terrestrial networks: CSquared and Liquid Telecom in AFR

Submarine cables: WIOCC, ACE in AFR, Dhiraagu in Maldives

Towers: IHS and Helios Tower in AFR, Phoenix in LAC and E.co in APAC

Outsourcing: enabling effects for other industries

Energy provision and manufacturing of equipment and devices

Telecom operators are one of the largest consumer of energy

manufacturing of smartphones: China, Indonesia, Rwanda (Mara Group)

Entrepreneurship in urban informal ICT sector

Innovative business models create new markets

Airtime distribution through informal retailers

Internet access through Cybercafes

Sales and refurbishing of used phones (Cashify in India, AiHuishou in China)

Entrepreneurship in urban informal ICT sector

Pay-as-you-go/prepaid pricing → Reduced cost of entry and improved productivity for MSMEs

3 million new jobs from digital platforms (e-delivery, ride-hailing, …) in Africa by 2025

Facebook, WhatsApp as advertising platforms, supply chain management

Entrepreneurship across verticals in rural areas

Bundling of access to energy and digital connectivity

Increased digital connectivity

Opportunities for maintenance

Mobile phone recharging

Entrepreneurship across verticals in rural areas

Decentralized power systems for mobile towers

Increased availability of connectivity in rural areas

Opportunities for new economic activities that rely on power

More broadly, empirical evidence from EM suggest positive impact of connectivity on employment: Klonner & Nolen (2010) find that employment increases by 15% when a SA's region is covered by a mobile network, mainly due to increased employment for women

Questions?

Todd Cotts

Intelsat

The Future Begins Here

Todd Cotts | Intelsat, Networks

March 5, 2020

-43.4668°

170.1882°

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"Our children are the rock on which our future will be built, our greatest asset as a nation. They will be the leaders of our country, the creators of our national wealth who care for and protect our people."
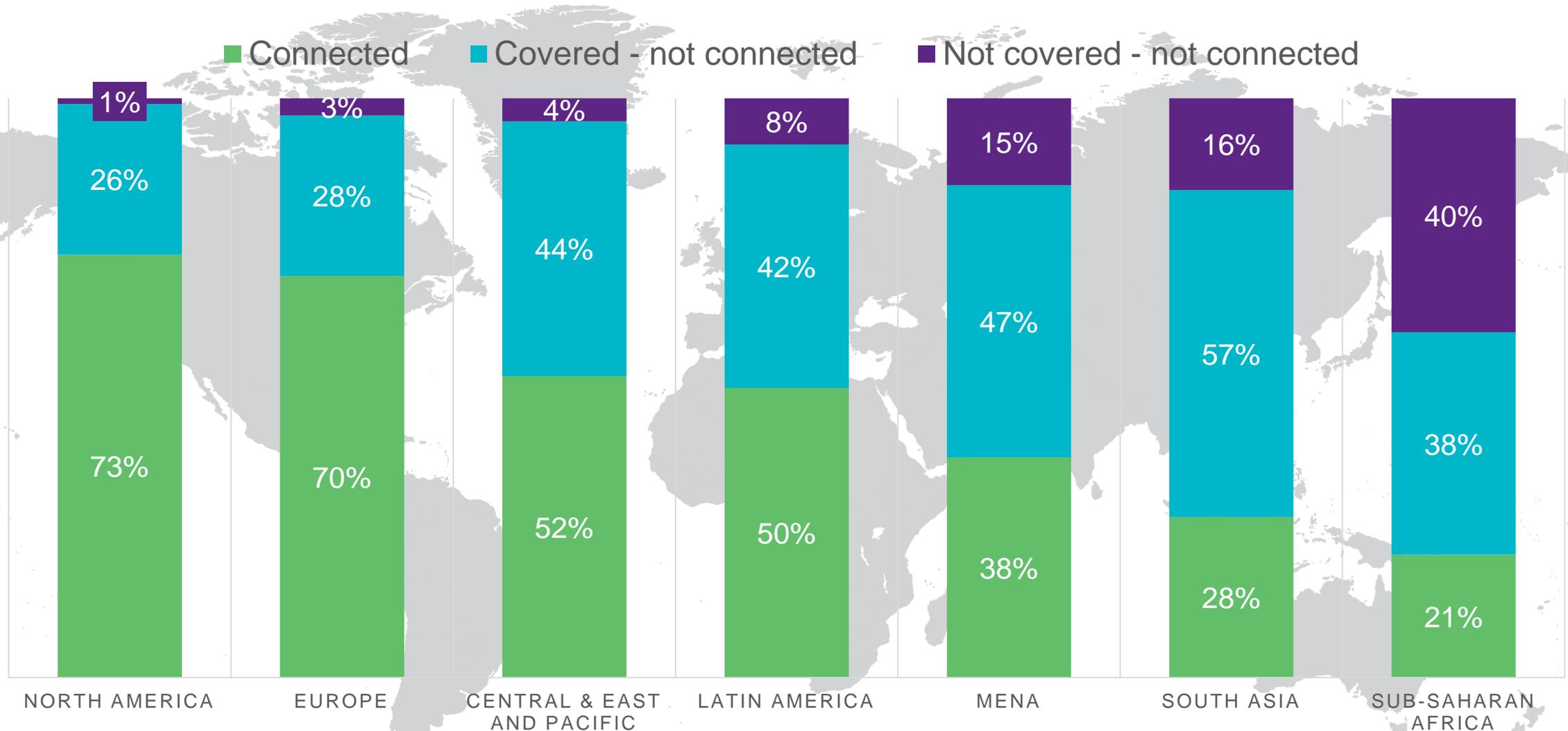
Nelson Mandela, 3 June 1995
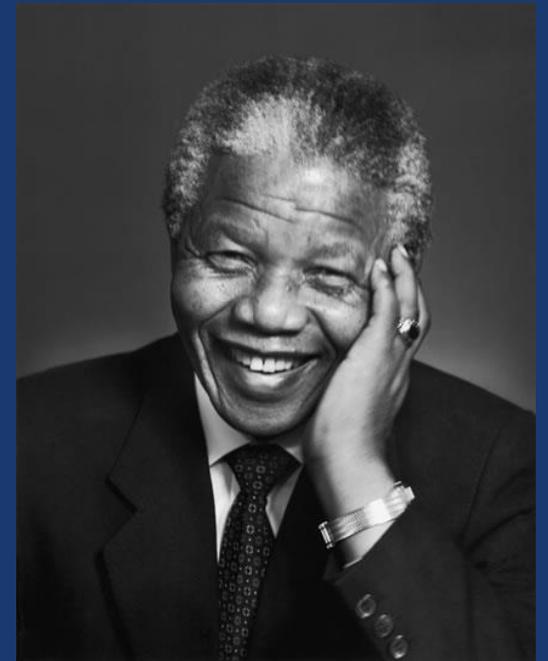
The Connectivity Gap

The world's unconnected youth

Not Covered – Not Connected

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Legend: ■ Connected ■ Covered - not connected ■ Not covered - not connected

Region	Connected	Covered - not connected	Not covered - not connected
NORTH AMERICA	73%	26%	1%
EUROPE	70%	28%	3%
CENTRAL & EAST AND PACIFIC	52%	44%	4%
LATIN AMERICA	50%	42%	8%
MENA	38%	47%	15%
SOUTH ASIA	28%	57%	16%
SUB-SAHARAN AFRICA	21%	38%	40%

**60%**

of the world's unconnected live in rural areas

The Rural Dilemma

- Nearly two-thirds of unconnected communities worldwide are in rural areas.

- Many of these rural areas are 3 or more hours from the nearest urban center where people must travel in order to have access to connectivity.

- This means most people in rural areas remain unconnected, especially women and children.
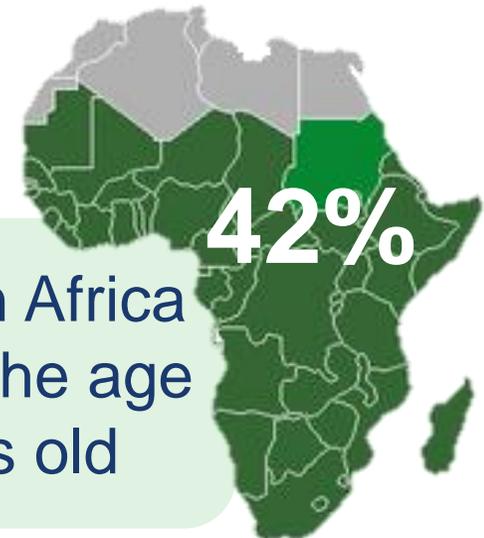
The World's Unconnected Youth

~346 Million Youth ages 15-24 are not online
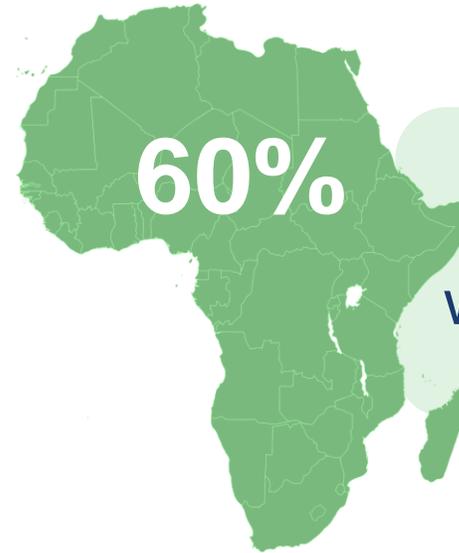
60% Unconnected youth worldwide live in Africa
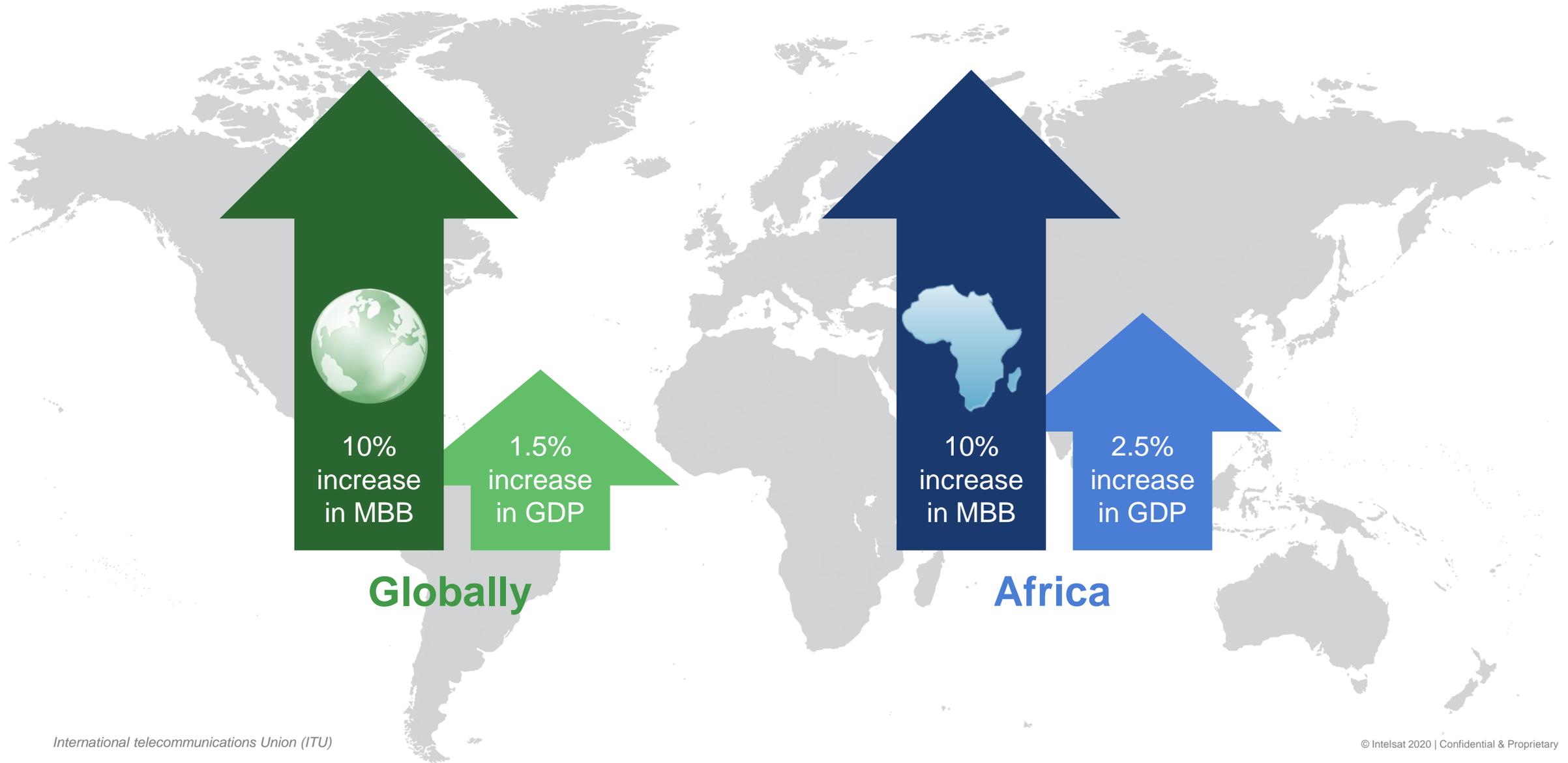
40% Population in sub-Saharan Africa without access to 3G or 4G coverage, mostly in rural areas

42% Sub-Saharan Africa youth under the age of 15 years old

GDP Growth from Mobile Broadband

10% increase in MBB — 1.5% increase in GDP — **Globally**

10% increase in MBB — 2.5% increase in GDP — **Africa**

Solving the Connectivity Gap

Connecting unconnected communities

Barriers to Connectivity

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Cost to Build Out
High cost of terrestrial backhaul over long distances and challenging terrain.

Return-on-Investment
Low or slow return on investment in rural, sparsely populated areas.

Geographic Feasibility
Topographical obstacles, including mountains, rivers and valleys.

"Several technology options exist for backhaul of RAN (e.g., fiber, microwave, and satellite). Of these options, only satellite technology is suitable from either a cost or practicality standpoint for use in deploying wireless access networks in hard-to-serve areas such as rural communities."

F r o s t   &   S u l l i v a n | M a r k e t   I n s i g h t

Space-based Managed Backhaul

INTELSAT

Geo-stationary constellation covers 99% of world's populated areas.

Distance and topography are not constraints or factors of cost.

Expand the possibilities of your network planning – connect your network.

$

Single pool of capacity supports multiple applications across the entire network
No distance, topography, or line-of-sight constraints, and can support 10, 100, or 1000s of sites

Intelsat's high-performing managed backhaul service enables you to quickly and economically connect your network in new ways and places you haven't been able to before.

Intelsat's high-performing connectivity covering 99% of the world's populated areas

Dynamic allocation of bandwidth across network of sites for economical and efficient use of capacity

Network design by expert engineers plus 24x7 support

Managed backhaul service supporting 4G and 5G deployments

MNO Core

Internet

Very Small Aperture Terminals (VSAT)

Secure IntelsatOne data center and global fiber-optic network

IP optimization and acceleration to ensure high quality of experience

Voice & Data

UE

Managed Backhaul for Mobile Operators

Connecting Wi-Fi Service over Satellite

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Managed Cloud

Wi-Fi Controller

Hotspot Cloud

Internet

IntelsatOne Flex

Hub & Teleport

Site Antenna

Solar Panel

Wi-Fi Hotspot (aka Wi-Fi Zone)

VSAT Modem

Power over Ethernet (PoE) Router

Wi-Fi Access Point

Wi-Fi Enabled Device

Wi-Fi Enabled Device

Wi-Fi Enabled Device

Intelsat Certified Ready-to-Install Solution

- VSAT Kit + Solar Panel
- Wi-Fi Router + Access Points
- Training Documentation
- Local Installation + Support

When the World Connects

Examples of connecting the unconnected over Intelsat's network

Connecting Uganda's Unconnected

Intelsat enables MTN to provide connectivity to hard-to-reach communities

Bufundi cell site currently offers coverage to two Primary schools

MTN is a MoMo Mobile Money Service Provider

Provides the ability to conduct payment and cash-out services using a mobile app.

Ntoroko cell site offers coverage to a health center and Primary school

Africa Mobile Networks (AMN)

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Intelsat made a strategic investment in AMN to accelerate the adoption of mobile connectivity in ultra-rural sub-Saharan Africa, leveraging the ubiquitous coverage of Intelsat's worldwide network.

AMN reaching the most remote parts of Liberia

AMN site in Zambia with 4G (LTE) as well as 2G (GSM)

All villages in Nigeria with populations above 1,000 people will be connected with voice and data

Connecting Cameroun

Utilizing Intelsat's worldwide satellite network, AMN and Orange are able to bring connectivity to the unconnected, significantly enhancing communication capabilities and providing them access to life-changing mobile applications that allow them to conduct financial transactions.

Link to video: https://www.youtube.com/watch?time_continue=1&v=XUmmwBiO-Go&feature=emb_logo

Wi-Fi for Schools in Rwanda

Rwanda Connected Schools Pilot Project

- Senior leaders from the Rwandan government, Liquid Telecom and Intelsat agreed to support a pilot project in Rwanda that will test the viability and sustainability of VSAT based broadband services to connect schools in underserved areas to the internet. These are schools that are outside of fiber, 3G or LTE service areas.

- A solution based on satellite internet service combined with Wi-Fi access and solar power will be deployed at 20 selected schools and piloted over a period of 6 months to evaluate the technology and costing models and prove the concept.

South Africa | Internet 4 Mzansi

Improve adoption of internet services through a cost effective, pervasive service in rural areas

Create and empower youth owned and managed ICT SMME's, and create employment opportunities

Enable increased Black participation in ICT through a training and mentorship program

Smart Villages Pilot Project

10 villages selected for ANSI broadband pilot with Intelsat

- Objective: To determine broadband adoption and evaluate technology and capacity requirements.

- A solution based on satellite internet service combined with Wi-Fi access will be deployed in the selected villages and piloted over a period of 12 months to evaluate the technology and costing models and prove the concept.

- The solution proposed for the pilot is based on Intelsat (very small aperture terminal-VSAT) satellite services combined with Wi-Fi access points and a Cloud based user management service.

- This is a complete turn-key public Wi-Fi access service for connecting remote communities to the Internet where existing communications infrastructure doesn't reach.
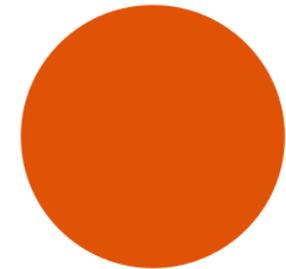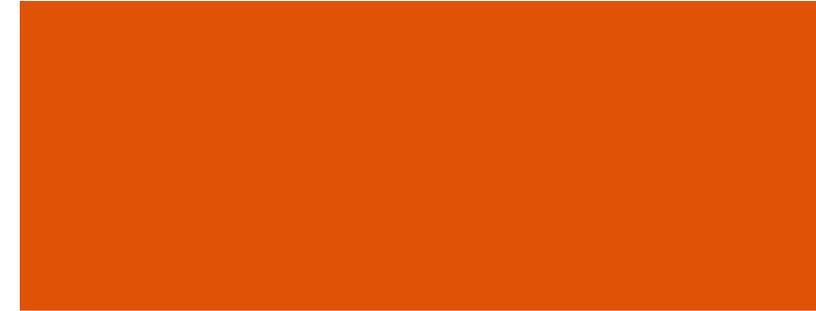
Empowering Refugees Through Connectivity

- Wi-Fi service using Intelsat's network brings connectivity to UNHCR refugee camps.

- In 2017, Intelsat and the United Nations refugee agency provided Wi-Fi connectivity to support an ICT lab for the Ampain Refugee Camp in Ghana.

Empowering Communities and Entrepreneurs

- Intelsat partnered in 2017 with Coca-Cola and EKOCENTER to deploy Wi-Fi community access to 10 different EKOCENTER sites across Kenya and Tanzania.

- At the EKOCENTER sites, Wi-Fi access was paid for utilizing a pre-paid voucher program.

> NOTE: Today, Coca-Cola has changed its business model and is no longer deploying kiosks into remote areas. They have now moved toward the urban center.

The Future Begins with Us

To change the future, we must focus on the future – the youth

Connecting Youth

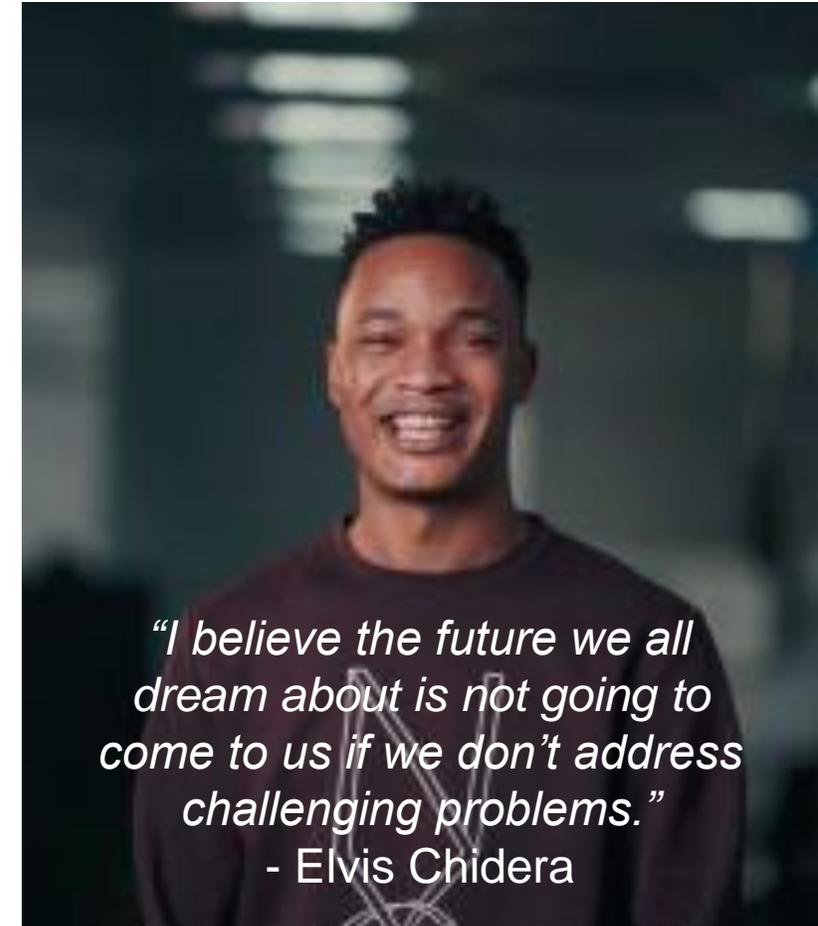**Connectivity can be a game changer for marginalized children**

- Connectivity brings opportunities for learning and education, especially during humanitarian crises.

- Connectivity allows children to access information on issues that affect their communities and give them a role in helping to solve them.

- Connectivity delivers economic opportunity by providing young people with training opportunities and job-matching services, and by creating new kinds of work.
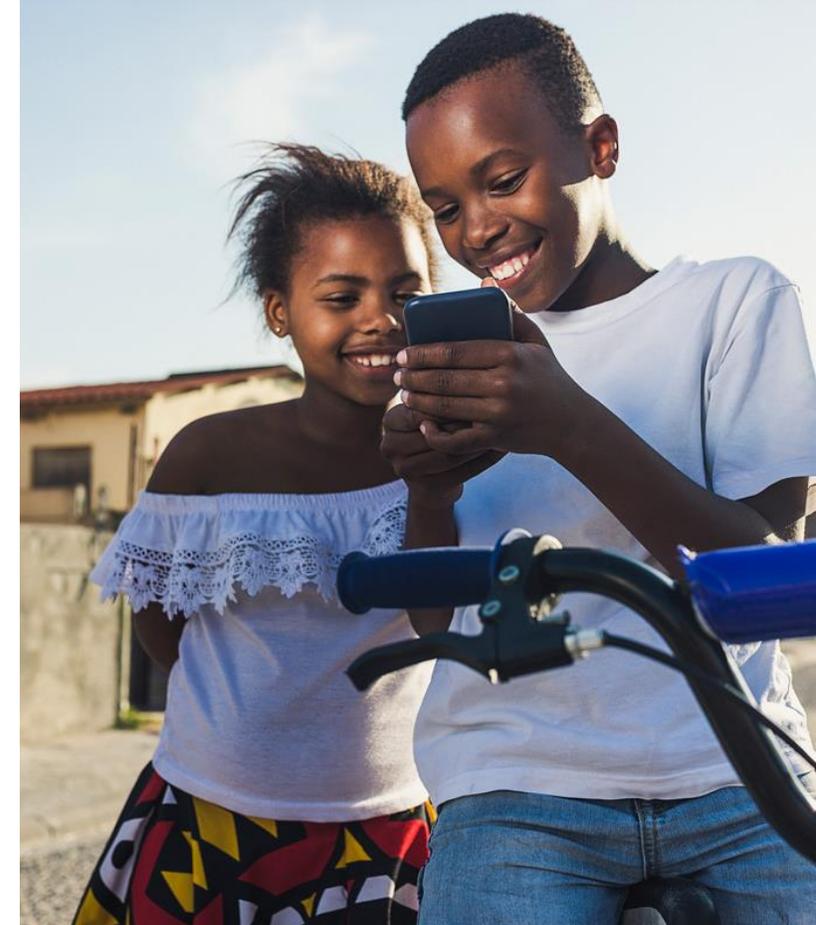
Elvis Chidera of Nigeria

How connectivity helped one young man in Nigeria escape poverty

- In 2012, at the age of 14, Elvis was, in his own words, "just a village boy from Nigeria who had nothing but a dream and a Nokia feature phone." His dream? To build a social network like Facebook and be the next Mark Zuckerberg.

- Elvis did not own a laptop or have Internet at home, so he would save money for weeks to buy Internet access at cyber cafes, where he would go after school to learn to code. With his new knowledge and skill, Elvis created a social network, which was more of a learning experience for him, as it did not take off like he had wanted.

- However, using that experience, Elvis went on to develop an app called XmxMe to help his local community send text messages "cheaper and easier to multiple people at a time," and he did this using the feature phone that had been given to him as a gift, which he had also used to develop his "failed social network, and several other projects." Today, Elvis is an Android Engineer.

"I believe the future we all dream about is not going to come to us if we don't address challenging problems."
- Elvis Chidera

"Each of us as citizens has a role to play in creating a better world for our children."

Nelson Mandela, 9 May 2002

Thank You

Todd Cotts

Sr Principal Product Marketing Manager

Intelsat

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