f

Policies for The Inclusive Internet UN Forum on Science, Technology and Innovation for the SDGs

Dr. Robert Pepper Head, Global Connectivity Policy and Planning 15 May 2017

Achieving Our Mission Thru Collaboration/Partnership

Give people the power to share and make the world more open and connected

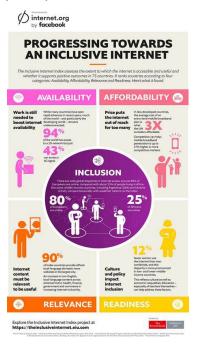
Bring internet access to the 60% of the world who are not yet connected

The Inclusive Internet Index

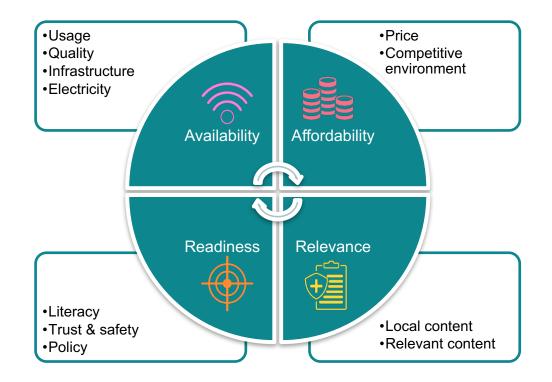
Look at the global state of Internet connectivity and inclusiveness by Facebook and the Economist Intelligence Unit (EIU)



https://theinclusiveinternet.eiu.com/



Categories of Internet Inclusivity



Key Global Findings

- More to inclusion than Internet availability
- Middle-income countries outperform rich in some areas
- Local content abundant in non-English countries
- IXPs can enable local content growth, but not alone
- The Gender Gap in Internet usage is growing
- e-Gov services enabling Internet inclusion are lagging
- Countries are making transition to digital societies...
- ...but majority of connected world remains under-connected

Key Indicator Regional Comparisons

Indicator	Global	Africa	Asia	Europe	Latin America	MENA	North America
Internet users (% of households)	43.0	15.6	47.6	78.5	37.9	53.9	84.4
Mobile subscribers (per 100 inhabitants; %)	102.8	79.8	110.2	119.1	114.6	113.1	99.8
Average mobile upload speed (Kbps)	4,865	1,808	6,161	8,500	4,328	3,610	9,500
Average mobile download speed (Kbps)	10,199	4,757	12,252	17,933	8,333	7,032	20,660
Average mobile latency (ms)	108.0	152.2	95.4	63.0	96.0	108.1	69.5
Network coverage (min. 2G) (% of population)	93.9	87.6	95.9	98.7	96.8	94.5	99.4
Network coverage (min. 3G) (% of population)	75.7	58.7	77.7	91.1	86.9	77.9	99.4
Network coverage (min. 4G) (% of population)	43.3	15.8	44.8	77.3	53.5	41.9	97.8
Female access to the Internet (% of households)	39.9	11.6	42.5	88.0	41.7	37.9	81.0

Key Indicator Regional Comparisons

Indicator	Global	Africa	Asia	Europe	Latin America	MENA	North America
Internet users (% of households)	43.0	15.6	47.6	78.5	37.9	53.9	84.4
Mobile subscribers (per 100 inhabitants; %)	102.8	79.8	110.2	119.1	114.6	113.1	99.8
Average mobile upload speed (Kbps)	4,865	1,808	6,161	8,500	4,328	3,610	9,500
Average mobile download speed (Kbps)	10,199	4,757	12,252	17,933	8,333	7,032	20,660
Average mobile latency (ms)	108.0	152.2	95.4	63.0	96.0	108.1	69.5
Network coverage (min. 2G) (% of population)	93.9	87.6	95.9	98.7	96.8	94.5	99.4
Network coverage (min. 3G) (% of population)	75.7	58.7	77.7	91.1	86.9	77.9	99.4
Network coverage (min. 4G) (% of population)	43.3	15.8	44.8	77.3	53.5	41.9	97.8
Female access to the Internet (% of households)	39.9	11.6	42.5	88.0	41.7	37.9	81.0

Key Indicator Regional Comparisons

Indicator	Global	Africa	Asia	Europe	Latin America	MENA	North America
Internet users (% of households)	43.0	15.6	47.6	78.5	37.9	53.9	84.4
Mobile subscribers (per 100 inhabitants; %)	102.8	79.8	110.2	119.1	114.6	113.1	99.8
Average mobile upload speed (Kbps)	4,865	1,808	6,161	8,500	4,328	3,610	9,500
Average mobile download speed (Kbps)	10,199	4,757	12,252	17,933	8,333	7,032	20,660
Average mobile latency (ms)	108.0	152.2	95.4	63.0	96.0	108.1	69.5
Network coverage (min. 2G) (% of population)	93.9	87.6	95.9	98.7	96.8	94.5	99.4
Network coverage (min. 3G) (% of population)	75.7	58.7	77.7	91.1	86.9	77.9	99.4
Network coverage (min. 4G) (% of population)	43.3	15.8	44.8	77.3	53.5	41.9	97.8
Female access to the Internet (% of households)	39.9	11.6	42.5	88.0	41.7	37.9	81.0

Solutions to Fit/Solve the Problem—Backhaul Gap

DENSE URBAN

Quality of connectivity

TERRAGRAPH

facebook

60GHz high bandwidth wireless network



MEDIUM DENSITY

Limited or no connectivity AQUILA

Solar-powered, high altitude, long endurance aircraft, free space optical

LOW DENSITY

Limited or no connectivity SATELLITES

Low-earth orbit and geosynchronous satellites, free space optical





Aquila

Unmanned Aircraft System (UAS) Goal: deliver gigabit speeds to medium density regions

SUSTAINABLE G ALS... Facebook



Recommendations for the STI Forum Policies for Internet Inclusion and Investing for the Future

Public-Private Partnerships: Gov't enabling Private Sector inventing, creating, innovating

Supply side: policies (not just regulation) that lower costs, speed deployment—e.g., more spectrum/reduce cost/flexibility

Demand side: policies that foster relevance and readiness; e.g., local/relevant content/language, e-Gov services

Need new frameworks that support innovation, investment, competition and new business models...(re)align economics with incentives, complexity and competition

