

# Effective carrier communities are key to digital equality

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The digital divide is a phenomenon that has plagued developing nations for a number of decades, and addressing this inequality in technological ability and advancement is essential to the economic growth and stability of these countries.



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Today, connectivity is central to digital technology and addressing the challenges within this market that are hindering the growth and adoption of connectivity is key. A well-developed market from the perspective of participation in the global internet economy is essential in bridging the digital divide, and this in turn requires effective carrier communities that deliver the infrastructure, networks and supporting foundations for effective digital connectivity.

## The biggest challenge

One of the biggest challenges in developing markets, and in Africa in particular, is low internet penetration, where more than 60% of the population on average does not participate in the digital economy. The major reason for this is affordability, as the cost of connectivity within the developing market is exceptionally high, particularly in comparison to the average earnings of the population.

Typically people are able to spend around 5% of their disposable income on internet services, however, in Africa people would need to spend upward of 60% of their income on broadband services, which is simply not affordable. In fact, the cost of access to broadband in the African market is up to 300 times higher per megabyte than in developed markets, which is significantly hindering adoption and thus stifling access to other technologies.

## Increasing internet penetration

In order to increase internet penetration and participation in the digital economy, this barrier to entry must be lowered and costs brought down to a level affordable to a larger proportion of the population. There are three prevalent catalysts to achieving this lowering of prices, namely open markets, multiple tiered points of interconnect and resilient networks. The regulatory environment is pivotal across all sectors, including transport networks, backhaul, global interconnects and more, and openness ensures a level 'playing field' for infrastructure providers and service providers.

Furthermore, in an open market, there is the all-important factor of competition, which in turn leads to ongoing innovation

towards greater efficiency, new services and better value for money innovation. Competition means that there are multiple providers, so organisations need to focus on quality and on improving efficiencies, which helps to decrease prices and ensure better customer service across the board.

## Importance of infrastructure

In addition, the actual infrastructure is important. As the internet is a global economy, there needs to be multiple interconnects across networks on a national, regional and global level to deliver the best, shortest route with the lowest latency possible. This is essential in order to ensure improved service, driving increased customer adoption and therefore assisting to reduce prices with greater economies of scale. Networks also need to be resilient, which involves a number of different elements. Security is essential across the different network layers, including the core, access and backhaul networks as well as premises-based equipment.

Infrastructure needs to be fault tolerant, and transmission paths need to be redundant. Furthermore monitoring and measurement of capacities is essential to delivering Quality of Service (QoS) and scalability to networks. Resilience is often mistakenly seen as an expense more than a necessity, however, if the network does not work effectively, consumers will not use it or trust it, let alone spend their money on it. The cost therefore of not having resilience is far greater than the cost of actually providing a resilient network, particularly with regard to elements like customer churn.

A well-developed connectivity market incorporates all of the above characteristics, with an open, well defined and well enforced regulatory model, sound infrastructure deployment, and multi-stakeholder collaboration and engagement. Successful collaboration between regulators, infrastructure providers, wholesale and retail operators, service providers and content networks helps to build effective carrier communities.

All organisations within these greater carrier community have a role to play in addressing these challenges, enabling a well-developed market to evolve and helping to bridge the digital divide by providing more widespread access to the global digital economy.

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