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The Research ICT Africa Network conducts research on ICT policy and regulation that facilitates evidence-based and informed policy making for improved access, use and application of ICT for social development and economic growth.

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DEVELOPING SMART PUBLIC WI-FI IN SOUTH AFRICA
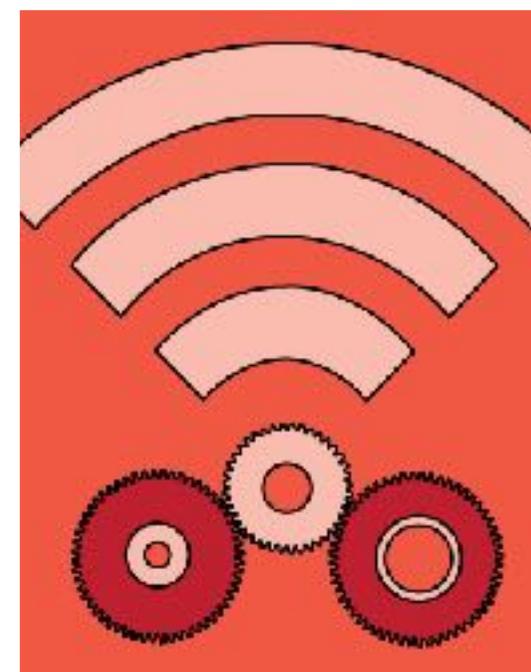
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RESEARCH

The digital inequality facing South Africa urgently needs innovative solutions. The country also lacks the critical mass of networked connections and intensity of ICT use that effectively enhance economic growth and social well-being.

The convenience and low-skill requirements of mobile phones, which have contributed strongly to ICT access and takeup trends, are restrained by high mobile data costs and unequal quality of service. To this end, free public Wi-Fi provision by local authorities is well received.

A board marking the availability of Neotel's free public Wi-Fi provision in the Western Cape.

Research ICT Africa (RIA's) study assessed the different models of supply as well as the dynamics of public Wi-Fi use in Gauteng and the Western Cape.

In this way, it contributes a comprehensive assessment of supply models as well as of the demand-side trends of free public W-Fi users. Interviews, surveys, speedtests and user analytics were used to this end.

FINDINGS

The Gauteng and Western Cape Provinces are the wealthiest and can, as such, afford to host the two most developed free public Wi-Fi networks in South Africa, run by Project Isizwe and Neotel respectively.

	Tshwane Free Wi-Fi	Western Cape Broadband Initiative
Strengths	• Quick deployment • Costs agreed upfront for 3 years • Tried and tested and has demonstrated success	• Open network (fosters innovation, competition and private sector involvement) • Supports private sector investment from the start
Weaknesses	• Considered expensive and unsustainable. • Not "open access" • NPO status does not allow for commercial Fibre/Wi-Fi deployment projects	• Network elements expensive • Deployment relatively slow

The free public Wi-Fi hotspots that were included in this study found the users to be mostly between the ages of 16 and 35, students and male. They used the service mostly for educational or information purposes as well as email and social networking activities since they found it provided a free alternative to mobile networks.

RECOMMENDATIONS

Public Wi-Fi network operators supply data at a much cheaper margin when compared to local mobile network operators. This is due to the backhaul infrastructure being subsidised by a government organisation and access network roll-out costs are low.

Public Wi-Fi thus provides complementary broadband access to mobile data and, as such, may become a way to bridge the access gap. However, there are a few obstacles preventing optimal roll out and use.

One of the main barriers to accessing public Wi-Fi is that the network is unreliable and often slow or unavailable. Additionally, only Wi-Fi enabled devices can connect to these networks, leaving those who cannot afford Wi-Fi enabled devices to find other ways of accessing the internet.

Neotel's public Wi-Fi network coverage is limited to selected public buildings throughout the Western Cape, leaving most users uncovered. Despite hotspots being placed near to public/government buildings, the public Wi-Fi network is far from ubiquitous. This limitation also renders a sense of insecurity among users who have to be outside after nightfall in order to be within range of the hotspot.

Project Isizwe's network enjoys more geographic prerogative but resources remain a constraining factor.

This undermines the low-cost competition that public Wi-Fi poses to high mobile data costs and should be the target of future policies and research, such as RIA's nationwide representative surveys due in 2017.