WHY AREN'T WE ACTIVELY PURSUING SATELLITE CONNECTIVITY?

FOLLOWING FIRTH
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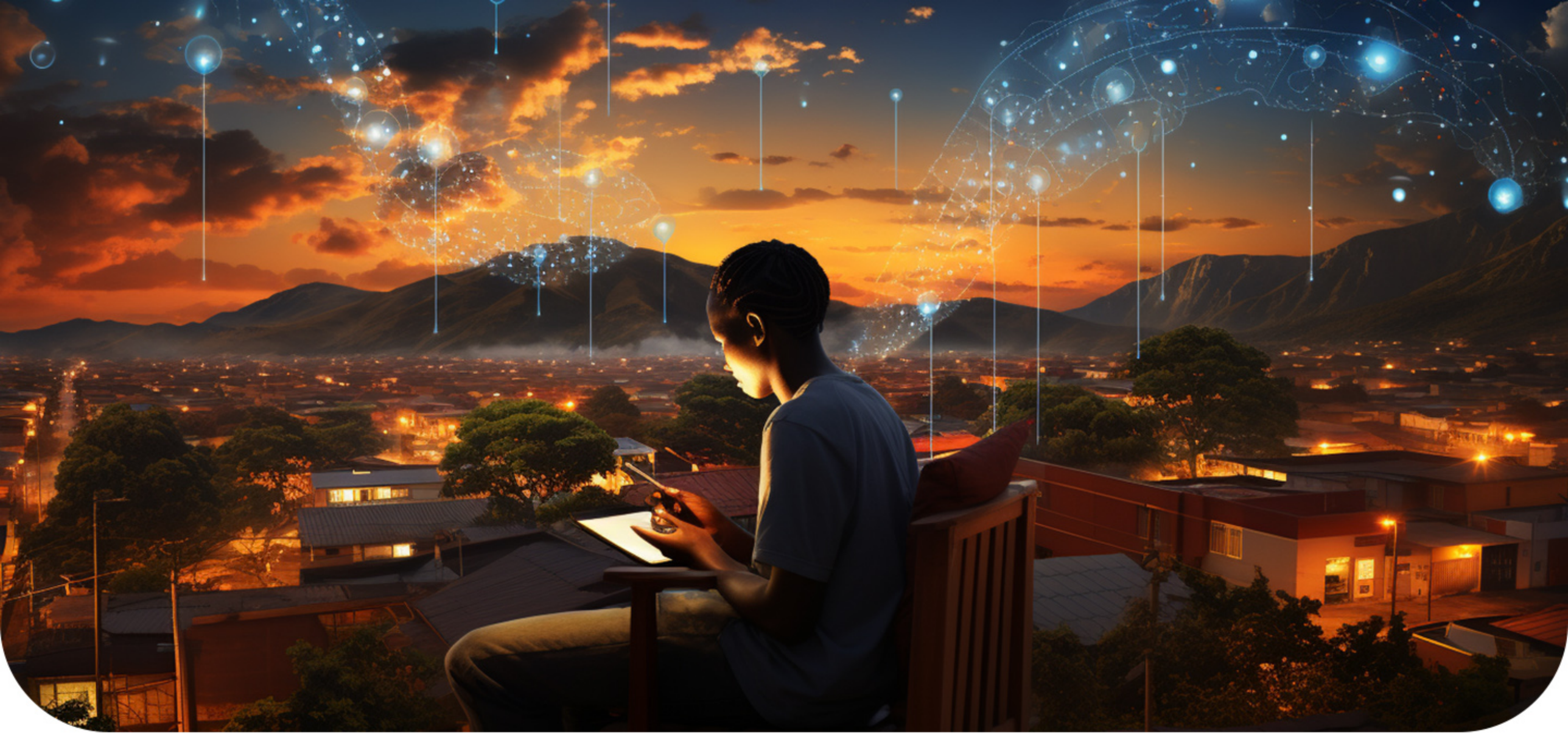
MIP
A SOCIAL SOLUTION IN A DIGITAL DIMENSION

Since it became available to the public in the 1990s, the internet has revolutionised daily life – so much so that today you need the internet to do everything from watching TV to making a phone call. According to data from the International Telecommunication Union (ITU), 67% of the world's population, equivalent to 5.4 billion people, are now online. In fact, there has been ongoing progress in global internet connectivity, with the number of people worldwide without access to the internet decreasing every year.

The mobile network operators and fibre providers have spent the past few decades building the networks that allow 45.34 million people in South Africa to access the internet. Our penetration numbers are even higher than the global average, with 74.7% of the country's population having access to internet services.

Unfortunately, the growing ubiquity of internet access is mostly limited to urban areas. Those in rural areas have far fewer options, with no access to fibre, and spotty mobile coverage. Even where there are cell phone towers, internet access can be a challenge. Load shedding, for example, interrupts service regularly. Satellite internet has started filling this gap, allowing people in rural areas to access reliable, always-on connectivity. In fact, satellite is also becoming the back-up solution of choice for companies who cannot afford any downtime, particularly in light of the recent unreliability of fibre networks as a result of multiple breaks in the undersea cables feeding South Africa's fibre networks.



South Africans always make a plan

When we think of remote or rural areas, we tend to imagine a few homesteads scattered among the bush. We certainly don't equate them with thriving businesses, and yet, that's precisely what farms, mines, and safari tour operators are. In fact, mining, tourism and farming are three of the largest contributors to the South African economy, but these operations have either had to invest in private networks or satellite in order to have access to internet connectivity.

Traditional satellite connections cost R1000 or more for speeds of 10Mbps, but with the launch of Starlink's Low Earth Orbit (LEO) solution, rural users have been able to access affordable high-speed connectivity. Unfortunately, anyone using Starlink in South Africa is doing so "illegally", because the Independent Communications Authority of South Africa (Icasa) has not yet licenced the service.

This has not stopped the reported 4000+ South African Starlink customers, who have used the service's roaming feature to bypass local restrictions. Now, those users are faced with the potential loss of the only reliable internet connectivity available to them. Following an investigation by Bloomberg News on the number of illegal Starlink accounts around the world, Starlink sent e-mails to account holders warning them that if they are operating a Starlink kit in an area that is not designated as available on the Starlink availability map, they would be cut off from 30 April 2024. However, an online poll of nearly 100 Starlink customers in South Africa showed that 73% could still access the service after the cut-off date.

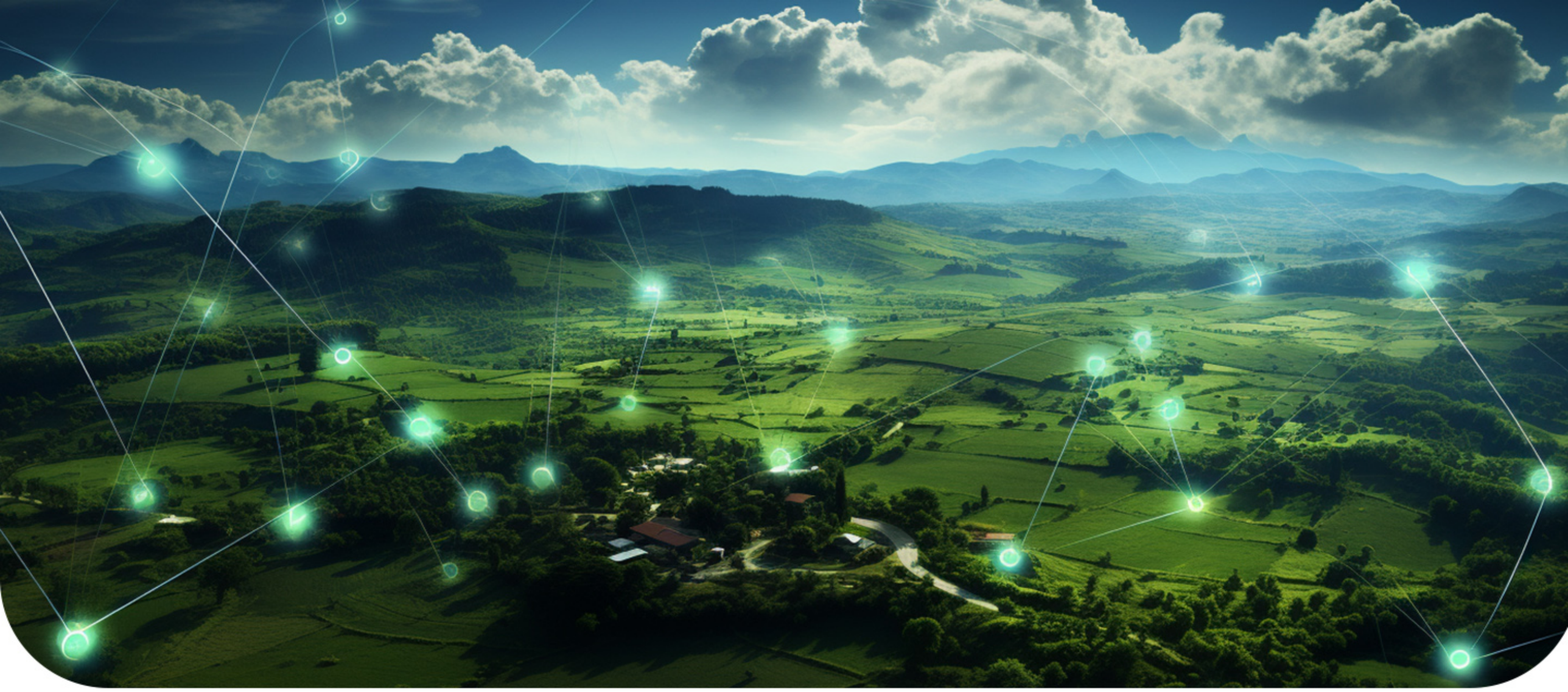
The big picture

The situation with Starlink once again highlights how outdated South Africa's approach towards technology is. While regulatory oversight is necessary, our onerous licencing requirements make South Africa an undesirable location for operators like Starlink. Essentially, government is hampering access to an item the economy is crying for!

Botswana, for example, recently proved its commitment to helping farmers use technology to stay and/or become globally competitive, giving Starlink a license to operate in the country. Many other countries in the region have also licenced the Starlink service, including Nigeria, Mozambique, Zambia, Kenya, and Malawi. Instead of Starlink asking to come into South Africa, South Africa should be begging Starlink to enter our economy and help alleviate connectivity challenges such as the limited reach of digital networks, unstable electricity supply and the speed of most distributable networks.

The government is not thinking entrepreneurially. We have a vast country, and are a 70% distributed economy when taking agriculture and mining into consideration. Easy access to Starlink could not only help organisations that operate in remote areas become more profitable, but the supply chain that could be created to meet the demand for the service would also help ensure economic growth.

Mining is distributed all over the country. The need for access to enable remote work is high, not to mention better network coverage to empower IoT solutions that are helping



make mines more profitable and safer in an expanded environment of automated safety features on mining equipment.

Tourism in South Africa has one major differentiator: The mix between beaches and safaris. Safari operators are highly distributed and dependent on being remote, but people no longer wanted to be isolated when on holiday. A dependable and broad internet framework is absolute, never mind the complexities of game management and poaching that require a reliable high-speed internet solution.

Finally farming, for both food security and exports – which contributes a rising portion of our GDP – is increasingly being digitised. All farmers need fuel, seed and fertilizer. These items could be deployed on an automated basis with a stable internet connection. For example, the fuel tanks on the farm can be remotely monitored and replenished at agreed times or levels measured by IOT devices.

This keeps the farmer on the farm and increasing his production capabilities without having to leave the farm for long haul collection. At the same time as fuel delivery, companies like KaapAgri will deliver food and essential supplies to keep the farmer and his staff fed.

Looking at the big picture is the role of government, and yet, South Africa's companies operating in remote areas have to use "illegal" technology to get reliable high-speed internet access. Initiatives that should have overcome connectivity challenges, such as Squidnet, have failed as they couldn't achieve 100% coverage and the technical packet sizes of the network are just too small. In many cases, these are limited to bytes and do not cater for the demands of a modern network load capability. In a world where internet access is just as important to the running of a business as any other utility, we should be actively encouraging solutions like Starlink, instead of making it even harder for companies to operate.

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