

Putting informal settlements on the map

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Access to informal settlements has always been a challenge when it comes to emergency services and transport route mapping. The solution: simple, but brilliant. A partnership between PlanAct and Google Earth has introduced 'Plus Codes', which are digital addresses that offer a near-instant solution for households in informal settlements.



SEF participants learning to map local settlements.

Mike Makwela, senior programme coordinator of NGO, PlanAct, says, "The organisation was founded in 1985, to assist communities in advocating for alternative development plans during the apartheid era. Over the years, PlanAct expanded its mission to support and mobilise community processes that enhance good governance at a local level, ultimately improving the living conditions and reducing poverty in communities."

Addressing issues in informal settlements

We chose to initiate this project because of the challenges that rapid urbanisation in South Africa present. This influx of people – often youth – seeking economic opportunities in cities, has resulted in growing informal settlements. Because they grow organically, there is a disconnect between demand and supply for essential services. In some cases, land earmarked for other developments is occupied, further complicating the challenge.

The problem lies in the fact that informal settlements are often excluded from city-wide planning. Which, amongst other things, means no physical addresses and little or no access to vital city services. Emergency services, including police, fire brigades and ambulances, rely on GPS and the lack of a physical address can lead to critical delays in reaching emergency scenes. This in turn, poses a serious risk to community members' safety.

'Addressing' the challenges

Makwela says, "PlanAct recognised the need for a comprehensive addressing system in well-established informal settlements. We partnered with Google Earth, to harness the power of technology to integrate these communities and

introduced what we call Plus Codes - digital addresses."

How do they go about it?

It starts with inclusive mapping. Community members – who know the locations intimately – participate by mapping their settlements, marking landmarks and communal spaces. Community volunteers are then trained to use the Address Maker application, addressing different types of structures within the settlements.

Social employment opportunities

"It's important to remember that PlanAct and its partners provide much needed work opportunities for community members," says Makwela. "Now, as one of the Social Employment Fund's (SEF) strategic implementation partners, we are training 24 participants from the Tjovitjo informal settlement in Ennerdale South, Johannesburg in Geographic Information System – or GIS-skills. This to generate Plus Codes for their residential areas."

The participants – who earn a stipend - will learn to develop a settlement layout map of their community. Then they will be taught how to use Google's open-source mapping software to generate Plus Codes and install one in each yard of the settlement.

Learning skills

Besides learning these important technical skills, the 24 participants will also develop interpersonal skills like communication and negotiation. And of course, sorely needed, they will earn an income through a stipend from SEF.

Make informal settlements safer

Makwela says, "The outcome of this project is nothing short of transformative. Informal settlements are being digitally integrated into the larger urban landscape, enabling residents to access goods and services online, which can be delivered to their Plus Codes. In addition to emergency services, e-hailing and online deliveries can now take place, which includes the delivery of textbooks and academic material for students studying remotely."

Digital addresses also help promote safety: Children and other vulnerable residents can be dropped off at the entrance to their homes and, in the case of domestic and gender-based violence, police can process more cases by having accurate residential addresses.

This newfound access eliminates various challenges, from transportation issues to improved safety. Things many of us take for granted.

The big picture

"The technology already exists as does the labour force, so the same approach can be taken in any geographical location. The community mapping and application of the address boards are both easily replicable and the concept is relatively cheap to scale," says Makwela.



SEF PlanAct - Lerato Qwabe holding a Plus Code address board in Thembelihle.

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