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The adoption of appropriate technology in public housing and informal settlement upgrades in South Africa

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Abstract

There exists a large number of housing delivery programmes being rolled out to impoverished communities across South Africa. These national programmes provide subsidised, serviced housing units with the aim of improving the quality of life for those who would otherwise have no or limited access to adequate shelter. However, despite efforts to decrease this backlog, poverty, poor living conditions and environmental degradation persists and informal settlements remain home to one in seven South African households. In response to the challenge of informal settlements, emerging technologies and the social processes followed to implement them have made possible affordable access to basic services including in the areas of energy supply and waste management. Dozens of companies, for instance, have developed high quality, solar-powered solutions specifically targeting the needs of the energy poor. New distribution models developed by these companies bring home-lighting and cooking systems to off-grid areas around the world. The impact of these new technologies is apparent in examples found in Kenya and South Africa, where innovative opportunities are being created for and co-produced with low income communities through the deployment of Information and Communication Technology (ICT). The benefits of these technical systems go far beyond simply lighting up a home; the aftereffects have led to low-income consumers investing in other technological products, developing businesses, and accessing improved services and micro-finance. Remarkably, studies have shown a substantial increase in household income and exam pass rates due to stable electricity generation and continuous lighting. Such delivery processes, have in the past been driven by the private sector, developmental researchers and/or the affected communities. They offer an approach to transform settlements redefining previous conceptions of planning and who is responsible for initiating change.