



LUMKANI

SAFER TOGETHER

Informal settlements or urban slums are areas categorized by high population and structural density, low incomes and little to no infrastructure. It is estimated that by 2020, nearly 1.5 billion people will be living in slums or sub-standard housing around the world. A significant challenge facing people living in these spaces is the incidence and spread of fires. In a single blaze, hundreds and up to tens of thousands of people can be displaced along with the loss of life. The direct cost of shack fires to governments, communities and families runs into the hundreds of millions of rands each year in South Africa alone, not to mention the indirect costs to society which entrenches cycles of poverty.



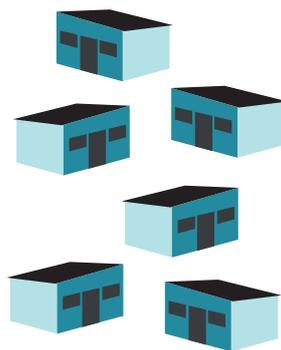
OUR VISION

To mitigate the loss of life and property associated with the spread of shack fires in South Africa and across the globe. We will realize this vision through our integrated early warning system, which by the end of 2018 will be in over 40,000 households.



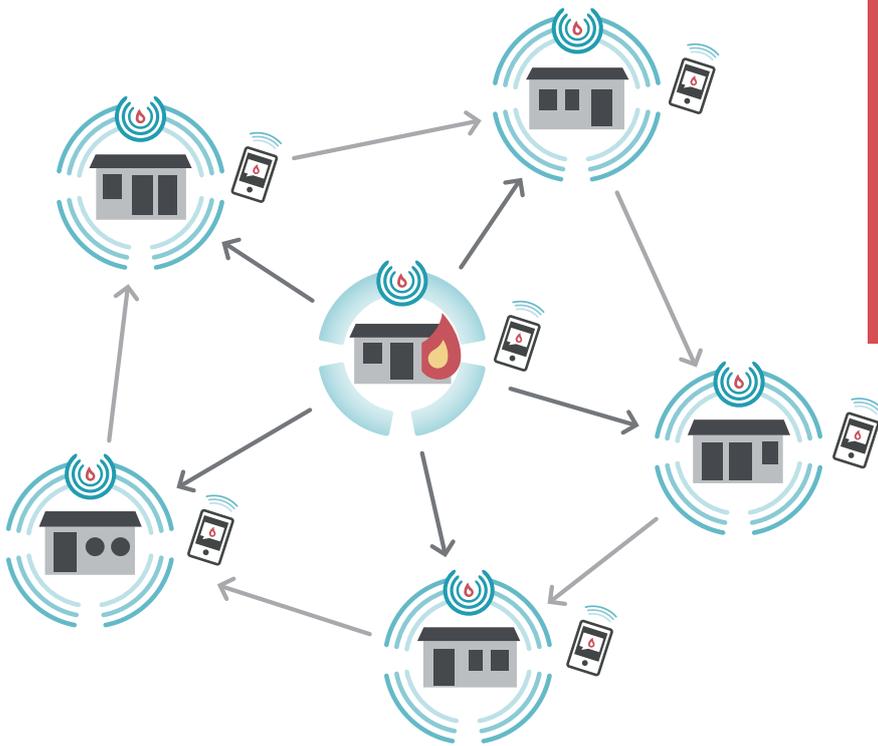
116 MILLION PEOPLE

LIVE IN INFORMAL SETTLEMENTS
IN SUB-SAHARA AFRICA



240 000

SOUTH AFRICANS
MADE HOMELESS DUE TO
SHACK FIRES
OVER THE LAST DECADE



"The innovative fire detector has the potential to transform the safety of slums worldwide, where more than 800 million people currently live"

World Vision Australia (2016)

HOW OUR SYSTEM WORKS:

We use innovative heat detection technology instead of smoke detection, which is not suitable given the heating, lighting, and cooking methods that are used in low-income households. Using rate-of-rise of temperature technology, our devices uniquely detect and accurately measure the incidence of hazardous fires, triggering an alarm inside the home to alert the family of the danger before the fire becomes unmanageable. Our devices are networked using radio frequency transmission, which connects neighboring detectors within a 100 feet radius to each other and constantly checks the health of the system.

In the event of a fire, devices within this range will sound their alarms creating a community-wide response to the danger. Moreover, it stores the GPS coordinates and simultaneously sends text-message warnings to members of the affected community. Given high structural and population densities, a community-wide alert buys valuable time for communities to effectively respond to rapidly spreading fires. Once someone responds affirmative regarding the fire, we contact the municipality's emergency response personnel to further mitigate disaster risk. Through **rapid detection** and **networked alert**, we enable better coordination to deal with fires.

IMPACT:

In a single community in South Africa named Imizamo Yethu, 8000 people lost their homes in April 2017. After this, Lumkani in partnership with JCI, covered all 5000 homes in the area with their early warning technology. **Already from March to November 2018:**

11 FIRES

WERE LIMITED FROM SPREADING ACROSS THE COMMUNITY

377 HOMES

WERE SAVED FROM THE SPREAD OF FIRE

1244 PEOPLE

WOULD HAVE BEEN DISPLACED

\$1.07 MILLION

OF INFORMAL PROPERTY AND GOODS SAVED

This equates to a **10x** Social Return on the Investment to JCI within 9 months of operation. The system has another 9 years of operating life to increase this return.