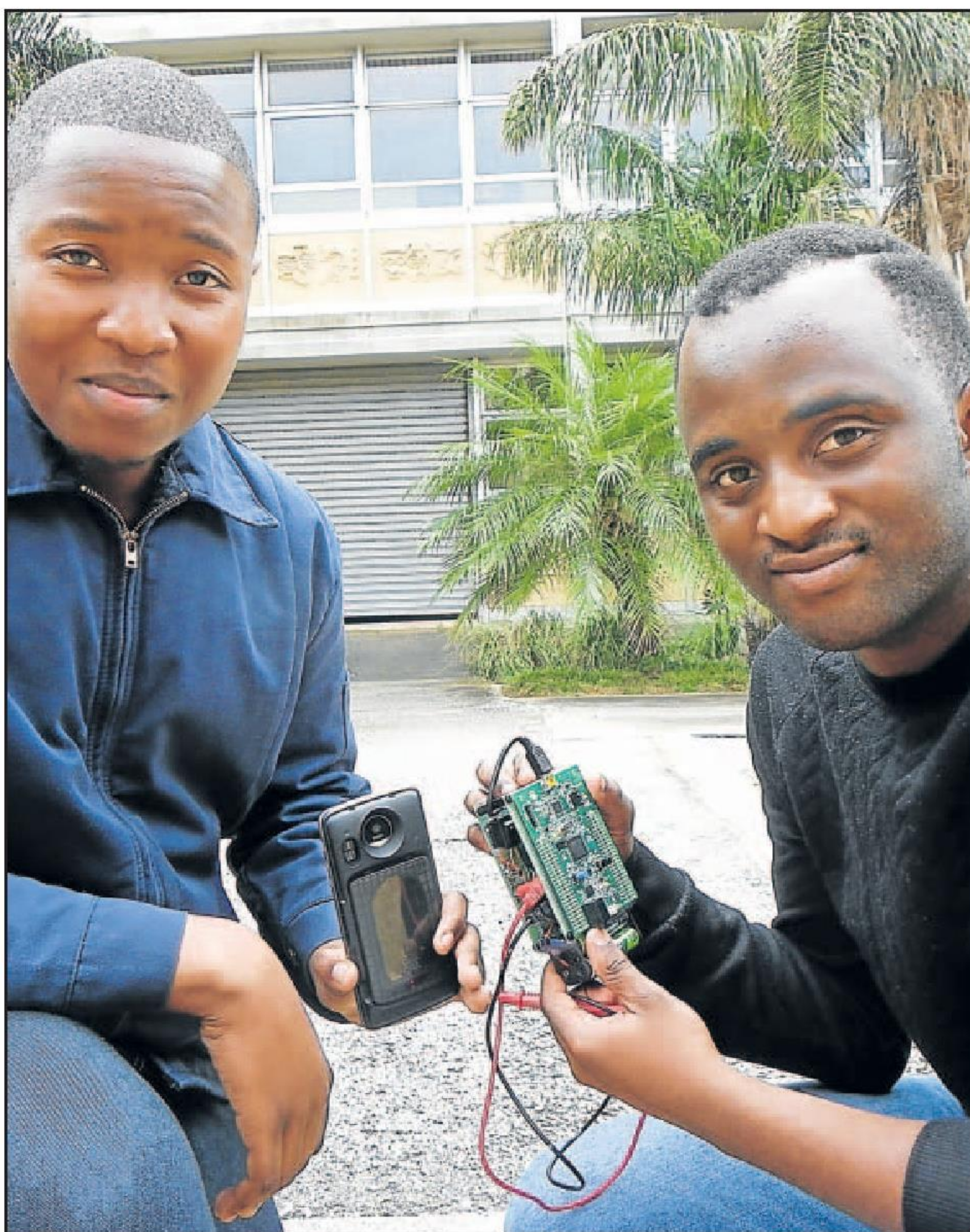


Students create smart measuring device



MADE TO MEASURE: Sinethemba Yamani, 24, left, and Ntsingiselo Nqeketo, 23, are working with others on a digital measuring device

Picture: SIYAMTANDA CAPA

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NECESSITY has proved to be the mother of invention for an enterprising group of Nelson Mandela Metropolitan University (NMMU) engineering students, who are developing a digital equivalent of the Swiss army knife to solve instrument shortages at the institution.

Frustrated by a shortage of tools and other equipment at the engineering faculty, the group has begun developing a multi-functional measuring device which, as an attachment to a smartphone, will deliver a wide range of measurement applications in one device.

The Instrumod is the brainchild of final-year electrical engineering student Sinethemba Yamani, 24, of Zwide in Port Elizabeth, who has partnered with final-year student Ntsingiselo Nqeketo, of Mthatha, and engineering graduates Sivuyile Fani, of Kwamagxaki, and Edwin Rebisi, 25, of Pretoria, to create the new instrument.

The “extra functionality device” is still in the prototype phase, but when completed it will be physically connected to a smartphone through a hardware device known as a “mod”.

The device, according to Yamani, stands a chance of being produced by cellphone industry giants Motorola and Indiegogo should the group raise enough money to compete in the third round of the Transform the Smartphone Challenge.

The international competition calls for the submission of design concepts for an electronic device that fits onto the back of Motorola’s new smart-

phone and 10 successful mod designs will compete for \$1-million (R13.4-million) in prize money and the right to have the mods distributed by Verizon.

Yamani said the idea was conceived when he was working on the reconstruction of an electric motor at NMMU and noticed the need for equipment.

“While working on the electric vehicle we would have to wait for each other because we did not have enough measuring instruments,” he said.

“It’s impossible to have instruments for everyone on the team because there are far too many of us. Working on the vehicle ended up being a waiting game, which meant the process was delayed.

“It was about then I thought of the idea of creating a laboratory that could fit into one’s pocket.”

Yamani said the delays caused by waiting for equipment meant that students missed deadlines.

“With its basic measuring instruments, this is the solution. From a spirit level used in construction and other applications, to recording various mechanical and electronic quantities, the multi-functional Instrumod could replace several large and immobile tools in the lab.”

Yamani said the creation of a device that could solve everyday problems had been his dream since he was in Grade 11 at Kwezi Lomso High School.

NMMU mechanical engineering lecturer Trevor Stroud said such a device could improve productivity for students.

“Even though it is still in the prototype phase, it is quite an impressive technology,” he said.

Yamani has started a crowdfunding page via the Indiegogo website to move the device into the next phase of its development.