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ENGINEERING

ANDRE' Broekman, a PhD student shows the SmTo, a smart device that is able to track a tomato's journey from farm to consumer, at the University of Pretoria's Engineering 4.0. | **JACQUES NAUDE** African News Agency (ANA)

New UP facility is fun and functional

VAL BOJE

A REFERENCE to a fictional platform in Harry Potter, the answer to the meaning of life, the universe and everything in *The Hitchhiker's Guide to the Galaxy* are names of meeting rooms at the new Engineering 4.0 facility launched on the University of Pretoria's Hillcrest campus on Monday.

The names provide an element of fun to a functional building which is the result of a collaboration between the university, SA National Roads Agency Limited (Sanral) and the CSIR.

The facility symbolises "the intersection of skills development, research and innovation for application in the development and preservation of South Africa's road infrastructure", said Sanral chief executive Skhumbuzo Macozoma.

UP vice-chancellor and principal Professor Tawana Kupe sees it as a way to "exchange the impossible for the possible", being locally relevant and globally competitive.

He said that according to QS rankings, UP was one of only two South African universities, and one of five in Africa, to be ranked in the top 400 universities globally for engineering and technology.

Engineering 4.0 UP will engage in collaborative research in the field of future smart cities and transportation, linking the Faculty of Engineering, Built Environment and Information Technology's resources to other university faculties, and serving as a hub for inter-and trans-disciplinary research as part of the Future Africa campus, and making a contribution to society at large.

It houses several laboratories and training facilities including Sanral's first independent transport reference testing laboratory, a concrete laboratory and wood engineering laboratory, the Sanral reference library, offices, student areas and an auditorium.

The spacious building was designed by the ARC group and is an attractive yet practical building, using elements of glass, concrete and wood, filled with light and views of the surrounding environment, and with solar panels on the roof.

Speakers at the launch pointed to the skills gap in the transportation sector and how Engineering 4.0 and its high-quality research facilities and staff will help bring about better-performing transportation infrastructure – both road and rail – with reduced environmental impact.

Professor Hannes Grabe, who holds the Transnet Freight Rail chair in Railway Engineering, demonstrated his research which focuses on the behaviour of track material using instrumentation on a modified truck that can travel on both road and rail infrastructure