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ICT research strategy soon

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South Africa's national information and communications technology (ICT) research and development (R&D) strategy is, Deputy Science and Technology Minister **Derek Hanekom** reports, "now very close to completion".

The ICT R&D strategy is being facilitated by the Department of Science and Technology.

He was speaking on May 17 at the formal launch, by the CSIR, of the Meraka Institute, subtitled the African Advanced Institute for Information and Communications Technology.

"The strategy will outline a plan of action to create an enabling framework and innovative environment for the advancement of ICT R&D and innovation, in a systematic fashion, within the context of national R&D," he said.

"The vision is to make South Africa a vibrant, innovative, inclusive and accessible knowledge society," he stated.

"Our challenge is to create an environment where ICT-based innovation flourishes, originating from differing levels of society," he affirmed.

The purpose of the Meraka insti-



Derek Hanekom

tute is to contribute to the South African government's programme to increase the scale and scope of R&D in the ICT area by means of 'focused, needs-driven' research in fields regarded as 'key' – for example, human language technologies and high-performance

computing.

(Meraka is a Sesotho word meaning 'common grazing' and thus denotes sharing, mutual benefit and the potential for prosperity.)

The work of the institute will be closely in line with existing programmes and strategies such as the Advanced Manufacturing Technology Strategy, the ICT Roadmap and the Department of Science and Technology's Frontier Science Programme.

The institute intends working with South African higher educational institutions to create what are termed "critical mass and concentrated national R&D efforts".

The creation of the institute is rooted in – indeed, the institute takes its mandate from – the 2002 State of the Nation address by President **Thabo Mbeki**.

In this address, the President referred



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to a concept for an ICT university.

This concept was subjected to discussion and development and, in 2004, the CSIR was made responsible for the project, leading to the creation and launch of the Meraka Institute.

The CSIR reports that the institute “already has a strong core of existing activities aligned to national imperatives, as well as recognised partnerships locally and abroad with peer organisations”.

One of the initiatives already under way is Wireless Africa, which involves research into sustainable ICT for developing countries to close the ‘digital divide’, both within and between countries.

There are two elements to this programme – first, social research in Angola, Mozambique and South Africa to create sustainable, community-owned wireless infrastructure for education, health and related service-delivery applications and, second, the removal of technology barriers to allow the creation of ‘bottom-up’ wireless access infrastructure, including mesh networking, low-cost voice and messaging devices, low-cost access points and antennas and network security.

Another current initiative is human language technologies, which involves strong research collaboration with local and international partners and is aimed at allowing people to get information and services and interact with technology through language.

It includes such elements as speech recognition, speech synthesis, and a key long-term goal is automatic translation systems.

The National Accessibility Portal project aims at empowering disabled people to live independently, accessing information and services, and to communicate – the prototype demonstrator is based on Internet technologies and uses open-source software.

Another programme is the Digital Doorway, a joint project of the institute and the DST, to achieve large-scale computer literacy; it employs robust, low-maintenance free-standing computer terminals with ‘motivating content’ – access is free 24 hours a day, and people can teach themselves functional computer skills.

So far this year, more than 100 of these terminals have been installed in urban, peri-urban and rural areas.

A fifth project is FLOSSWorld, Floss standing for “Free/Libre and Open Source Software”.

FLOSSWorld is the institute’s flagship open-source software project, and is a European Union Framework [research] Project 6 programme which includes collaborators in Asia and Brazil as well as Europe, for the development, promotion and implementation of open-source software.

Then there is the Centre for High Performance Computing, which is currently being set up with higher educational institutions – the aim is to provide “high-end computing and expertise” for R&D in the sciences, medicine, engineering and social sciences.

“Ultimately,” the CSIR states, “these undertakings are all aimed at quality of life and global competitiveness.”

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