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Human Sciences
Research Council

Changing lives of
ordinary people
through human and
social sciences

Innovation and its impact on South African Society

The Good, the Bad & the Ugly

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What is our mandate?

- As Research institutions, we contribute to solving grand challenges which face society, science and industry by performing top-rate research in strategic programmes.

- We research on issues of great complexity with our large-scale facilities and scientific infrastructure, co-operating closely with national and international partners.

Innovation and Knowledge

- are drivers of economic growth and societal change in all countries - rather than capital and labour

- In South Africa, the government invests in the building blocks of innovation by funding basic research in our Universities and public entities (including Science Councils) so that we can train scientists, engineers and technologists and can also produce publications and patents. This is how the investment impact in research and development is measured

From Sarah Mabuza, librarian helping users at the **Digital Doorway**'

The Grand Challenges (2008)

In 2008 Govt chose five specific areas (grand challenges) in which to catalyse leading edge innovation

1. Global change
2. Renewable energy
3. Space science
4. Bio-economy
5. Human Sciences

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Grand challenges cont…

1. Global change
2. Renewable energy
3. Space science
4. Bio-economy
5. Human Sciences

6. Information Technology???

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IT and Grand challenges

IT was **NOT** one of those areas chosen because:-

- is **intrinsic** to all of the five areas

- is a **cross-cutting** technology like bio-technology and eco(green) technology

Impact on Society

- Meraka Institute, works with a wireless mesh network technology to provide rural broadband connectivity as part of the government-wide IT infrastructure rollout.

- Digital Doorway project – provides terminals that are loaded with content and applications which includes science software, HIV & Aids information, learning materials, games, maths tutor etc in rural locations – (200+ units have been deployed across the country, mainly in rural areas where access to computers is still a big challenge).

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Impact on Society (cont...)

- **Centre for High Performance Computing** (CHPC) - provide computational resources to flagship projects to create research communities.

- **South African National Research Network** (SANReN) – the bandwidth abundance resulting from this will shape the growth and development of a new generation of students whose knowledge and skills will contribute to the goal of creating an inclusive information society.

- **Square Kilometer Array** (SKA) provide unrivalled opportunities for scientists and engineers from African countries to work on cutting-edge research and collaborate in joint projects with the top universities in the world.

- **Solar Power** – provides electricity to remote rural hospitals to perform more complex procedures owing to better equipment

- **Money Transfers** to the unbanked communities (e-wallet)

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Mobile Telephony

Good

- Information readily available - Internet Penetration
- Communications made possible to remote locations
- Service Delivery - e.g. cell-phone Banking, less visits to bank
- E-Government – government can disseminate information to citizens cheaply
- Money Transfers to the unbanked communities (e-wallet)
- Emergency response
- Social networking and collaboration
- Economic Boost – Mobile operators gaining more subscribers raising revenues
- Employment – creates opportunities for self employment

Bad

- Tools for crime (necessitated RICA)
- Children gain access to inappropriate content

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Computers

Good

- Information readily available - Internet Penetration, e-news,
- Communications made possible to remote locations
- Service Delivery - e.g. cell-phone Banking, less visits to bank
- E-Government – government can disseminate information to citizens cheaply
- Social networking and collaboration – keeps families and friends in touch
- Virtual Libraries – increase accessibility of information
- Employment – creates opportunities for self employment
- Economic Boost – larger tax base as more players come on board

Bad

- Tools for cybercrime
- Disintermediation
- Children gain access to inappropriate content

Solar Power

- Remote Rural Hospitals can now have reliable electricity and perform more complex procedures owing to better equipment
- Tourism – employment creation in remote places
- Literacy - Adult education in poor communities
- Computer literacy to poor rural schools
- Employment – creates opportunities for self employment (SME)
- Economic Boost – larger tax base as more players come on board
- Going Green - Reduction of South Africa's carbon footprint

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The ugly

- Highly unequal society
- Profits before people
- Limited impact on level of education
- Net consumer of technology
- Environmental impact

Conclusion

The intention of SA government, especially DST is to catalyse investment in key multi-disciplinary Research areas that will drive innovation in all sciences and the impact should be felt in widely desperate fields, from medicine to electronics to IT.

Is it time perhaps, to consider a National ICT plan?

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Thank You…

We are about people

Social science that makes a difference

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