



# ICT RDI Strategy

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TRACK 3: THE ENABLING ENVIRONMENT,  
Session 3a

**DST's ICT RDI Strategy Imperatives**

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# Outline

- ICT RDI Policy Timeline
- Latest R&D Statistics
- South African ICT RDI Strategy
- DST Supported ICT RDI Initiatives & Flagships
- South Africa's ICT RDI Implementation Roadmap



# ICT RDI Policy Timeline

To build a knowledge-based economy

10Yr Innov Plan

ICT R&D and I Strategy

Identified ICT as Key Tech Mission

Creation of Meraka

Creation of DST

Approved under ISAD Plan

Developing the NSI

R&D Strategy

To conduct: R&D, Application Dev and HCD

S&T White Paper

1996

2002

2004

2005

2006

2007/08



science & technology

Department:  
Science and Technology  
REPUBLIC OF SOUTH AFRICA



# Latest Facts & Figures

| Indicator  | 2007/08 | 2008/09 |
|--|---------|---------|
| Gross domestic expenditure on R&D (GERD) – R' Millions | 18 624  | 21 041  |
| GERD as a percentage of GDP                            | 0.93    | 0.92    |
| ICT expenditure on R&D as a percentage of GERD         | 14.0    | 13.1    |
| ICT GERD as percentage of GDP                          | 0.12    | 0.13    |

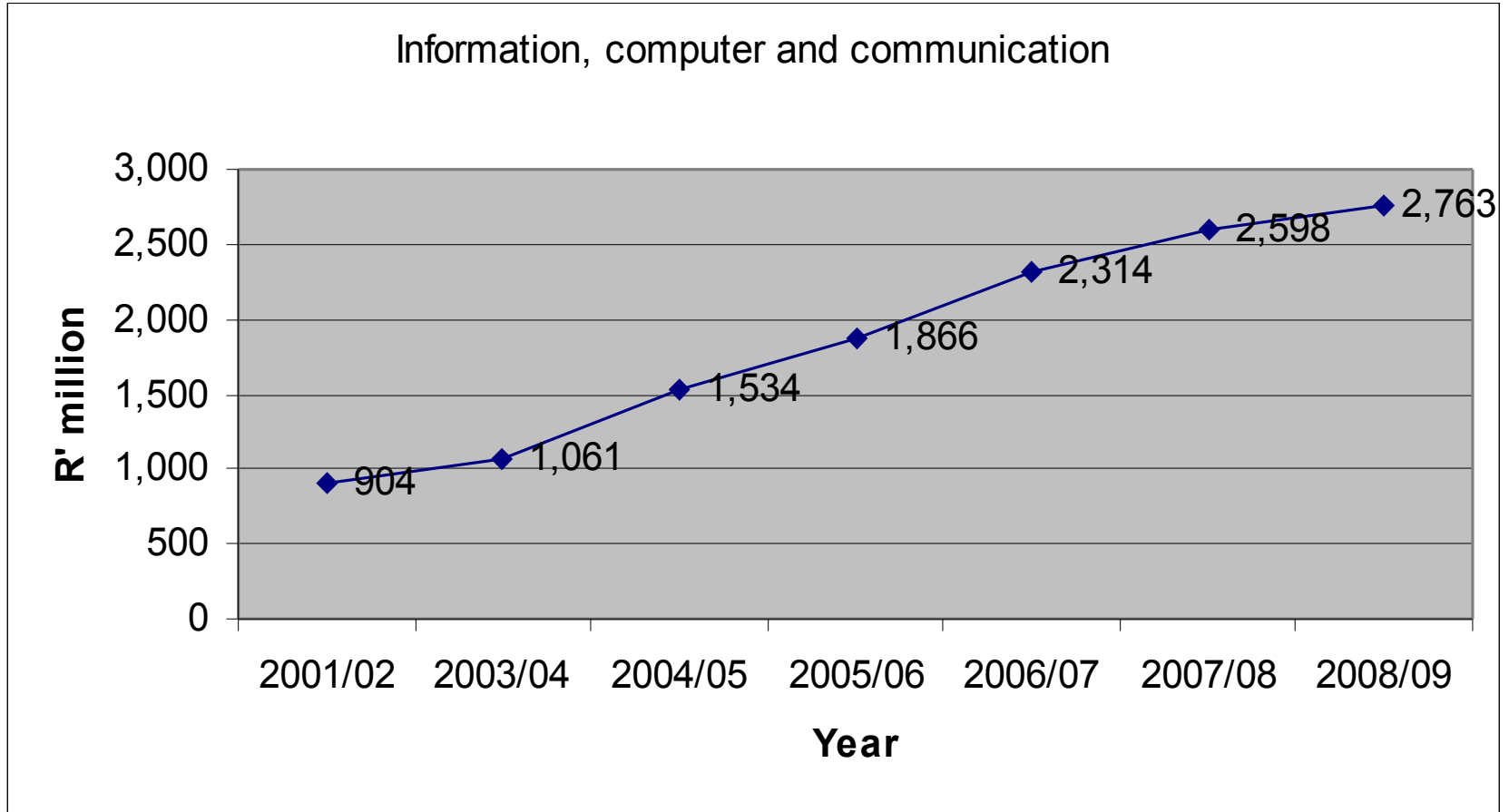
Source: DST/HSRC – National Survey of Research and Experimental Development (2008/2009) Fiscal Year

Target for 2008/2009 was GERD = 1% of GDP (Not achieved)

Ideal Target : GERD = 1.5% of GDP by 2014 and 2% of GDP by 2018



# ICT R&D growth





# SA ICT R&D and Innovation in Context

ICT has potential benefits for Society & the Economy

- Sparse **ICT R&D** and **innovation** capacity – **potential to be unlocked**
- Major ICT activities involve information literacy, backup and support, and adaptation, customisation and integration – leading to **reliance on imported products and services**
- Pockets of excellence exist
  - **Multichoice / UEC** based on South African cryptography research – pay satellite TV decoders
  - **Namitech** , **PRISM** Smartcards, payment technology
  - **Mark Shuttleworth's Thwate Consulting** (VeriSign/Symantec) digital certificates and internet security



# ICT RDI Imperatives

## Strategic Objectives

- Focused world-class research
- Strong innovation chain leading to increased ICT patenting, reduced digital divide and vibrant high-tech ICT industry
- Advanced human resource capacity

## Pillars/CSFs for the ICT RDI strategy

- Effective research infrastructure
- Effective cooperation between **government, research community, industry** and international partners
- ICT policy and institutional support
- Adequate funding



# DST Supported ICT RDI Initiatives

- Cyber-Infrastructure (SANReN and CHPC)
- Enabling the inclusive use of ICTs
  - Human Language Technologies
  - Intelligent Environments for Independent Living
  - Digital Doorway: Reduce digital divide by broadening computer literacy and associated skills targeting youth and rural communities
- Supporting national priorities
  - Education: Mobile Applications (e.g. Dr Maths)
  - Geomatics and Spatial Technologies: e.g. Advanced Fire Information System (AFIS)

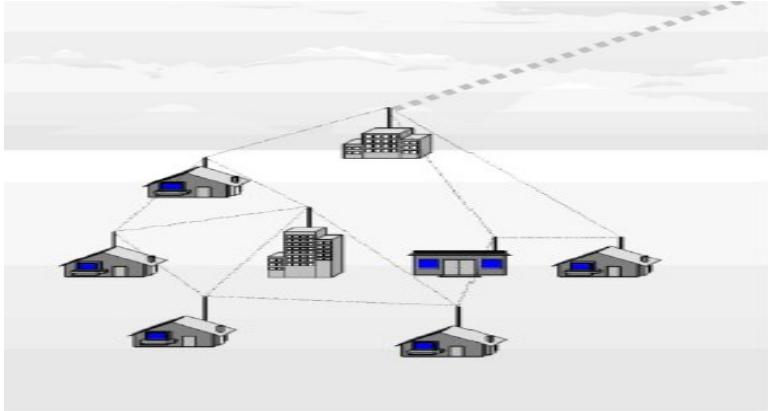




# *DST ICT RDI Flagships: Increasing broadband access*



# The Wireless Mesh Network Project



- **Objective:** expand and deploy the R&D and innovation outputs in **affordable broadband technology using WMN**
- **“Village Operator”** model - driven by community ownership and local economic development
- **Deployment:** 3 District Municipalities in 3 Provinces
- **Status:** 200 schools connected; 19 Village Operators trained and installing





## *DST ICT RDI Flagships:*

*Stimulating and supporting R&D led  
ICT industry development*



# Information Security Initiative

## Purpose

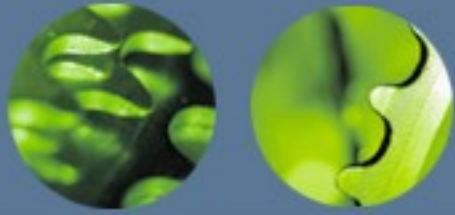
- **Build capacity and competency** in information security to ensure strategic independence of the country
- **Coordinate and enable a university-industry-research institution alliance**, doing mainly applied research and development that ultimately produce new information security products and services
- Ultimately, **develop and enhance local high-tech industry** in information security niche areas

## Current Human Capital Development (HCD) Plan

- Funding for 13 Masters and 3 PhD students in **cryptography, network security, smart card technologies and biometrics**



# *Towards South Africa's ICT RDI implementation Roadmap*



# ICT RDI Vision for South Africa

- Excellent research landscape and a flourishing ICT-based innovation
- Developed South African niche ICT capabilities
- World class R&D institutions and infrastructure
- An indigenous ICT sector that is innovative and competitive – **leading to increase in export of locally developed products and services.**
- A healthy **innovation ecosystem**, in which research results flow unencumbered to government and industry to achieve impact in society



# Thank You

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