

THE ROLE OF CSIR IN AFRICA

Presentation CSIR Africa Workshop

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CSIR: Strategic Partnerships

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Presentation Outline

- CSIR mandate and objectives
- Research impact areas and flagship programmes
- Examples of activities in Africa
- CSIR Africa strategy
- Challenges
- Opportunities
- Conclusion



Role of CSIR in Africa

- Provide strategic support to the following CSIR initiatives
- Nanomedicine in poverty related drugs such as TB and malaria
- Creation of a vibrant Economic platform in Uganda using agro-processing, through small enterprise development
- Collaborate with WAITRO (World Association of Industrial Technology Research Organisations) – Africa chapter on project implementation



The CSIR Mandate

“The objects of the CSIR are,
through directed and particularly
multidisciplinary research and technological
innovation,
to foster, in the national interest and in fields
which in its opinion should receive
preference, industrial and scientific
development,
either by itself or in co-operation with principals
from the private or public sectors,
and thereby to contribute to the improvement of
the quality of life of the people of the
Republic,
and to perform any other functions that may be
assigned to the CSIR by or under this Act.”

(Scientific Research Council Act 46 of 1988,
amended by Act 71 of 1990)

CSIR Objectives

Building and transforming human capital

Strengthening the science, engineering and technology base

Performing relevant research and development and transferring technology and skilled human capital



Contributing to national programme of development and fulfilling mandate

Maintaining financial sustainability and good governance

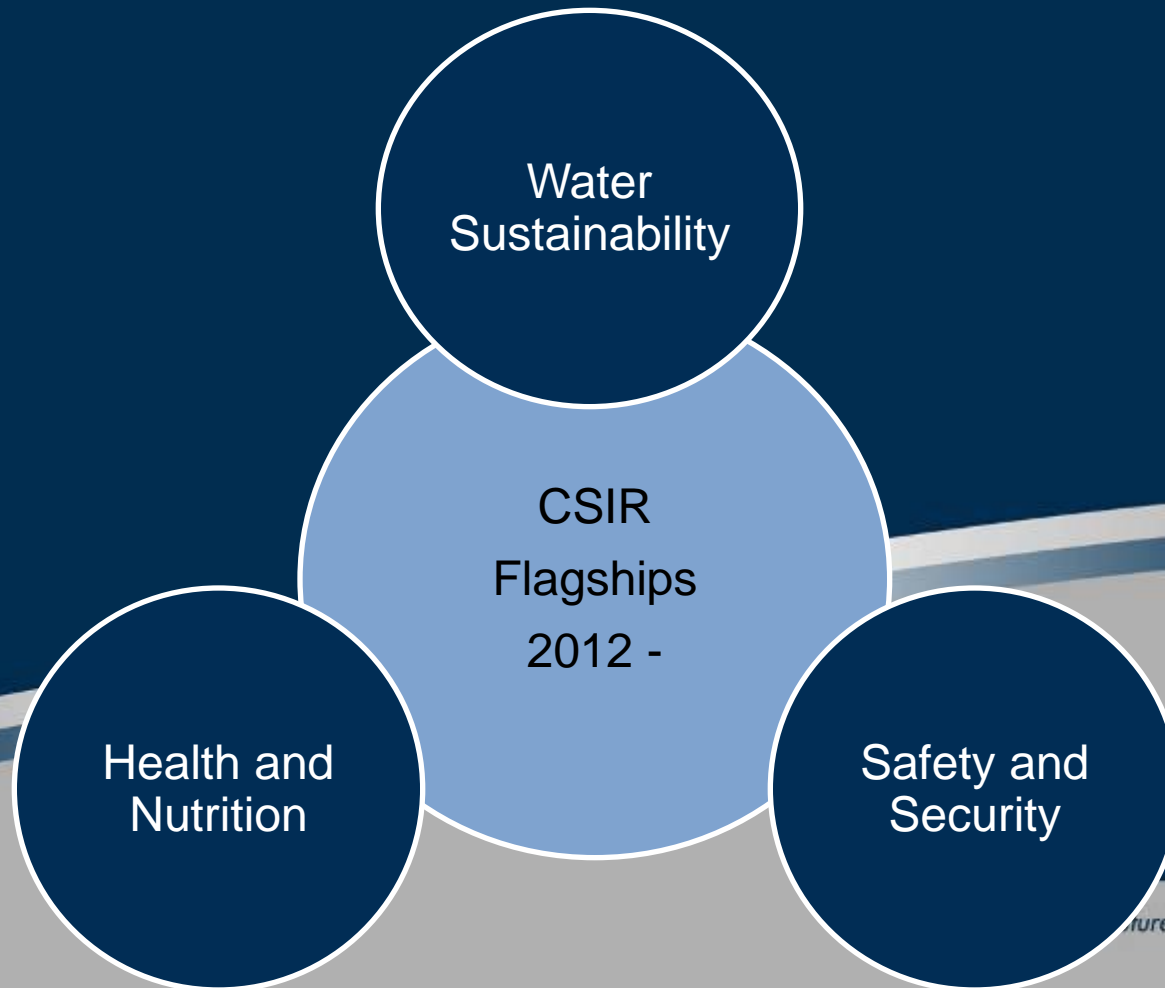
Research Impact Areas

What we do



CSIR Flagships

What we do



Examples of CSIR Initiatives in Africa

- Within context of CSIR mandate, government strategies, AU priorities, stakeholder expectations

African Laser Centre (ALC)

- ALC that has in the past hosted and interacted with several delegates from African countries on research collaboration.
- The bilateral agreements that DST has with a number of African countries has assisted in this regard.
- More funding to support engagement in the bilateral agreements that are in place to motivate increased collaboration in Africa.

AU (NEPAD) Southern Africa Network for Biosciences (SANBIO)

- SANBIO aims to accelerate Africa's Regional and Continental integration.
- Six nodes were established in Africa
 - Mushroom - University of Namibia
 - Bioinformatics - University of Mauritius
 - Livestock - National Institute for Scientific and Industrial research and University of Zambia
 - Plant Genetic Resources - SADC Plant Genetic Resources Centre, Zambia
 - SA Indigenous Knowledge Systems North West University
 - Fisheries - Bunda College of Agriculture, Malawi

Nanomedicines

- Building sustainable capabilities in nanotechnology for development in Africa.
- Nanomedicines are key to fighting poverty related diseases such as Tuberculosis and contributes to poverty alleviation and economic progress in Africa.
- Nanomedicine has proven to improve treatment, diagnosis, monitoring of diseases.

Nanomedicines – cont.

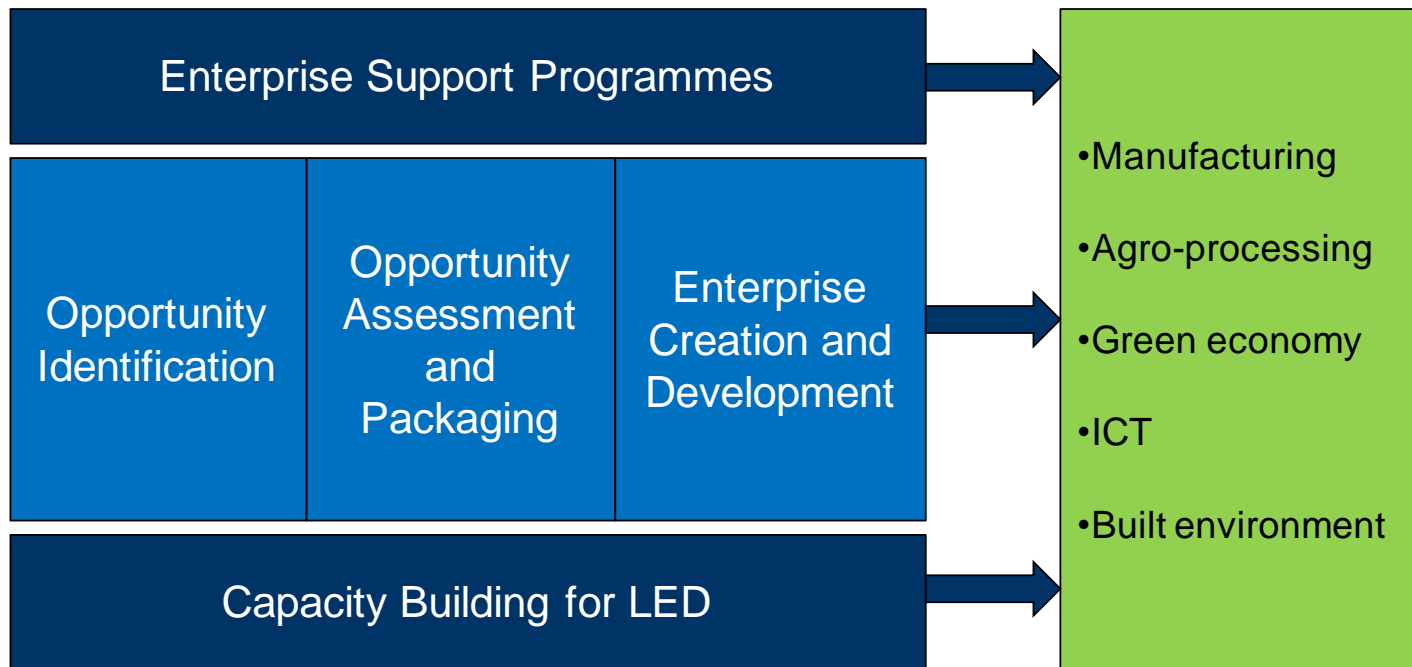
- The Project Consortium on Nanomedicine for malaria was introduced in Kenya, Nigeria and Tanzania
- First international sensitisation Nanomedicine workshop in Africa hosted by CSIR in 2011
- Sensitisation seminars in Kenya, Tanzania, Cameroon, Ethiopia and Nigeria

Information and communication Technology

- Wireless mesh networks – Zambia
- High performance computing – Tanzania
- Fire detection - Angola

CSIR Enterprise Creation and Development

UGANDA



Challenges in engaging with the Continent (1)

- Culture of seeking contract R&D vs. S&T cooperation
- Understanding of the Continent how to identify opportunities and how to do business
- Networking - getting to know S&T counterparts (beyond names)
- Local presence - tenders, language, culture, contract support
- Language barriers - French, Portuguese, Arabic, African languages
- Enabling mechanisms lacking
- International funding often requires co-funding

Challenges in engaging with the Continent (2)

- Continental research capacity and infrastructure
 - poor R&D infrastructure in the Continent
 - inadequate S&T human capacity, S&T brain drain
 - lack of sustainable funding and models for collaborative R&D
 - expectation that RSA will provide, lack of own funds
 - inadequate corporate governance structures
- Strong competition from countries looking for resources, partnerships
 - consultants, international agencies
- Government coordination and funding

Motivation for Increased CSIR Role

- South Africa's destiny linked to the Continent
in our national interest to contribute to regional growth
passionate about partnering, sharing, learning, fostering growth and
development, improving quality of life on the Continent
technology transfer and innovation drives socio-economic development
- Need critical mass of S&T capabilities in the Continent in areas relevant to
the region and where we have strengths
 - CSIR stakeholder/customer expectation
 - provide scientific leadership
- Real income opportunities for contract R&D as well as collaborative R&D

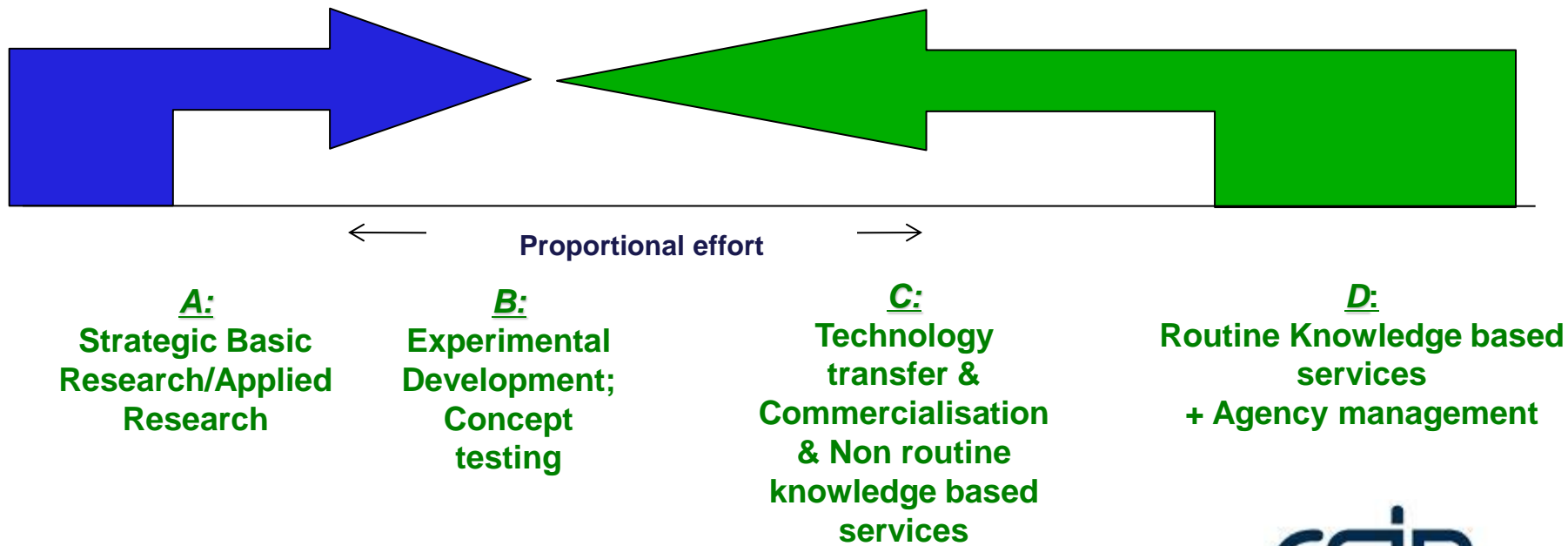
CSIR Africa Strategy

Provide S&T leadership

Build S&T critical mass
Establish networks
Mobilise funding
Flagship Initiatives

Contract R&D services

Map CSIR-ready technologies for impact
Build on CSIR successes
Develop business understanding
Build credibility through delivery
Identify new project opportunities



CSIR Africa Strategy -cont

- There is enthusiasm for a significantly increased role for the CSIR in the African Continent
- Implementation Plan (under development)
 - Two-way approach:
 - 1) S&T leadership through flagship programmes
 - ICT
 - Health
 - Climate Change
 - Infrastructure
 - ALC
 - SANBio
 - 2) Contract R&D services

Conclusion

- Develop human capital in the Continent
- Access funding collectively
- Formalise collaborations
- Work together to identify priority areas
- Pursue commercialisation
- Share technologies and research facilities

Thank you

