

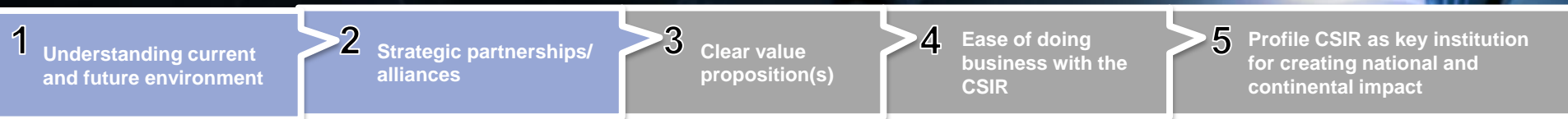
# Update on CSIR Strategic Partnerships



## CSIR Strategic Partnerships Forum

February 2014

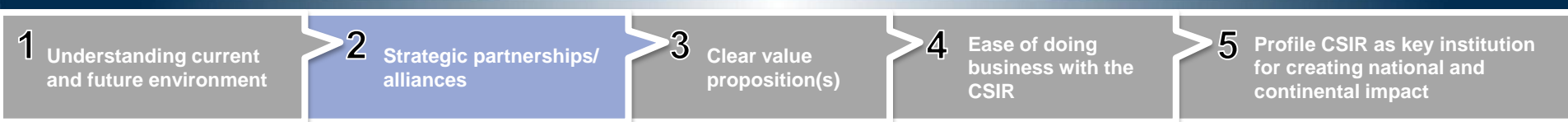
# Definition of a CSIR Strategic Partnership



- We share a long term shared vision
- We participate in each other's strategy formulation process
- We are planned into each other's strategy
- We have joint R&D initiatives linking strategic objectives to a portfolio of R&D projects
- Shared investment, infrastructure, human capital development, IP etc.
  - Some of which we do together
  - Some of which involve other partners (e.g. HEIs, NGOs, CBOs)
  - Some of which CSIR does based on technical expertise



# Roles - CSIR Key Account Managers



## 1. Approach

- Understand the Strategic Partner/CSIR MoA
- Take a strategic perspective
- Take an institutional perspective

## 2. Operational

- Establish communication link with counterpart
- Develop shared understanding of the intent of the cooperation area
- Develop concepts for joint initiatives
- Respond to enquiries from colleagues
- Advise, guide and filter

## 3. Test project concepts

- Firstly with institutional representative
- Own institutional entity
- Steering Committee

## 4. Develop and submit project proposals

- Meet own institutional process requirements
- Align with guidelines and criteria provided

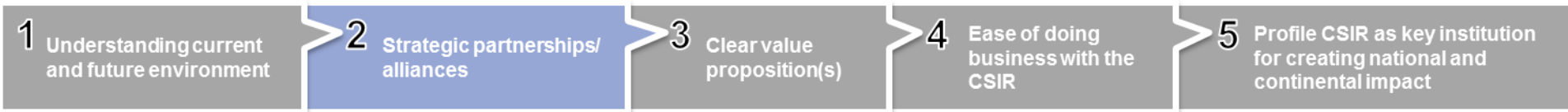
# Update on CSIR Strategic Partnerships



## State Owned Enterprises

# Eskom/CSIR Strategic Partnership

Barry MacColl/Berenice Lue



## 1. Overview of collaborative R&D programme

- Demand Side Management & Energy Efficiency/ Renewable Supply Options
- Energy Storage
- Integrated Resource Scenarios
- Climate Change
- Smart Grids
- Water
- Refurbishment

## 2. Progress to date

- Eskom R20m Task Order approved
- Contracts secured for NLC, NRE, DPSS
- 2<sup>nd</sup> call for proposals 19 July

## 3. Issues for attention

- Clear articulation of CSIR Energy strategy and key focus areas required
- PG allocation at Unit level to complement Eskom funding
  - (Proposing) researcher alignment with Unit strategy and MoA intent

# SITA/CSIR Strategic Partnership

## Gerald O'Sullivan/Berenice Lue



### 1. Overview of Program of Work

- Network Monitoring, Simulation and Modelling, DPSS led
- Smart ID Cards, MDS led
- Dr Math, Meraka led
- Department-specific RDI road maps, Meraka/DPSS led

### 2. Issues for attention

- Complex relationship management due to organisation in transition but key enabler for CSIR to provide ICT services to Government
- CEO to CEO meeting required to re-commit to shared strategic intent

# SAPS/CSIR Strategic Relationship

## Braam Greeff / Lieutenant General Ngubane and Major General Pillay

- Status: MOA completed before 8 August deadline.  
Currently with Treasury for clearance to use CSIR as preferred supplier.
- Strategic Intent: Establish a Safety and Security Evaluation and Research Institute (SSERI) for long term strategic and operational scientific decision support
- Delivers support in 6 programmes:
  - Command & Control and Shared Situational Awareness
  - ICT
  - Integration and Interoperability
  - Operational Quick Reaction Tasks
  - Science and Technology Capability Development
  - Strategic and Operational Decision Support
- Builds on / requires expansion of:
  - ICT capabilities
  - Cyber Security
  - Enterprise Engineering / Business Architecting / Governance Support
  - Sensors, GIS platforms, Data Fusion
  - Test & Evaluation Facilities
  - Knowledge & Technology Transfer

# Denel/CSIR Strategic Partnership

John Wesley/Laurent Dala

## Overview of Program of Work

Agreement Type	CSIR Unit/ DPSS CA	Partner Institute	Field
MOU	Optronics	DENEL (PTY) LTD	Exchange information with the PURPOSE to jointly develop an imaging simulation system (OSSIM) simulator application in their own respective areas of work
MOU	Optronics	Denel Dynamics	Joint OSSIM Marketing
NDA	Aeronautics	Denel Dynamics	Intergration of the A-Darter missile on the Hawk aircraft
NDA	Aeronautics	Denel Dynamics	Providing any support related to release clearance and aero elasticity aspects of Umbani on a Denel Dynamics client's aircraft
NDA	Radar & EW	Denel Dynamics	Technical or business information of a proprietary or confidential nature (transfer of the SHP algorithm )
MOU	Radar & EW	Denel Dynamics	Technical or business information of a proprietary or confidential nature (transfer of the SHP algorithm )
NDA	Landwards	Rheinmetall Denel Munition	Military vehicle protection against various threats
MOA	LPT (NLC)	Denel Dynamics	Development of microlasers for a missile mounted proximity imaging fuze
C R&D	LMP (NLC)	Denel Dynamics	Laser welding and cladding of bomb casing of Umbani system
MOA	LMP (NLC)	Rheinmetall Denel Munitions	Laser welding of maraging steel rocket motor casing and wiring lugs of the A-Darter missile
Small Contract	LMP (NLC)	Denel (Rost Precision Engineeing)	Precision laser welding of Rooivalk helicopter components

### 1. New Initiatives

- Liquid fuel tank design validation capability: Joint R&D programme between CSIR, Denel Aerostructures and University of Pretoria. Joint proposal submitted to dti (via AISI)
- Joint support to DOT on Unmanned Aircraft Integration into SA Civil airspace. Early discussion on project started with Denel dynamics (UA Systems)





# TNPA&TPT/CSIR Strategic Partnership

Rufus Lekala & Willie Coetsee/Petrus Matji



## 1. Overview of Program of Work

- Port infrastructure monitoring, maintenance and optimization
- Physical and numerical models of port layout, ship motion and breakwaters
- Information management systems for data archiving & port control, consolidation and cleansing of data to enhance modelling capabilities
- Long wave measurement and forecasting linked to moored ship motion analysis for safer berthing
- Marine environmental monitoring
- Impact of climate change on all ports
- Early warning systems
- Human capital development

## 2. Comments

- TPT to identify specific projects that will in line with high level program activities

# TE Strategic Partnership

Charl Harding/Sugen Govender



## ▪ Status:

- *Transnet second steering committee took place.*
- *The first orders have been placed for the projects*
- *5 projects being scoped for the next PMC*
- *The control system lab and traction motor lab have been finished in building 44*
- *Transnet is ready to start construction of building 21 early next year.*

## ▪ Strategic Interaction:

- *The proposal to assist with the Enterprise Engineering of a new R&D organisation has been accepted and work has commenced*

## ▪ Capabilities Required:

- *The CSIR is investing in the development of capabilities which will be required by Transnet.*

## ▪ Issues

- *The biggest issue communicated from Transnet is that they feel resources are not dedicated to the projects and thinly spread across multiple projects.*

# Update on CSIR Strategic Partnerships



## Public Sector

# the dti/CSIR Strategic Partnership

## Nonkululeko Shinga/Berenice Lue



### 1. Overview of Program of Work

- Establishment of the Titanium Industry (Value Chain approach)
- Establishment of the Platinum Industry
- Electronics Industry based on Defence Capacity
- Energy: Shale gas (Shell)
- Two key strategic projects - Water Infrastructure & Waste Management and Recycling

### 2. Issues for attention

- CSIR Champion to be identified for each Strategic Area
- PG allocation from Executive strategic fund required to scope each strategic area
- CSIR demonstrable delivery outputs and timelines required on (2) key strategic projects - Water Infrastructure & Waste Management

# DWA/CSIR Strategic Partnership

## Ramogale Sekwele/Harrison Pienaar

### Status

The CSIR-DWA strategic partnership convened its second Steering Committee, confirming six identified areas of cooperation. Subsequently, value propositions and potential project initiatives has been identified for each cooperation area. Establishment of joint technical task teams have been confirmed, in order to further refine and unpack each value proposition and project initiative, for consideration at the next Steering Committee meeting.

#### COOPERATION AREAS:

1. Water policy, regulation and governance  
(DWA: Marie Brisley/ CSIR: Marius Claassen)
2. Integrated planning and demand management  
(DWA: Solly Mabuda/ CSIR: Paul Lochner)
3. Infrastructure  
(DWA: Kurt Fortuin/ CSIR: Petrus Matji)
4. Monitoring, evaluation and compliance  
(DWA: Carey Raja/ CSIR: Karen van Breukelen)
5. International water cooperation  
(DWA: Thabisa Fiko/ CSIR: Harrison Pienaar)
6. Human capital development  
(DWA: Verena Meyer/ CSIR: Pinda Sifunda)

#### STRATEGIC INITIATIVES:

1. Development and refinement of key regulatory tools (i.e. waste discharge charge system and water tariff setting).
2. Centre for integrated and sophisticated water planning modelling systems.
3. Strategic advocacy support in operations, maintenance, health & safety aspects of water infrastructure.
4. Provision of adequate systems to deal with both quality and quantity aspects of water management.
5. Joint cooperation and management on water aspects to promote regional and international water cooperation.
6. Provision of adequate & skilled capacity in water management.

### Issues for attention

- ExCo formal request for presentation on CSIR Water Flagship to be made to DWA ExCo
- CSIR Relationship with DWA is dominated by projects with DWA Agencies and is still very project specific, not yet strategic – aim is to grow it to this level

# DEA/CSIR STRATEGIC PARTNERSHIP

## Mapula Tshangela/Xolisa Ngwadla

The DEA-CSIR strategic partnership identified 5 co-operation areas, with technical working groups charged with comprehensively elaborating those areas. Albeit at different stages of maturity, for each co-operation area, a priority strategic initiative has been identified with a view of practically demonstrating the cooperation. The 3<sup>rd</sup> Steering Committee of September 2013 considered progress, which included the exploration of funding mechanisms for various initiatives

### COOPERATION AREA: NOTABLE STRATEGIC INITIATIVE

1. Environmental solutions for a green economy - Douglas Trotter (NRE): Development of guidelines, tools, indicators and metrics for assessing green economy initiatives
2. Adapting and mitigating climate change - Xolisa Ngwadla (NRE): Open platform to support greenhouse gas mitigation decision making
3. Sustainable environmental management - Paul Lochner (CAS): Supporting Strategic Environmental Assessments for SIPS, including development of the 'environmental infrastructure SIP
4. Protecting biodiversity - Luthando Dziba (NRE): Bioprospecting for potentially valuable medicinal and food species
5. Ecosystem Service delivery - Lee Annamalai (MI): Risk assessment and modelling; disaster management planning and fire detection building on the AFIS platform

### COOPERATION AREA: NOTABLE STRATEGIC INITIATIVE

1. Exploring funding mechanisms for the jointly agreed areas of focus
2. Near-term funding from the DEA pledged, CSIR to explore ways of co-funding the work; appointed on a short-term basis to support UNFCCC negotiations
3. CSIR appointed to as lead a trio of CSIR-SANBI-CGS, implementation is under way; DEA legal commenting on an hoc funding mechanism Rapid-Research-Response for contracting CSIR
4. Funding earmarked under the South Africa allocation of the Global Environment Facility; Contract secured for alien invasive vegetation management-monitoring
5. Internal preparatory work and definition of the value proposition to the client concluded in respect of the ocean domain

# SRSA/CSIR Strategic Partnership

## Bernadus van der Spuy/Tony Kirkbride

The SRSA/CSIR/DST strategic partnership is currently crafting a Research, Development and Implementation Programme in support of the government's National Sport and Recreation Plan. A draft business plan and management model have been proposed for consideration (closely aligned to the framework contained in this presentation). Four themes, linked to five CSIR competency areas, have been identified and the three parties are presently identifying the funding priorities, investment strategies and timescales.

### COMPETENCY AREAS:

1. Systems Development - To be advised
2. Immovable Asset Management - Ankoma Ampofo -Anti (CAS)
3. Sports Science and Technology - Tony Kirkbride (CAS)
4. Infrastructure - Ankoma Ampofo-Anti (CAS)\*
5. Monitoring and Evaluation/Impact Assessment - To be advised

\* Linked to competency area #1

### NOTABLE STRATEGIC INITIATIVES:

1. *Talent Identification*: this is a complex process that aims to identify potential elite athletes in SA and implement structured performance pathways to pro-actively develop sporting talent
2. *Facilities*: this underpins sports development in South Africa by providing an enabling environment
3. *Club Development*: aims to provide a solid foundation for long-term participant development and mentorship programmes
4. *Research and Development Support*: targets critically important sports science and technology domains, such as telemetry and tracking, aerodynamics, materials, nutrition and ICT

# DoH/CSIR Strategic Relationship

Matthew Chetty / Milani Wolmarans

- **Status**: MOU between BE & DoH in place.
  - Needs expansion to cover all of CSIR as well as the spectrum of Health Initiatives. Draft has been prepared, requires expansion of scope for NHI, etc.
  - Contract received for (NHI) Population Registration System, collaboration between DPSS, Meraka, MDS & BE.
- **Strategic Intent**: Build on the good work of BE (IUSS) & Meraka (Normative Standards Framework) to secure involvement across 4 of the NDOH programmes:
- **Opportunities**: (consolidated)
  - ICT infrastructure and systems, incl Standards based mHealth platform, Health Facility Connectivity Solutions
  - Health infrastructure, Standardised clinic design and construction, Infection control
  - Spatial planning, Immovable asset management
  - Enterprise architecture and systems engineering
  - Medical technologies (POC diagnosis), Nutrition, Environmental health
- **Required Capabilities**:
  - Medical technology development skills and facilities (regulatory certification knowledge)
  - Need to expand capabilities such as eHealth standards & systems



# DPW/CSIR Strategic Partnership

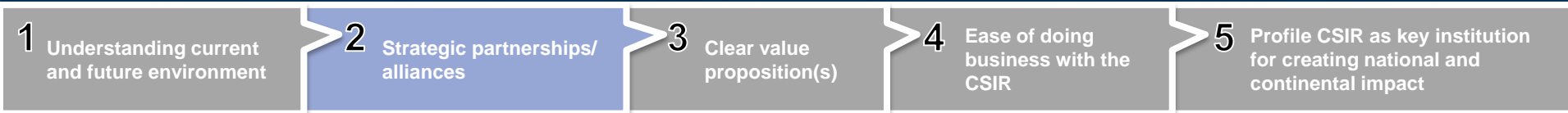
## Sihle Dlungwana/Thembanani Mackaukau



1. Old NDW/CSIR Mou (2005) needs to be replaced - no longer appropriate
2. New MoU awaiting signatures
3. Main role-players are BE, CAS & NDPW (see MoU's addendum)
4. Overview of Program of Work entails CSIR expertise (among others) i.t.o.:
  - NDPW's Expanded Public Works Programme (EPWP) – R4m contract with BE currently underway;
  - Green Building Programme;
  - Energy and water efficiency in buildings;
  - Design and construction of low-volume roads;
  - Enhancement of and compliance with the Government Immovable Asset Management Act;
  - Emerging contractor development models
5. Issues for attention
  - Finalisation of the Mou
  - CSIR be appointed to assist with strategic projects identified in (4) above.

# DRDLR/CSIR Strategic Partnership

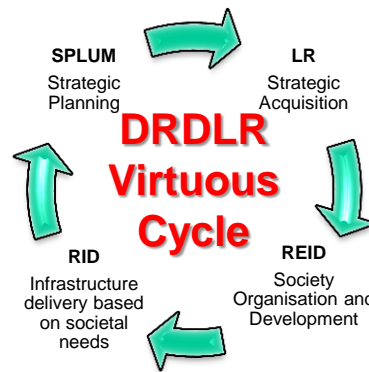
## Rensie van Rensburg/Daphney Mayindi



### Overview of Departmental Processes and Structures

#### Determine "Where" to implement:

- SIPs (Strategic Integrated Projects)
- 23 Districts
- CRDP sites
- PGDS (Prov Growth & Dev Strategy)
- District IDPs
- LM IDPs
- Statssa Info (analysis)
- LMC (Functions to be identified)



#### "What" to buy:

- Proactive acquisition of land based on SPLUM reports



#### "Who" to assist

#### "When" to assist

#### "What" to pass to strategic partners and "what" to pass to RID:

- Community organisation into economic units of production
- Training of communities
- Provision of production inputs
- Enter into strategic partnerships to support
- Identify community and on farms infrastructure required
- Skills development and training (Narysec)

**Infrastructure Projects i.e.** When and what infrastructure to deliver is determined by community readiness to produce in the identified areas that maximize governments investment. Projects relating to the socio-economic, regeneration of small towns, ICT, and special projects will also be initiated by RID.

### Issues for attention

- Steering Committee needs urgent finalisation
- Strategic guidance needed from the Steering Committee on needs, priorities, time frames and funding

# Gauteng DID/CSIR Strategic Partnerships

## Tshepo Theledi/Themba Belle

### Overview of programme of Work

- Currently there is no MOU between the CSIR and DID
- Discussions at an advanced stage and the areas that are being looked at are -
- CSIR's input into the green agenda
- Joint research agenda between the GDID and the CSIR for the development of an infrastructure barometer
- CSIR's secondment of technical staff and skills transfer
- ICT
- Property Management

### Issues for attention

- GIDD agreement on areas of priority
- Preparation of MoU in progress

# The Innovation Hub/CSIR Strategic Partnership

Tsietsi Maleho /Themba Belle

## Overview of Programme Work

- A signed MOU exists between the two institutions.
- Currently there are two Task teams that have been set up to put life into the MOU

## Support to Start Ups

- The CSIR has an entrepreneurial pool for CSIR spin off companies
- TIH has indicated its willingness to act as a referral
- TIH has offered to incubate CSIR start-up companies
- In the Biopark, the TIH are looking at Food processing and Health technologies,
- TIH keen in visiting the CSIR Biomanufacturing Industry Development Centre
- Smart City Initiative
- Finding ICT solutions for the City of Tshwane.
- Working on a practise note that addresses innovation closely with Centre for Public Service Innovation (CPSI) to assist the City improve on Service Delivery.

## Issues for attention

- The CSIR would like to increase the number of its start ups
- Channeling referrals to the CSIR from the TIH
- Closing the loop on the CSIR/TIH/City of Tshwane Smart City Initiative..."

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# CSIR Aerospace Strategic Partnership

## Nomfuneko Majaja /Marié Botha

1. Overview of Program of Work
  - CSIR Aerospace Quarterly Forum managed from SIIU to ensure collaboration across CSIR research units in the fields of aeronautics and space
  - CSIR/DST Civil Commercial Unmanned Aerial System (CCUAS) National Project managed from SIIU which includes numerous CSIR research units (SIIU, DPSS, MSM), universities (UJ, SUN, CPUT), and industry (Denel, Tellumat, ATE)
  - Aerospace Industry Support Initiative (AISI), funded by **the dti**, utilising CSIR experts (SIIU, BE, DPSS, MSM, NLC) and CSIR national facilities to the benefit of South African industry.
  - Establishing and maintaining key relationships with local and international stakeholders
2. Progress to date
  - SANSА MOU to be signed (to be upgraded to a strategic partnership and a MOA signed upon project identification)
  - Astrium (EADS) Director for Africa visited the CSIR, reinforcing CSIR's relationship with Astrium Space Transportation
  - AISI Estimated Impact within South African Aerospace industry during 2012/2013:
    - 9 Manufacturing improvement processes implemented by NLC within industry (LABAMA support projects)
    - NMMU aerodynamic validation project at DPSS utilising CFD and wind tunnel tests
    - 2 Guidelines developed by DPSS and published for general industry use
    - AISI funded interns extended to industry. Envisioned that approximately 15 interns will be placed within Denel Aviation and Denel Aerostructures with a short rotation in CSIR research units.
3. Issues for attention
  - SAA Bio-Fuels strategy 2020
  - SAA Aircraft Acquisition
  - Additional opportunities to be investigated with SKA South Africa, beyond current collaborations
  - Clear value proposition of CSIR capabilities to be mapped to European Technology Tree, with Technology Readiness Levels defined, and documented.
  - CSIR's involvement in SANSА's Satellite Programme

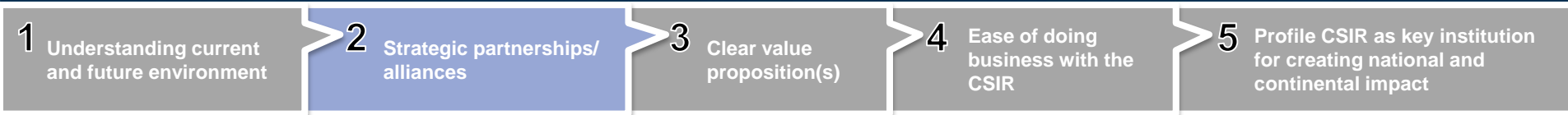
# Update on CSIR Strategic Partnerships

- 1 Understanding current and future environment
- 2 Strategic partnerships/alliances
- 3 Clear value proposition(s)
- 4 Ease of doing business with the CSIR
- 5 Profile CSIR as key institution for creating national and continental impact

## Private Sector

# Sasol/CSIR Strategic Partnership

Harko Mulder/Berenice Lue



## 1. Overview of Program of Work

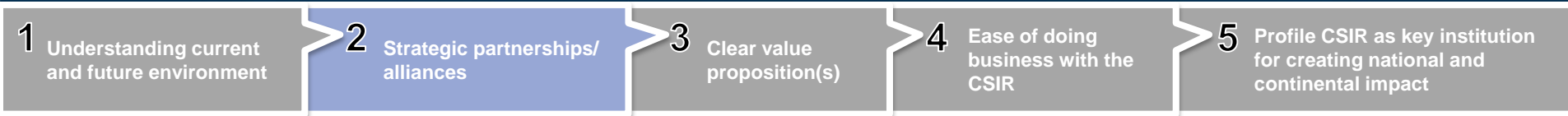
- MoU Signed on
- Areas of Cooperation identified
  - Environment
  - Energy

## 2. Issues for attention

- Relationship not leading to tangible initiatives.
- EXCO strategic discussion with Dr Thulani Dlamini required to advise of the way forward in respect of this relationship.

# TIA/CSIR Strategic Partnership

## Patrick Krappie/Berenice Lue



### 1. Overview of Program of Work

- Steering Committee in place
- TIA/CSIR Draft Framework of Engagement under development

### 2. Issues for attention

- Concern that there has not been finalisation of the MOU, communication guidelines, and conflict resolution



# IDC/CSIR Strategic Partnership

## Kugan Thaver/Berenice Lue



### 1. Overview of Program of Work

- SteerCom in place
- MoU signed on
- Key areas to be explored to give meaning to the CSIR/IDC Strategic Partnership
  - Infrastructure, Localisation, ICT, Green Industries/Renewable Energy, Water Infrastructure, Africa PICC/SIPs and Licensing & Ventures.
- Mandate to foster industrial development.

### 2. Issues for attention

- Excellent support to CSIR on PICC/SIPs
- IDC plate seems very full

# SASSA/CSIR Strategic Partnership

Frank Earl/Fabrizio Dionisio

## 1. Overview of collaborative R&D programme

- SASSA expressed a need to become strategically independent with respect their core technology systems, both for internal and external applications
- The main external application would entail an End-to-End system (that they would own) which would be used to pay government grants. Currently this service is being sub-contracted to a third party. The charges to use such third parties amount to billions of Rands per annum, which SASSA would rather use for other social development priorities
- Regarding this system, SASSA only handles the application of payments and uses third parties for the payment logistics. These third parties hold all rights for the current payment solutions
- SASSA is open to developing an end to end home-grown solution that they would own fully
- Initial requirement by SASSA entail identity management, biometrics and smartcard capabilities

## 2. Progress to date

- NDA to be signed for initial co-operation
- Initial workshop held on 11 October 2013 to discuss SASSA immediate requirements and mapping of current status of operations
- Follow-up meeting with Frank Earl regarding SASSA “other” requirements
- Following clear understanding of requirements with respect to CSIR capabilities, official communication from SASSA CEO to CSIR Executive to follow

## 3. Issues for attention

- Sensitivity due to current litigation processes between SASSA and some of its service providers

# DuPont/CSIR Strategic Partnership

Bjoern Meth (Mmapule Tshabalala)/Berenice Lue (Sipho Mtsweni)

## 1. Strategic intent:

- DuPont selected the CSIR as their strategic R&D partner in Africa to apply science to find solutions in food, energy and protection.

## 2. Progress to date:

- MoU is in place, workshop held at CSIR on 16 July 2013, submission of concepts document on possible areas of value add by *Bio*: Nutrition and health & Pioneer Hi-Bred partnership), *BE*: Net-Zero building & evaluation of asphalt), *DPSS*: Safety & Security, *ECD*, *MSM*: Multifunctional controlled release fertiliser system & water treatment using nano technology, *Meraka* and *NRE*: Water treatment
- Audiocon meeting held on 7 Oct 2013 to cement areas of mutual interest in water flagship:
  - *AMD and wastewater treatment, discussions are at an advanced stage*
  - *Polymer applications, possible areas not identified as yet, discussions at early stage*

## 3. Issues for attention

- *Most Technical Experts are engaged with other activities, we may not meet the 31 Oct 2013 deadline for submissions of project concepts*
- *Should it be necessary, CSIR Technical Experts could join Drs Sibisi and Chikwamba on their trip to Geneva in Jan 2014 to finalise scoping of projects*

# Business Support: Funding

## Eunice Ndeke



### Overview of Program of Work

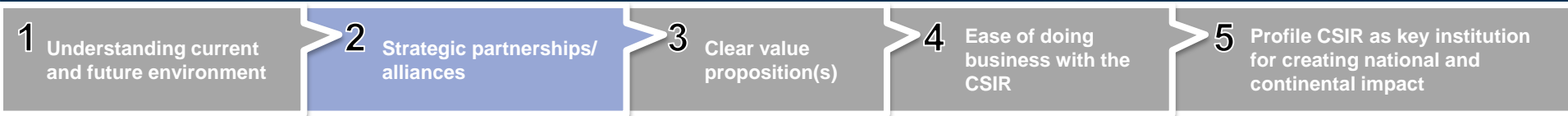
- Support to CSIR Africa Strategy and CSIR WAITRO Africa Focal Point (UNECA workshop)
- CSIR - wide registrations local/international:
  - Registrations were completed - NLC, Biosciences, Built Environment.
  - USA Registration - SAM.gov and Grants.gov.
  - EU FP Registration
  - DIFD
  - Richards Bay Minerals, Sasol
  - African Development Bank
- Competitive Funding Calls published :
  - (NRF, European Union, United States, Thrip, DEA, Bill&Gates Foundation)
  - Conferences and Science Awards

### Issues for attention

- CSIR Strategic Partnerships Blog launched
- Blog updated with new funding opportunities, current Calls, intraweb articles- DuPont, Transnet, IDC, Africa workshop, business forum meetings and UNECA/WAITRO workshop.

# CSIR Programme Office

## Ratilal Rowji



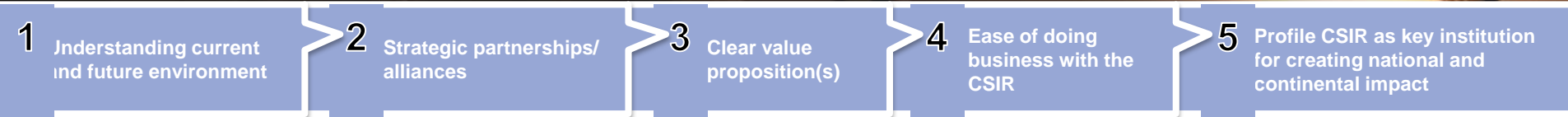
### 1. Overview of CSIR Programme Office

- Programme management across CSIR with complex multi-year and multi-unit programmes.
- Coordinate CSIR macro activity and plan/s for programme with strategic alliances and partners.
- Harness the full CSIR resources into full CSIR value proposition.
- Formalise and establish the operational framework to allow programmes and portfolios to execute iaw MOUs, MOAs and contracts.
- Support the Key Account Manager and the Technical Lead.
- Support the governance framework.
- Provide programme status to steering committee/s and external stakeholders via dashboards and status reports.

### 2. Issues for attention

- Formalise the CSIR programme office within the CSIR
- Provide and make accessible all the tools – processes, procedures, templates and documents for use within programme

# CSIR Strategic Partnerships Modis Operandi



Thank you