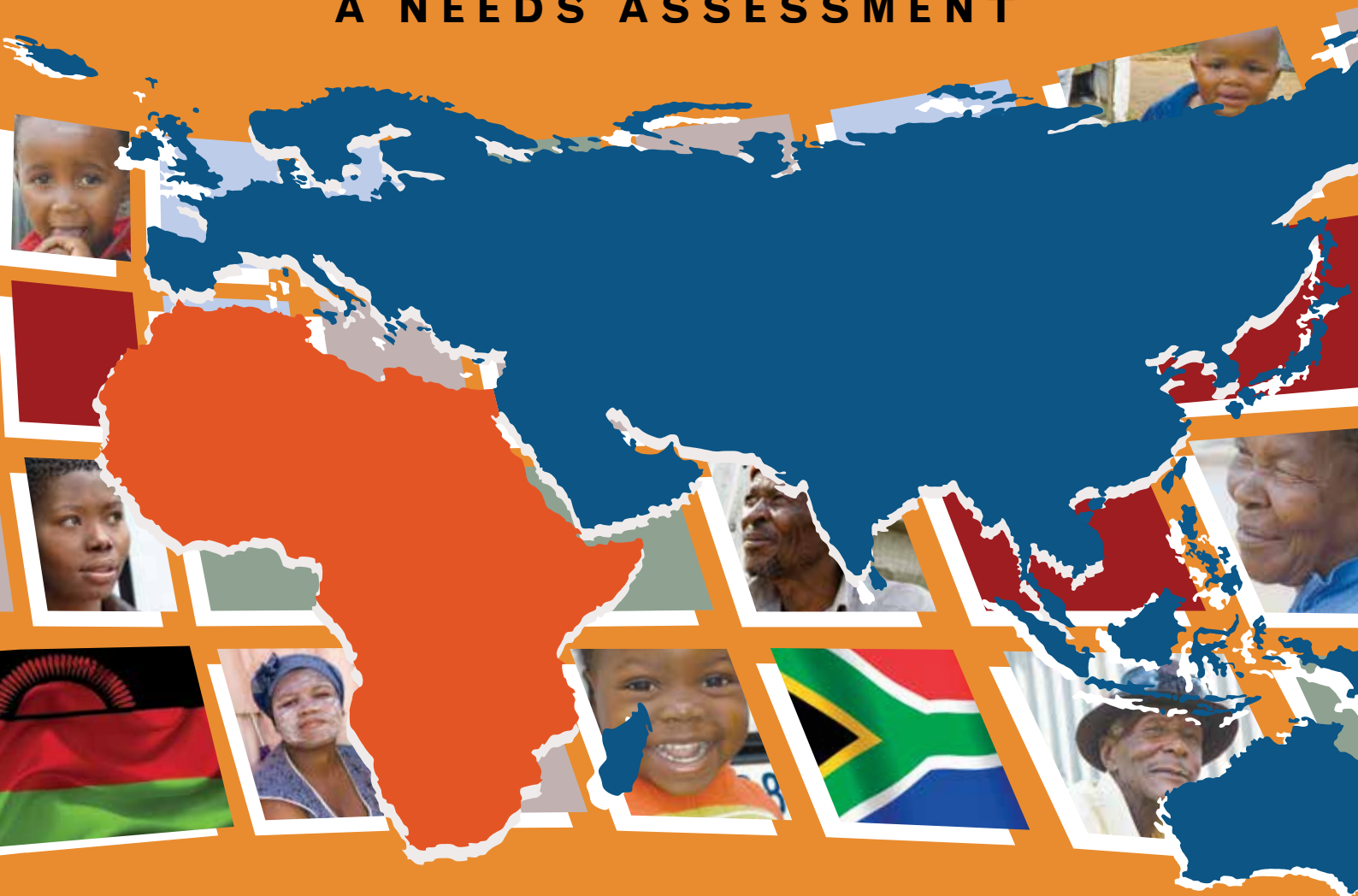# Identifying strategic gaps and establishing priorities for capacity-building within selected government departments of

# SOUTH AFRICA

## A NEEDS ASSESSMENT

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UNIVERSITY OF JOHANNESBURG

UKaid
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# Contents

## Abbreviations

| | |
|---|---|
| **BCURE** | Build Capacity to Use Research Evidence |
| **CfAR** | Centre for Anthropological Research |
| **CLEAR-AA** | Centre for Learning on Evaluation and Results for Anglo Africa |
| **CoJ** | City of Johannesburg |
| **CSIR** | Centre for Science and Industrial Research |
| **DBE** | Department of Basic Education |
| **DEA** | Department of Environmental Affairs |
| **DFID** | Department for International Development |
| **DPME** | Department of Planning Monitoring and Evaluation |
| **ECDoE** | Eastern Cape Department of Education |
| **DST** | Department of Science and Technology |
| **EIDM** | Evidence-Informed Decision-Making |
| **HSRC** | Human Sciences Research Council |
| **ICTs** | Information and Communication Technologies |
| **IID** | Innovation for Inclusive Development |
| **M&E** | Monitoring and Evaluation |
| **NES** | National Evaluation System |
| **PSPPD** | Programme to Support Pro-poor Policy Development |
| **TA** | Technical Assistance |
| **UJ** | University of Johannesburg |
| **UK** | United Kingdom |

# EXECUTIVE SUMMARY

This needs assessment to the United Kingdom's (UK) Department for International Development (DFID) provides feedback on the 'Building Capacity to Use Research Evidence (BCURE)' programme offered to selected South African government departments through the University of Johannesburg (UJ). The UJ-BCURE programme focuses on the identification of opportunities for support within government systems for the promotion of evidence use. The programme builds on previous work completed by the UJ-BCURE team that explored the evidence-to-policy landscape in South Africa.

This needs assessment presents the gaps and opportunities identified in South Africa for the promotion (through capacity-building) of evidence-informed decision-making (EIDM) within selected South African government departments.

Initially, five government departments were identified as potential stakeholders to be supported by the capacity-building initiatives of the UJ-BCURE programme. These included:

- The national Department of Performance, Monitoring and Evaluation (DPME) in the Office of the President;
- The national Department of Science and Technology (DST);
- The national Department of Basic Education (DBE);
- The national Department of Environmental Affairs (DEA);
- Local government department, represented by the City of Johannesburg (CoJ).

The UJ-BCURE programme envisioned that it could possibly provide capacity-building support in relation to the following functions and activities of the various departments:

- To the DPME in developing an EIDM capacity-building support model to carry out its quest for developing effective mechanisms for EIDM capacity-building within government;
- To the DBE in its role in achieving National Outcome One (improving basic education for all South Africans) with a particular focus on developing the basic education sector implementation plan for e-Education 2014-2019;
- To assist the DST in the management process of the building of the strategic framework for innovation for inclusive development (IID). This process is guided by the technical inputs of multiple South African stakeholders and owned solely by those stakeholders. The role of UJ-BCURE is to provide support to DST as they require and deem appropriate;

- To the Department for Environmental Affairs (DEA) in translating its framework for environmental evidence-based policymaking into action[1] with particular reference to the Innovation for Inclusive Development (IID) strategy; and
- To the City of Johannesburg (CoJ) in implementing a new system to support EIDM.

This needs assessment is the second deliverable (following a landscape review) of the UJ-BCURE programme to DFID. The needs assessment is the first step towards the operationalisation of the programme. Operationalisation will include piloting of workshops, mentorships, and extended mentorships (titled Mentorship-*plus*). The overall aim of UJ-BCURE is to improve the EIDM processes and environment in the selected South African government departments.

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[1] Note that given the overlap with the activities of the Overseas Development Institute-Human Sciences Research Council (ODI-HSRC) BCURE consortium, which is also working in South Africa, we jointly decided that UJ-BCURE would not take up requests for capacity-building from DEA. However, the identification of DEA's needs in the area of EIDM was conducted prior to this decision and key findings of the needs assessment are therefore included in this report.

# 1. Purpose of the Needs Assessment

The purpose of the UJ-BCURE programme is to identify a sustainable model of capacity-building to support EIDM within the civil service in South Africa. The purposes of this needs assessment can since be stated as:

(1) To identify the partner(s) within government interested in receiving support through capacity-building in the area of EIDM.

(2) To determine identified partners' specific needs[2] related to EIDM.

The specific aims of this needs assessment are:

- To understand high-level systems and their relationships in EIDM within the South African public service.
- To identify the key EIDM focus themes for the identified government departments.
- To establish the EIDM capacity-building goals of these departments.

# 2. Programme Background and Information

DFID's BCURE programme supports the urgent need in many Low- and Middle-Income Countries for evidence-informed solutions in the larger public service sector with a particular focus to address poverty and the development of related skills. DFID has funded six BCURE programmes worldwide, one of which is the UJ-BCURE programme in South Africa. The UJ-BCURE programme is hosted by the Centre for Anthropological Research (CfAR) at the University of Johannesburg and will offer Technical Assistance (TA) to selected South African and Malawi government departments until December 2016.

Over the course of the three-year UJ-BCURE programme, the TA given to the South African Government will include:

(1) A landscape review of the evidence-to-policy environment, which will inform UJ-BCURE of the stakeholders in the EIDM environment with a focus on the DBE, DST and DPME.

(2) Innovative ways to build capacity (including tools, systems and processes for capacity-building) using:

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[2] In line with the parameters set by DFID, programme design and implementation will be fluid, flexible and responsive to the needs of partners.

a. workshops and capacity-building programmes, from introductory awareness-raising sessions for senior civil servants, to advanced skills in accessing, appraising, and synthesizing evidence for technical staff within government;

b. a mentorship programme (Mentorship-*plus*) on adaptation and implementation of learning within mentees' work environments. This programme will be an extended longer-term mentorship effort for government policymakers in a one-on-one enabling environment for individual and cohort capacity-building.

(3) Building the Africa Evidence Network (AEN), which will include the establishment of country-specific branches and the hosting of two continent-wide colloquia to provide capacity-building and capacity-sharing opportunities. This will include partners in South Africa and Malawi, research councils (e.g. the Human Sciences Research Council, and the Center for Science and Industrial Research) and academic institutions (e.g. University of the Witwatersrand and the University of Malawi). It will be supported by a web-based platform for visibility, debates and resources.

Recent research highlighted the consequences of the lack of impact research (and the research community) on the decisions taken by the South African government (Godfrey et al., 2010). The authors argue that the research community has unsuccessfully responded to the challenge by 'pushing' evidence onto policymakers, with a hope that policymakers will use the information to inform policy formulation or implementation processes. The study suggests that researchers at universities and science councils feel frustrated about research conducted for government departments because they tend not to receive feedback about utilization or impact (Godfrey et al., 2010). It is possible that the lack of feedback is the result of a lack of capacity among civil servants to engage with, or use, the research provided. This interface, between the production and the capacity to utilise research, will be the crux of UJ-BCURE programme. The aim is to promote a closer, more effective, relationship between policymakers and researchers.

## 3. Needs Assessment Approach and Methodology

The UJ-BUCRE team conducted nine workshops and meetings aimed at establishing relationships with relevant role players, and at assessing role players' needs related to the programme during the inception phase of the project in 2014. The areas of potential support identified are presented below in Table 1.

Additional subject matter covered during these meetings and workshops included:

- How to reach mutually beneficial agreements and establish symbiotic relationships;
- How to extend relationships and build wider networks;
- Identification of potential challenges or barriers to uptake within the relevant government systems;
- Realistic target setting and stakeholder expectation management;
- Identification of the most important building blocks toward an increased role for decision makers in the EIDM environment.

**Table 1: Sequential meetings that have led to refined area(s) of programme focus: Potential areas of support for the DPME, the DST, the DBE, and the DEA.**

| Meeting date & purpose | Main agenda & description | Main outcome(s) |
|---|---|---|
| Preliminary fact-finding workshop hosted by the DPME, at the Union Buildings on the 12th of February 2014. | Representatives from the HSRC and the UJ-BCURE team and representatives of DPME attended. The meeting focused on relevant areas of work, the kind of support needed, and the preliminary expected outputs. | • Established a relationship with relevant stakeholders.<br>• Increased understanding of the scope of work of relevant government departments within the EIDM sector.<br>• Identification of areas in which support would be most critical. |
| Introductory meeting with the DEA on the 7th of March 2014 | The meeting focused on EIDM processes in the DEA, related relationships between the DEA and relevant stakeholders, the DEA's scope of work and challenges experienced by the department in this regard. | • Identification of key DEA strengths pertaining to EIDM.<br>• Identification of lessons applicable to other government departments for the improvement of their EIDM systems. |
| National Evaluation System (NES) workshop hosted by the DPME on the 18th and 19th of March 2014. | This meeting focused on the DPME's scope of work within the NES, and, in particular, on the evaluations it conducts. These include pre-evaluations, procurement processes, and evaluation management. | • Identification of key role players in the NES.<br>• Understanding NES and related processes.<br>• Agreeing on outputs from the BCURE programme and managing expectations in this regard. |
| Focused landscaping workshop at the Union Buildings, hosted by the UJ-BCURE team, on the 25th of March 2014. | The meeting focused on agreeing to the parameters and finalising a joint understanding of the nature of the relationship between UJ-BCURE and the DPME. The meeting was attended, inter alia, by representatives from Statistics South Africa, the DPME, and the Programme to Support Pro-poor Policy Development (PSPPD), the Department of Home Affairs, the DEA, the Department of Tourism, | • Provided feedback to the relevant EIDM sector stakeholders, following the analysis of data generated through a series of in-depth interviews focused on identifying opportunities/gaps in the EIDM sector to develop the UJ-BCURE support/capacity building strategy. |

| | the National Treasury and the HSRC. | |
|---|---|---|
| Two day (reflection) policy nexus workshop hosted by the HSRC on the 7th and 8th of April 2014 | This meeting focused on (1) engagement with EIDM stakeholders and their perceived relationships to each other, (2) further refining the landscape map[3], (3) agreeing on the pattern of future relationship development among participants, and, (4) the initiation of interactions amongst participants to develop their own mapping exercises within their work environments. | • Identification of gaps and opportunities in the EIDM sector. |
| Exploratory meeting with senior DST officials, at the DST offices, on the 17th of April 2014 | This meeting, chaired by Imraan Patel Chief Director - Science and Technology for Economic Impact, focused on the identification of areas in which the BCURE programme can be implemented. | • Established relationships with the DST working group.<br>• Obtained commitment to the process from senior officials in the DST.<br>• Decision made to support the Cofimvaba project[4].<br>• Inclusion of the DBE as a primary partner in the Cofimvaba initiative which has relevance to (presidential) Outcome 1 (improving basic education).<br>• Allocation of an oversight role to the DPME in taking capacity-building forward nationally with support from UJ-BCURE. |
| Workshop hosted by the DST on the 13th of May 2014. | The workshop focused on determining the focus areas of work and capacity-building support for the DPME, DST, DBE and the DEA. The workshop was attended by representatives from the DBE, DPME, HSRC and UJ-BCURE. | • Clarification of UJ-BCURE's support to the relevant government departments. |
| PSPPD Annual Strategy day held at Kievits Kroon Country Estate on the 28th of May 2014. | The day focused on the successes of the first 6-year cycle of the PSPPD programme, and on prioritising and planning for phase 2 of the PSPPD. Representatives of the UJ-BCURE team were invited as contributing stakeholders. | • Linked UJ-BCURE work to PSPPD work.<br>• Identified partnership opportunities to conduct piloting and training activities. |

[3] The landscape map is a single-pager outlay of the respective stakeholders and players in the EIDM environment and how they link with each other. Whilst this one-pager tries to represent the relationships on a single page, the landscape review attempts to give a move comprehensive explanation of the relationships, challenges, what works, and the improvements that could be made.

[4] The (Cofimvaba) TECH4RED is a joint initiative between DST, DBE, the Department of Rural Development and the Eastern Cape Department of Education (ECDoE), focused on the Nciba Circuit of the Cofimvaba School District in the Eastern Cape Province. Focus areas include: Health, Nutrition, Water & Sanitation, Renewable energy, Science and Technology Centre, Teacher and Learner support, and ICT for Rural Education Development (ICT4RED).

| Follow on meetings with DST and DBE representatives on the 5th of June 2014. | On the 5th of June, following a meeting earlier in the day between the UJ-BCURE team and the DBE which focused on the DBE's flagship ICT project (Cofimvaba), UJ BCURE representatives met with representatives from the DST. The meeting with the DST focused on possible support for the flagship project from the DST and explored time-frames and implementation frameworks. | • An agreement for project level support was reached with the DBE.<br>• Increased support for bigger impact on the White Paper on ICT 2004<br>• Identified DBE needs:<br>(1) need to do more work on the White Paper on ICT 2004, and<br>(2) need support to operationalise decision-making in terms of case studies. |
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# 4. Findings

### *4.1 Support for the DPME*

The DPME is responsible for the South African government's national (i.e. overarching) Monitoring and Evaluation (M&E) system. In general, more effort has gone into developing monitoring systems than evaluations. The DPME is currently endeavoring to systematise government evaluations by designing and improving a national evaluation strategy. A key component of this is the development of the 2014/15 National Evaluation Plan (DPME 2013). The DPME's Evaluation and Research Unit has a remit to support the completion of evaluations under the National Evaluation Strategy (NES). This currently includes considerable "hands-on" support to some government departments undertaking evaluations. The DPME has engaged in evaluation related capacity building initiatives that it now seeks to analyse for lessons learned and to inform a scaling of the support. The responsibility for scaling-up on capacity building initiatives will, in the interim, remain with the DPME. In the short-term, the Evaluation and Research Unit will emphasise capacity building for research and evaluations. In the longer-term, this responsibility will be transferred to the School of Government.

UJ-BCURE believes it can support the development of a sustainable and embedded capacity building programme for the implementation of the NES. Support can also be provided to translate learning from DPME's capacity building in evaluation to their envisaged capacity building in the use of research over 2015/16. The proposed outcomes of this process will be enhanced capacity building model(s) and strategies that will be sustainable and implemented in the wider South African government. This will most likely be done through the development of a capacity building strategy for the public service sector of South Africa.

### 4.2 Support for the DST

The DST, as the custodial coordinator for the development of the National System of Innovation (NSI), influences this system through key strategies such as the National Research and Development Strategy and the Ten-Year Innovation Plan[5]. The latter seeks to contribute to the transformation of the South African economy into a knowledge-based economy, in which the production and dissemination of knowledge will lead to economic benefits and enrich all fields of human endeavor (DST, 2012). The measure of success will be the level to which science and technology play a driving role in enhancing productivity, economic growth, and socio-economic development. The DST plays a central role in supporting the relevant research institutions and is the custodian of the policies that are derived from them.

The DST engages in EIDM in the sense that the department coordinates evidence-generating projects. Implementing partners (those coordinated by the DST) report to the DST (and other funding partners) and the policy directions are then implemented by the government through the respective departments via approved implementation plans. A clear example of this is the Cofimvaba Project. Currently, this system is highly supply driven and DST has expressed a desire for assistance to co-ordinate the systematic uptake of the evidence it commissions. The DST and UJ-BCURE could work together in the area of capacity building to allow the decision-making processes in government to benefit from the research and evidence assessments DST produces, ultimately aiming to closer incorporate evidence into government's approach to policy and decision-making.

### 4.3 Support for the DBE

The Department of Basic Education (DBE) was formed when the former National Department of Education was split into two independent departments: DBE and the Department of Higher Education and Training. The DBE deals with all schools from Grade R to Grade 12, including adult literacy programmes. The aim of the DBE is to develop, maintain, and support a South African school education system for the 21st century. Improving basic education outcomes is a prerequisite for the attainment of South Africa's long-range development goals, including the Millennium Development Goals (Odhav, 2009).

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[5] The NSI remains an ideal for which the South African government continues to strive. It is an enabling framework for S&T. It can be understood as a set of functioning institutions, organisations, and policies that interact constructively in the pursuit of a common set of social and economic goals and objectives, seeking to promote change through the introduction of innovations. In this regard, the NSI framework defines innovation as the introduction into a market (economic or social) of new or improved products and services. Innovation is vital for wealth creation, economic growth, and social development. S&T and R&D are the key drivers of innovation (DST, 2012).

The DBE has sought to respond to challenges pertaining to quality and access within the education sector it oversees, and has introduced various policy changes to this end. These changes include addressing weaknesses in areas such as funding, redress, and capacity building for historically disadvantaged institutions and students. As part of a presidential initiative to improve delivery, the DBE signed a performance agreement for presidential Outcome 1: 'Improved quality of basic education'. The delivery agreement has four requisite outputs;

- Improving the quality of teaching and learning;
- Undertaking regular assessments to track progress;
- Improving Early Childhood Development, including improving the quality of Grade R;
- Ensuring a credible, outcomes-focused planning and accountability system of education.

The National White paper on e-Education 2004 is located within this delivery framework and seeks to transform learning and teaching through Information and Communication Technologies (ICTs). Published in 2004, the paper calls the education sector and all partners to optimally make available and use ICTs in education in a manner that will create better access to quality education for all, and bridge the digital divide, within and between South Africa and other parts of the world (Department of Education, 2004). The paper acknowledges that the challenges of providing modern technologies to schools in order to enhance the quality of learning and teaching will require a significant investment. Given the magnitude of this task, the White Paper represents a new framework for the collaboration of Government and the private sector in the provision of ICTs in education (Department of Basic Education, 2004).

Following ten years of implementation, the time is opportune to assess the White Paper for its strengths and weaknesses. This opportunity will need further engagements in capacity building and technical assistance in operationalising decision support. This high level policy engagements would arguably be valuable to the DBE. Relationships with the UJ-BCURE programme will facilitate DBE's access to other appropriately qualified professionals to support this process of engagement from a content and methodological perspective.

Other engagements with the DBE could be directed at single projects. An example which could be explored by the UJ-BCURE programme is the Cofimvaba ICT project. This project holds promise because it provides an area needing critical TA, capacity building, and it has important decision and policy implications for the wider education sector at local, district, and national levels.

### 4.4 Support for the DEA

The DEA has various programmes that, at varying depth, use research to inform policy activities and which can be considered relevant to this needs assessment. These programmes include climate change, waste management, biodiversity, and compliance and enforcement. The climate change programme is supported by the Intergovernmental Panel on Climate Change; the biodiversity sector is supported by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services; while the sustainable development programme is supported by the United Nations Environmental Programme International Resource Panel. In an attempt to formalise a common science-to-policy approach, the DEA developed a research, development and evidence framework, which was approved by the Minister and Members of Executive Council in 2012, and is currently being implemented (Department of Environmental Affairs, 2012).

The framework seeks to develop a more rigorous approach that gathers, critically appraises and uses high quality research evidence to inform policy-making and professional practice (Department of Environmental Affairs, 2012). In this framework, Outcome 10, the Environment Sector Plan and the South African Environment Outlook priorities are used to identify evidence needs and likely future developments. These environmental issues inform research questions and the agenda for the sector at thematic level. The context for this framework is to implement the national research and development goals through responding to the Sector Plan and Outcome 10 evidence needs, while ensuring a coordinated common approach for developing sector thematic strategies (Department of Environmental Affairs, 2012). Furthermore, the knowledge transfer between researchers and policy makers in the environmental sector, which needs to be strengthened, has been given attention, and the gaps between policymakers and researchers are expected to be bridged. The framework also expects that through the DEA, a central knowledge management system (web-based data system) will be developed to help facilitate interactions among key stakeholders from the science and the policy domains (Department of Environmental Affairs, 2012).

A possible strategic direction for the UJ-BCURE programme could be to determine how the DEA could implement an evidence-based process for environmental policymaking in the context of a desire to return to more participatory policy development processes. However, as indicated above in footnote 1 of this report, it is not within UJ-BCURE's current remit to provide capacity building to the DEA.

The interactions for planning the programme, and for gathering and analysing key contact information to direct future work do not end with this needs assessment. The process will continue over the next two years. At this stage, we have identified specific avenues that we will be exploring including:

- The importance of the Outcomes approach in bringing together spheres of decision makers;
- Exploring how capacity building will be done with the DPME systems of support with particular reference to the National Evaluation System, which may have insights for the country at large;
- The need to engage at two levels: the National Evaluation System, which is implemented by the DPME, and with national department (DST/DBE);
- Preliminary agreement on deliverables between UJ-BCURE, the DBE, with guidance from DST include:
    1. Support in capacity building for the ICT environment
    2. Contributing to the research skills and pool for decision-making in the DBE with reference to ICT for e-Education
    3. Preliminary assessment of the 10 years the White Paper on e-Education has been implemented
    4. Identifying a National model that the DBE can use in the current roll out of ICT for e-Education.
- Exploratory discussions were held with the City of Johannesburg (CoJ). Senior officials from the Council presented on some of the key strategic objectives of the City. Key to their strategic visioning process has been the production of the City's Growth and Development Strategy (GDS). Our discussions are at an early stage in terms of how the UJ-BCURE can assist in cementing the link between evidence and policymaking. The officials have, however, expressed a clear need for some form of capacity building to be undertaken. Attempts at building productive relationships and alliances are ongoing.

# 5. Conclusions

This report to DFID follows from an initial landscape review that outlined the major stakeholders and their role(s) in the EIDM environment in South Africa. Despite a potentially larger scope of support that the UJ-BCURE team can offer, four stakeholders have been described in detail in this needs assessment. These are the DPME, DST, DBE and the DEA. Our decisions to explore these four Departments stem from:

- Alignment to our deliverables;

- An attempt to maximize on our capability to understand and undertake capacity building exercises;

- A realistic review of stakeholders and their needs (and in particular our ability to show impact);

- The selection of cases and partners that will generate case studies and lessons transferable to other departments.

The focus will be on the following:

- The DPME will be supported in terms of the National Evaluation System. Although the DPME does capacity building at the different spheres of government, it is yet to find the ideal model for doing so. This will in practice be supported by other assignments currently being undertaken within the DPME.

- The DST (Innovation for Inclusive Development and Sustainable livelihoods section) has influence on the NSI framework and requested support from the UJ-BCURE programme to better manage and influence the policy environment. The lessons learnt could be carried to other sections of the DST, and the departments with which it routinely interacts.

- The DBE requested research on its White Paper on ICT in Education to supplement corrective action to steer the policy in achieving its implementation. This will be within the larger framework of Outcome 1, which is to improve basic education in South Africa.

## 6. Recommendations, Implications and Next Steps

**Recommendation 1:**

This needs assessment establishes programme scope with regard to the support it seeks to provide to three government departments, notably the DPME, DST, and DBE.

- *Next Step:* The UJ-BCURE programme will actively engage with these partners to address capacity building needs and training requirements.
  - o DPME: UJ-BCURE will work with the Directors of Evaluation and Research in the DPME over the next few months to design a programme of support to be provided to the capacity building team at DPME between late 2014 and mid-2016. This will include close liaison with related support initiatives for DPME provided by the Centers for Learning on Evaluation and Results for Anglo Africa (CLEAR-AA) and PSPPD.

- o DST: Specific focus will be given to the DST in terms of capacity building to tackle strategic issues on improving the outputs and outcomes for implemented programmes relating to the DBE. These two areas, will include strengthening the decisions made for smaller projects. An example is the decision-making process of the ICT Cofimvaba project.
  - o DBE: The focal point of support for the DBE will be on the White Paper on e-Education. The initial steps will be to workshop the Directors and senior managers responsible for implementing the ICT strategy within the DBE and re-examining the policy document as a mini review. Subsequent support areas may include a review of the policy, re-alignment, and / or downstream impact assessments.
- *Who:* The UJ-BCURE Country Programme Manager, DPME, DST, and DBE.

**Recommendation 2:**

Develop a detailed, shared piloting plan during Quarter 3 (July, August and September 2014) informed by piloting and further redefinition (if need be) following from on-going discussions.

- *Next Step:* Agree on the piloting plan, candidates, dates, venues and other logistical arrangements.
- *Who:* The UJ-BCURE team, DPME, DST, and the DBE.

**Recommendation 3:**

Agree and develop a detailed, shared implementation plan informed by piloting at two phases in conjunction with the DPME, DST, and DBE. This could include:

1. A wider workshop series aimed at those involved with the decision-making process.
2. A smaller group of mentees who will benefit from deeper discussions on the expectations of the EIDM cycle. This will be extended into the mentorship-*plus* phase for two or three senior government officials (Deputy Director Generals, Chief Directors or Directors) drawn from different departments (either the DPME (PSPPD), DST, and/or the DBE) to fully engage with and produce policy brief(s) which will directly affect their relevant Department(s).

- *Next Step:* The relevant stakeholders will continuously engage in discussions and refining the agreed upon plans.
- *Who:* The UJ-BCURE Country Programme Manager, DPME (PSPPD), DST, and DBE.

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