

Final Report of the Independent Review of the Infrastructure Skills for Development (IS4D) Program

December 2016

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Executive Summary

This report presents the findings and recommendations of the Independent Review of the *Infrastructure Skills for Development (IS4D) program*. Cardno Emerging Markets (Australia) Pty Ltd (Cardno) in collaboration with the New Partnership for Africa's Development (NEPAD) implemented this program on behalf of the Australian Department of Foreign Affairs and Trade (DFAT).

IS4D is a short, work-based, action learning program designed to equip professionals working in public sector agencies with the project management competencies required to initiate and oversee key infrastructure projects, especially the Priority Action Projects (PAPs) that form part of the Programme for Infrastructure Development in Africa (PIDA). It attracted sixty-five participants from seventeen public sector agencies in eight African countries. All participants were senior and middle level professionals working on regional PIDA projects.

The participants, undertake a 'real work / real time' project that is critical to their employing agency. The action learning model, which underpins the IS4D program, involves the participants in a process of activity and reflection that requires them to analyse the project, identify obstacles or bottlenecks, and develop strategies to ensure the successful completion of the project or project stage. Participants are supported in this process by being provided with access to:

- individualised support from an experienced technical mentor
- a peer-to-peer support group or learning set
- on-line, accredited project management training delivered by an Australian provider
- short-term training on specialised topics, such as negotiation skills, infrastructure financing, and leadership skills
- experiential work placements with, and shorter term visits to, organisations undertaking tasks related to the participants' work based projects.

The Review concluded that IS4D is well regarded by its beneficiaries and provides an effective way of addressing the skills deficit in public sector agencies engaged in implementing the PIDA initiative.

To date, IS4D has been supported by the Australia-Africa Partnerships Facility (AAPF) through donor funding supplied by the Australian Government. This support is coming to an end in 2016 and important decisions have to be made about the future of the program. The Review Team believes that there are strong arguments for maintaining and expanding the program. However donor funding cannot support programs of this nature indefinitely. Rather a market-based solution is required. However such an approach cannot be put in place within the time period left for the completion of the present phase of IS4D. As such, we recommend that a short period of additional funding of up to two years be provided by the Australian Government to allow for:

- further consolidation of the IS4D program
- the assessment and subsequent implementation of the changes suggested to IS4D in this report
- the roll out of a transition strategy to support the market based provision of IS4D.

At the end of this period it is envisaged that:

- the ownership of IS4D including any intellectual property would formally be transferred to NEPAD
- a managing agent with expertise in program administration and quality assurance would be appointed by NEPAD to oversee and maintain the IS4D program
- one or more providers would be licensed or approved for a set period by NEPAD through the managing agent to offer IS4D on a fee for service basis

- IS4D would be offered on a fee for service basis to a range of users including the Regional Economic Commissions, corridor authorities, multinational agencies, individual or consortia of infrastructure agencies and donors.

1. Introduction

This report presents the findings and recommendations of the Independent Review of the *Infrastructure Skills for Development (IS4D) program*. Cardno implemented this program, which is focused on building the project management capabilities of public sector organisations engaged in major infrastructure projects in Africa, in collaboration with NEPAD on behalf of DFAT.

Cardno commissioned the review, which was undertaken by Rob Stowell and Shakespeare Maya, between July and November 2016. This report details the outcomes of the review and provides a set of recommendations on how IS4D may be institutionalised as a pillar of infrastructure capacity development across Africa. It is envisaged that the findings and recommendations in this report will be used by NEPAD to inform decisions about the future provision of the IS4D program.

2. Objectives of the review

The key objectives of the independent review were to:

- assess and report on the progress of IS4D against its objectives and expected outcomes
- provide a summative evaluation of the IS4D program.

3. Deliverables of the review

The key deliverable of the independent review of the IS4D program is this report that includes:

1. an Executive Summary
2. an overview of the IS4D program and the context in which it has been implemented
3. a description of the review methodology
4. an assessment of the objectives of IS4D and the action learning methodology used in its implementation.
5. an appraisal of the IS4D program against the evaluation questions listed in the terms of reference for the review (see Appendix 1) that are based on five OECD DAC evaluation criteria, namely: relevance, effectiveness, efficiency, sustainability and gender
6. a set of recommendations about how IS4D may be institutionalised as a pillar of infrastructure capacity development.

4. Review methodology

The review methodology, which the Review Team developed in response to the terms of reference provided for the Independent Review, involved three key stages. These were:

- **Background scan:** The Review Team conducted a background scan that comprised a targeted review of key background documents and meetings with the Cardno Management Team that were conducted via Skype. The purpose of the scan was to ensure that the Review Team was thoroughly familiar with the terms of reference for the review, the key objectives and design features of the IS4D initiative and the key stakeholders associated with the IS4D program and their expectations from the program. The outcomes of the scan were used to refine the focus and consultation strategy of the independent review.
- **Stakeholder consultation:** The Review Team undertook consultations with a range of organisations and individuals involved in the IS4D project. These are listed in Appendixes 4 and 7. The consultations comprised four key components. These were:
 - *Survey of participants and supervisors in the 2015 and 2016 IS4D programs.* The Review Team developed two survey instruments – one for participants and the other for supervisors (See

Appendices 2 and 3). The surveys were distributed to all participants and supervisors in the IS4D program via the Cardno office in Johannesburg. Overall, completed surveys were received from 30 participants and 5 supervisors. A list of all respondents to the surveys is provided as Appendix 4. A summary of the responses to the participant and supervisor surveys is provided as Appendices 5 and 6, respectively.

- *Interviews with participants at the IS4D Mid Term Meeting in Johannesburg on 1-3 August 2016.* The Review Team conducted interviews with:
 - a selection of 2016 IS4D participants focusing on those participants whose home agencies would not be visited by the Review Team during the fieldwork
 - all 2015 IS4D graduates in attendance at the workshop
 - all IS4D 2016 mentors
 - the Cardno Project Management Team
 - representatives of DFAT.

The Review Team also sat in on some of the workshop presentations, including the presentation by NEPAD and the Learning Set sessions, at the mid-term meeting. A list of all the people interviewed during the review is provided as Appendix 7.

- *Home visits to IS4D projects.* The Review Team conducted home visits to a selection of IS4D participating agencies in Zambia (5 August), Kenya (8-9 August) and Uganda (11 August). The projects that were visited were selected to ensure that the sample contained:
 - a spread of countries participating in IS4D
 - a spread of industry sectors i.e.: road, rail and power
 - coverage of different stages in the project management cycle
 - coverage of cross border issues
 - multi sector infrastructure environments
 - cross cutting issues with a significant bearing on infrastructure development planning
 - projects that illustrated all dimensions of the action-learning model that underpins IS4D.

The purpose of the home visits was to build on the information gathered through the consultations conducted at the midterm workshop and the background documentation provided to the Review Team by Cardno as well as to gather more detailed information and views focusing on:

- IS4D 2015 and 2016 project activities
- the benefits of the IS4D program for participants and their organisations
- the support required for IS4D participants and graduates to fully utilise learnings from the program
- the sustainability of the IS4D program and its principles at the individual, project and organisational level.

The Review Team took a deliberate decision to focus on a limited number of projects so that more detailed information could be gathered on specific IS4D projects. The home visits undertaken by the team are listed in the table on the following page.

Country	IS4D Project Site	Date
Zambia	Energy Regulation Board	5 August 2016
	Kenya Highway Authority	8 August 2016
	Kenya Land Commission	8 August 2016
	Uganda Railways Corporation	11 August 2016
	Uganda National Roads Authority	11 August 2016

- *Key respondent interviews.* The Review Team conducted a series of follow up interviews to: (1) clarify issues raised during the consultation, (2) explore new and emerging issues, (3) verify key information, and (4) test succession proposals. The Review Team conducted interviews with Ms. Stacey Walker from DFAT and Mr George Murumba, Ms Florence Nazare, Ms Abiola Shomang and Mr Bob Kalanzi from NEPAD at the conclusion of the fieldwork phase to discuss the outcomes of the consultations and gather views on the future of IS4D.

In addition, the Review Team had an extended conversation with Ms Andy Dijkerman, the Strategic Adviser in IS4D1, who was the principal designer of the IS4D action-learning model. This conversation canvassed a range of matters including the impetus for IS4D, the design features of the action-learning model and potential options for the future development of IS4D.

- *Drafting and preparation of the final report.* The Review Team used the outcomes of the background scan, the field consultations and the participants and supervisor surveys results to inform the draft report. It finalised the report taking into account, as appropriate, feedback received from DFAT and the Cardno Project Management Team.

5. Context of the IS4D program

The IS4D program has been in operation since 2014 and is scheduled to close in late 2016. It is a relatively modest, Australian Government funded intervention that is designed to support the infrastructure related goals of the African Union Commission's, *Agenda 2063 The Africa We Want*¹. One of the key goals of *Agenda 2063* is to '...connect Africa through world-class infrastructure, with a concerted push to finance and implement the major infrastructure projects in: transport, energy and ICT'. According to the authors of *Agenda 2063*, if this infrastructure could be put in place intra- African trade would grow '... from less than 12% in 2013 to approaching 50% by 2045' and 'Africa's share of global trade shall rise from 2% to 12%.' This is in contrast to the existing situation where the continent's infrastructure deficit has impeded regional integration and trade and has cut GDP growth by as much as 2.2%.

In response to this situation, the African Heads of State had earlier approved an ambitious continent-wide Programme for Infrastructure Development in Africa (PIDA). The African Union Commission (AUC), in partnership with the United Nations Economic Commission for Africa (UNECA), the African Development Bank (AfDB) and the NEPAD Planning and Coordination Agency (NPCA), formulated PIDA. This program identified 431 infrastructure development projects in the transport, water, power and information and communication technologies (ICTs) sectors that were planned and from this schedule selected 51 Priority Action Projects (PAP) for fast track implementation.

While there has been high level support for PIDA, many of the PAPs have been stalled or have failed to meet implementation timelines. This is due to a number of factors including a \$50 billion annual infrastructure financing deficit. Apart from the funding deficit, the other major impediment to the implementation of the PAPs

¹ African Union Commission, *Agenda 2063 The Africa We Want*, Final Edition, April 2015.
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has been the lack of skills and experience in public sector agencies to prepare and manage complex cross border projects. The combination of inadequate funding and the ‘skills and experience deficit’ in the agencies managing these projects has resulted in a very low project financing success rate.

The key continental development agencies, which established PIDA, have highlighted the need to address this ‘skills and experience deficit’ and to bolster the capabilities of public sector agencies in all member States in infrastructure project planning and preparation particularly at the prefeasibility stage.

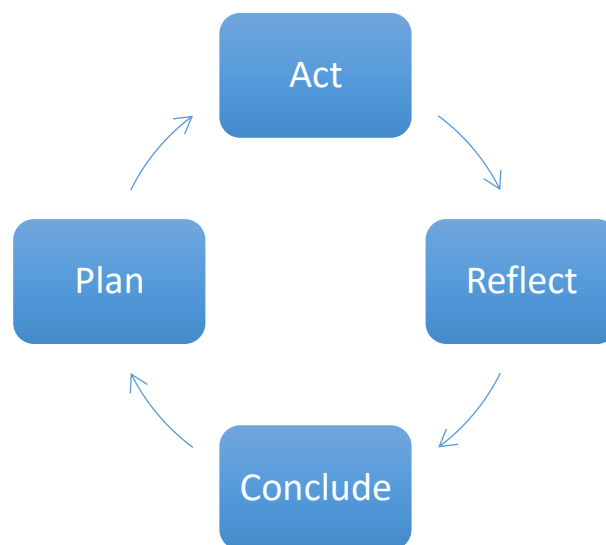
A recent review of IS4D, which was commissioned by NEPAD and funded by the AfDB, confirmed that one of the main reasons for the slow progress of many cross border infrastructure projects is the ‘skills and experience deficit’ in public sector agencies that are responsible for the management of these projects. This deficit, the authors of the study argued, has contributed significantly to the current situation in which 30% of PAPs remain at the “origination” stage.²

6. Assessment of the objectives of the IS4D program and the action learning methodology used in implementing IS4D

IS4D is a short, work-based, action learning program designed to equip professionals working in public sector agencies with the project management competencies and enabling capabilities such as stakeholder management, time management, team work and communication, they require to initiate, plan and oversee the delivery of the PAPs.

As indicated in Figure 1, action learning in IS4D is a four-stage process of planning, activity and reflection. It is an approach to learning that starts from the needs of the learner – in this context, the skills needed by project participants to plan and implement infrastructure projects.

Figure 1: IS4D Action learning model



Each IS4D participant identifies a problem associated with a ‘real work / real time’ project that is critical to their employing agency. The participant then develops a strategy to address the problem, implements the strategy, reflects on its effectiveness and identifies any follow up actions required to ensure the successful completion of the project or project stage. Through this process of activity and reflection, which is often referred to as the Action Learning Cycle, participants develop solutions and in so doing learn how to predict, plan for and overcome problems at different stages of the project management cycle.

² NEPAD, *Independent Evaluation of IS4D Phase 1*, 2015.
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In IS4D, participants apply the action learning model to solve a real problem through their work-based project. They are supported in this process by:

- monthly one-on-one meetings with an experienced technical mentor
- bimonthly action learning group discussions facilitated by the mentor
- on-line, accredited project management training delivered by an Australian Registered Training Organisation.

In addition, depending on their needs, participants are also able to access:

- short-term training on specialised topics, such as negotiation skills, infrastructure financing, and leadership skills and/or
- work based immersion or experiential visits with organisations undertaking tasks related to the participants' work based projects.

This approach to action learning seems to be particularly appropriate for the infrastructure professionals who are the primary target group for IS4D. It

- focuses on developing the capabilities that infrastructure professionals need to deliver real time / real work projects;
- has the flexibility to be applied to problems or bottlenecks at any stage of the project management cycle;
- enables the individual needs of different participants from different industry sectors to be addressed within the same program;
- acknowledges that the participants are professionals in their own right by actively involving them in a process of activity and reflection that puts them in control of developing solutions to problems related to their projects, and,
- equips them with an approach for responding to different types of challenges in project preparation and execution in the future.

IS4D offers a real-time support package for infrastructure professionals. The program, which is work place based, is delivered over a 7-8 month period and is designed to support a group of 25-40 participants, equips infrastructure professionals with the capabilities required to address problems and deliver infrastructure projects.

To date, there have been two phases of IS4D delivery. The first phase, IS4D1, which was implemented as a pilot project between February and October 2015, aimed to:

- improve the design and packaging of regional public infrastructure projects through the provision of key project management skills and capacity to public sector professionals.
- contribute to the effective implementation of cross-border infrastructure through facilitation of peer-to-peer professional networks that foster institutional learning leading to improved planning and management of infrastructure projects.
- generate and document learning on the relevance, efficiency and effectiveness of the IS4D (including the action-learning pedagogy) in order to draw lessons that will improve future program delivery.

The participants engaged in this phase were drawn from infrastructure agencies in three key corridors. These were:

- The Northern Multi-modal Transport Corridor - a smart corridor system for road and rail on the multi-modal African Regional Transport Infrastructure Network in Southern Africa.

- The Beira-Nacala Transport Corridor - a modern railway system that is being implemented between the ports of Nacala and/or Beira and the coal exporting region of Moatize in Mozambique.
- The North-South Power Transmission Corridor - an 8,000 kilometre transmission line stretching from Egypt through Sudan, South Sudan, Ethiopia, Kenya, Malawi, Mozambique, Zambia and Zimbabwe to South Africa to transport energy generated by the Great Millennium Renaissance Dam in Ethiopia.

A second phase, IS4D2, which commenced in March 2016 is currently being implemented and will be completed by the end of 2016. This phase builds ‘... on the “learnings” of the pilot phase (2015) to consolidate and deliver an action learning program for key professionals in public sector agencies critical to delivering priority African infrastructure projects, within the same corridors selected for the pilot project.’³ A list of the organisations and projects undertaken through IS4D1 and 2 is provided as Appendix 8.

IS4D2 incorporates a number of improvements that were identified through feedback received on IS4D1 from the monitoring and evaluation process, the NEPAD Independent Evaluation of IS4D1, the AAPF Report on Mid-Term Visits to Home Agencies of IS4D1 Participants, the education service providers and the IS4D project team. These improvements included:

- the introduction of more streamlined reporting processes for participants;
- a change in the format and frequency of project workshops, including the introduction of the mid term workshop;
- the removal of the experiential visits element that was re-adopted later; and,
- the reduction in the number of online project management modules from two to one but with an option for the uptake of the second module on an individual basis.

Further, in IS4D2 the Cardno Project Team took deliberate steps to engage alumni from IS4D1 in key project activities. This included, among other things, giving some degree of preference to applicants nominated by alumni during the selection of second phase participants; engaging alumni in IS4D2 workshops to give accounts of their experiences with IS4D and its impact on their professional performance; and supporting six alumni to attend a financing short course which they had not attended in the first phase. Through this engagement, the Cardno Project Team was able to realise one of the core objectives of IS4D that is to establish peer to peer networks which support ongoing learning and professional relationships among infrastructure officials. This focus on the alumni may also support the development of a broader, sustainable network of skilled infrastructure professionals who are able to share ideas and contribute to the further development of the IS4D Model. A key result of this alumni engagement effort is the establishment of the NEPAD Community of Practice that is dedicated to IS4D participants. This result also complements NEPAD’s PIDA Champions Strategy that aims to facilitate ongoing networking and discussion of common issues amongst infrastructure professionals.

All in all some 28 learnings from IS4D1 were recorded and summarised in the IS4D2 2016 Work Plan. Most of these were implemented in IS4D2. However some important learnings were recorded but not implemented. These included the need to establish a Mentor Learning Set and to improve connectivity. While these may have been desirable improvements, the impact of non-implementation appears to be negligible. The mentors were able to use the workshops, notably the new midterm workshop, to share experiences. The participants survey conducted by the Review Team also showed that only 4% of respondents said that connectivity issues had a critical or inhibitive impact on their learning.

Essentially, though, the IS4D model was unchanged between IS4D1 and IS4D2, indicating that the initial design of the model was robust but flexible enough to absorb improvements. Consultations by the Review Team revealed that the IS4D model is well understood by participants. There was virtually no criticism of the model. In fact, almost all participants and supervisors were highly supportive of the model and the integrated manner in which the model has been rolled out. All expressed strong support for the work based project and a

³ AAPF, *Infrastructure Skills for Development 2 Annual Work Plan 2016*, p.3
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number identified this as the one thing that sets IS4D apart from other forms of professional training they had experienced.

A number of participants and supervisors raised suggestions for improving the model. The suggestions that the Review Team believe are worthy of further consideration are:

- providing a briefing session for supervisors to ensure that they understand: their role, how they can support participants and the ways in which they can promote the take up of IS4D within their agencies;
- providing opportunities for the mentors to liaise directly with supervisors to ensure that the mentors have a clear understanding of the organisational context within which participants are working, their skill development needs and the support available to participants in the workplace;
- improving the design of the on-line learning materials so that key content is highlighted and participants are better able to identify key information;
- providing the online learning materials in languages other than English, principally Portuguese and French, and to allow assessment tasks to be submitted in these languages; and,
- strengthening follow up for IS4D graduates to ensure that their personal learnings are reinforced and effectively transmitted to work colleagues, including co-workers, supervisors and managers, in their employing agencies.

Taken together, IS4D1 and IS4D2 have attracted participants from eight countries, namely the Democratic Republic of Congo, Uganda, Kenya, Tanzania, Malawi, Mozambique, South Sudan and Zambia. These participants are involved in a variety of major regional projects in the road, rail and power transmission sectors. Overall 65 participants from 17 public sector agencies have taken part in the IS4D program - 38 in IS4D1 and 27 in IS4D2. The participants were all senior and middle level infrastructure development professionals working on regional PIDA projects or national components of projects linked to PIDA. The majority of participants were engineers. Others were economists, valuers, legal officers, surveyors, project planners and regulators.

7. Appraisal of the IS4D program

A set of evaluation questions, which are based on the OECD DAC evaluation criteria of relevance, effectiveness, efficiency, sustainability and gender, were identified in the terms of reference for the Independent Review. The ensuing section of this report presents the Review Team's response to each of these questions.

7.1 Relevance

7.1.1 *Are the programme objectives consistent with the expectations of beneficiary participants and agencies?*

The principal beneficiaries of the IS4D program are the 65 participants and the 17 infrastructure agencies that were engaged in IS4D1 and IS4D2. The Participant Survey, which was conducted by the Review Team, revealed that the key skill needs which participants hoped would be addressed through the IS4D program were (1) project integration, (2) stakeholder engagement, (3) risk management, (4) negotiation and (5) communication. Of the 30 participants who responded to the survey, 22 (73%) indicated that the IS4D program met their expectations and 6 (20%) stated that it exceeded their expectations. Responses from supervisors with regard to expectations and satisfaction levels were consistent with the views of the participants. These survey results supported the impressions that the Review Team developed through the consultations conducted with supervisors and participants during the field work phase of the Review. Overall both participants and supervisors saw the development of generic project management skills as the key reason for their participation in IS4D. Survey results show that the program either met or in many cases exceeded their expectations as regards the development of management skills. A further indicator of both participant and supervisor satisfaction with the program was the willingness of a number of agencies to engage in both IS4D1

and IS4D2, as well as the way in which agencies, such as the Kenya Land Commission, are integrating the project management capabilities developed through IS4D into their standard operating procedures.

The other key groups of beneficiaries are NEPAD which is tasked with catalysing the implementation of PIDA and the Regional Economic Commissions (RECs) which are responsible for implementing PIDA. The review of the background documents, revealed a strong convergence between the skill needs of public sector agencies engaged in the PIDA initiative, and the objectives of the IS4D program. Central to the IS4D model, which is described in section 6 of this report, is the view that '...if capacities, skills and relationships of key agency staff are improved, then infrastructure projects are more likely to be completed successfully.' This is consistent with the African Union Commission's, *Master Plan for Continental Integration*⁴, which outlines PIDA and argues that '... regional infrastructure development will not move forward without a sharper focus on project planning and preparation.' This view was further confirmed in discussions which the Review Team held with key NEPAD staff. In a meeting with the Review Team, Mr. George Murumba, M&E Specialist, Regional Integration Infrastructure and Trade Division, stated that '... skill shortages within the PIDA implementing agencies remains by far the most critical challenge to them fulfilling their role'. He went on to argue that the greatest skill deficit in most agencies is the capabilities needed during the early stage preparation of infrastructure projects. According to Ms. Florence M Nazare, Head, Capacity Building Division at NEPAD, these were primarily 'soft skills' such as: the ability to handle the political imperatives of large scale cross border projects, convert politically driven project concepts into business proposals attractive to investors, navigate project concepts through competing social interests, and communicate and negotiate effectively with senior representatives of governments and financial institutions. This, she concluded, has led to a lack of capacity amongst many public sector agencies to mobilise political support for the projects and capacity to develop the business case for the projects.

With this background, and in addition to IS4D, NEPAD has supported the PIDA CAP and the AfDB Infrastructure Project Preparation Facility (IPPF). Both of these initiatives seek to improve project preparation at the REC level. This provides further evidence that the focus in IS4D on building the capabilities of infrastructure professionals in the public sector, particularly in generic project management skills such as project integration, stakeholder engagement, negotiation and risk management, is consistent with the needs and expectations of groups such as NEPAD and the RECs.

While these NEPAD officials voiced strong support for IS4D, the Review Team had limited access to key decision makers within NEPAD and was provided with limited information on the organisation's intentions with regard to the future development of IS4D. The Review Team views this as a significant limitation as any decisions about the sustainability and institutionalisation of IS4D hinge on NEPAD's support and ongoing commitment to the program.

Nevertheless, the Review Team believes that there is a high level of congruence between the objectives of IS4D and the expectations of the beneficiaries, namely the infrastructure professionals who participated in the program, their employing agencies and the main planning and policy bodies including NEPAD and the RECs.

7.1.2 To what extent is the design of the programme relevant to the needs of participants and agencies involved?

The Review Team formed the view that the design of IS4D is highly relevant to the needs of program participants and their employing agencies. As noted in the preceding section, the program addressed the specific skill needs of participants. In addition, the discussions which the Review Team held with participants revealed that the program design also provided them with a supportive learning environment in which:

- the program content focused on their day to day work;
- they had ready access to expert technical support and information;
- the time spent in off the job learning was minimized;

⁴ African Union Commission, *Master Plan for Continental Integration*, p8.
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- the program was sufficiently flexible to enable participants to work with their mentors to develop a learning agreement which set out a personalised solution to meet their skills needs;
- networking opportunities with professionals working in similar contexts were created; and,
- participants are equipped with an approach to problem solving through the action learning model that can be applied to both current and future projects.

The program design also appears to have taken a realistic approach to the work demands placed on middle and senior level officials. While many of the participants are time poor there was virtually no complaints about the work burden associated with IS4D. In fact, over 80% of respondents to the Participant Survey noted that the IS4D work load was manageable. The Review Team believes that this was due in significant measure to the IS4D program being based on a real work/real time project that is focused on and does not compete with the participants' work activities.

The criteria for selecting participants also helped to ensure the relevance of IS4D to the participants and their employing agencies. The participants had to be employed in a current PIDA project and be in a role that contributed or have the potential to contribute to PIDA implementation, especially in relation to project feasibility and project preparation.

The discussions which the Review Team held with supervisors reinforced the relevance of the program design to the participating agencies. The main strengths of the program design to the agencies appeared to be:

- the focus on a real time / real work project that in many cases contributed significantly to the completion of agency projects or key stages of projects that otherwise might have been stalled or failed to be realised.
- the low cost of IS4D to the participating agencies
- the focus on providing participants with the skills, particularly 'soft skills' in areas such as stakeholder engagement, risk management and negotiation, that are needed to advance key infrastructure projects
- the improved access which the participants received to expert advice through the mentor program and how this was indirectly passed onto other staff in the agency through the participants (1) reporting back on IS4D activities, (2) applying approaches learned through IS4D in their work, and / or (3) suggesting new ways of addressing project bottlenecks
- the relatively limited amount of time spent off the job by project participants. This was seen to be particularly important as many of the IS4D participants held key positions in agencies that had serious shortages of experienced staff and limited capacity to recruit new or replacement staff.

7.1.3 Discuss the extent to which each one of the programme components and activities are meeting the needs of the beneficiary participants and agencies.

As described in section 5 of this report, there are six identifiable components of the IS4D program. While there was some refinement of these components in IS4D2 based on feedback emanating from IS4D1, the key components of the program were largely unchanged between the two phases of the program. The extent to which each of the six program components met the needs of the beneficiary participants and agencies is discussed below.

7.1.3.1 Work Based Project: As discussed earlier in this report, participant in IS4D is required to undertake a 'real work / real time' project. In each case the project must focus on a problem that is important to the participant's employing agency and is directly related to the implementation of the PIDA initiative. The work based project is the central feature of IS4D. All other components of the program are geared towards assisting the participant to successfully complete the project.

At the onset, all participants design their own project. This involves participants in identifying the problem, confirming the benefits of the project to their employing agency, setting targets and milestones, detailing how these will be achieved and identifying the skill development they require to complete their project. Through IS4D, participants have access to mentor support, a learning set, an online learning program and optional

enrichment activities to assist them in refining the project proposal and identifying and attaining the skills they need to complete the project. This is complemented by the support provided by the participants' supervisors and employing agencies.

The consultations undertaken by the Review Team highlighted the importance of the work based project to both the participants and their employing agencies. For example, the Zambia Energy Regulation Board (ZERB), which is responsible for regulating the electricity supply system, is currently in the process of setting new standards for low cost electrification technology. The officer responsible for developing these standards is a participant in IS4D2. Through IS4D2 it is envisaged that the officer will develop skills in standards setting and the agency will gain the required standards for low cost electrification as well as enhanced capacity in standards setting through the participant sharing his learning with other regulators at ZERB. This work based project is typical of most projects undertaken through IS4D. The project is directly relevant to the participant's work and current skill needs while also assisting the agency to meet its current priorities and develop its human capacity by building the skills of the participant and ensuring that these are passed on to other staff members.

7.1.3.2 Mentoring: In IS4D, mentoring is a learning relationship involving a participant and an experienced infrastructure professional. In this relationship, the mentor supports participant learning by:

- assisting the participant to reflect and act on challenges associated with his / her work based project
- facilitating a learning set in which the participant is supported by a peer group to develop new approaches for overcoming challenges in his/her work based project
- monitoring the participant's progress against an agreed learning program
- working with the participant to design an individual content enrichment program that may involve the participant in undertaking (i) specialised short courses, (ii) experiential visits to organisations and / or (iii) a short term work-based immersion placement.

Discussions with participants showed that they are regularly faced with dead – end situations during project preparation and implementation. In such situations, the mentor's role is to prompt the participant to think creatively and open up alternative pathways to addressing the project bottleneck. This may be achieved through questioning, exposing the participant to new situations, providing opportunities for the participant to examine the problem in a peer group discussion, or providing specialist input. The IS4D mentoring process relies heavily on the mentor's capacity to build a trusting and respectful environment. The discussions with the participants indicated that the participants attached a high level of importance to this aspect of the IS4D program and valued their relationship with their mentors. For example, Ugandan IS4D1 alumni and Head of Design at the Uganda Highways Authority, who is also the supervisor for three IS4D2 participants, outlined how delays in the drafting of a piece of legislation had stalled progress of the Kampala – Jinja Expressway and how a solution was identified as a result of a challenging and probing engagement with his mentor through a Skype discussion.

The importance of mentoring was reinforced in the Participant Survey in which participants were asked to rate the 'relevance' and 'usefulness' of the mentoring program. Of the thirty participants who responded to the survey, 17 (63%) gave the mentoring program the highest score for 'relevance' and 18 (67%) gave it the highest score for 'usefulness'.

Besides the explicit contributions of mentors to the program, there were other incidental benefits from their role that are worth noting. The mentors provide an institutional anchor and emotional home for the IS4D participants. This creates the important feeling of community and belonging among participants. In addition, the support provided by the IS4D mentors and the peer-to-peer networks complemented the support that is routinely provided by workplace supervisors. In some cases this led to participants suggesting new ideas and approaches to their supervisors that in turn strengthened the supervisors' confidence in IS4D.

However, in IS4D the mentoring process is essentially focused on the mentor and the participant. There is no direct relationship between the mentor and the participant's employing agency or workplace supervisor. This may mean that neither the mentor nor the workplace supervisor is fully informed of the challenges facing the

participant or the forms of assistance that may be needed or are available to him or her. Feedback received by the Review Team from both mentors and workplace supervisors indicated that this gap should be closed in future IS4D programs.

7.1.3.3 Group Learning Sets: All participants in IS4D are allocated to a learning set. The learning set is a core element of the action learning methodology. In the learning sets, which are facilitated by the participants' mentor, participants have the opportunity in a relatively structured environment to exchange information, experiences and ideas about their work-based projects. On some occasions, this may be through one-on-one discussion with the mentor while on others it may be through whole group discussion. The learning sets are designed to foster peer-to-peer learning and help participants recognise the benefits of professional exchange. The successful operation of the learning sets contributed to the high level of peer networking that is evident amongst IS4D participants.

The Participant Survey revealed that participants rated this component of the program very highly, with 81% rating it 4 and above for 'relevance' and 86% giving it the same rating for 'usefulness'. This reflects the importance which many participants attach to the professional networks and cross border collaboration that have developed as a result of their involvement in IS4D. This effect was also identified in the AAPF report on the mid-term visits to home agencies in IS4D1. The authors of this report argued that as result of IS4D, there was much greater cross-border communication between engineers involved in key infrastructure projects. They noted that this was particularly evident in the North-South Power Transmission Corridor where there was collaboration between the IS4D participants from Kenya and Tanzania involved in the link that is to place at the Namanga border, between Zambian and Tanzanian participants working on the Tanzania-Zambia border, as well as between participants working on the Zambia extension to Malawi.

This element of the program is important for participants. It helps them to build and strengthen their professional networks and assists them to recognise that they can take control of their learning through collaborating with others. While these benefits should not be undervalued, the learning sets may have a longer term but more important role to play in promoting cross-border discussions amongst key infrastructure professionals that lead to improved alignment and greater harmonisation of technical standards and operating practices on infrastructure projects across the continent.

7.1.3.4 On-line project management course: The final core component of IS4D is the online project management course offered through Central Institute of Technology (CIT), which now forms part of Northern Metropolitan TAFE (NMT) in Western Australia. This course initially comprised two units of competency from a Diploma level qualification but as result of feedback from participants this has been reduced to one unit of competency in IS4D2. Participants in IS4D2 have been offered the opportunity to undertake one or two additional units and all participants have the option of completing the Diploma through NMT on a fee for service basis. The consultations conducted by the Review Team confirmed the concern about the work load associated with the online program that was identified in the AAPF report on the mid-term visits to home agencies in IS4D1 and as such the Team supports the earlier decision to reduce the number of units which participants are required to complete. In addition, the Review Team noted suggestions from participants about the need to:

- improve connectivity so that online access is more reliable;
- review the design of the on-line learning materials so that key content is highlighted and participants are better able to identify key information;
- provide the online learning materials in languages other than English, principally Portuguese and French; and,
- to allow assessment tasks to be submitted in languages other than English. Addressing these issues would assist participants to access the program and improve its continent wide applicability.

In spite of these concerns, participants generally valued the online learning program with some indicating that they intended to undertake additional units of competency offered through NMT. In the Participant Survey, participants rated this component of the IS4D program quite highly, with 80% rating it 4 and above for

'relevance' and 80% giving it the same rating for 'usefulness'. This is a slightly lower rating compared with the more practical elements of the program. This result confirms field mission discussions with supervisors and participants, which indicated that they generally placed a higher value on the practical rather than the more theoretical elements of IS4D.

The relatively lower rating of this element must, however, be read against the participants' overall view that all components of IS4D are equally important as they form part of integrated response to building project management capability.

7.1.3.5 Work-based Immersion and Experiential Visits: The work based immersion and experiential visits component is probably the highest cost and most complex part of IS4D to organise. In this component, participants spend a period of up to five days in a work based immersion program in a host infrastructure organisation or may choose to undertake experiential visits with a number of relevant organisations over the five days. Under this component the participants examine how the organisations deal with issues related to their work place project. While the 'work based immersion program' and 'experiential visits' differ in terms of the depth and breadth of exposure which participants receive from particular organisations, the participants did not appear to draw any major distinction between the two approaches. Rather participants tended to view the 'immersion program' and 'experiential visits' as options with similar intended outcomes, namely the opportunity to experience good practice and to see how other organisations deal with problems similar to those faced by their own organisations.

88% of respondents to the Participant Survey rated this component at 4 or above in terms of 'relevance' and 85% rated it the same in terms of 'usefulness'. Consultations with supervisors showed that they were particularly supportive of this component. The value which both participants and supervisors attached to the component was due to it providing the participants with:

- exposure and experience beyond their own work environment;
- insight into how similar public sector agencies or private sector infrastructure developers address matters related to project preparation and/or management; and,
- the opportunity to observe 'good practice'.

In addition to these important effects, the Review Team concluded that the true value of work based immersion and experiential visits is that it develops the professional confidence of participants by giving them first hand experience of how project obstacles and bottlenecks are identified and managed in 'good practice' environments. This effect was confirmed by the Director of the Uganda Railways Authority who described the benefits of work based immersion in terms of building 'confidence, integrity and detail' in participants. Exposure to good practice and the confidence it builds strengthens the capacity of infrastructure professionals to present projects to policy makers, make informed decisions on project matters and collaborate and negotiate with other national authorities, donors, financiers and cross border agencies.

7.1.3.6 Customised specialist training: Three customised short course programs are offered to participants through IS4D. These are:

- Negotiation Skills Training
- Financing Options for Infrastructure Projects
- Leadership Training

The objective of these short courses is to provide participants with in-depth, up to date information on a topic that is pertinent to their work based learning project. These courses are highly targeted, designed for non-expert audiences and are delivered by recognised experts in their respective fields. As such the courses are particularly well suited to the IS4D participants who are predominantly engineers with limited exposure to negotiation, project financing and leadership training. This component also addresses a key skills deficit in many public sector infrastructure agencies that often recruit on the basis of engineering rather than broader project management skills. This component received the highest rating on the Participant Survey of all IS4D

components. 96% of participants rated the specialised training program as 4 or higher for 'relevance' and 96% rated it 4 or higher for 'usefulness'.

In summary, all six components of IS4D are relevant to the needs of infrastructure professionals. While accepting the centrality of the work-based project the Review Team believes that all components are essential and would not support any suggestion to remove any of the six key project components. Having said this, the Review Team does believe that the suggestions made for refining the online project management program should be considered in any future redevelopment of IS4D.

7.2 Effectiveness

7.2.1 Assess to what extent the program has contributed to achieving objectives and outcomes in influencing improved design and packaging of infrastructure projects and more effective implementation of cross border projects.

Initially the Review Team believed that both of these objectives were too ambitious for a small-scale intervention with a limited time frame. However the evidence gathered through the fieldwork phase of the review has suggested otherwise. Even though IS4D has only been in operation on a limited scale for two years, the Review Team was able to gather ample evidence that the IS4D program is having a positive impact on both the 'design and packaging' and implementation of cross border infrastructure projects in the corridors in which the project is operating. The Review Team was also able to identify key elements of the working environments that foster the effective application of learned IS4D skills, namely: confidence, supportive leadership, teamwork, effective fallback mechanisms and a willingness to take risks and embrace change.

The way in which the skills learned through IS4D can contribute to project design and packaging were highlighted in the discussion that the Review Team held with the Uganda National Roads Authority (UNRA) on the Kampala – Jinja Expressway. This road construction project, which is being undertaken by the UNRA and forms part of the Northern Corridor, is at the proposal development stage. Discussions with the Authority revealed that the development of the project proposal had been stalled by the lack of a legal framework for public private partnerships (PPPs) and the absence of a national policy on tolling. While a draft bill to facilitate public private partnerships had been formulated the passage of the bill had been delayed. By applying the stakeholder engagement strategies gained through the on line learning component of the IS4D program and through discussions with his mentor, the UNRA staff member responsible for the project was able to:

- identify the key stakeholders associated with the development of the bill, including the Ministry of Finance, other government ministries and parliamentarians;
- engage key stakeholders in a discussion about the impact which the delays in the passage of the bill was having on the Kampala – Jinja Expressway project and the broader northern corridor initiative; and,
- develop a coordinated approach to ensuring that the bill was passed.

Through these efforts the PPP Act 2015 was passed by parliament and a major impediment to the development of the project proposal was overcome.

The development of the project proposal was further delayed by the absence of a tolling policy. In November 2014, UNRA discovered that there was no policy on tolling and that the responsible ministry, namely the Ministry of Transport and Works (MTW), had undertaken little work on the development of the policy. The UNRA identified this as a significant risk that would have a critical impact on the development of the project proposal. Following discussions with his IS4D project mentor, the UNRA officer responsible for the project, developed a strategy for expediting the development of the tolling policy. This strategy, which UNRA put into operation in June 2015, involved engaging with relevant officers in MTW, arranging a site visit to South Africa to see how tolling operates and the UNRA preparing a draft policy on tolling for consideration by MTW. As a result of these actions the draft policy was prepared and is currently being considered by Cabinet. Again, through this application of IS4D principles, a major impediment to the development of the project proposal was overcome in less than two months. Without applying the IS4D skills, the project would have been further delayed.

This case study highlights how the focus on project management skills in IS4D and the associated mentoring and online learning programs have helped build stakeholder engagement skills within UNRA and in so doing has assisted the Authority to advance the Kampala – Jinja Expressway and meet its broader regional commitments under the Northern Corridor initiative.

The effectiveness of the IS4D program in supporting project implementation is further illustrated in the work undertaken by the IS4D participants from the Kenya Land Commission. As a result of recent land reforms, the Commission is now responsible for the acquisition of all land required for major infrastructure projects. The Deputy Director of the Land Valuation and Taxation section of the Commission told the Review Team that over 70% of all land valuations for infrastructure projects were incomplete at the time the Commission was established. This in many cases was due to poor project management particularly inadequate stakeholder engagement. Through the implementation of improved project management strategies, including the application of stakeholder engagement techniques learned through IS4D, 20% of the backlog was cleared in one year.

In addition to contributing to reducing the backlog of uncompleted valuations, he noted that the IS4D program had had a significant impact on the implementation of new projects. A case in point is the Kenya, Ethiopia and Tanzania Interconnector. In this case, the Commission was responsible for the acquisition of land for the way leave for the Kenyan sector. This involved the acquisition of a 612-kilometer long section of land which involved negotiations with over 2000 project affected persons.

The complete acquisition, which involved identifying all project affected persons, valuing all structures and damage to crops and trees, assessing all compensation claims and making payments, was completed in twelve months. This was achieved through implementing a strategy devised through an IS4D work-based project which involved:

- a well researched compensation resettlement program;
- a public sensitisation program which clearly explained the project to stakeholders in an accessible, transparent and timely manner;
- site visits by the valuation staff to the affected communities; and,
- the development of alternative solutions, such as diverting a section of the way leave to overcome a particular land acquisition issue.

The net outcome was that the Land Valuation and Taxation section was able to deliver the way leave to the Civil Construction Department in twelve months so that construction could commence. The Deputy Director of the Land Valuation and Taxation section cited earlier, estimates that the application of the learnings from the IS4D program reduced the time taken for the delivery of the way leave from at least 24 to 12 months.

In commenting on which component of the IS4D program was most helpful in dealing with the issues associated with the Interconnector, the Deputy Director, who was an IS4D participant in 2015 but working in a different organisation (KETRACO), noted that the key components of the IS4D program are interrelated and when taken together help participants to develop a holistic response to an issue. For example, he indicated that the strategy applied in the Interconnector project resulted from a mix of the specialised training program, industry immersion at the Zambia Electricity Supply Corporation Limited (ZESCO) which focused on land acquisition practices, peer to peer networking, and discussion with the IS4D mentor on how to respond to disruptive stakeholders.

During the consultations the Review Team was provided with a range of similar case studies which highlight the deficit of project management skills within key infrastructure agencies, the adverse effect that this skill deficit has on project initiation and implementation, and how participants in the IS4D program had been able to apply the project management skills learned through the program to facilitate both the development of infrastructure project proposals and the implementation of approved projects.

7.2.2 Assess the extent to which identified risks (and new risks) to program implementation were managed and also their impact on program objectives and outcome.

The Cardno Project Management Team undertook a comprehensive risk assessment for IS4D. The key risks that were identified included: political and relationship risks, project management risks and procurement risks.

The political and relationship risks centred on changes at national and infrastructure agency level that may adversely impact on participation in the project or on Australian government support for IS4D. The key challenge that emerged in this area was the deterioration in the safety and security environment in some of the participating countries, such as South Sudan. In response to this situation, the Management Team in consultation with DFAT decided that participants could not be accepted from these countries and other participant countries such as Mozambique were identified instead.

The project management risks centred on the availability of suitable participants with the time to fully participate in IS4D and the lack of adequate ICT infrastructure to support the program. The former of these risks was largely addressed by careful selection of program participants, whereas the latter continues to be an issue with some participants in IS4D2 not having access to the level of connectivity required to fully take advantage of the mentoring program and the online project management courses. Nevertheless it should be noted that only four of the thirty respondents to the Participant Survey identified connectivity issues as having a significant or critically inhibitive impact on their involvement in the online learning program. Interestingly a lack of female participation in the program was not addressed in the risk assessment for IS4D2. Given the low level of female participation in IS4D1 it might have been expected that this would have been seen as a risk for IS4D2 and a range of mitigating strategies put in place. As it turns out, a low level of female participation, as described in section 7.6 of this report, continued to be a feature of IS4D2.

The final major risk area identified by the Management Team was procurement and this centred on the availability of key human resource personnel, such as trainers and mentors, to support the program and the potential difficulties in gaining travel permits for participants to engage in site visits and study tours. While the latter of these did not emerge as a significant problem, the availability of appropriately qualified and experienced human resources, particularly mentors, is a key issue. At present there are adequate mentors, notwithstanding the lack of female mentors (see Section 7.6), to support the program. However, if the program were to go to scale then sourcing the requisite number of qualified and experienced mentors would be difficult. At this stage, no strategy has been put in place for addressing this matter and consideration should be given to developing a cadre of mentors who can support the program in the future. This should include a focus on supporting the development of female IS4D mentors. A related issue is the lack of any formal arrangements for reviewing and developing the skills of the existing group of mentors. Mentoring, in the sense that it is applied in IS4D, is a relatively new concept in the infrastructure sector in Africa. Attention should be given to assessing the skills of the current group of mentors, identifying the areas in which they require further skills development and determining an appropriate way of addressing their skill needs.

One risk, which emerged during the program that was not identified in the risk assessment for IS4D2 prepared by the Cardno Project Management Team, was the need to support participants from non-English speaking nations, particularly countries where French and Portuguese are official languages. While every effort has been made to support participants from non English speaking backgrounds in IS4D, concerns were raised with the Review Team about the lack of training materials in languages other than English and the stipulation to submit assessment requirements in English. This matter should be addressed in any redevelopment of IS4D. It has to be noted though that proficiency in English was a prerequisite for enrolment into the program.

Generally the Cardno Project Management Team was adept at identifying risks and quick to put in place mitigating measures.

7.3 Efficiency

7.3.1 Were inputs (resources and time) from the program management team and beneficiaries used in the best possible way to achieve the objectives of IS4D?

Five key groups provided major inputs in terms of time and resources for IS4D. These were the:

- Cardno Project Management Team
- NMT – the Australian Registered Training Organisation
- mentors
- workplace supervisors
- NEPAD.

The Cardno Project Management Team was responsible for the design and implementation of the IS4D program. A small core team undertook this task with support from a wider group of consultants and a monitoring and evaluation specialist. The use of specialist consultants ensured that IS4D had access to high quality advice on action learning, the skill and experience needs of infrastructure professionals and the forms of professional support that were most appropriate for middle and senior level managers in infrastructure organisations in Africa. The appointment of a monitoring and evaluation specialist ensured that the core team and other stakeholders had ready access to regular and reliable information on the progress of IAS4D. Overall the Review Team concluded that the management team structure was appropriate for the project and that it was able to develop and deliver the IS4D program in an efficient manner.

The mentors are a critical element of IS4D. According to the *AAPF IS4D2 Annual Work Plan for 2016*, the mentors are ‘...the key link between the participant’s baseline knowledge and skills, their goals for learning, and their ability to apply their learnings on their work based projects.’ The mentors were selected on the basis of their technical expertise, experience in program management, interpersonal skills and expertise in Action Learning. Six mentors were engaged in IS4D 1 and five in IS4D2.

The mentors were responsible for supporting participants in undertaking their work based projects, facilitating the learning sets, identifying enrichment activities for participants and reporting on participant progress. They also provided a key source of feedback on the IS4D program and emerged as important advocates for the program. In IS4D2 the Cardno Project Team took steps to reduce the reporting load on the mentors so that they could allocate more time to working with the participants. This helped to ensure that the mentors’ resources were more efficiently used and better directed at achieving the project outcomes. Overall the Review Team concluded that the inputs from the mentors are being effectively used. However more attention needs to be paid to ensuring that there is an adequate number of trained and experienced mentors to support any future expansion of IS4D.

NMT was engaged by the Cardno Project Management Team primarily to deliver the online project management program. This has proved to be a reasonably efficient way of delivering basic training in areas such as stakeholder and risk management. The overall cost to IS4D has been relatively low and participants are able to access further training through NMT on a fee for service basis. The only major drawback has been the problem with connectivity that has impacted on some participants’ use of the online system.

A key group of contributors to IS4D that appears to be underutilised is the workplace supervisors. This group should be a key support for the participants, an important advocate for IS4D and a major source of feedback on the program. Skilled workplace supervisors create a culture of learning in their agencies, understand the impact of feedback on performance, give effective feedback to staff, model best practice and assist staff in identifying solutions to difficult problems and situations. At present it does not appear that the capabilities of this group are being used to their best advantage in IS4D. During the fieldwork phase of the review, the Review Team met with a number of supervisors who were actively involved in supporting the IS4D participants in their agencies but this was largely being done on their own initiative with little formal support from the project. In any redevelopment of IS4D attention should be given to providing a briefing session for supervisors to ensure that they understand their role, how they can support participants and the ways in which they can promote the take up of IS4D within their agencies. This would help to ensure that participants are more effectively supported in their agencies and that the resources contributed by the workplace supervisors are more efficiently used.

NEPAD has made an important contribution to IS4D in supplying information on the skills needs of infrastructure professionals, promoting the project to key policy makers, engaging with the Cardno Project

Management Team on the selection of program participants, and sponsoring the development of a Community of Practice around IS4D. However the Review Team believes that the IS4D program may have benefitted from the establishment of a more formal communication process between the Cardno Project Management Team and the NEPAD team. It appears that communication between the two groups was hampered by changes in key personnel and the demands of a short-term project. Better communications may have streamlined decision making and ensured that decisions could be actioned in a timely manner.

Overall the time and resources of the Cardno Project Management Team and the beneficiaries appear to have been efficiently used with the major exception being the underutilisation of the workplace supervisors.

7.3.2 Is the methodology being applied in a cost effective way to achieve the objectives of IS4D and / or its there a more cost effective manner in which IS4D could be implemented?

The total cost of IS4D1 was \$1,891,237 and it is estimated that the total cost for IS4D2, according to the *AAFP IS4D2 Annual Work Plan for 2016*, will be \$2,057,682. The breakdown of these costs is presented in the chart below.

IS4D Project Costs (AUD\$)		
Cost category	IS4D1 - 2015	IS4D2 - 2016
Facility Management Fee		205,768
Personnel and Advisor Support Costs	\$592,612	\$463 431
Activity Implementation Costs	1,291,461	1 388,483
TOTAL	\$1,891,237	\$2 057,682

Source: Cardno Project Management Team

Excluding the facility management fee and team salaries, the cost of IS4D 1 was \$1.29 million AUD and for IS4D2 is estimated to be \$1.38 million AUD. Given that there were 38 participants in IS4D1 and 28 participants in IS4D2, this represents a unit cost of approximately \$33,985 AUD and \$49,500 AUD, respectively. This compares favourably with the unit cost of the Australian short course program operated by DFAT that is estimated to be \$33,000 per student for a six-week course.

Nevertheless when compared with commercially available project management training programs, IS4D does appear to be a relatively high cost option. For example, a twelve month, on line project management qualification delivered by an Australian Registered Training Organisation typically costs between \$7,500 and \$10,500 AUD, whereas a Graduate Certificate in Project Management offered by an Australian University comprising four modules delivered over a twelve month period costs about \$3,500AUD per module at a total cost of \$14,000 AUD. It should be noted however that:

- the online courses provided by Australian institutions are unlikely to provide the full range of services offered by IS4D, and
- many of the costs incurred in delivering IS4D would either not be incurred or would be borne by the participant in these Australian programs.

The Review Team believes that the cost of IS4D could be reduced significantly by:

- eliminating some cost items, such as NEPAD travel and alumni activities;
- sourcing key program components locally, such as the project management training and the short courses;
- shifting some program costs, such as participant travel and accommodation, to the user, namely the employing agency; and,
- market testing some cost items such as the provision of mentoring services.

IS4D has run as a pilot or demonstration project and this is reflected in the current cost structure. If IS4D continues, the cost structure of the program should be revised with a view to ensuring that IS4D is offered at a

price that is comparable with other quality, post graduate programs provided by academic institutions and professional bodies.

While IS4D appears to be an expensive intervention, it is important to note that many infrastructure agencies currently make significant investments in developing their human resources. For example the Zambia Energy Regulation Board (ZERB), along with other energy regulators in the region, has a critical shortage of skilled regulators. At present, ZERB sends new recruits overseas for training in energy regulation. In most cases they undertake a two to three-week full time program at either the University of Florida or the Institute of Private Public Partnerships in Washington. While these courses are highly regarded, they are expensive, costing up to \$7,500 AUD per participant for the course alone, are focused on general regulatory frameworks, are not sector specific and do not include a practical and supported work project. By contrast the IS4D program is focused on a work project that is defined by ZERB, the participant is fully supported through the mentoring and peer-to-peer program, there are limited costs associated with travel and accommodation, and the participant spends less concentrated time away from the workplace. During the consultations, ZERB indicated that IS4D provides an attractive and potentially cost effective form of capacity building for new recruits and that the Board is about to commission a Return on Investment study to assess the benefit of IS4D compared to the traditional full time programs that it currently purchases for training new regulators.

At this stage, the Review Team recommends that the current cost structure of IS4D is reviewed and that key cost items are market tested.

7.4 Sustainability

7.4.1 To what extent is it likely that the benefits of IS4D will continue to flow after DFAT support has ended?

The key issue that emerged during the consultations was the sustainability of the IS4D program. This relates to both the sustainability of the learnings attained by individuals and agencies engaged in the program and the sustainability of the program once the financial support provided by the Australian Government comes to an end.

The consultations conducted by the Review Team confirmed that there is a significant skills deficit in relation to project management skills in the major infrastructure agencies and that this is being effectively addressed albeit on a limited scale by the IS4D project. Virtually every participant spoken to by the Review Team confirmed the benefits of the program and how the program has had a direct impact on their work practices. While there is a risk that IS4D learnings may be lost if the its graduates do not have access to ongoing support, the Review Team saw considerable evidence of the project management processes and techniques promoted through IS4D being applied in the workplace, communicated to others who have not participated in the program and incorporated in workplace procedures. The Review Team believes this has been enhanced by involving more than one participant from an agency in the IS4D program, offering the IS4D program to the same agencies in 2015 and 2016, and engaging some IS4D 2015 graduates as supervisors in the 2016 program. These actions have helped to build a cadre of key staff within individual agencies who have been exposed to IS4D.

While IS4D has only impacted on a limited number of infrastructure agencies, it appears that the benefits are sustainable within those agencies provided that participants are not isolated or lack supervisor support. The Review Team is firmly of the view that the work supervisor plays a critical role in the IS4D program in terms of supporting the participants and communicating the learnings from the IS4D to their peers in the workplace. As argued earlier in this report, more attention should be given to supporting supervisors in any future IS4D programs.

Another factor, which has the potential to support the sustainability of the learnings acquired by individuals and agencies, is the NEPAD sponsored Community of Practice mentioned earlier. A number of participants commented favourably on this initiative but expressed concern about the functioning of the web site and the need for the web site to be actively managed. An effective Community of Practice focused on the needs of IS4D participants, supervisors and graduates would help to ensure that cross border networks are established, learnings from the IS4D project are shared and ideas for program development and improvement are communicated to NEPAD and other agencies.

Nevertheless the cessation of Australian Government support for IS4D represents a major challenge to the sustainability of the program. While the skills gained through IS4D will continue to be applied by many of the participants the likelihood of the benefits of the program continuing to flow will be significantly diminished unless some other way of supporting the program is put in place.

7.4.2 To what extent have participants continued to apply the principles and knowledge acquired as a result of participating in IS4D?

As indicated in the preceding section, there is clear evidence that graduates of IS4D1 have continued to apply the principles and knowledge acquired through the program. A case in point is the way in which the Deputy Director of Valuation and Taxation at the Kenya Land Commission, has championed the use of IS4D in his department. He was a participant in IS4D1 while working for the Kenyan Electricity Transmission Company (KETRACO). After graduating from the program he moved to the lands authority and has applied the skills learned through IS4D to solve issues associated with land acquisitions for major infrastructure programs. Due to the success of this work, the lands authority independently approached the Cardno Management Team about the possibility of enrolling other staff in IS4D2. As a result two staff members, including the Director of the Valuation and Taxation Division, are currently completing IS4D. In addition, the Director has indicated that the Division intends to test the principles of IS4D on the land acquisition process for the Lamu Coal Fired Power Station in Kenya.

The Review Team noted a number of other examples of how participants have continued to apply the principles and practices of IS4D. While this is encouraging the examples tend to be isolated and there is a need to build a critical mass of users within agencies to fully ground the principles and practice of IS4D.

7.4.3 Identify opportunities to build sustainability of outcomes achieved under IS4D.

The Review Team discussed a range of options for building the sustainability of the outcomes of IS4D. For most participants, the key to sustainability is to provide effective follow up and support for IS4D graduates. A number of participants expect that this could be achieved through the NEPAD Community of Practice provided that it was actively managed or through the development of a social media strategy using tools such as Whatsapp and Skype.

An alternative approach, which emanated from separate discussions that the Review Team held with the Zambia Energy Regulatory Board and the Northern Corridor Transit and Transport Authority, is to establish corridor, REC or sector specific IS4D programs. For example, the SADC electricity regulators have an existing organisation called the Regional Regulators Association (RRA) that aims to harmonise standards and promote best practice in regulation across the region. All the members of RRA have experienced difficulties in recruiting regulatory staff. One response to this might be to establish an IS4D program for energy regulators that is customised to the energy sector and is funded by RRA members. Similarly, it may be possible to develop an IS4D program for the different agencies involved in a specific corridor that is funded through their training budgets or an IS4D program that is customised for and funded through a REC.

A range of other options for ensuring the sustainability of the outcomes of IS4D was identified through the consultations, the Participant and Supervisor surveys and the background literature. The most viable of these were:

1. conducting further IS4D programs to maintain the visibility of the program and to expand its reach;
2. ensuring that the IS4D program is recognised for continuing professional development purposes by the relevant professional bodies, such as the Institutes of Engineers;
3. establishing credit arrangements between the IS4D program and infrastructure related higher degree programs; and,
4. developing a network of IS4D providers that are able to offer the IS4D program on a fee for service basis.

Each of these four options has the potential to boost the visibility, reach and acceptance of IS4D. Options 2 and 3, which focus on gaining formal recognition for IS4D graduates, offer significant benefits for individual

infrastructure professionals and their employers and provide a mechanism for mainstreaming the program. For example, if IS4D was recognised as part of the continuing professional development program for professional associations, such as the various national institutes of engineers, then completion of the program would contribute to individuals being able to gain or maintain their registration with the professional body and would ensure that employing agencies are better placed to meet their quality objectives with regard to the employment of trained and appropriately qualified professional staff. Similar benefits may flow to both individuals and their employers if IS4D graduates could gain credit for the program within higher degree qualifications.

Gaining formal recognition for IS4D through the professional associations and higher education institutions will increase the value of IS4D for individuals and their employers as well as integrate the program into the formal professional skills development and recognition processes in the different countries in Africa. This in turn may make IS4D a more attractive option for donor-supported programs, as donors will be able to see a direct link between IS4D and the formal processes and requirements for professional skills development and recognition. The development of these arrangements will take time and will need to be negotiated with the relevant professional bodies and higher education institutions. Gaining acceptance from these bodies may require some adjustment to IS4D, such as strengthening the assessment requirements or enhancing the supervision and reporting arrangements for the work-based project.

4.4 Recommend how IS4D could be institutionalised as a pillar of infrastructure capacity development to be scaled up, financed and delivered effectively whether by NEPAD or another donor partner.

To date IS4D has been supported by the AAPF through donor funding supplied by the Australian Government. This support is coming to an end and important decisions have to be made about the future of IS4D. The Review Team believes that there are strong arguments for maintaining and expanding the program. However donor funding cannot support programs of this nature indefinitely. The funding supplied by the Australian Government has underwritten the cost of developing and piloting the program and has supported this evaluation which has shown that the program provides an appropriate response to the skills deficit in the relevant public sector agencies. The question that this raises is how might the program be financed and managed in the future.

Several responses to this question were presented to the Review Team with opinions sourced from background documents, participants, participant supervisors, mentors, the key respondents and NEPAD.

The leading options are:

1. Seek other donor support for IS4D program to continue its implementation under a format similar to IS4D 1 and 2.
2. Transfer IS4D to the Regional Economic Communities
3. Transfer IS4D NEPAD
4. Commercialise IS4D

The relative benefits and limitations of each of these options are summarised in the following chart (Figure 2).

Figure 2: Benefits and limitations of options for future provision of IS4D

Option	Benefits	Limitations
1. Seek other donor support for IS4D	<ul style="list-style-type: none"> • Guaranteed funding support for IS4D program • Expertise available to support further development / roll out of IS4D program • Option supported by NEPAD • Pan African focus of program maintained 	<ul style="list-style-type: none"> • Donor support may not be available. • Donor support not sustainable or guaranteed in the medium to longer term. • Key program features may be redesigned to suit donor objectives
2. Transfer IS4D to the Regional Economic Commissions	<ul style="list-style-type: none"> • IS4D program linked with regional infrastructure priorities • RECs possess or can access technical expertise to manage IS4D program 	<ul style="list-style-type: none"> • Transfer to RECs not supported by NEPAD • Pan African focus of IS4D program may be compromised • RECs capacity to fund IS4D is unclear
3. Transfer IS4D to NEPAD	<ul style="list-style-type: none"> • Pan-African focus of IS4D program maintained. • Clear link with African Union and PIDA program • NEPAD is the responsible AU agency 	<ul style="list-style-type: none"> • NEPAD lacks funding to support IS4D and as such sustainability is not guaranteed • NEPADs future plans for IS4D are unclear • NEPAD may need technical assistance to effectively manage IS4D program
4. Commercialise IS4D	<ul style="list-style-type: none"> • Provision and maintenance of IS4D linked to market demand • Fee for service funding of program minimises reliance on donor and government funding for IS4D program • Fosters capability building of organisations providing professional development services for infrastructure professionals. • Pan African focus of program maintained. 	<ul style="list-style-type: none"> • Transition plan required to shift IS4D from donor to commercial funding basis. • Need to foster development of professional organisations to provide IS4D on a fee for service basis. • Government infrastructure agencies may choose not to purchase IS4D program

Up till now, both NEPAD and the Cardno Project Management Team have expressed support for Option 1 that is to seek a new donor to support the continued provision of IS4D. For instance the *AAPF: IS4D Annual Work plan for 2016* noted that ‘... the sustainability of the program is dependent on timely identification of a new funding partner to succeed Australian Aid funding. Negotiations have been initiated with the NPCA (NEPAD) for their role in succession planning. The NEPAD NPCA has identified a preference to secure another donor to continue with the program post-2016.’

The review gauged the four options against three key considerations. These were:

- sustainability of the provision of IS4D services under the succession option
- adherence of the option to NEPAD’s preference for a pan-African presence
- failure risk of the option.

The Review Team concluded that a market-based solution provides for long term sustainability, can be pan African in scope and being independent of interruptions associated with donor funding may have a lower risk

of failure if properly introduced. It is interesting to note that both the Participant and Supervisor Surveys indicated that people would be prepared to participate in IS4D on a fee for service basis, with four of the five supervisors and 66% participants stating that they would participate in the program if it was offered on this basis.

However, it is most unlikely that such an approach could be put in place before the current funding arrangements come to an end and the necessary supporting infrastructure is put in place. As such the Review Team recommends that a short period of additional funding of up two years should be provided by the Australian Government to allow for:

- documentation of the IS4D program including a description of best practice applications of IS4D
- further consolidation of the IS4D program
- the assessment and subsequent implementation of the changes suggested to IS4D in this report
- the roll out of a transition strategy. It is envisaged that this strategy will address, amongst other things:
 - transfer of IS4D to NEPAD
 - expansion of the group of trained mentors with a particular focus on boosting the number of female mentors
 - strengthening of the role of workplace supervisors
 - establishing a simple but robust quality assurance framework for the IS4D program
 - building the capacity of local organisations to act as IS4D providers
 - developing a branding and marketing strategy for IS4D
 - identifying a local provider of online project management training
 - gaining recognition of the IS4D program by professional bodies for continuing professional development purposes
 - establishing credit arrangements between IS4D and a higher degree project management program offered by at least one African institution
 - reviewing the cost structure of the IS4D program
 - supporting the further development of the NEPAD Community of Practice
 - developing a maintenance strategy for the IS4D program and any associated program materials.

At the end of this period of additional transition funding it is envisaged that:

- the ownership of IS4D including any intellectual property would formally be transferred to NEPAD as the key AU agency responsible for economic co-operation and integration among African nations
- a managing agent with expertise in program administration and quality assurance would be appointed by NEPAD to oversee and maintain the IS4D program until such time that it can be effectively administered internally. It is envisaged that this would be a small team funded through a mix of licensing/ approval fees, the provision of training services for mentors and other staff engaged in IS4D delivery, and NEPAD funds
- one or more providers would be licensed or approved for a set period by NEPAD through the managing agent to offer IS4D on a fee for service basis.
- IS4D would be offered on a fee for service basis to a range of users including RECs, corridor authorities, multinational agencies such as RRA, individual or consortia of infrastructure agencies and donors.

In making this recommendation the Review Team acknowledges that the Australian Government's current view, as represented by DFAT, is that program funding for IS4D will not be continued beyond the current period.

7.5 Monitoring and evaluation

7.5.1 Did the monitoring and evaluation usefully inform programming decisions and learning?

The IS4D monitoring and evaluation strategy complied with *Standard 2 - Initiative Monitoring and Evaluation Systems* in the *DFAT Monitoring and Evaluation Standards*. Adequate resources appear to have been allocated within IS4D for the monitoring and evaluation, clear terms of reference were established for the monitoring and evaluation consultant and an experienced consultant, Mr Matthew Smith was appointed to undertake the monitoring and evaluation of IS4D. In the Review Team's opinion, a comprehensive monitoring and evaluation strategy was established for IS4D and appropriate reports were prepared and these were made available to the Cardno Project Team and other stakeholders as required.

While well planned, the monitoring and evaluation strategy was not inflexible. As noted in the *IS4D2 Annual Work Plan 2016* a number of changes were made to the monitoring and evaluation approach in response to stakeholder feedback between IS4D1 and IS4D2. These included '... a greater emphasis on streamlining all reporting through agreeing all M&E data capture requirements up front and reducing the number of ad-hoc requests for feedback'. In addition '... the primary collection of feedback for M&E purposes will be through the RTO, with the effort of agreeing stakeholder M&E requirements being invested up front, with online and manual reporting templates accommodating multiple stakeholders. Mentor reporting has been cut back to allow a greater focus on the relationship with participants, while still enabling regular but short reporting channels as a feedback and accountability tool. By doing this, the administration burden will be reduced and the focus can remain on the learning journey.'

As well as informing the monitoring and evaluation strategy, information gathered through monitoring the evaluation process was consistently used to inform programming decisions. For example, feedback gathered from participants and mentors informed key decisions such as: reducing the number of mandatory online modules that participants were required to undertake from one to two, introducing the mid-term workshop in IS4D2, and improving information sharing on participant progress with supervisors and agencies during IS4D2.

7.6 Gender

7.6.1 To what extent has gender been addressed, if at all, in the design and implementation of IS4D?

From the outset of IS4D, the Cardno Project Management Team recognised that the low level of female employment in the infrastructure sector in Africa, especially in mid-senior level public sector positions, would limit female participation in the program. In response, priority was given to applications made by women to join the program. In addition, the IS4D program was reviewed by the AAPF Gender Advisor who made a series of recommendations for boosting female participation and the coverage of gender in the program. These recommendations, which were adopted by the Cardno Project Management Team are detailed in Appendix 9, included: encouraging agencies to nominate women for inclusion in IS4D, engaging women in mentoring roles, encouraging training providers associated with the program to design and deliver gender sensitive learning programs, disaggregating assessment results by gender to identify gender specific training needs, and collecting sex disaggregated data on program activities.

Acting on this advice, the Cardno Project Management Team encouraged the infrastructure agencies involved in the program to take gender into account when nominating applicants for IS4D and recommended that participants include gender considerations in their project work plans. Nevertheless, female participation in the program remained low. In IS4D1, eight or 20% of total program participants were women. Female participation in IS4D2 was similar, with seven or 21 % of the participants being women.

One way of broadening female participation in the future may be to encourage participation by women who are employed in senior, non-engineering roles in public sector infrastructure agencies. For example, three of the four participants from the Kenya Lands Commission in IS4D2 were female economists who are involved in land acquisition for infrastructure projects.

As recommended by the AAPF Gender Advisor, attention should also be paid, in future IS4D programs, to increasing the number of women engaged as mentors. IS4D1 engaged two female mentors and IS4D2 engaged one. While this is positive, attention should be given, if the program continues, to developing a cadre

of female mentors. This would help address the underrepresentation of women in the program as well as send a positive message to infrastructure agencies about the contribution that women make to the infrastructure sector in Africa.

In the first year of the programme, the Cardno Project Management Team enlisted the services of two female experts to support key aspects of the development and roll out of the IS4D model. One, an Action Learning specialist was engaged to manage the mentors and the other was the Strategic Advisor to the programme. While the two were not part of the participant cohort, their high level of involvement and leadership in the IS4D program reinforced the contribution that women make to the infrastructure sector, modelled “best practice” in terms of gender inclusiveness in project design, and provided a powerful role model for both female and male participants in the program.

A further action, which the Cardno Project Management Team took to address gender in IS4D, was to include a session on gender in the infrastructure sector in the mid-term workshop program for IS4D2.

It is interesting to note that gender did not emerge as a significant issue during the consultations conducted by the Review Team. The Team spoke with a number of female participants about the selection of participants, the structure of the program including the timing of program activities and work requirements, the operation of the learning sets and the mentoring process. None of these emerged as matters that impeded female participation in the IS4D program. In fact, a number of female participants highlighted the inclusive nature of the program in terms of the level of female participation, the support provided to female participants particularly through the peer to peer networking and mentoring components, and the mutually respectful and inclusive manner in which the learning sets and other program activities were conducted.

While female participation was low, this is ample evidence that the Cardno Project Management Team took active steps to promote female participation in the program, address gender in the program’s implementation and ensure that program activities were inclusive.

8. Summary of key conclusions

- There is widespread acknowledgement, from the peak African infrastructure policy bodies through to infrastructure professionals, that the project management skills deficit in key infrastructure agencies is inhibiting the financing and implementation of the PAPs.
- The infrastructure agencies that participated in IS4D and NEPAD acknowledge that IS4D is an effective tool for mitigating the skills deficit
- The focus in IS4D on building the project management capabilities of public sector infrastructure professionals, in areas such as project integration, stakeholder engagement, negotiation and risk management, is consistent with the needs and expectations of the beneficiaries, namely the IS4D participants, their employing agencies, NEPAD and the RECs.
- All components of the IS4D model are critical but the cost structure must be reviewed.
- IS4D graduates have supported the dissemination of the principles and practices of IS4D within their agencies. However a critical mass of users within these agencies must be built to enhance the application of IS4D learnings within the agencies.
- The continued provision of IS4D on the basis of donor funding is unsustainable. A market-based approach to financing the program should be introduced that is supported by a transitional period of donor-supported activities to consolidate the program and roll out the transition plan proposed in this review.
- To boost the sustainability and image of IS4D, formal recognition for IS4D should be sought within the continuing professional development programs of professional bodies and by attracting credit in higher degree qualifications in project management offered by African institutions.

- IS4D provides a sound response to the deficit in project management skills in infrastructure agencies and the program roll out should be sustained and extended.

9. Recommendations

IS4D is highly valued by its key beneficiaries, namely the participants, their employing agencies and the key governmental bodies associated with PIDA and the PAPs. It provides an effective way of addressing the skills needs of infrastructure professionals responsible for designing and implementing PIDA projects.

Up till now IS4D has been managed by Cardno through the AAPF and has operated on donor funds supplied by the Australian Government. With the AAPF and the donor funding coming to an end it is important that new arrangements are put in place for managing and financing the program. To this end the Review Team recommends that:

1. the IS4D program, including examples of best practice applications of IS4D, is documented and the ensuing publication is widely distributed to key stakeholders
2. a short period of additional funding of up two years is provided by the Australian Government to allow for consolidation of the IS4D program, the assessment and subsequent implementation of the changes suggested to IS4D in this report, and the roll out of a transition strategy.
3. the transition strategy focus on repositioning the IS4D program as a user pay program as outlined in section 7.4.4 of this report.

10 . Appendices

Number	Title
1	Terms of reference for the Independent Review of IS4D
2	Participant survey
3	Supervisor survey
4	Respondents to participant and supervisor surveys
5	Summary of responses to participant survey
6	Summary of responses to supervisor survey
7	List of people interviewed during the consultation phase of the review
8	Agencies, participants and projects involved in AS4D 1 and 2
9	AAPF Gender Advisor recommendations for boosting female participation in IS4D
10	Abbreviations

Appendix 1

Terms of reference for the Independent Review of IS4D

Relevance	<p>i. Are the program objectives consistent with the expectations of beneficiary participants and agencies?</p> <ul style="list-style-type: none"> • To what extent is the design of the program relevant to the needs of participants and agencies involved? • Discuss the extent to which each one of the program components and activities is meeting the needs of the beneficiary participants and agencies.
Effectiveness	<p>ii. Assess to what extent the program has contributed to achieving expected objectives and outcomes in influencing:</p> <ul style="list-style-type: none"> • Improved design and packaging of infrastructure projects, and • More effective implementation of cross border infrastructure projects <p>iii. Assess the extent to which identified risks (and new risks) to program implementation were managed and also their impact on program objectives and outcomes.</p>
Efficiency	<p>iv. Where inputs (resources and time) from the program management team and beneficiaries used in the best possible way to achieve the objectives of IS4D?</p> <p>v. Is the methodology being applied in a cost effective way to achieve the objectives of IS4D and/or is there a more cost effective manner in which IS4D could be implemented?</p>
Sustainability	<p>vi. To what extent is it likely that the benefits of IS4D will continue to flow after DFAT support has ended?</p> <ul style="list-style-type: none"> • To what extent have participants continued to apply the principles and knowledge acquired as a result of participating in IS4D? • Identify opportunities to build sustainability of outcomes achieved under IS4D. • Recommend how IS4D could be institutionalised as a pillar of infrastructure capacity development to be scaled up, financed and delivered effectively whether by NEPAD or by another donor partner.
Monitoring and evaluation	<p>vii. Does it usefully inform programming decisions and learning?</p>
Gender	<p>vii. To what extent has gender been addressed, if at all, in the design and implementation of IS4D?</p>

Appendix 2

IS4D Program Review Participant Survey

Name		
Organisation		
IS4D project title		
Email address		
Year (circle the correct year)	2015	2016
Name of mentor		
Name of workplace supervisor		

Instructions

Read the survey form.

Answer each of the ten questions on the form.

Return the completed form by email by 31 August 2016.

Question One

- What was your major skill need that you hoped would be addressed through participating in the IS4D program?
- Using the following scale rate the extent to which this skill need was addressed.

Exceeded my expectations	Met my expectations	Almost met my expectations	Less than my expectations	Did not meet my expectations
5	4	3	2	1

Question Two:

- List three skills or abilities that you have acquired through the IS4D program.
- Describe one specific aspect of the project that you have used in your work.

Question Three

Using the following scale rate the relevance and usefulness of the following components of the IS4D program

IS4D Program Component	Relevance					Usefulness				
	1	2	3	4	5	1	2	3	4	5
On line learning program										
Mentoring program										
Site visits / immersion program										
Specialist training program										

Question Four:

Describe one situation in which you exchanged information related to the IS4D program with a colleague either within or outside your organization.

Question Five:

What support do you think IS4D graduates need to assist them in continuing to apply the skills and knowledge they acquired through the IS4D program?

Question Six

List any improvements that you think should be made to the IS4D program.

Question Seven

How would you rate the workload associated with the IS4D program

Excessive	Manageable	Difficult to manage	Easy to manage	Light
5	4	3	2	1

Question Eight:

Would you recommend the IS4D program to a colleague? (Please tick the most appropriate response)

- Yes
- No
- Unsure

Question Nine:

Would you participate in the IS4D program if it was offered on a fee for service basis? ? (Please tick the most appropriate response)

- Yes
- No
- Unsure

Question Ten

Using the rating scale to indicate whether any of the following had a negative impact on your involvement in the IS4D program. Rate each item listed in the first column from 1 to 5 by placing a tick in the appropriate box. Where 1 indicates 'no negative impact' and 5 indicates a 'critical and inhibitive impact'.

Did the following have an adverse impact on your involvement in the program?	No negative impact	Little impact	Major impact	Significant impact	Critical and inhibitive impact
	1	2	3	4	5
Information provided prior to commencement of program					
Timing of program activities					
Work load					
Access to mentors					
Ease of use of online platform					

Appendix 3

IS4D Program Review Supervisor Survey

Name	
Organisation	
Email address	
Name of participants engaged in IS4D program and year of involvement	

Instructions

Read the survey form.

Answer each of the ten questions on the form.

Return the completed form by email to by Friday 19 August 2016.

Question One

- What was the major skill need that you hoped would be addressed through sending staff to participate in the IS4D program?
- Using the following scale rate the extent to which this skill need was addressed.

Exceeded my expectations	Met my expectations	Almost met me expectations	Less than my expectations	Did not meet my expectations
5	4	3	2	1

Question Two:

Describe one way in which a member of your staff has applied in the workplace what he or she learned through the IS4D Program.

Question Three

What do you think your staff has gained through participating in the IS4D Program

Question Four:

What support do you think supervisors and host organisations should provide for participants in the IS4D program?

Question Five

What would enable you to better support your staff involved in the IS4D program?

Question Six

Would you encourage other members of your staff / organization to undertake the IS4D program?

- Yes
- No
- Unsure

Question Seven

Would you encourage other members of your staff / organization to undertake the IS4D program if it was offered on a fee for service basis?

(Please tick the most appropriate response)

- Yes
- No
- Unsure

Question Eight

What have been the major benefits of your staff participating in the IS4D program?

Question Nine

What do you think can be done to ensure the sustainability of the learnings that your staff acquired through the IS4D program?

Appendix 4

Respondents to participant and supervisor surveys

Respondents – participants	
Name	Organisation
Eric Musama	Zambia Energy Regulation Board
Silas Kandie Cheboi	Energy Regulatory Commission (Kenya)
Charles Odoi Chibambo	Electricity Supply Corporation of Malawi
Michael C. Gondwe	Electricity Supply Corporation of Malawi
Eunice Kageni Kiambi	Kenya National Highways Authority
Joan Anyika Otike	Kenya National Highways Authority
Kennedy Nengo	Kenya Power and Lighting Co. Ltd
Zipporah Kimotho	Kenya Railways Corporation
John Ileri Maina	Kenya Railways Corporation
Jonathan Metiaki Kilelo	Kenya Railways Corporation
Martinho Julião Vubil	Ministry of Transport and Communications
Geoffrey F. Magwede	Ministry of Transport and Public Works (Malawi)
Justice Mtande	Ministry of Transport and Public Works (Malawi)
Cedric Junior Njala	Ministry of Transport and Public Works (Malawi)
Daniel Kabaggoza	Uganda Railways Corporation
Sonia Fernandes Ussene Badrú	Caminhos de Ferro de Mocambique (Ports and Railways of Mozambique)
Salome Ludenyi Munubi	National Land Commission of Kenya
Doricah Buyaki Ongaga	National Land Commission-Kenya
Fred Tumwebaze	Northern Corridor Transit and Transport Coordination Authority (NCTTCA)
Lievin Chirhalwirwa	Northern Corridor Transit and Transport Coordination Authority (NCTTCA)
Eugénio Domingos Nguenha	Caminhos de Ferro de Mocambique (Ports and Railways of Mozambique)

Koma Denis J. Donato	South Sudan Roads Authority
Imelda Bore	The Kenya Power and Lighting Company Limited
Micahel Ochola	Uganda National Roads Authority
Nakonde Zaituni	Uganda National Roads Authority
Bakiza Ian Paul	Uganda National Roads Authority
Simon Mabeta	ZESCO Limited
Cecilia Kasonde	ZESCO Limited
Respondents – supervisors	
Eng. Samuel O. Ogege	Kenya National Highways Authority
Benedict Mukuma Kimau	Kenya Railways Corporation
Geoffrey Francis Magwede	Ministry of Transport and Public Works (Malawi)
Donat Bagula	Northern Corridor Transit Transport Coordination authority (NCTTCA)
Patrick Muleme	Uganda National Roads Authority

Appendix 5

Summary of response to IS4D Program Review Participant Survey

Survey response	
Total number of survey responses	30
Year of respondent participation in IS4D program	2015 - 9 2016 – 21
Responses to survey questions	
Question	Response
1a: What was your major skill need that you hoped would be addressed through participating in the IS4D program?	<ul style="list-style-type: none"> Project management skills (38.0%) Negotiation skills (16.6%) Risk management skills (11.9%) Stakeholder engagement skills (11.9%) Communication / interpersonal skills (4.7%) Cost management skills (4.7%) Project monitoring and evaluation skills (4.7%) Procurement skills (2.3%) Feasibility study skills (2.3%) Conflict resolution skills (2.3%)
1b: Using the following scale rate the extent to which this skill need was addressed.	<ul style="list-style-type: none"> Exceeded my expectation (20.0%) Met my expectations (73.3%) Almost met my expectations (13.3%) Less than met my expectations (0.0%) Did not meet my expectations (3.3%) No response (3.3%)
2a: List three skills or abilities that you have acquired through the IS4D program.	<ul style="list-style-type: none"> Project management skills (34.1%) Stakeholder engagement (13.4%) Risk management skills (10.9%) Negotiation skills (9.7%) Communication / interpersonal skills (9.7%) Financing options – PPP (8.5%) Cost management skills (3.6%) Procurements skills (2.4%) Time management skills (4.8%) Project documentation skills (1.2%) Computing skills (1.2%)

2b: Describe one specific aspect of the project that you have used in your work.	<p>Stakeholder engagement skills (25.0%)</p> <p>Project management skills (20.8%)</p> <p>Risk management skills (12.5%)</p> <p>Communication skills (8.3%)</p> <p>Cost management skills (8.3%)</p> <p>Cross border cooperation skills (8.3%)</p> <p>Time management skills (4.1%)</p> <p>Contract management skills (4.1%)</p> <p>Financing options information (4.1%)</p> <p>Project documentation skills (4.1%)</p>																																																																												
	<table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="5">Relevance (%)</th> <th colspan="5">Usefulness (%)</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>On line learning program</td> <td>-</td> <td>-</td> <td>7.4</td> <td>44.4</td> <td>48.1</td> <td>-</td> <td>-</td> <td>7.4</td> <td>37.0</td> <td>55.5</td> </tr> <tr> <td>Mentoring program</td> <td>-</td> <td>-</td> <td>7.4</td> <td>29.6</td> <td>62.9</td> <td>-</td> <td>-</td> <td>11.1</td> <td>22.2</td> <td>66.6</td> </tr> <tr> <td>Site visits / immersion program</td> <td>-</td> <td>-</td> <td>12.0</td> <td>36.0</td> <td>52.0</td> <td>-</td> <td>-</td> <td>15.3</td> <td>34.6</td> <td>50.0</td> </tr> <tr> <td>Specialist training program</td> <td>-</td> <td>-</td> <td>3.8</td> <td>19.2</td> <td>76.9</td> <td>-</td> <td>-</td> <td>3.7</td> <td>25.9</td> <td>70.3</td> </tr> <tr> <td>Peer to peer networking</td> <td>-</td> <td>-</td> <td>18.5</td> <td>37.0</td> <td>44.4</td> <td>-</td> <td>-</td> <td>14.8</td> <td>29.6</td> <td>55.5</td> </tr> </tbody> </table>		Relevance (%)					Usefulness (%)					1	2	3	4	5	1	2	3	4	5	On line learning program	-	-	7.4	44.4	48.1	-	-	7.4	37.0	55.5	Mentoring program	-	-	7.4	29.6	62.9	-	-	11.1	22.2	66.6	Site visits / immersion program	-	-	12.0	36.0	52.0	-	-	15.3	34.6	50.0	Specialist training program	-	-	3.8	19.2	76.9	-	-	3.7	25.9	70.3	Peer to peer networking	-	-	18.5	37.0	44.4	-	-	14.8	29.6	55.5
	Relevance (%)					Usefulness (%)																																																																							
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Peer to peer networking	-	-	18.5	37.0	44.4	-	-	14.8	29.6	55.5																																																																			
4: Describe one situation in which you exchanged information related to the IS4D program with a colleague either within or outside your organization.	<p>A number of participants noted that they had engaged in cross border communication with infrastructure professionals in relation to current infrastructure projects.</p> <p>A small number stated that they had communicated with other IS4D learners in relation to the work-based project and other IS4D related assessment tasks.</p> <p>Individual participants noted that they had communicated with others on the following topics: risk management, project staffing, stakeholder engagement, financing options, IS4D templates and tools, project concept planning, and budgeting.</p>																																																																												
5: What support do you think IS4D graduates need to assist them in continuing to apply the skills and knowledge they acquired through the IS4D program?	<p>IS4D graduate network (30.4%)</p> <p>Ongoing professional development (21.7%)</p> <p>IS4D forum / discussion group / Community of Practice (17.3%)</p> <p>Monitoring of progress / development of IS4D graduates (8.6%)</p> <p>Documentation of good practice in infrastructure project management (4.3%)</p> <p>Mentoring of graduates (4.3%)</p>																																																																												
6: List any improvements that you think should be made to the	The six key program improvements identified were:																																																																												

IS4D program.	<ul style="list-style-type: none"> • Travel and visas for IS4D participants • Presentation of IS4D materials in languages other than English, particularly Portuguese • Providing additional time for participants to share information on their work projects • Expanded opportunities in the program for IS4D participants to meet face to face • Greater involvement of experienced infrastructure professionals in IS4D program delivery • Involvement of a broader range of infrastructure professionals IS4D participants 					
7: How would you rate the workload associated with the IS4D program?	Excessive (-) Manageable (88.8%) Difficult to manage (7.4%) Easy to manage (3.7%) Light (-)					
8: Would you recommend the IS4D program to a colleague?	Yes (100.0%) No (-) Unsure					
9: Would you participate in the IS4D program if it was offered on a fee for service basis?	Yes (66.6) No (-) Unsure (33.3%)					
		No negative impact	Little impact	Major impact	Significant impact	Critically inhibitive impact
		1	2	3	4	5
	Information provided prior to commencement of program	74.0%	7.4%	11.1%	7.4%	(-)
	Timing of program activities	53.85	23.0%	7.6%	15.35	(-)
	Work load	40.7%	25.9%	18.55	14.8%	(-)
Ease of use of online platform	59.2%	22.2%	3.7%	11.1%	3.7%	

Appendix 6

Summary of response to IS4D Program Review Supervisor Survey

Survey response	
Total number of survey responses	5
Year of IS4D program	2015 - 1 2016 – 4 (1 in both 2015 and 2016)
Responses to survey questions	
Question	Response
1a: What was the major skill need that you hoped would be addressed through sending staff to participate in the IS4D program?	Project management skills Risk management skills Project preparation skills Feasibility study skills
1b: Using the following scale rate the extent to which this skill need was addressed.	Exceeded my expectation (1) Met my expectations (3) Almost met my expectations (-) Less than met my expectations (-) Did not meet my expectations (-) No response (1)
2: Describe one way in which a member of your staff has applied in the workplace what he or she learned through the IS4D Program.	Respondents responses were: <ul style="list-style-type: none"> • PPP project monitoring • Project documentation preparation • Stakeholder engagement • Project formulation • Negotiation with project partners
3: What do you think your staff has gained through participating in the IS4D Program?	Respondents responses were: <ul style="list-style-type: none"> • Project management skills • Risk management skills • Negotiation skills
4: What support do you think supervisors and host organisations should provide for participants in the IS4D program?	Respondents responses were: <ul style="list-style-type: none"> • Facilitate attendance and participation in IS4D program • Provide opportunities for IS4D participants to be actively engaged in infrastructure project implementation

<p>5: What would enable you to better support your staff involved in the IS4D program?</p>	<p>Respondents responses were:</p> <ul style="list-style-type: none"> • Further information on IS4d program and its objectives • Further information on IS4D program schedule
<p>6: Would you encourage other members of your staff / organization to undertake the IS4D program?</p>	<p>Yes (4) No (-) Unsure (-) No response (1)</p>
<p>7: Would you encourage your staff to participate in the IS4D program if it was offered on a fee for service basis?</p>	<p>Yes (4) No (-) Unsure (-) No response (1)</p>
<p>8: What have been the major benefits of your staff participating in the IS4D program?</p>	<p>Respondents responses were:</p> <ul style="list-style-type: none"> • Strengthen project management skills • Improve negotiation skills • Build professional confidence • Enhance stakeholder engagement skills
<p>9: What do you think can be done to ensure the sustainability of the learnings that your staff acquired through the IS4D program?</p>	<p>Respondents responses were:</p> <ul style="list-style-type: none"> • Evaluation of the IS4D program • Provide access for IS4D graduates to work on real infrastructure projects • Build network of IS4D graduates

Appendix 7

List of people interviewed during the consultation phase of the review

Name	Organisation/Role
Abiola Shomang	New Partnership for Africa's Development (NEPAD)
Andy Dijkerman	
Anita Manete	Department of Foreign Affairs and Trade, Government of Australia
Bob Kalanzi	NEPAD
Caitlin Poole	Cardno Emerging Markets Pty Ltd
Cecilia Kasonde	Zambia Electricity Supply Corporation
Charles Kateeba	Uganda Railways Corporation
Cornellous Mzezewa	Mentor
David Jarrett	Mentor
Doricah Buyaki Ogaga	Kenya National Land Commission
Emanuel Anderson	Tanzania Electric Supply Company
Ephrem Getahum	New Partnership for Africa's Development (NEPAD)
Euginio Nguenha	Caminhos de Ferro de Mocambique (Ports and Railways of Mozambique)
Florence Nazarre	New Partnership for Africa's Development (NEPAD)
Fred Tumwebaze	Northern Corridor Transit and Transport Coordination Authority (NCTTCA)
George Murumba	New Partnership for Africa's Development (NEPAD)
Gerome Rich	Cardno Emerging Markets Pty Ltd
Hope Chanda Musonda	Zambia Electricity Supply Corporation
Joash M. Oindo	Kenya National Land Commission
Llevin Chirhalwirwa	Northern Corridor Transit and Transport Coordination Authority
Lovemore Bingadadi	Mentor
Martinho J. Vubil	Ministry of Transport and Communications (Mozambique)
Matthew Smith	Cardno Emerging Markets Pty Ltd

Patrick Muleme	Uganda National Roads Authority, IS4D1 alumni and.
Peter Chris Katwebaze	Uganda Railways Corporation
Peter Zhou	Mentor
Salome Ludenyi Munubi	Kenya National Land Commission
Samuel Ogege	Kenya Highway Authority
Sonia Badru	Caminhos de Ferro de Mocambique (Ports and Railways of Mozambique)
Stacey Walker	Department of Foreign Affairs and Trade, Government of Australia
Suzana Moreira	Mentor
Yohane Mukabe	Zambia Energy Regulation Board

Appendix 8

Agencies, participants and projects involved in AS4D 1 and 2

IS4D I Participants

Agency	Participant Name	Cluster	Work Based Project Focus for IS4D-- Per Learning Agreement	WBP Milestone or Output Progress March 2015
Malawi Ministry of Transport-- Rail	Geoffrey Francis Magwede	Rail	Feasibility studies for Malawi Railway Rehab & Reconstruction	Progress made in getting Malawi representatives included within regional discussions around Beira-Nacala rail corridor planning
	Cedric Njala		Feasibility studies for Rehab & Reconstruction of Limbe line and Mchini	Elicited stakeholder feedback on Limbe line studies-- poor response rate raised to Permanent Secretary for action
Uganda National Roads Authority	Nakonde Zaituni	Roads	Completion of Reconstruction of Mbarara-Katuna NC Route 124 km	Review and settlement of contractors' claims has reached an advanced stage
	Patrick Muleme		Developer Selection for Kampala-Jinja Expressway PPP Project	Mentee made progress on stakeholder identification-- both internal and external
	Davis Muhwezi		Economic Analysis of the Kibuye Busega Mpigi Expressway Project	Traffic study data collection done. Transport cost studies underway.
Kenya Highway Authority	Samson Mwangi Murage	Roads	Eldoret-Webuye-Malaba A-104 NC Road Rehabilitation	Participant making progress on identifying project risks
	Eunice Kageni Kiambi		Dev't of a better risk mgm't plan for oversight KE roads construction	Launched process of creating risk register with risk catalogue and risks define w/consultant buy-in
Kenya Railways Corporation	Benedict Mukuma Kimau	Rail	Rehab and upgrade capacity of Nairobi Commuter Rail	Participant is following the necessary approaches to manage staff and projects
	John Ireri Maina		Improved Passenger Mobility Kenya Commuter Railway Stations	Procurement of contractor and construction materials has advanced with specification of bill of quantities
Uganda Railways Corporation	Peter Katwebaze	Roads	Dev't of HR Capacity Building Plan for the Uganda Std. Gauge Rail project	Working w/HR to design skills audit templates. Coordinating w/other agencies so progress re financing and other deliverables does not affect delivery schedule
	Daniel Kabaggoza		Construction of standard gauge Railway network	Participant is working of project leadership.
South Sudan Roads Authority	Emmanuel Roy Longo	Roads	Strategic Plan for South Sudan Multi-Modal Transport Dev't	Participant is actively supporting Minister's bilateral discussions w/Kenya on the EAC corridor
	Koma Denis Donato		Estab. Consultant selection Mgm't Documentation system for SSRA	Prepared TOR, RFP and Tender document for upgrading Kapoeta-Boma-Raad Rd. to bitumen std.
DRC Agency for Large Public Works	Eric Ngilo	Roads	Sup'vn of works for Lubumbashi-Dar es Salaam road & bridge segment	Construction contract signed between DRC government and construction company
	Léopold Lukunja		Pre-Feasibility study for Kamango-Kisangani DRC Standard Gauge Rail	Progress made in preparing pre-feasibility TOR. Work underway to identify financing and investors
Sudan Ministry of Transport Railway Directorate	James Joseph Uyo Khafir	Rail	Establish framework for effective mgm't of SS Railway infrastructure	Concluded skills gap analysis and identified 69 positions need to be filled based on replication of former Sudan HR capacity & rail organization
	Adam Talo Fartak		Effective delivery of railway signalling services w/in SS Railway network	Making plans to discuss signalling plans from former Sudan with East African railways personnel
EAC Secretariat-- Infrastructure Division	Joster Imbuchi Onyango	Roads	Dev't Tech Specs for Interoperability for East African Railways	Participant is developing country benchmarking as input information to interoperability design
	Gratian Rutaserwa		Feasibility Study and detailed design for Dar es Salaam Bypass Road	Concept paper and TOR for study is in preparation. Search for financing has been launched
NCTTA - Secretariat	Hosea Nyangweso	Roads	Harmonization of road transport policies, standards & specifications	Stakeholder mapping completed
	Cezzy Kanionga		Securing finance for 2 pilot Roadside Stations in Northern Corridor	Preparations underway for an investor conference, including TOR for investor scope of engagement
	Racheal Nyamwiza Nganwa		Feasibility study & detailed design for Mbarara-Kisangani Upgrade	Participant has redoubled efforts to find financing for preparation phase work. Is taking an active role in approaching alternative sources in order to overcome this initial critical obstacle

Agency	Participant Name	Cluster	Work Based Project Focus for IS4D-- Per Learning Agreement	WBP Milestone or Output Progress March 2015
Kenya Transmission Company	Ruth Kabiri Mburu	Power Transmission	Project mgm't of Nairobi Transmission Ring	Work stoppage caused by conflict over land rights. Importance of stakeholder engagement now very apparent and recourse may be made to arbitration. Contractor performance below expectations.
	Brian Muchilwa		Procurement for Kenya-Tanzania Power Interconnection project	The AfDB has approved funds for the Project. Internal project management team being assembled.
	Joash M. Oindo		Acquisition of Wayleave for section of Nairobi Ring TX Line	Made return visits to Project Affected Persons of TX Line. Reviewed the corridor and made slight changes without affecting the overall cost of the project. Compromised so as not to affect dev't/building plans of 4 land owners; they withdrew court case against the Utility and agreed in principle to sign agreement. Another 2 families have agreed to accept compensation offers previously rejected. Review of way leave acquisition protocol/policies now underway in KETRACO.
Kenya Power Company	Amos Ronda Nabaala		Develop a model for use in determining Wheeling Charges	No meeting with mentor. Participant working on literature review pertaining to wheeling tariffs
	Erastus M.E. Kiruja		Formulate Wheeling & Tariff terms for Ethiopia-TZ wheeling Agreement	EAPP Independent Regulatory Board (IRB) approved principles & process of wheeling formulation
Tanzania Ministry of Mines & Energy	Yusuf Msembele		Monitor progress on Makamako-Songea 220 KV TX Line	Project progress is on schedule with stakeholders buying in and agreeing to terms
Tanzania Electricity Supply Corporation	David Donald Mrema		Overseeing tendering processes w/in the TZ-KE T-line projects	24 Expressions of Interest received. Ready to move to evaluation and short-listing in March.
	Khalid Reuben James		Implementation of upstream (pre-construction) works on ZTK TX line	EOIs received, evaluated and sent to Tender Board. Project funding from AfDB and JICA approved.
Zambia Electricity Supply Corporation	Hilner Wire Mulapani		Reschedule works re completion/eval'n deadlines Chipata TX Line	EPC meeting & time rescheduling agreed w/out cost changes. Needed to engage w/EPC & win their cooperation to make such time schedule changes. This is the first time such detail of project rescheduling has happened and openness of deliberations with EPC was important.
	Hope Chanda		Lusaka South Multi-Facility Zone; TX lines and Sub-Station	Draft agreement circulated to stakeholders. Project financing is still outstanding.
	Julius Zulu		Oversight of Zambia-Malawi Chipata Transmission Project	Way-leave line survey completed. Compensation for way-leave rights and crop compensation being evaluated.
	Cecilia Kasonde		Define Scope & Procurement for Sub-Stations of Lusaka T & D Project	Stakeholder ID completed. Scope document prepared/submitted to mgm't for consent
Office PPPI, PMU for ZTK PIDA Project	Clement Chiwele		Dev't of trading mechanisms for ZTK Project	Work plan developed and submitted to management for approval
Malawi Electricity Supply Corporation	Michael Gondwe		Cross border coord'n to deliver Feasibility study for Malawi-Zambia TX	ESCOM Mgm't sensitized/accepts the need to engage ZESCO to establish joint Technical Work Group
	Julia Nchilamwela		Feasibility studies for Malawi - Zambia Interconnection T-Lines	No meeting with mentor due to communications challenges
EAC Secretariat--Infrastructure	Peter Njoroge Kinuthia--Power		Feasibility Study for Kigali-Bujumbura Pipeline	Participant reporting satisfactory progress in setting up steering committee and counterpart staff

IS4D 2 Participants

Agency	Participant Name	Cluster	Work Based Project (as per Learning Agreement)	WBP Milestone or Output Progress to May 31 2016
	Otike Joan Anyika		Development of a request for proposal (RFP) for the review and updating of the Kenyan road design manual	Initial stakeholder meeting conducted. Procurement plan being prepared.
	Ouma Clarence Karot		Procurement of consultants and works for Sirare accessibility and road safety improvement project: Isebania -Kisii- Ahero (A1) rehabilitation project	Tender documents have been received, and the technical evaluation of proposals has commenced (Lot 1 has been completed & Lot 2 evaluation is near completion)
	Lievin Chirhalwirwa		Development of Capacity for project preparation and enabling environment for the upgrading the Northern Corridor Road of Mombasa-Nairobi-Kampala-Kigali- Bujumbura -Bukavu connecting 5 member states	All the member states of the Technical committee of the Northern Corridor Transit and Transport Coordination Authority (NCTTCA) have endorsed the project preparation training
	Fred Tumwebaze		Promoting PPPs financing for road transport infrastructure and integrating the development of road side stations and rest stop amenities as part of Road Infrastructure facilities	First draft of the RSS General Guidelines prepared and has been submitted to Management for comments. In addition, coordinated the formation of Uganda RSS National Task Force, and other stakeholders meetings have also been organised.
	Zipporah Wanjiru Kimotho		Compliance System for concessionaire reporting on the main line (Nairobi - Malaba line)	In reviewing the concession agreement noted where the concessionaire has complied and where they have not. Working with Concessionaire regarding reporting framework, and steps being taken to approve a concept note for a baseline study.
	Jonathan Metiaki Kilelo		Procurement of consultant to undertake safety review of railway operations over the conceded railway network in Kenya under operation by RVRK Ltd	EOI advertised, and responses received.
	Imelda Bore		Amendment of the Ethiopia - Kenya 400MW Power Purchase Agreement signed on 14 th February 2013	Limited progress to date, having been on leave
	Kennedy Nengo		Initiate and coordinate implementation of projects in Western Kenya in order to enable trade of 30MW between Kenya and Rwanda by November 2016	Construction complete and commissioning tests on - going at Kisii, Kisumu, Chemosit, Lanet and Eldoret
	David Kibe Kariuki		Coordinate the procurement of a consultant and manage the preparation of the 6 th Cost of Service Study (COSS) in the Electric Power Subsector in Kenya by October 2016	Evaluation of EOIs and short listing of 6 qualified consultants for the exercise completed, which World Bank has accepted.
	Silas Kandie Cheboi		Implementation of the Cummins biogas power plant in Marigat Baringo County	Site visit completed as per schedule, currently preparing site visit report

Agency	Participant Name	Cluster	Work Based Project (as per Learning Agreement)	WBP Milestone or Output Progress to May 31 2016
Kenya National Land Commission (KNLC)	Salome Ludenyi Munubi		Acquisition of Land for a coal powered plant in Lamu County	RAP Consultant has been given detailed terms of reference for the assignment to sensitise the stakeholders about the project.
	Dorich Buyaki Ongaga		Acquisition of land for the construction of Thwake Multipurpose Water Dam	Servicing notices completed, stakeholder sensitization meetings underway
	Charles Chibambo		Develop new scope of works and implementation packages for the 400kv transmission backbone line linking Malawi to Zambia and Malawi	Informal networking resulted in cross border co-operation (Zambia/Malawi) with Zambian participants (Simon & David) who are working on the ZTK project, albeit data sharing is informal at this juncture.
	Alexander Walota Kaitane		Effective Co-ordination of Stakeholders to ensure efficient & timely implementation of resettlement action plans (RAPS) for the Phombeya - Nkhoma 400Kv. Nkhoma- Bunda 132kv and Chintechche-Bwengu 132kv Power transmission Lines	Additional funding for the project was secured; meetings to sensitise stakeholders on Resettlement Action Plan were held.
Ministry of Transport and Public Works	Justice Victor Mtande		Project scoping and costing rehabilitation of railway systems from Mchinji to Nkaya (400kms)	Received the inception scoping report and is developing a project concept note to present to line manager. This concept note will then be circulated to the internal stakeholders.
	Eugenio Domingos Nguenha		Ressano Garcia Railway Rehabilitation Project	ToRs done by CFM to formalize the process of hiring the consultant. Feasibility and design reports submitted to CFM for analysis and assessment and approved for implementation
	Sonia Fernandes Ussene Badru	Managing the inspection of the signalling and telecommunications for the Machipanda railway	The approval of the feasibility report has been finalised, all questions have been closed out. From this it is now possible to commence on the TORs for the procurement plan	
Ministry of Transport and Communications	Martinho Juliao Vubil	Completion of the contractor procurement to ensure the start of the Nacala port rehabilitation Phase 1 and 2 project	The technical proposal is being finalised with financial proposals being scheduled for analysis from the end of June. Jica has put in place an observation team to ensure that CFM's evaluation team is following best practice.	
Tanzania Electric Supply Company (TANESCO)	Emmanuel Anderson Mbanda	Power	Management of Makambako - Songea distribution project to ensure the project is completed within time	On-going dispute with contractor is hindering project progress, albeit a strategy is now in place to overcome these obstacles.
	Ian Paul Bakiza		Addendum approval and substantial completion of upgrading Ntungamo Mirama Hills Project from gravel to bitumen standard	The addendum has been drafted and is now with Solicitor General for review and subsequent signing.

Agency	Participant Name	Cluster	Work Based Project (as per Learning Agreement)	WBP Milestone or Output Progress to May 31 2016
	Michael Ochola		Design update and preparation of bidding document for the construction of the Kampala flyover project	Design variation awaits JICA approval. As funder, JICA has requested for justification from the Standard Gauge Rail (SGR) group. Stakeholder engagement has been successful, albeit compensation issues with Electoral Commission still need to be resolved.
	Rebecca Abonyo		Kampala - Jinja Expressway PPP Project- Initiation of the procurement process for concessionaire to execute the design, construction, financing, operation and maintenance of the project	Tracking and monitoring progress in order to compile Project Management Status Report, which now includes a detailed project timeline based on the existing procurement processes in UNRA.
Uganda Railways Corporation	Nicholas Kakooza	Rail	Closure of the KFW Bank funded URC Freight Wagons Overhaul Project, Phase 2	The mentee is currently capturing all information of how the material is being used but the concessionaire is not providing data to complete this task, It envisaged that the appointment of a local based supervisor by the concessionaire will facilitate communication. Mentee is actively identifying activities and working on the template for the final project report. Mentee is working with the concessionaire on the wagon inspection schedule.
Office for Promoting Private Power Investment, Ministry of Energy and Water Development (OPPI)	David Chifundo Phiri		Market Study for the Zambia Tanzania Kenya (ZTK) Power Interconnector Project	Limited progress to date, albeit networking with other participants (Simon and Charles) to share data informally on ZTK project.
Zambia Electricity Supply Corporation (ZESC)	Simon Mabeta		Study and analysis of Interconnection technical challenges between SAPP and EAPP	Cross border interaction with Charles is working as Simon now taking into account Malawi's needs
	Eric Musama		Develop Code of Practice for Low Cost Electrification Schemes in Zambia- Shield Wire Technology	Using examples of Namibian and Ghana's Wayleave Code of Practice to guide the development of Zambian Code of Practice
	Besa Chimbaka		Developing a Multi - Year Tariff Framework	Zero draft framework has been developed and it has been submitted to the Head of the Department of Economic Regulation for review

Appendix 9

AAPF Gender Advisor recommendations for boosting female participation in IS4D

The AAPF Gender Advisor reviewed the program and offered the following recommendations:

- **Selection Process:** During discussions with the participating agencies that will be sending participants, the ALB team will highlight the importance of identifying qualified women.
- **Gender balance:** In addition to selecting as many qualified female participants as possible, the project will also strive to create a gender-balance in the learning sets and mentorship arrangements. The project will not simply seek to pair female mentors with female participants, but will also seek, where appropriate, to pair female mentors with male participants.
- **Training Providers:** RFPs for training providers will include selection criteria around their experience in designing and delivering gender-sensitive learning programs. If necessary, the AAPF Gender Advisor could also provide the training providers with some guidelines and materials on how to conduct gender-sensitive trainings.
- **Competency Assessments:** The results of the initial competency assessments will be disaggregated by sex, to identify whether there are any training needs specific to either the male or female participants. If so, the ALB will determine how this may be addressed.
- **Awareness:** the AAPF Gender Advisor will develop a tip sheet to alert project staff, EPC and mining company hosts, facilitators, trainers, mentors and line managers to the kinds of gender-based constraints that female participants may encounter at different points in the project, and provide suggestions for specific actions that they can take to help them overcome these constraints.
- **Program content:** The Action Learning Broker will ensure that the learning sets include relevant social inclusion content. For the objectives of this activity, relevant topics would include social impact assessments of infrastructure projects; stakeholder and community engagement processes; inclusive planning; and dispute resolution mechanisms.
- **Data:** The project will collect sex-disaggregated data and analyse it throughout the life of the project, making suitable adjustments to the program if discrepancies exist.

Appendix 10

Abbreviations

Abbreviation	Meaning
AAPF	Australia-Africa Partnerships Facility
AfDB	African Development Bank
AUC	African Union Commission
DFAT	Australian Department of Foreign Affairs and Trade
ICT	Information and Communications Technologies
IPPF	Infrastructure Project Preparation Facility
IS4D	Infrastructure Skills for Development
KETRACO	Kenya Energy Transmission Company Limited
M&E	Monitoring and Evaluation
NCTTA	Northern Corridor Transit and Transport Coordination Authority
NEPAD	New Partnership for Africa's Development
NMT	North Metropolitan TAFE
NPCA	NEPAD Planning and Coordination Agency
OECD DAC	Organisation for Economic Cooperation and Development - Development Assistance Committee
PAP	Priority Action Plan
PIDA	Programme for Infrastructure Development in Africa
PPP	Private Public Partnership
REC	Regional Economic Commission
SADC	Southern African Development Community
UNECA	United Nations Economic Commission for Africa
UNRA	Uganda National Roads Authority
WBP	Work-Based Project
ZERB	Zambia Energy Regulation Board
ZESCO	Zambia Electricity Supply Corporation Limited