



**ReCAP**  
Research for Community Access Partnership



## Baseline survey of past and current road sector research undertakings in Uganda and establishment of Research Management System

Workshop 2 Report



Aurecon AMEI Limited

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**aurecon**

The views in this document are those of the authors and they do not necessarily reflect the views of the Research for Community Access Partnership (ReCAP), or Cardno Emerging Markets (UK) Ltd for whom the document was prepared

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## **Abstract**

The purpose of this project is to carry out a baseline survey of past and current research that has been undertaken on the roads sector in Uganda, and to establish a Research Management System that enables access to such research and serves as a tool to plan and manage future research. The study commenced on 22 November 2016.

This document presents the report on the Workshop 2 that was held on 28 June 2017 in Kampala. The report captures the presentations that were made at the workshop, the feedback received and the results of the group discussions held.

## **Key words**

Baseline survey, road sector research, Research Management System

## **RESEARCH FOR COMMUNITY ACCESS PARTNERSHIP (ReCAP)**

### ***Safe and sustainable transport for rural communities***

ReCAP is a research programme, funded by UK Aid, with the aim of promoting safe and sustainable transport for rural communities in Africa and Asia. ReCAP comprises the Africa Community Access Partnership (AfCAP) and the Asia Community Access Partnership (AsCAP). These partnerships support knowledge sharing between participating countries in order to enhance the uptake of low cost, proven solutions for rural access that maximise the use of local resources. The ReCAP programme is managed by Cardno Emerging Markets (UK) Ltd.

## **Acronyms, Units and Currencies**

AfCAP	Africa Community Access Programme
AsCAP	Asia Community Access Programme
CAA	Civil Aviation Authority
DFID	Department for International Development
EU	European Union
JICA	Japan International Cooperation Agency
KCCA	Kampala Capital City Authority
MELTC	Mt. Elgon Labour Based Training Centre
MoLG	Ministry of Local Government
MoWT	Ministry of Works and Transport
ReCAP	Research for Community Access partnership
TOR	Terms of Reference
TT	Technology Transfer
UIPE	Uganda Institution of Professional Engineers
UK	United Kingdom
UNCST	Uganda National Council for Science and Technology
UNRA	Uganda National Roads Authority
URF	Uganda Road Fund

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## **1 Executive summary**

The purpose of this project is to carry out a baseline survey of past and current research that has been undertaken on the roads sector in Uganda, and to establish a Research Management System that enables access to such research and serves as a tool to plan and manage future research. The study commenced on 22 November 2016.

This document presents the report on the Workshop 2 that was held on 28 June 2017 in Kampala. The report captures the presentations that were made at the workshop, the feedback received and the results of the group discussions held.

The report also captures the major outcomes from the workshop and the wrap-up meeting that was held between the client and the consultancy team after the workshop.

## **2 Introduction**

### **2.1 Background**

One of the challenges facing the roads sector in Uganda is the absence of consistent, continuous and coordinated research. Various national institutions and agencies have undertaken research in the road sector, including Makerere University, the Uganda National Roads Authority (UNRA), Mt. Elgon Labour Based Training Centre (MELTEC), the Central Materials Laboratory, and individual researchers. However, there is currently no databank where research is consolidated and indexed, and made available to all stakeholders.

The Africa Community Access Programme (AfCAP) is a programme of research and knowledge dissemination funded by the UK government through the Department for International Development (DFID). Cardno Emerging Markets (UK) Ltd was contracted to do the management of the AFCAP2 (under the Research for Community Access partnership (ReCAP) umbrella). The AfCAP National Steering Committee placed high priority on knowledge management as a tool to coordinate road research undertakings, and to avoid duplication of research. AfCAP accepted a request from UNRA for support to carry out a baseline survey of past and current road sector research undertakings in Uganda.

Cardno appointed Aurecon AMEI Limited to carry out the baseline survey of past and current road sector research undertakings in Uganda and to establish a Research Management System. The study commenced on 22 November 2016.

This document presents the **Workshop 2 Report** for the study, following the workshop that was held on 28 June 2017 in Kampala.

### **2.2 Project objectives**

The purpose of this project is to carry out a baseline survey of past and current research that has been undertaken on the roads sector in Uganda, and to establish a Research Management System that enables access to such research and serves as a tool to plan and manage future research.

To achieve this purpose, the study comprises of the following main tasks:

1. Review and compile a listing of past and current research that has been undertaken on the roads sector in Uganda;
2. Analyse and categorise past and current research undertakings to outline items such as:
  - a. Methodology/ approach followed;
  - b. Controls exercised;
  - c. Institutions involved;
  - d. Competence of researchers;
  - e. Research findings.
3. Comment on the reliability of research undertakings;
4. Undertake a gap analysis to identify and prioritise research knowledge gaps;
5. Assess the prevailing modes of knowledge management;
6. Develop an implementation plan for the establishment of a centralized knowledge base of research undertakings within the road sub-sector;

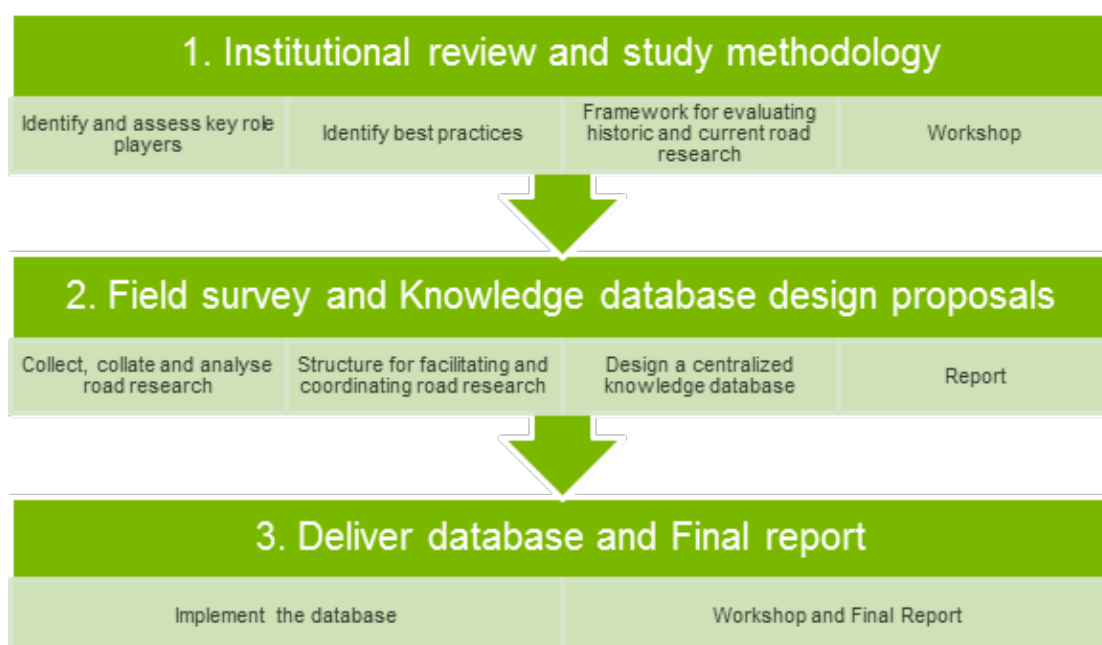
7. The target audience is a broad range of stakeholders including current and future researchers, practitioners, academia, road policy and decision makers, and the general public.

### **2.3 Project methodology**

The methodology was structured around the objectives and specific tasks stipulated in the Terms of Reference (TOR). The study consists of three main components, namely:

1. A process of identifying and consulting with research institutions, organisations or individuals;
2. A process of gathering research material, ordering/ categorising it, evaluating it on the basis of a predetermined set of criteria, and drawing some conclusions;
3. Designing and implement a Research Management System.

The broad approach for conducting this study is illustrated in the Figure 1 below.



**Figure 1: Broad approach to the study**

### **2.4 Structure of the report**

The rest of the report is structured as follows:

- Chapter 3 presents the objectives of the workshop, and describes the arrangements and programme of the workshop;
- Chapter 4 presents the content of the workshop, in the form of the presentations made and notes on the discussions that took place during the workshop;
- Chapter 5 presents the major outcomes of the workshop, and of the wrap-up meeting that was held between the consultancy team and the client on 29 June 2017.



### **3 Workshop objectives and arrangements**

The purpose of the workshop was as follows:

- To present the findings of Phases 2 and 3 of the study (as captured in the Draft Final Report) to stakeholders, specifically the best practices and definitions, the findings of consultations, the review of the research gathered, the structure for facilitating road research in future, and a demonstration of the Research Management System;
- To obtain buy-in from all stakeholders with regards to the structure for facilitating road research in future, and the structure and function of the Research Management System;
- To obtain feedback from stakeholders on final changes that need to be made to the Report and the Research Management System.

The workshop was held on Wednesday 28 June 2017, at the offices of UNRA and the Ministry of Works, at Kyambogo.

The following stakeholders were invited to the workshop:

1. Uganda National Roads Authority (UNRA) (Executive Director, Human Resource, Network Planning, Design, IT);
2. Makerere University;
3. Ndejje University;
4. Kyambogo University;
5. Uganda Christian University, Mukono;
6. Ministry of Works and Transport (MoWT) (Headquarters);
7. Mount Elgon Labour-based Training Centre (MELTC);
8. Central Materials Laboratory (CML);
9. Kampala Capital City Authority (KCCA);
10. Uganda National Council of Science and Technology (UNCST);
11. Uganda Road Fund (URF);
12. Ministry of Water and Environment;
13. Ministry of Local Government (MoLG);
14. Uganda Institution of Professional Engineers (UIPE);
15. National Planning Authority;
16. The World Bank;
17. Japan International Cooperation Agency (JICA);
18. The European Union (EU);
19. The Statehouse of Uganda;
20. The Private Sector;

The workshop programme is indicated in Table 1.

**Table 1: Workshop programme**

<b>Agenda</b>			
<b>No</b>	<b>Topic</b>	<b>Time</b>	<b>Responsible</b>
1	Arrival	08:30-09:00	-
2	Remarks by Head Research and Development, UNRA	09:00-09:10	Head Research and Development, UNRA
3	Remarks by The Africa Community Access Partnership (AfCAP)	09:10-09:20	Regional Technical Manager
4	Remarks by Executive Director, UNRA	09:20-09:30	Executive Director, UNRA
5	Presentation of Draft Report (Best practices and definitions, Consultation process and findings, Research review, Structure for facilitating and coordinating research)	09:30-10:30	Aurecon/University of Pretoria
6	TEA BREAK	10:30-11:00	
7	Presentation of Draft Report (Best practices and definitions, Consultation process and findings, Research review, Structure for facilitating and coordinating research)	11:00-11:30	Aurecon/University of Pretoria
8	Discussion	11:30-13:00	All
9	LUNCH	13:00-14:00	
10	Demonstration of EDMS	14:00-15:00	Aurecon/University of Pretoria
11	Discussion	15:00-15:30	All
12	TEA BREAK	15:30-16:00	
13	Closure and way forward	16:00-16:30	UNRA/AfCAP

## **4 Workshop**

### **4.1 Participants**

The following organisations were represented at the workshop:

1. Uganda National Roads Authority (UNRA);
2. AfCAP;
3. ReCAP;
4. Makerere University;
5. Ndejje University;
6. Kyambogo University;
7. The Statehouse of Uganda;
8. Uganda Christian University (UCU);
9. Ministry of Works and Transport (MoWT);
10. Kampala Capital City Authority (KCCA);
11. Uganda Road Fund (URF);
12. Ministry of Local Government (MoLG);
13. European Union (EU);
14. Trio Consultants Ltd;
15. Aurecon.

The attendance register for the workshop is attached in Annexure A.

### **4.2 Presentations**

#### *4.2.1 Welcome and introduction*

Professor Bagampadde from the Makerere University acted as Chairperson and welcomed all to the workshop. Professor Bagampadde thanked all for the good turnout and remarked that the workshop was well represented by researchers and research institutions in Uganda.

Professor Bagampadde then introduced key participants from all the institutions represented at the workshop.

#### *4.2.2 Remarks by Head Research and Development, UNRA*

Dr. Rubarenzya from UNRA welcomed all to the workshop. Dr. Rubarenzya provided a background on the research and development department within UNRA, and their objectives. He then introduced the ongoing research projects undertaken by his unit, as well as the research projects planned for the near future.

Dr. Rubarenzya introduced the baseline survey project to the audience, and explained the objectives and the scope of the project. He encouraged all stakeholders to participate in the discussions, and to ensure that the final product would be of value to the research community.

The presentation made by Dr. Rubarenzya is attached in Appendix B.

#### *4.2.3 Remarks by The Africa Community Access Partnership, AfCAP*

Mr. Leta from the ReCAP Project Management Unit provided background on the Research for Community Access Partnership (ReCAP), and its two legs of Africa Community Access Partnership (AfCAP) and Asia Community Access Partnership (AsCAP).

ReCAP is a programme of research and knowledge dissemination funded by the UK government through the Department for International Development (DFID). Projects are typically established through consultation with the relevant countries. In the case of Uganda, a need was identified to understand the extent of research available and to investigate the basic need and structure of future research undertakings.

Mr. Leta noted that the baseline survey project included a consultation process, through questionnaires, direct consultation, site visits and a first workshop. The Workshop 2 would present the findings of the Draft Final Report. He encouraged stakeholders to provide feedback.

#### *4.2.4 Remarks by Head of Legal, UNRA*

Ms. Kuteesa from UNRA welcomed all to the workshop. She made apology for the Executive Director, UNRA, who could not attend.

Ms. Kuteesa highlighted the importance of research for Africa, and for Uganda. Research can show us how to more sustainable in the way we are doing things. Research can further assist us in finding cost-effective ways of providing transport solutions, and in finding solutions that are sensitive towards the environment and communities.

Ms. Kuteesa noted the importance of investment in research; specifically to ensure sufficient resources, and to ensure that research is focussed and coordinated.

Ms. Kuteesa asked all to participate in the day's deliberations, and declared the workshop open.

#### *4.2.5 Presentation of the Draft Report, University Pretoria and Aurecon*

Professor Steyn from the University of Pretoria presented the findings of the Draft Final Report of the study. The presentation was divided into the following main categories. The presentation itself is attached to Annexure B of this report.

- Project background;
- Best practices and definitions;
- Consultations and findings;
- Research review;
- Structure for facilitating research.

Professor Steyn explained that research needs to be appropriate, and that it is important to have an understanding of road needs in the country; i.e. a Roads Vision. This would define the reason or goal of road research.

The Technology Tree (TT) model was explained as an approach to identify research needs and to manage research. While the Roads Vision would identify the strategic focus of research, the Centre of Excellence environment would then plan and conduct research accordingly.

The definition of research was presented. It was explained that research needs to have a problem statement or hypothesis, data, and a response to the problem statement.

Professor Steyn described the consultation process that was undertaken, and the research that was collected. An analysis of the research was presented in terms of the Technology Tree, the focus areas, the pavement cross section, and the geographic location of the research. A gap analysis was performed and presented.

The structure for facilitating research in future was presented. It was proposed that a simplified Technology Tree (TT) model was used to classify research (three simplified classes to be used), and to plan and manage research. A proposed institutional structure was presented. It was proposed that a body be formed with representation of relevant industries, universities and academia to collectively plan for future road research.

### **4.3 Notes from workshop**

The discussions during the Workshop 2 for the project “Baseline Survey of Past and Current Road Sector Research Undertakings in Uganda and Establishment of Research Management System”, held on 28 June 2017 were noted and are summarised in this section.

#### **4.3.1 General discussions**

The following discussion points were raised by different attendants of the workshop:

#### **Research collected and Research Management System:**

- 1. Question/Statement:** It was noted that the Draft Final Report seemed to capture research from undergraduates mostly. Post graduate studies need to be included, as well as research done outside of Uganda but relevant to Uganda.  
**Answer:** Professor Steyn explained that the research also included post graduate studies, as well as research from TRL, Crossroads, and Google Scholar. Research by undergraduates however represented a large portion of the total research captured.
- 2. Question/Statement:** Can the database be easily updated (e.g. new focus areas added), once handed over to UNRA?  
**Answer:** Mr Kruger indicated that the Research Management System had been designed to easily allow updates and additions. The administrative person would have the authority to make such changes.
- 3. Question/Statement:** Who would take ownership of the Research Management System, and who would have access to the Research Management System?  
**Answer:** Aurecon and University of Pretoria explained that the Research Management System would be hosted by UNRA. The system was already in the public domain, i.e. anyone could follow the link and have access to the Research Management System. Mr Moolman noted that there was a proposal from UNRA for all interested parties to first register with UNRA, and then receive a registration number which would be required to have access to the Research Management System.
- 4. Question/Statement:** Would the Research Management System only contain the metadata of research?  
**Answer:** Aurecon explained that the Research Management System was capable of uploading data (soft copies of research) as well. At the time however, only

metadata of research was kept in order to protect the intellectual property associated with research. The metadata however indicated where the research was kept, and who the contact person was.

5. **Question/Statement:** Did the research only focus on UNRA roads (i.e. national roads)?  
**Answer:** Aurecon replied that all roads were included. “Road research” encapsulated all roads, and therefore all road related research was collated.
6. **Question/Statement:** Clarification was requested on the quality control of research to be uploaded on the Research Management System.  
**Answer:** Dr. Rubarenzya stated that this was part of an ongoing discussion that would be tabled at a National meeting to be held in the near future.

Professor Steyn and Mr Sampson explained that the measure of quality could be very subjective at times, and that one did not want to preclude research. The users of the system would ultimately decide whether the research was good or not.

The system at the time provided for a researcher to upload on his/her own, or to send to an administrator to upload.

7. **Question/Statement:** It was noted that UNRA has a bridge management system (as part of a wider road management system). It was asked whether the Road Management System could be integrated with this bridge (or road) management system.  
**Answer:** Professor Steyn explained that the bridge and road management system focussed on asset management, which had a different focus than the Research Management System and the two should therefore not be integrated. Professor Steyn however explained that bridge research was also captured in the Research Management System.
8. **Question/Statement:** When would the Research Management System be accessible?  
**Answer:** Aurecon explained that the Research Management System was at the time in the cloud, but accessible. The system had not yet been finally released. The final version would be hosted by UNRA.
9. **Question/Statement:** Ms Kisembo (Head, IT, from UNRA) gave some comments on the Research Management System:
  - The listing of research (by project title) was slightly difficult to navigate;
  - The field on research competence needed an appropriate classification. One could consider classes of undergraduate, post graduate (Masters, PhD), and published research;
  - Each research entry needed a unique identifier, in order to avoid duplication;
  - There had to be a clear workflow and process of entering research.
10. **Question/Statement:** Was it possible for the Research Management System to have links to other databases?  
**Answer:** Mr Kruger explained that the Research Management System was designed on APIs that were easily accessible with other platforms. Not all platforms however expose their APIs, in which case one would not be able to integrate.

11. **Question/Statement:** It was noted that authors are an important field, and the user should be able to perform searches for an author.  
**Answer:** Mr Kruger explained that the way authors' names were presented, differed from one entry to the other, which made it difficult for the system to know whether authors were the same person or not. It was proposed that the OCID code be added, which was a unique code for each researcher. Another proposal was to perform searches only using surnames.
12. **Statement:** The Research Management System should indicate to a user whether a specific research item is published work, or unpublished work.

#### **Technical matters:**

13. **Question/Statement:** The need for improvement of laboratories was discussed. The Vice Chairman for Standards in Uganda informed the audience that a recently promulgated Act provided for a Board to be established and to identify the need for standards, and to set appropriate standards. This process could be used for the setting of standards related to laboratories as well.
14. **Question/Statement:** Clarification was requested on the COWI sections, and whether the consultants could comment on the success rating of the sections.  
**Answer:** Professor Steyn explained the sections that were visited by the Aurecon/ University of Pretoria team on the Semuto-Kapeka road. This road contained a number of test sections with a range of subbase, base and surfacing options. Professor Steyn stated that the consultant could not comment on the success rating of the sections, as there was limited data available. However, some of the sections were older than six years, and still in a good condition. Dr. Rubarenzya indicated that UNRA was going to monitor these sections, as part of a budget provision in the current financial year.

#### **Structure for facilitating and coordinating research:**

15. **Question/Statement:** A test of quality of research is whether it has been peer reviewed or not.
16. **Question/Statement:** UNRA should work together with other sectors, and other government institutions responsible for roads, to understand their needs.
17. **Question/Statement:** The need for regular meetings by the road sector, to discuss and plan for road research, was discussed. It was mentioned that there is currently a road sector annual review. It was proposed that a part of this meeting be set aside for discussions on research.
18. **Question/Statement:** It was proposed that an overarching forum needs to be in place to plan and manage research and to approve budgets. Mr Sampson (ReCAP) then added that AfCAP would support Uganda for a 3-year period to get the project going, but that Uganda (government and research institutions) needs to take ownership of the project and ensure it continues past the 3-year support period.
19. **Question/Statement:** Mr Sampson highlighted the fact that similar types of research was taking place in the wider region (Mozambique was mentioned as an example), and that countries need to share research, and lessons learned in the planning and management of research.

**Implementation:**

20. **Question/Statement:** For ease of implementation, recommendations should be prioritised. For example, there might be some immediate action points, while a timeline could be provided for the future implementation of the remaining items.
21. **Question/Statement:** It was proposed that the Research Management System needed a champion to take it forward, and to ensure implementation and use.  
**Answer:** Dr. Rubarenzya stated that UNRA was willing to champion the Research Management System. The onus was on Uganda to further populate the Research Management System, and to start using it to plan and manage research. Mr Sampson added that the Research Management System was only a tool to assist in planning and managing research. How the system was used, would determine how successful they were in managing their research.
22. **Question/Statement:** How would researchers and research institutions be motivated to enter research on the system?  
**Answer:** Institutions of learning should share the responsibility of educating researchers and showing them the benefits of sharing research on the system.
23. **Question/Statement:** Professor Steyn asked the audience whether there was a general agreement on the process, layout and capability of the Research Management System as presented at the workshop.  
**Answer:** The audience agreed. The only qualification was from Ms Kisembo who asked for some improved usability.

**4.3.2 Group discussions**

A group discussion was held to perform a high level determination of the roads vision for the country, and the resulting knowledge needs for roads.

The following four questions were posed to the groups:

- Does Uganda have a Roads Need statement, or a Roads Vision?
- How was this (or how should this be) developed?
- Who were (or should be) the stakeholders?
- What are the high level needs or requirements for the road sector, and the resulting knowledge needs?

The feedback received from the three groups can be summarised as the following:

- **Question:** Does Uganda have a Roads Need statement, or a Roads Vision?  
**Consolidated answer:** Uganda have roads statements in the following documents:
  - A Roads statement in the National Development Plan;
  - The UNRA vision, as well as their RSDP III provides insight into the roads vision;
  - The Ministry of Works and Transport (MoWT) Sector Development Plan;
  - The MoWT National Transport Master Plan.
- **Question:** How was this developed, and who were the stakeholders?  
**Consolidated answer:** It was developed as a project by government, and through consultation with all stakeholders including:
  - Development Partners;



- Ministries;
  - Local government;
  - UNRA;
  - KCCA;
  - National Planning Authority;
  - Ministry of Finance;
  - Ministry of Land;
  - Academic institutions;
  - Private sector;
  - Stakeholders for other transport modes, such as Civil Aviation Authority (CAA) and Railways;
- **Question:** What are the high level needs or requirements for the road sector, and the resulting knowledge needs?  
**Consolidated answer:** The following high level needs or requirements for the road sector were identified:
    - Accessibility, and connectivity;
    - Regional connectivity;
    - Road network to support the economy;
    - To minimize travel time and travel cost;
    - To ensure a safe travel experience (road safety);
    - Use of appropriate technologies;
    - Increase the percentage of paved roads;
    - Identification of alternative technologies for material and construction methods (such as labour based construction);
    - Options for lower cost roads, such as low cost seals for lower order roads;
    - Promotion of local industry in road related consulting and construction work;
    - Roads for specific purposes, such as the oil roads, and dedicated funding made available for this;
    - Protection of roads through proper utilization of other modes such as rail, marine and pipeline transport.

#### **4.4 Conclusion**

Dr. Rubarenzya thanked all participants for their attendance. He expressed his wish for all present to continue engaging on the subject.

Mr. Leta also thanked all for their input during the workshop. He noted that the consultancy and client team would consider all comments and extract key elements to incorporate into the Workshop Report and Final Report.

Mr. Sampson thanked all for a well-represented turnout. He stated that ReCAP would assist them through the process, but that Uganda had to own and implement the solution.

## 5 Outcomes

The major outcomes from the workshop and related discussions are summarised as follows:

- The workshop attendees voiced their general support for the project recommendations, and for the Research Management System as presented at the workshop;
- Main items to clarify and address in the Final Report, or the Research Management System, included:
  - The broad institutional framework for managing research needs to be fleshed out some more;
  - The need for a roads needs assessment, to inform what research needs to focus on;
  - There needs to be a clear workflow and process of capturing and placing data on the Research Management System;
  - There needs to be guidance on assessing the quality of research, or the competency of researchers;
  - Some minor improvements of the Research Management System were proposed, e.g. a better listing of items, ability to search on surnames of researchers, and a unique identifier for each research item.

A wrap-up meeting was held between the client and the consultancy team on 29 June 2017, and the following were discussed and agreed on:

- The structure and flow of the Final Report will be aligned with that of the presentation given at Workshop 2;
- The Final Report will say more on the broad institutional framework for facilitating and coordinating research;
- The Final Report will make a recommendation for a roads needs assessment, to inform future research needs. The report can make preliminary recommendations on such a needs assessment, but such needs will have to be tested and formalised with research institutions and relevant stakeholders;
- The Final Report, and the Research Management System, need to clearly describe the workflow of entering and posting data onto the system. The consultancy team proposed that uploading be done by administrators, which would be located at UNRA and at main research institutions (such as universities). In this way, the issue of quality control will also be addressed, as the administrator will perform a high-level review of the research to establish whether it is relevant;
- The issue of handover and training of the Research Management System was discussed. Mr Moolman will confirm the scope specified in the Terms of Reference, and submit a motivation in case the scope did not provide for training. Aurecon further confirmed that the source code would be handed to the client;
- The Final Report needs to clearly explain why the Research Management System only contains metadata, and not the complete research document. Professor Steyn explained at the meeting that this related to the intellectual property of the researcher;
- The Research Management System will be updated to address the following:
  - Branding, to be in line with UNRA and AfCAP requirements;
  - Provide for a feedback loop, to feed back to the UNRA administrator;
  - Consider ways of improving the listing of items;
  - Address the ability to search on surnames of researchers;

- Add a function to count the number of users of the system;
- It was proposed that a link to social media be added;
- It was proposed that Aurecon should consider an alternative base map for the system. Mr Kruger indicated that this might have implications for the system. However, Aurecon would consider and also discuss with the relevant person at UNRA;
- The issue of a unique identifier was discussed. It was agreed that this might be helpful when integrating with another system, but was not a critical item;
- The adding of links to other systems was discussed. However, it was agreed that the Research Management System should not be a general search engine, and that these links should rather be kept outside of the Research Management System.

## **6 Workshop evaluation**

An evaluation form was handed out to participants at the end of the workshop. A total of 14 completed forms were received back from participants. The completed forms are attached to this report as Annexure C.

A scoring system was used for questions 2 to 16 on the evaluation form. The evaluator had to indicate a score of A to E, where each letter had the following meaning:

- A = very useful; good
- B = useful; good
- C = OK
- D = rather weak
- E = very poor

The results from the evaluation forms are summarised below.

1. Please note down three things that you have learned during this workshop.

The following responses have been received (minor editing applied):

- It is important to document all details on projects to be used later in research, assessment and quality control;
- Importance of easy access to existing research, to improve future research activities;
- It's important to work with all stakeholders to make road research successful;
- There is willingness for stakeholders to collaborate;
- There is a need for sustainable research;
- UNRA is a trusted host for the Research Management System, and for research coordination;
- The Research Management System will allow good access to research data to avoid repetitions or research similar fields;
- It is important to be clear about your needs/vision to guide research;
- There is a need for institutional responsibility and management of research;
- There is a need for better research in the road sector;
- Research should focus on the vision or the country national development plan;
- One should be sensitive of plagiarism, in the operation (uploading of data) of the Research Management System;
- We should measure the impact of research practice.
- To find out the quality of the research, you have to look at what was the motivation;
- The extent of current research available in the country;
- Research Management System can serve as a tool for managing research;
- The value of making an informed needs assessment before embarking on applied research;
- The symbiotic nature of approach or research by university and other stakeholders;
- The importance of equipping and staffing the materials laboratories in Uganda.
- The extent of road research in Uganda is limited;
- There is currently no or limited co-ordination of research outputs, and efforts are ongoing to cover the gaps.
- Research is important and access to research can help in solving problems;
- The Research Management System contains good information;

- Creating a joint research platform will enhance the use of cheaper technology and reduce the cost of road construction;
- The importance of the needs statement for focussing research;
- Sharing knowledge and research is a factor in the development of the road sector.

2. What is your overall impression of this workshop?

Frequency of scores given:

A	B	C	D	E
12	2	0	0	0

3. How far did the workshop meet your expectations?

Frequency of scores given:

A	B	C	D	E
8	4	1	1	0

4. How useful was the workshop to you?

Frequency of scores given:

A	B	C	D	E
6	6	2	0	0

5. How far did the workshop meet its objective?

Frequency of scores given:

A	B	C	D	E
7	6	1	0	0

6. How useful was the introduction to workshop themes, issues and outputs?

Frequency of scores given:

A	B	C	D	E
10	4	0	0	0

7. What was your impression of the presentation of best practices and definitions?

Frequency of scores given:

A	B	C	D	E
7	4	4	0	0

8. What was our impression of the extent of consultation, as presented in the Consultation and findings?

Frequency of scores given:

A	B	C	D	E
6	6	1	1	0

9. What was your impression of the discussion sessions?

Frequency of scores given:

A	B	C	D	E
6	6	1	0	0

10. What was your impression of the proposed structure for facilitation road research in Uganda?

Frequency of scores given:

A	B	C	D	E
4	5	3	1	0

11. What was your impression of the RMS?

Frequency of scores given:

A	B	C	D	E
7	5	2	0	0

12. How do you rate the workshop facilitation?

Frequency of scores given:

A	B	C	D	E
10	4	0	0	0

13. How do you rate the workshop schedule/timetable?

Frequency of scores given:

A	B	C	D	E
7	7	0	0	0

14. What was your impression of the logistical organisation of the workshop?

Frequency of scores given:

A	B	C	D	E
10	4	0	0	0

15. How were the workshop facilities provided by the UNRA office?

Frequency of scores given:

A	B	C	D	E
7	5	2	0	0

16. What was your impression of the pre-workshop information sent out to you?

Frequency of scores given:

A	B	C	D	E
7	4	1	0	0

17. What were the best and most useful aspects of the workshop?

The following responses have been received:

- Bringing stakeholders together;
- Research Management System demonstration, recommendations, findings;
- The introduction of the research website, pool of research knowledge;
- The group discussion;
- The honest and constructive feedback that was obtained;
- The interactive nature. The participatory approach involving all attendees;
- The level of experience and knowledge by the facilitator.

18. How could the workshop have been improved?

The following responses have been received:

- Calling more stakeholders especially researchers not in universities;
- More time could be given to small group discussion sessions;
- The need to involve operators of public and private transport organizations;
- The reading material (workshop information) should have been sent out prior to the workshop;
- There is a need for more contact time with individual stakeholders, so as to interest them to participating in research programs.

19. Have you any other comments?

The following responses have been received:

- Further development of the website;
- Need to motivate and sensitize public about the Research Management System;

- The platform should provide for research to be uploaded by different stakeholders;
- Include uploading stakeholders in the Research Management System e.g. Ministry research departments;
- Very excellent organization in general;
- The meals were very good.



## **Annexure A – Attendance register**



ATTENDANCE FOR THE RESEARCH BASELINE STAKEHOLDERS' WORKSHOP AT KYAMBOGO UNRA OFFICES; 28<sup>TH</sup> JUNE, 2017

S/N	NAME	ORGANISATION / DESIGNATION	CONTACT	SIGNATURE
1.	WYNAND STEYN	UNIVERSITY OF PRETORIA	wynand.steyn@up.ac.za	
2.	Altus Moolman	Aurecon	altus.moolman@aurecongroup.com	
3.	Moses Matoru	Makerere University	mmatoru@cedat.mak.ac.ug	
4.	MILTON BARYAMUREBA	UNRA	Milton.Baryamureba@unra.go.ug	
5.	Margaret Nabukanya	UNRA IMHUS	margaret.nabukanya@unra.go.ug	
6.	PROF. JACKSON MWAKALI	TRIO Consultants Ltd	jmwakali@gmail.com	
7.	ALPROF. UMARU BAGAMPADDE	MAKERERE UNIVERSITY	bumaru@cedat.mak.ac.ug	
8.	ZIZIGA MAMIN	UCU (Uganda Christian University)	mzizigoo@ucu.ac.ug	
9.	Nkululeko Leta	AFCAP	nkululeko.leta@cordus.com	
10.	Les Sampson	ReCAP	Les.sampson@cardno.uk.ac	
11.	Eng Prof Albert Rugumayo	Ndejje University	airugumayo@gmail.com	
12.	Mary Kamuli Kuteesa	UNRA	mary.kuteesa@unra.go.ug	
13.	Nampeera Robrali	UNRA	robinamps@gmail.com	
14.	Rosemary Kuseba	UNRA	rosemary.kuseba@unra.go.ug	
15.	Mugume Rodgers	UNRA	rogers.mugume@unra.go.ug	
16.	HENRY SHIMARTWA	Makerere Univ	principal@cedat.mak.ac.ug	
17.	Leah Musenero	UNRA	leah.musenero@unra.go.ug	
18.	Eng. Dr. Rusengoza Patrick	Statehouse	patrick.rusengoza@statehouse.go.ug	
19.	ROBERT KIGOZI	URF (Uganda Road Fund)	rkigozi@roadfund.ug	
20.	Eng Mubiru Joel	KyU (Kyambogo University)	mubirudalt@yahoo.com	

S/N	NAME	ORGANISATION / DESIGNATION	CONTACT	SIGNATURE
21.	Flora Nwagwu	En DEPARTMENT	1312701000	
22.	Andrew Okafor	URT / Statistician	0782284168	
23.	NAMUSOKE SULAIMA	MOW & T	0775-721332	
24.	Leonard Onwuzor	KECA	0701343472	
25.	Eng. Stanjaji Andrews	KECA	0701473245	
26.	Michael Kirza	KECA	0772614580	
27.	Emmerentian Mbabazi	UNRA/R&D	0789569190	
28.	Mark Henry Rubarenzya	UNRA/Head, R&D	0782163508	
29.	Eng. Usama Kayima	MOWT/ISE	0774440770	
30.	Nwankwaka Benson	MOWT/SAS	0772-615738	
31.	Mbuije Joel Webster	Ndejje University	0703-447404	
32.	Inmadilate Katutsi	UNRA	0785938304	
33.				
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## **Annexure B – Presentations**



Baseline survey of past and current road sector research undertakings in Uganda and establishment of an EDMS (RMS)

# RESEARCH STAKEHOLDERS' WORKSHOP

Eng. Dr. Mark Henry Rubarenzya  
Head, Department of Research and Development  
UGANDA NATIONAL ROADS AUTHORITY

June 28, 2017



# Organisations represented

- UNRA
- Ministry of Works & Transport
- Statehouse
- UNCST
- (JICA)
- DFID
- The World Bank
- The European Union
- KCCA
- Uganda Road Fund
- Makerere University
- Ndejje University
- Kyambogo University
- Uganda Christian University
- Private Sector representative
- Ministry of Water and Environment
- Ministry of Local Government
- Ministry of Finance, Planning, and Economic Development
- National Planning Authority
- Uganda Industrial Research Institute
- Mt. Elgon Labour-based Training Centre (MELTC)
- Uganda Institution of Professional Engineers (UIPE)



# R&D at UNRA

Established to, among others:

- Provide **evidence-based advice** on ways to construct good quality roads that **last their lifeline**
- Develop **knowledge for evidence-based decision making** on **efficient and effective management** of the national roads network and **other services** provided by Authority
- Promote the **continuous improvement** of the services provided by Authority



# R&D at UNRA

- Partner with universities and research institutions in **advancing research** on roads and transport.
- Foster **technology and knowledge transfer** through technical assistance.





# Ongoing research projects

- Baseline survey of past and current road sector research undertakings in Uganda and establishment of an EDMS
- Economic Growth through Effective Road Asset Management
- The use of appropriate high-tech solutions for Road Network and Condition Analysis, with a focus on satellite imagery
- Assessment of alternative materials for road signs to improve road safety



# Initial research at UNRA

- Research management and coordination (Institutional and Knowledge)
- Road safety
- Asset management
- Adaptation of emerging High-Tech solutions



# Planned research projects

- Forensic investigation of premature pavement failures
- Monitoring of the long-term pavement performance of existing road trial sections constructed with innovative road products
- Cost Benefit Analysis of R&D
- Optimisation of Road Reserves (*for max. socioeconomic benefit*)
- Landslide hazard mapping and mitigation: Enhancing road infrastructure resilience to climate-induced disaster
- Materials mapping and database



# Bucket list for R&D

- **Research strategy (initiated)**
- **Strategic partnerships**
- **Research funding**
- **The need for a research baseline!**



# Project Objectives

- Review, analyse, and compile a comprehensive listing of all past and current research that has been undertaken on the roads sector in Uganda.
- Categorise past and current research undertakings to explicitly outline methodology, controls, institutions involved, competence of researchers, research findings.
- Comment and/or make recommendations on the validity and reliability of the outcomes of each research undertaking.
- Undertake a gap analysis to identify and prioritise research knowledge gaps.
- Assess the prevailing modes of knowledge management and develop an implementation plan for the establishment of a centralized knowledge base of research undertakings within the road sub-sector.



# Project Scope (Selection)

- Identify and review the current institutional, organizational and technical issues relating to road-related research in Uganda.
- Review the institutional frameworks of key institutions and agencies that undertake road related research in other countries to identify research best practices.
- Propose a structure and institutional arrangement to better facilitate and coordinate road research in the country.
- Evaluate the level of dissemination and uptake of research recommendations and feedback by stakeholders.
- Establish an EDMS – Research Management System



# Expectations of you

- Active participation and engagement
- Identification and/or validation of country research needs & priorities
- Contributions to project recommendations
- Identification of deficiencies/ pending issues with project



# YOUR PARTICIPATION & FEEDBACK MATTERS

Eng. Dr. Mark Henry Rubarenzya  
Head, Department of Research and Development  
UGANDA NATIONAL ROADS AUTHORITY

[Mark.Rubarenzya@unra.go.ug](mailto:Mark.Rubarenzya@unra.go.ug)

June 28, 2017





**AfCAP**  
Africa Community Access Partnership



**Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)**

**Workshop 2: 28 June 2017**





No	Topic	Time	Responsible
1	Arrival	08:30-09:00	-
2	Remarks by Head Research and Development, UNRA	09:00-09:10	Head Research and Development, UNRA
3	Remarks by The Africa Community Access Partnership (AfCAP)	09:10-09:20	Regional Technical Manager
4	Remarks by Executive Director, UNRA	09:20-09:30	Executive Director, UNRA
5	Presentation of Draft Report  (Best practices and definitions, Consultation process and findings, Research review, Structure for facilitating and coordinating research)  Discussion 1	09:30-10:30	Aurecon/University of Pretoria  (W Steyn)
6	TEA BREAK	10:30-11:00	
7	Presentation of Draft Report  (Best practices and definitions, Consultation process and findings, Research review, Structure for facilitating and coordinating research)	11:00-11:30	Aurecon/University of Pretoria  (W Steyn)
8	Discussion 2	11:30-13:00	All
9	LUNCH	13:00-14:00	
10	Demonstration of RMS	14:00-15:00	Aurecon/University of Pretoria  (E Kruger)
11	Discussion 3	15:00-15:30	All
12	TEA BREAK	15:30-16:00	
13	Closure and way forward	16:00-16:30	UNRA/AfCAP



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Africa Community Access Partnership

# 2 to 4. Opening and welcome



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# 5. Presentation of Draft Report

# Presentation

- Project background
- Best practices and definitions
- Consultations and findings
- **Discussion 1 – Road needs situation**
- Research review
- Structure for facilitating research
- RMS demonstration
- **Discussion 2 – RMS interrogation**
- **Discussion 3 – Recommendations from Workshop**

# Motivation

- Challenges facing Uganda roads sector
  - absence of consistent, continuous, coordinated research
- Various national institutions / agencies undertook research
- No databank where research is consolidated & indexed, & accessible to stakeholders
- AfCAP places high priority on knowledge management to coordinate road research undertakings / avoid duplication of research
- Aurecon AMEI Limited appointed to carry out project

# Purpose

- Baseline survey of past & current research on roads sector in Uganda
- Establish databank that enables access to research

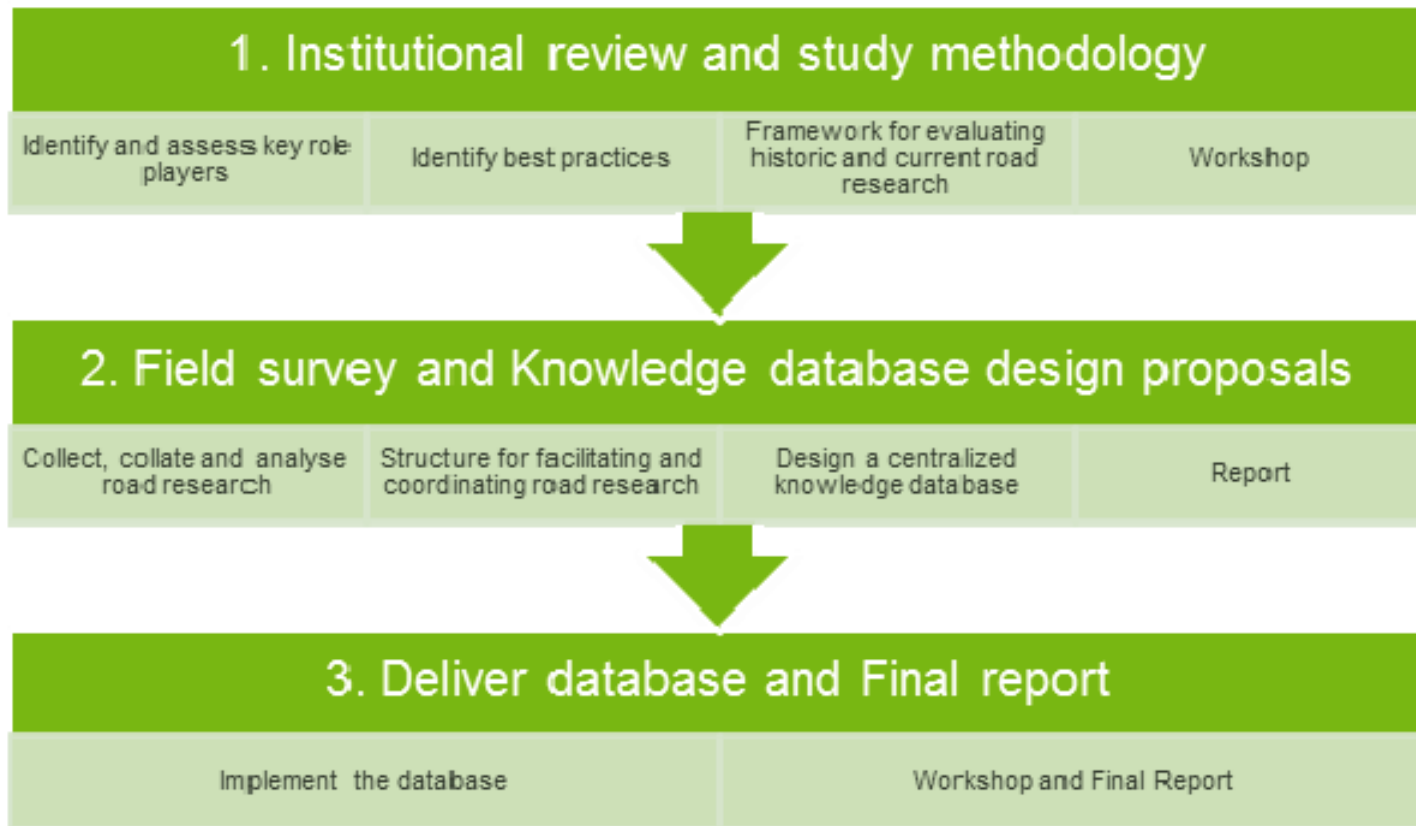
# Tasks

1. Review & compile past & current Uganda road sector research
  2. Analyse & categorise past & current research
  3. Comment on reliability of research undertakings
  4. Gap analysis to identify & prioritise research knowledge gaps
  5. Assess prevailing modes of knowledge management
  6. Develop implementation plan for establishment of centralized knowledge base of research undertakings
- Target audience - broad range of stakeholders including current & future researchers, practitioners, academia, road policy & decision makers, general public





# Methodology



# Draft Final Report structure

- Executive summary
- Introduction
- Best practices
- Consultation process & findings
- Field visits & collection of research
- Structure for facilitating & coordinating road research
- Specifications for RMS
- Appendix A - Questionnaires
- Appendix B – Database of research reports

# 5.1 Best practices and definitions

# Introduction

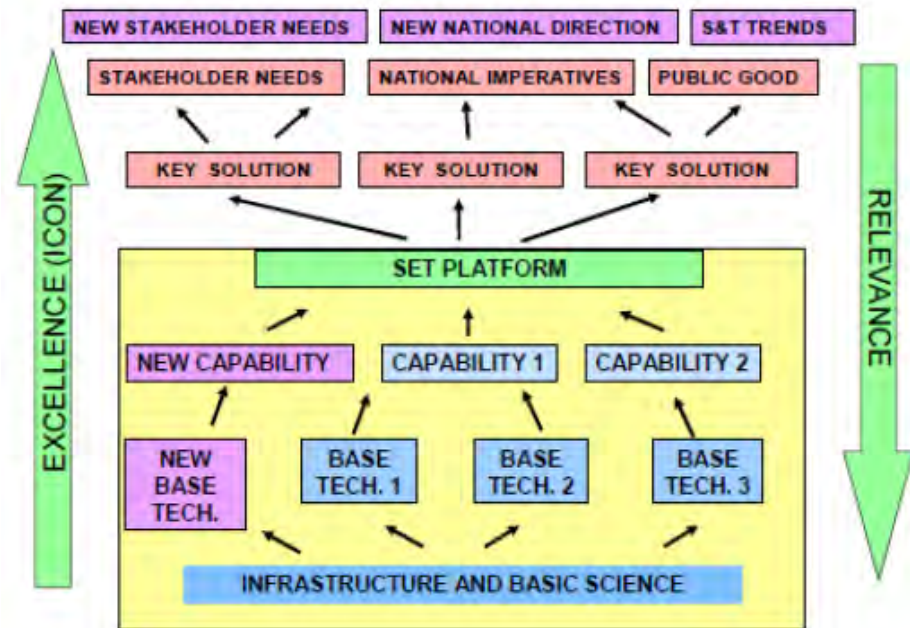
- Managing transportation research
  - Focus on ensuring **appropriate & cost-effective research** conducted
  - **Support economic development**
- Research planning - identify appropriate areas of research
  - Current & expected challenges
  - Road network support economic & social growth & development
  - **Roads Needs understanding / Vision**
- Research conducted
  - Benefits quantified
  - Expressed in terms of costs & investment & asset value of network
  - Positive Return On Investment (ROI)

# Approaches for management

- Various approaches to identify & manage research
- Simplified specific approach applied successfully in South African roads sector
  - Technology Tree (TT) model

# Technology Tree model

- Key focus areas & related identified needs
- Key solutions to address identified needs
- Technology platform
- Applied technologies / capabilities
- Base technologies
- Basic science and infrastructure





# Requirements

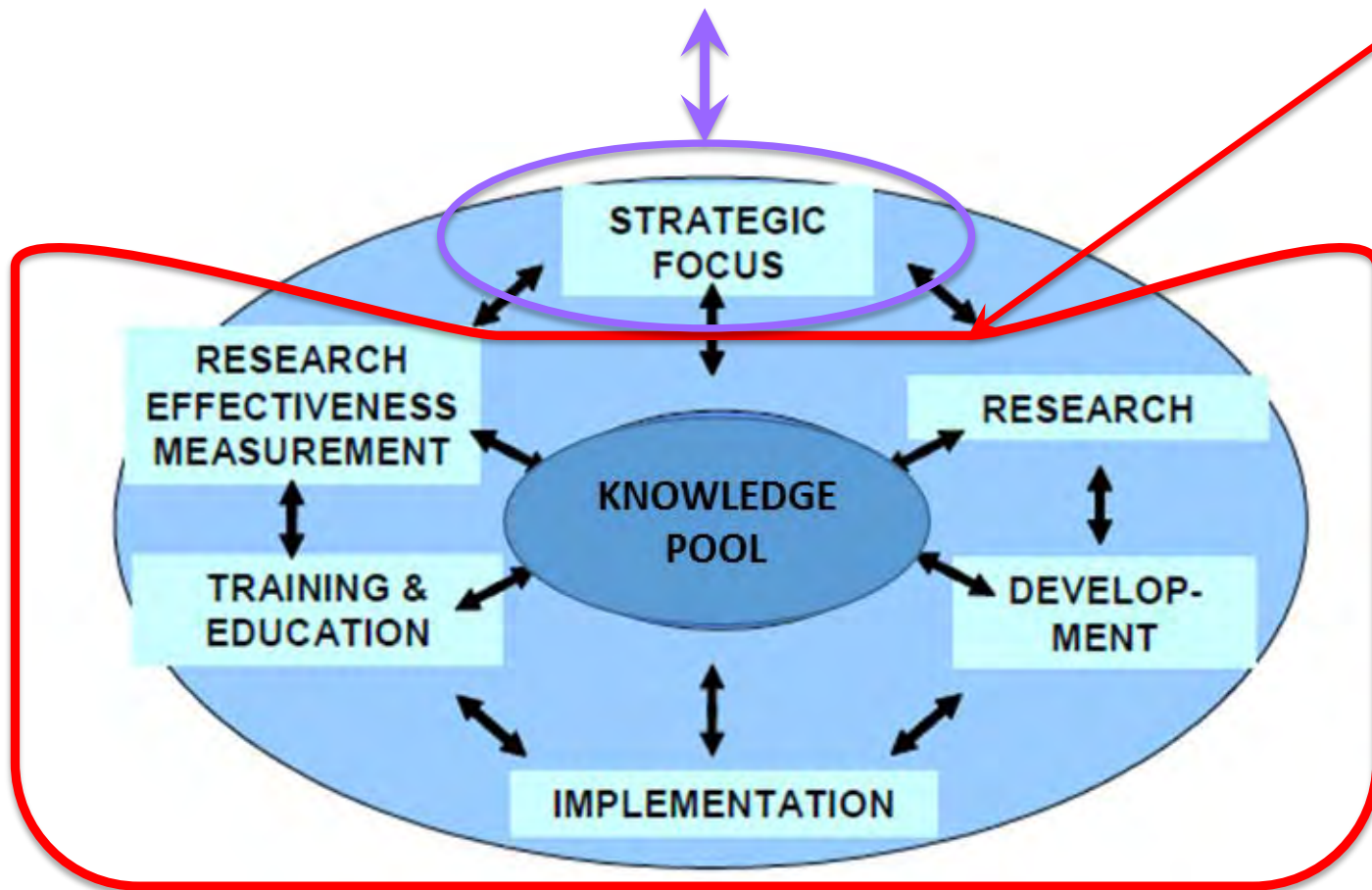
- Identify broad needs
- Investigate broad needs
- Identify knowledge shortcomings
- Develop research projects to develop knowledge
- Implement
- Feedback



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# Uganda roads needs Vision 2040 National Development Plan

Centre of  
Excellence  
environment





# Institutional responsibility

- Models assume central responsibility for managing & coordinating of research
- Ensure effective use of scarce resources
- Keep researcher & research organizations independence
- Responsible institution should be
  - Trusted
  - Transparent
  - Knowledgeable

# Consolidation, storage & dissemination

- Consolidation & storage
  - Traditionally major challenges in research cycle
  - Typical issues:
    - Intellectual property rights of authors / funders
    - Output format (hard copy, electronic, software source, etc.)
    - Long term commitment to storage
    - Perceived cost of keeping & managing database
    - Ensure that important data & findings are not lost

# Consolidation, storage & dissemination

- **Dissemination**
  - Ensure that research funding not used in vain
  - Typical dissemination channels
    - academic dissertations / theses, conference proceedings / journal papers, short courses, lectures
  - Many international examples
- **If not disseminated, not known & implemented**
  - Most organizations do not have specific policy on research output dissemination
  - Often haphazardly as decided & planned by individual researcher
- **Good practice**
  - Develop focused policy on dissemination of research outputs
  - Combination of academic & practical dissemination
  - Expose Uganda research to international scrutiny & visibility

# Definitions for research

- 3 steps required for research to be conducted
  - Problem statement / hypothesis
  - Collect data
  - Develop response to problem statement / hypothesis
- Process used to establish, verify / confirm facts, reaffirm results of previous work, solve novel / existing problems, support / develop theories
- Requires collection of data / information in support of confirmation of existing knowledge / **development of new knowledge**

# Definitions for research

- **Research** - problem statement / hypothesis - establish, verify, confirm facts, reaffirm results of previous work, solve novel / existing problems, support / develop theories that require data / information collection & analysis and publication
- **Test section** –constructed with objective of evaluating novel material / technique in comparison with control section for which only material / technique evaluated differ
- **Demonstration section** - demonstrate process & viability of using specific material / technique
- **Competency assessment section** - demonstrate competency with technique
- **Design review** – evaluate whether design for infrastructure has been conducted correctly & effectively
- **Road surveillance / monitoring / routine testing** –regular surveillance of specific parameters (e.g. rut, fatigue, riding quality) on road is conducted
- **Quality control** – regular planned testing of materials / field sections to establish whether or not construction / maintenance adhere to required specifications
- First two research, other outputs may become part of research programme

# Researcher competence

- Qualities required to conduct research
  - Academic qualifications
  - Professional registration
  - Experience
  - Relevant publications in journals / conferences
  - Relevant contribution to industry guidelines & manuals
  - h-score (internationally accepted indication of publication productivity & quality of research)
  - Involvement in development of new inventions

# Research quality & reliability

- Based on impact on practice
- Can be through **application of research outputs or prevention of actions**
  - Both outcomes serves community - optimum use of limited resources
- **Reliability** - assumption that researcher & laboratories involved using internationally accepted scientific research principles
- **Quality** – evaluate adherence to standards
- This project - not all information available regarding scientific methods used & impact on practice
- Rather than making statements that can be construed incorrect due to lack of such evidence, more general indication of quality & reliability of relevant research provided



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## 5.2 Consultation and findings



# Meetings

- Range of meetings with client / stakeholders
- Inform stakeholders of project objectives, obtaining buy-in, & obtaining input (questionnaire)
- Identify sources of historic road research, & location
- Identify existing trial / test sections
- Other topics
  - Understanding of Transport Sector Data Management System operated by MoWT
  - Benchmarking & lessons learned on structuring of research departments

# Questionnaires

- Questionnaires to stakeholders
  - Extent to which stakeholder conducts road related research
  - Level of interest in road related research
  - Views on road research in Uganda
  - Issues or challenges experienced with regards to coordination of road research
  - Requirements for centralised knowledge database
  - Use of computer systems, applications, & internet

# Workshop 1

- Major outcomes:
  - General support for project & intended actions
  - In-principle agreement obtained for selected experimental site visits
  - Simplified Technology Tree (TT) model as basis for research evaluation agreed upon
  - Proposed focus areas for road research
    - Traffic, Material, Natural environment, Pavement structure, Design, Construction, Management, Maintenance & Rehabilitation – added Safety
  - Confirmed ability & willingness to participate
  - Agreed on database data fields
  - Approved way forward

# Research focus areas

- Research focus areas:
  - **Traffic** – overall demand for road & places all other decisions in context
  - **Material** – available resources to respond to stated needs
  - **Environment** – overall context under which road functions
  - **Pavement structure** – optimal combination of materials in specific environment to address specific traffic demand
- Areas of interest:
  - **Design** – evaluate relevant inputs in standardised & acceptable framework
  - **Construction** – application of design - quality control
  - **Management** – long-term management of facility
  - **Maintenance & rehabilitation** – keeping facility in serviceable condition & extend life
- **Road safety and Operations added**



# Discussion 1

# High-level needs determination

- Uganda Roads Needs
- Uganda Vision 2040 (Roads)
- National Development Plans (Roads)
- Knowledge needs
  
- Does Uganda have a Road Needs statement / Vision 2040?
- How was / should this be developed?
- Stakeholders?
- High-level needs?



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## **5.3 Research review / Summary of information**

# Collation of research - Questionnaires

- Major demand for quality, relevant road research
- Needs to be disseminated & implemented once conducted
- Concern regarding coordination & availability of road research information



# Collation of research – Research reports

- 412 records
- Most information complete
- Focus areas, Pavement layer focus & TT level completed by project team
- Large number of reports cannot be classified as research reports
  - Mainly undergraduate university studies
  - Upgrade/ design / feasibility of existing infrastructure without research component
    - Kept as part of database
- Google Scholar Uganda Roads
  - 19 reports / papers located through Google Scholar search
- TRL
  - 16 Reports identified & supplied - 1958 to 2014
- CrossRoads
  - List of Crossroads research data obtained
  - Limited reports received

# Collation of research – Field visits

- Sites constructed with aim of monitoring sections over time identified & selection visited
- CML trials sections
  - Demonstrating proprietary products with Ugandan soils
  - All failed
- MELTC
  - Demonstration and Competency assessment sections
- COWI
  - Good sections, no current monitoring

# Analysis – Field visits

- Need documentation and reporting
- Difficult to extract direct comparisons between test sections, as topography differs significantly
- Appears to be lack of coordination of research efforts with subsequent duplication
- MELTC & COWI sections - best probability of being incorporated into future field monitoring & research programme

# Collation of research – Field visits



# Collation of research – Laboratory visits

- Central Materials Laboratory
  - Previously used for research
  - Adequately trained staff available
  - Currently involved in Cement Proficiency Testing Scheme with BAM group
- UNRA
  - Stocked with equipment obtained through road construction contracts
    - Varying degrees of functionality
  - Process underway to look at certification & quality control of laboratories
    - Observation of some of tests confirmed requirement for certification

# Analysis – Laboratories

- Equipment in varying degrees of functionality
- Technicians / testers trained but not certified for testing
- Need certification & quality control of laboratories
- Laboratories can probably not in current state provide research-level test results
- Evaluation to be done regarding availability of road survey equipment

# Analysis – Research reports

## ■ Technology Tree

### – Base

- Least number of reports
- New competencies & knowledge to build research platforms on
- Focused on Materials & innovative uses / materials characterisation

### – Platform

- Almost third of reports
- Focused mainly on Materials, & Construction & Management focus

### – Solution / Application

- Majority (55.6 per cent) of reports
- Focus on case studies, designs & feasibility studies
- Existing knowledge applied & new basic research not conducted

**Table 6: Technology tree reports statistics**

Technology Tree level	Number of reports	Percentage of reports
Base	64	15.7%
Platform	117	28.7%
Solution / Application	226	55.5%

# Analysis – Research reports

- Technology Tree – Example – marginal material stabilization
  - Base
    - Material characterisation
  - Platform
    - Evaluate various indigenous and other stabilizers
  - Solution / Application
    - Guideline / specification



# Analysis – Research reports

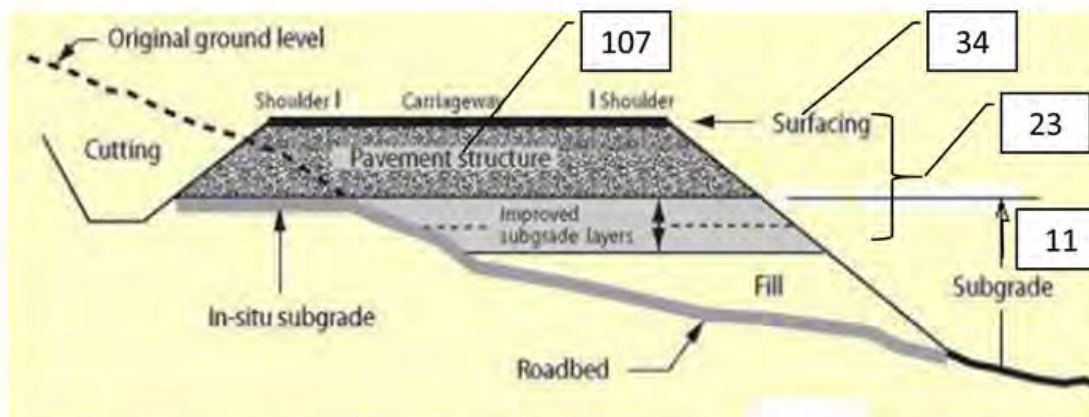
**Table 7: Focus area reports statistics**

<b>Focus Area</b>	<b>Number of reports</b>	<b>Percentage of reports</b>
Construction	40	9.7%
Design	63	15.2%
Environment	27	6.5%
Maintenance & Rehabilitation	27	6.5%
Management	51	12.3%
Material	141	34.1%
Operations	27	6.5%
Pavement structure	5	1.2%
Road safety	27	6.5%
Traffic	6	1.4%

# Analysis – Research reports

**Table 8: Pavement layers reports statistics**

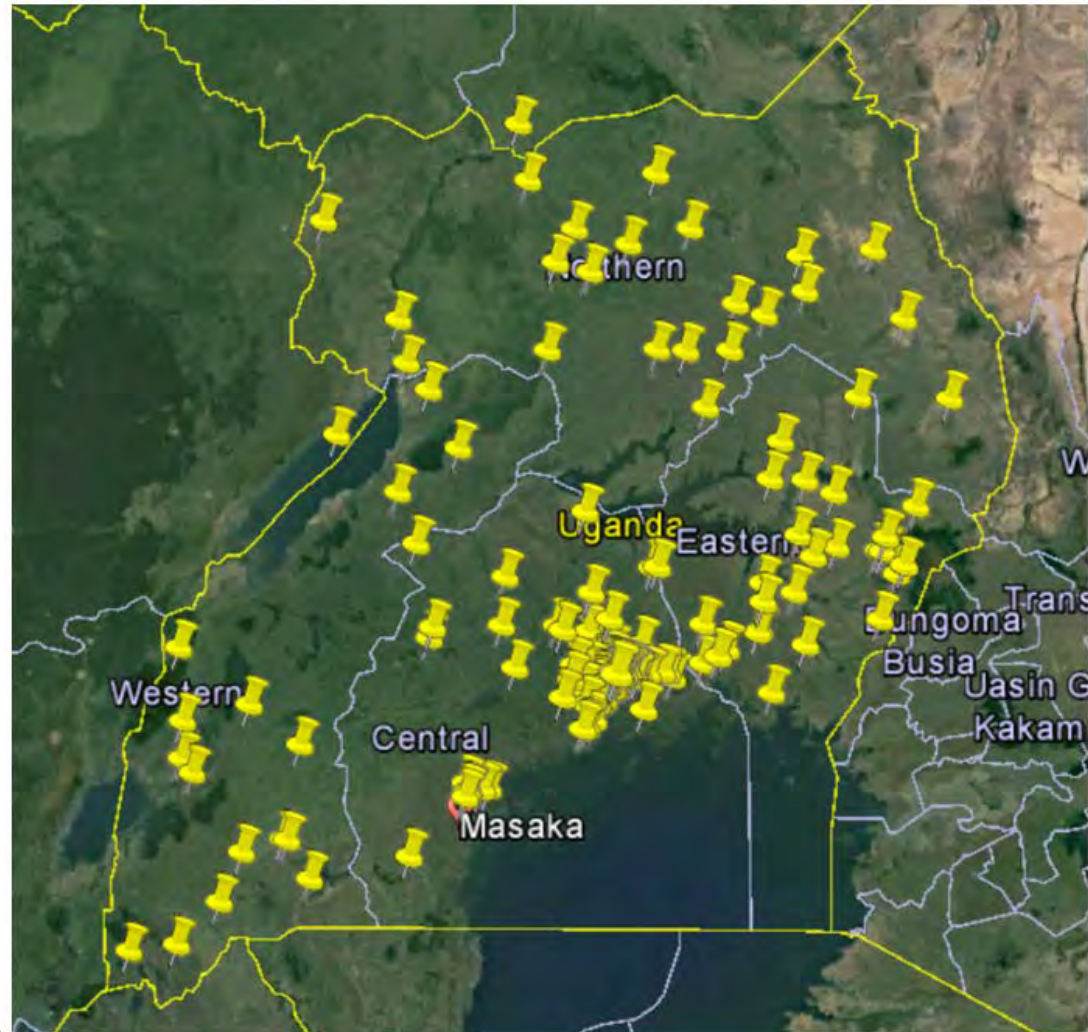
Pavement layer	Number of reports	Percentage of reports
Surfacing	34	8.4%
Base	16	3.9%
Subbase	7	1.7%
Subgrade	11	2.7%
Other	117	28.7%
Non-road	50	12.3%
Gravel	65	16.0%
Pavement	107	26.3%



**Figure 9: Cross-section of road reserve indicating relevant layers and locations for which research cited in Appendix B were conducted**

# Analysis – Research reports

- Work spread over most of Uganda
- Northern, Western & south-Central areas may have less locations than Central and Eastern parts of Uganda



# Analysis - Overall

- Level of duplication within institutions & between institutions – need coordinated research programme
- Appears to be lack of overall coordinated research
- Very few reports focused on bigger research programme
- Clear lack of research output publication / marketing / distribution
  - Majority of reports stored in hard copy format & therefore inaccessible
  - Google Scholar search provided very limited (19) reports - mostly non-Ugandan of origin
  - Lack of publication leads to further possibility of duplication
- No clear evidence of implementation of research
  
- Some research indicates concerted effort to focus on specific research topic (e.g. stabilization of gravel using various indigenous natural products such as sawdust, diatomite, sewage sludge ash etc.)

# Analysis - Questionnaires

- Major demand for quality, relevant road research
- Needs to be disseminated & implemented
- Concern regarding coordination & availability of road research information

# Analysis – Meetings & Observations

- Need for **training in research methodology**
- Most current & recent road research at least partially driven by external parties who fund research in Africa & incorporate various departments & entities in process
- Does not appear that formal research agenda exists that are debated, agreed upon & updated to serve country's road research needs
- Platform needs to be established to ensure that Uganda can drive its own road research agenda
- Need to identify short, medium & long term goals & focus to ensure that roads research agenda becomes visible to all affected parties & can be driven with early successes & promise of expected longer term outcomes
- Roads research budget needs to be benchmarked & approved along international guidelines
  - Around 2 per cent of GDP / budget on research to be competitive
- Important when evaluating research conducted by international agencies that research is not confused with development projects

# Reliability & quality of research

- Lack of central research entity / discussion body hampers research efforts most
- Active intentions of conducting good roads related research by number of institutions
- Lack of coordination leads to duplication of efforts & lack of implementation
- Regular gathering of active researchers to assist in thorough identification of research needs, development of research plan & monitoring of execution of such a plan is required

# Structure and priorities of road research – Gap analysis

- **Only conducted when Roads needs are defined and understood**
- Major gap - communication / publishing / dissemination
- Focus on understanding of local materials, environment & traffic
- What is unique to Uganda for specific research focus
- Need commitment from stakeholders
- Use with international best practices to improve road design, construction, management activities
- Traffic, Road Safety gaps



## 5.4 Structure for facilitating research

# TT model

- Simplified application of TT model can assist for research to be categorized as base, platform, solution level
- Application of TT model
  - Research reports could be classified under each of three simplified classes
  - Least number of reports classified under Base level
  - Platform level had about third of reports
  - Solution / Application level - majority of reports
- Current lack of coordination between three levels of research
- Expected that needs lead to base, platform & solution level research
- More coordinated approach towards roads research should be able to address this need

# Institutional structure

- Institutional structure needs to address
  - Institutional setup - different organisations involved & respective responsibilities
  - Hosting of RMS within institutional structure
  - Communication channels & platforms for sharing knowledge
  - Platforms to interact with & share knowledge with technical fraternity outside of Uganda

# Institutional structure

- Overall road research coordinating institution should link to UNRA structure to ensure coordination is done with national focus, incorporating all relevant stakeholders
- Centre of Excellence environment
- Strengthen current UNRA Research & Development unit efforts as first priority
- Mandate
  - Develop national coordination system of research needs
  - Establish national roads research discussion forum
  - Conduct thorough investigation of Roads Needs - foresight study
    - roads related needs for next decade
    - economical & socio-economical drivers in country & region
  - Mandate all roads related research & investigations by both local & international companies, research centres & governments, to be conducted through UNRA Unit

# Industry bodies

- Form body with participation of relevant industry / academia parties to ensure that all voices incorporated in direction of road research agenda
- Example - Roads Pavement Forum
- Specific goals
  - Providing perspective of overarching strategic issues
  - Promoting best practice
  - Co-ordination & linkage with other groupings
  - Establishment of task groups with specific national objectives
  - Provision of sufficient time for participation/discussion/advice & social interactions
  - Dissemination of new technologies
  - Provision of forum for acceptance of technological changes
  - Provision of forum for interaction between theory & practice and identification of technology development needs

# Overall recommendations

- Conduct a Roads Needs study / Develop Roads version of Vision 2040
- Identify gaps in knowledge to address developed Needs
- Define research focuses where unique Uganda knowledge need to be developed
- Defined research agenda
- Use groups with competencies



**AfCAP**  
Africa Community Access Partnership

# Discussion 2

## Draft report



**AfCAP**  
Africa Community Access Partnership

# 10. Demonstration of RMS





# General demonstration



# Discussion 3

# High-level RMS interrogation

- Tasks inside functionality of RMS
- Tasks outside of functionality of RMS



# Discussion 3



# Recommendations from Workshop



**AfCAP**  
Africa Community Access Partnership



# Thank you for your attention

[www.research4cap.org](http://www.research4cap.org)



Join the ReCAP Group on LinkedIn

## **Annexure C – Completed workshop evaluation forms**

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- a) There is willingness for stakeholders to collaborate
- b) Need for sustainable research
- c) UNRA is a trusted host for the RMS, and research coordination

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A= Very useful, very good; B = useful, good; C = OK ; D = rather weak ; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - **A** - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - **A** - B - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - **A** - B - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - **A** - B - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - **A** - B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - **A** - B - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - **A** - B - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - **A** - B - C - D - E - ☹ - Z



10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - **A** - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - **C** - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - **A** - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - **A** - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - **A** - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - **A** - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - **A** - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
(please use overleaf if space is not enough)

The honest and constructive feedback that was obtained

18. How could the workshop have been improved? (please use overleaf if space is not enough)

more time could be given to small group discussion sessions

19. Have you any other comments? (please use overleaf if space is not enough)

None

Thank you for your comments and suggestions!

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

a) An initiative for good access to research data to avoid repetitions or related research in similar fields

b)

c)

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A= Very useful, very good; B = useful, good; C = OK ; D = rather weak ; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - A - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - A - B - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - A - B - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - A - B - C - D - E - ☹ - Z

Sensitization on ongoing RMS dev'ts

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - A - B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - A - B - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A - B - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - A - B - C - D - E - ☹ - Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
(please use overleaf if space is not enough)

- The Introduction of on the research website.
- Pool of research knowledge.

18. How could the workshop have been improved? (please use overleaf if space is not enough)

19. Have you any other comments? (please use overleaf if space is not enough)

- Further details of the website.
- Need to motivate & sensitise public about

Thank you for your comments and suggestions!

- The sq RMS
- Aesthetics to the website to make it navigable.

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- Important to be clear about your needs/vision to guide research.
- Need for institutional responsibility to manage research
- 

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A = Very useful, very good; B = useful, good; C = OK; D = rather weak; E = very poor

Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - A - **B** - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - A - **B** - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - A - **B** - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - A - **B** - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - A - **B** - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - A - **B** - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A - B - **C** - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - A - B - **C** - D - E - ☹ - Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
(please use overleaf if space is not enough)

The discussion part of the RMS demonstration.

18. How could the workshop have been improved? (please use overleaf if space is not enough)

19. Have you any other comments? (please use overleaf if space is not enough)

Thank you for your comments and suggestions!

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

a) *RMS*

b) *Need for better research in Road sector*

c) */*

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A= Very useful, very good; B = useful, good; C = OK ; D = rather weak ; E = very poor

Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - A - **B** - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - A - B - **C** - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - A - B - **C** - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - A - **B** - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - A - **B** - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - A - B - **C** - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A - **B** - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - A - **B** - C - D - E - ☹ - Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
(please use overleaf if space is not enough)

RMS

18. How could the workshop have been improved? (please use overleaf if space is not enough)

Calling more stakeholders especially researchers not in Ug Universities

19. Have you any other comments? (please use overleaf if space is not enough)

Thank you for your comments and suggestions!

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- a) Research should focus on the vision of the country, national development plan
- b) Institutional responsibility should check plagiarism
- c) we should measure the impact of research on practice.  
To find out the quality of the research, you have to look at what was the motivation.

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A = Very useful, very good; B = useful, good; C = OK; D = rather weak; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ -  A - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ -  A - B - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ -  A - B - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - A -  B - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - A -  B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ -  A - B - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A -  B - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - A - B - C - D - E - ☹ - Z



10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
(please use overleaf if space is not enough)

*explained in QA 1*

18. How could the workshop have been improved? (please use overleaf if space is not enough)

19. Have you any other comments? (please use overleaf if space is not enough)

*The platform should include provisions of research uploaded from different stakeholders like KECA, Mow, Muk, Kyll, Ndeffe, UCL and other universities doing engineering in Uganda*

*Thank you for your comments and suggestions!*

*This can be a platform where we may help to curb plagiarism from different universities*

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- Doing of research with an aim for implementables
- Identification of the current Research gaps within the road sector.
- About RMS: The Reliability and Validity of Research uploaded is key report and must be consider before uploaded

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A = Very useful, very good; B = useful, good; C = OK; D = rather weak; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

- What is your overall impression of this workshop? ☺-A-B-C-D-E-☹-Z
- How far did the workshop meet your expectations? ☺-A-B-C-D-E-☹-Z
- How useful was the workshop to you? ☺-A-B-C-D-E-☹-Z
- How far did the workshop meet its objectives? ☺-A-B-C-D-E-☹-Z
- How useful was the Introduction to workshop themes, issues and outputs? ☺-A-B-C-D-E-☹-Z
- What was your impression of the presentation on Best practices and definitions? ☺-A-B-C-D-E-☹-Z
- What was your impression of the extent of consultations, as presented in the Consultations and findings? ☺-A-B-C-D-E-☹-Z
- What was your impression of the Discussion sessions? ☺-A-B-C-D-E-☹-Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?  
*No quality checks of data upload should be put to the hands*

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?  
*Very*

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
 (please use overleaf if space is not enough)

*Identification of the current research gaps in Roads Sector  
 Application of the data management system was amazing.*

18. How could the workshop have been improved? (please use overleaf if space is not enough)  
*It was okay*

19. Have you any other comments? (please use overleaf if space is not enough)

*Is it possible to equip university with laboratory equipment to improve their research abilities?*  
 Thank you for your comments and suggestions!

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.
  - a) *- Different Stakeholders with vision (specific) statements on road sector*
  - b) *The intended scope of the data base management system - particularly what I won't be able to do with it*
  - c) *The scope of research work within the country*

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A = Very useful, very good; B = useful, good; C = OK; D = rather weak; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop? ☺ - **A** - B - C - D - E - ☹ - Z
  
3. How far did the workshop meet your expectations? ☺ - **A** - B - C - D - E - ☹ - Z
  
4. How useful was the workshop to you? ☺ - A - **B** - C - D - E - ☹ - Z
  
5. How far did the workshop meet its objectives? ☺ - **A** - B - C - D - E - ☹ - Z
  
6. How useful was the Introduction to workshop themes, issues and outputs? ☺ - **A** - B - C - D - E - ☹ - Z
  
7. What was your impression of the presentation on Best practices and definitions? ☺ - **A** - B - C - D - E - ☹ - Z
  
8. What was your impression of the extent of consultations, as presented in the Consultations and findings? ☺ - **A** - B - C - D - E - ☹ - Z
  
9. What was your impression of the Discussion sessions? ☺ - **A** - B - C - D - E - ☹ - Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
*(please use overleaf if space is not enough)*

→ Can't put my mind on anything in particular - Generally important

18. How could the workshop have been improved? *(please use overleaf if space is not enough)*

→

19. Have you any other comments? *(please use overleaf if space is not enough)*

with

Thank you for your comments and suggestions!

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- a) *status of road research in Uganda*
- b) *RMS development effort*
- c) *wide-ranging recommendations*

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A= Very useful, very good; B = useful, good; C = OK ; D = rather weak ; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - **A** - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - A - **B** - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - **A** - B - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - **A** - B - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - **A** - B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - A - B - **C** - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A - B - C - **D** - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - A - **B** - C - D - E - ☹ - Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - **D** - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - **B** - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - **A** - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - **B** - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - **B** - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - **C** - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - **C** - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?

*(please use overleaf if space is not enough)*

*RMS ; Recommendations ; The findings*

18. How could the workshop have been improved? *(please use overleaf if space is not enough)*

*More stakeholders*

19. Have you any other comments? *(please use overleaf if space is not enough)*

*Thank you for your comments and suggestions!*

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- a) The value of making an informed Needs Assessment before embarking on applied Research.
- b) The symbiotic nature of approach to research by university and other stakeholders.
- c) The importance of equipping and staffing the materials laboratories in Uganda.

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A = Very useful, very good; B = useful, good; C = OK; D = rather weak; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ -  A - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ -  A - B - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - A -  B - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ -  A - B - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ -  A - B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ -  A - B - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A -  B - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ -  A - B - C - D - E - ☹ - Z



10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - **B** - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - **A** - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - **A** - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - **B** - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - **A** - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - **B** - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - **B** - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
(please use overleaf if space is not enough)

- The participatory approach involving all attendees.
- The level of experience and knowledge by the facilitator.

18. How could the workshop have been improved? (please use overleaf if space is not enough)

- The need to involve operators of public and private transport organizations.

19. Have you any other comments? (please use overleaf if space is not enough)

Very excellent organization in general.

Thank you for your comments and suggestions!

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- a) There's scanty research information in Uganda.
- b) No co-ordination at all for research outputs.
- c) Efforts are ongoing to cover the gaps.

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A= Very useful, very good; B = useful, good; C = OK ; D = rather weak ; E = very poor  
 Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - **A** - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - A - **B** - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - A - **B** - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - **A** - B - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - **A** - B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - A - **B** - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A - **B** - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - **A** - B - C - D - E - ☹ - Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
*(please use overleaf if space is not enough)*

18. How could the workshop have been improved? *(please use overleaf if space is not enough)*

19. Have you any other comments? *(please use overleaf if space is not enough)*

*Thank you for your comments and suggestions!*

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- a) Research is important & access to research can help in solving problems
- b) The RMS contains good information
- c)

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A= Very useful, very good; B = useful, good; C = OK ; D = rather weak ; E = very poor

Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - **A** - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - **A** - B - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - A - **B** - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - A - **B** - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - A - **B** - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - **A** - B - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - **A** - B - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - **A** - B - C - D - E - ☹ - Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?

*(please use overleaf if space is not enough)*

- The interactive nature.  
 - Facilitators are very knowledgeable about topic

18. How could the workshop have been improved? *(please use overleaf if space is not enough)*

19. Have you any other comments? *(please use overleaf if space is not enough)*

*Thank you for your comments and suggestions!*

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- Creating a joint research platform will enhance the use of cheaper technology & reduce the unit cost of road construction*
- The importance of the needs statement & its development in any entity.*
- Sharing knowledge & research is a factor in the development of the road sector.*

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A = Very useful, very good; B = useful, good; C = OK; D = rather weak; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - A - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - A - B - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - A - B - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - A - B - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - A - B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - A - B - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A - B - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - A - B - C - D - E - ☹ - Z

10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - A - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - B - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - A - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
(please use overleaf if space is not enough)

The group discussion.

18. How could the workshop have been improved? (please use overleaf if space is not enough)

(work shop information)  
Reading material should have been sent out prior to the workshop.

19. Have you any other comments? (please use overleaf if space is not enough)

The meals were V. Good.

Thank you for your comments and suggestions!

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

a) level quality and organization of research

b) proper approach on way forward

c)

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A= Very useful, very good; B = useful, good; C = OK ; D = rather weak ; E = very poor

Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - **A** - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - **A** - B - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - **A** - B - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - **A** - B - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - **A** - B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - **A** - B - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - **A** - B - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - **A** - B - C - D - E - ☹ - Z



10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - **A** - B - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - **A** - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - **A** - B - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - A - **B** - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - **A** - B - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - **B** - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - **A** - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?

*(please use overleaf if space is not enough)*

*Bringing Stakeholders together*

18. How could the workshop have been improved? *(please use overleaf if space is not enough)*

*It was well organized*

19. Have you any other comments? *(please use overleaf if space is not enough)*

*Thank you for your comments and suggestions!*

Workshop on

## Baseline survey of past and current road sector research undertakings in Uganda and establishment of research management system (RMS)

28 June 2017, Kampala, Uganda

### EVALUATION FORM

Please fill in this anonymous evaluation form so we can learn from your opinions

1. Please note down three things that you have learned during this workshop.

- That it's important to document all details on projects to be used later in research, assessment and quality control.
- Improvement of research products through easy access to existing research.
- It's important to work with all stakeholders to make road research successful.

Please evaluate the programme elements, by circling one of the letters A to E or Z.

A = Very useful, very good; B = useful, good; C = OK; D = rather weak; E = very poor  
Z = absent - Other additional written comments welcome !! Use back if not enough space.

2. What is your overall impression of this workshop?

☺ - **A** - B - C - D - E - ☹ - Z

3. How far did the workshop meet your expectations?

☺ - **A** - B - C - D - E - ☹ - Z

4. How useful was the workshop to you?

☺ - **A** - B - C - D - E - ☹ - Z

5. How far did the workshop meet its objectives?

☺ - A - **B** - C - D - E - ☹ - Z

6. How useful was the Introduction to workshop themes, issues and outputs?

☺ - **A** - B - C - D - E - ☹ - Z

7. What was your impression of the presentation on Best practices and definitions?

☺ - A - **B** - C - D - E - ☹ - Z

8. What was your impression of the extent of consultations, as presented in the Consultations and findings?

☺ - A - **B** - C - D - E - ☹ - Z

9. What was your impression of the Discussion sessions?

☺ - A - **B** - C - D - E - ☹ - Z



10. What was your impression of the proposed structure for facilitating road research in Uganda?

☺ - A - (B) - C - D - E - ☹ - Z

11. What was your impression of the RMS?

☺ - (A) - B - C - D - E - ☹ - Z

12. How do you rate the workshop facilitation?

☺ - A - (B) - C - D - E - ☹ - Z

13. How do you rate the Workshop schedule / timetable?

☺ - (A) - B - C - D - E - ☹ - Z

14. What was your impression of the logistical organisation of the workshop?

☺ - A - (B) - C - D - E - ☹ - Z

15. How were the workshop facilities provided by the UNRA office?

☺ - A - (B) - C - D - E - ☹ - Z

16. What was your impression of the pre-workshop information sent out to you?

☺ - (A) - B - C - D - E - ☹ - Z

17. What were the best and most useful aspects of the workshop?  
(please use overleaf if space is not enough)

RMS and basics of research.

18. How could the workshop have been improved? (please use overleaf if space is not enough)

There is need for more contact time with individual stakeholders, so as to interest them to ~~part~~ participate in research programs.

19. Have you any other comments? (please use overleaf if space is not enough)

Yes. Include uploading stakeholders in the RMS system. e.g Ministry research departments.

Thank you for your comments and suggestions!