Transport-Technology Research Innovation for International Development (T-TRIID): Webinar Presentation On 10th & 12th July 2018

We welcome everyone to our T-TRIID webinar. T-TRIID is an initiative under the High Volume Transport programme. We are very excited about this competition and hope this webinar provides the answers to any questions you may have.
This presentation will provide an introduction to T-TRIID and its link to the HVT. You will receive information about the four themes in the Competition:

- Long Distance Strategic Road and Rail Transport;
- Urban Transport;
- Low Carbon Transport; and
- Gender, Vulnerable Groups and Inclusion in HVT

You will also be provided with information about the application process, how applications will be assessed, the funding available and the dates and deadlines you need to be aware of.
Introduction

• T-TRIID is part of HVT programme
• 5 year plan with funding of GBP15 million
• The purpose of HVT and T-TRIID is to:
  • Reduce barriers to innovation and advance technology in transport in the DFID Low Income Countries
  • Enable a better transport system
  • Maximise opportunities of smart ideas that have the potential for further development.
  • Fund early-stage innovations to take to the next stage of development

• The idea for T-TRIID has come from DfT’s established T-TRIG project, a programme launched at DfT in 2014 to fund some short, sharp, early stage research projects that would encourage innovation in transport in the UK. The purpose is the same but to encourage innovation in transport for the DFID Low Income Countries.

• This is part of the HVT programme. High Volume Transport programme is a DFID programme to fund innovation in transport over a 5 year period. GBP15 million is allocated for this programme. This is year one of the programme and has a small budget but it could open doors for some of the grant recipients bigger budgets in the subsequent years

• The purpose of HVT and thus the T-TRIID is to reduce barriers to innovation and advance technology in Low Income Countries.

• The programme is planning to improve transport systems in Low Income Countries.

• There is talent out there and solutions and we want to unlock opportunities for smart ideas and fund further development.

• These are early stage innovations grant – looking at the early stage developments to provide funding so that the ideas move to the next stage of development.
Introduction

• Open to all
• Novel and innovative solutions that use science, engineering or technology focussed on DFID’s priorities
• Enable advancement of technology-based transport products, processes and services (TRL 2-4)

• The T-TRIID is a competition open to all participants.
• Companies of all sizes – from independent, SMEs, research consultancies to academia.
• The important factor is that the focus must be using science, engineering or technology to provide novel solutions.
• T-TRIID is funding research at TRL 2-4 levels
• This covers concepts being formulated, finding proof of concept or lab testing, building a prototype etc
Introduction

- 10 projects up to GBP 30,000 each
- Open to all companies, any size, based anywhere
- Challenge and solutions must apply to a DFID Low Income Country (LIC)
- Collaborations with companies in LIC welcomed

- There are 10 projects being funded GBP30,000 each
- Open to companies of all sizes and based anywhere in the world just as long as the solution is applicable to a DFID Low Income Country.
- We welcome collaborations with companies in the LIC as we want to see skills transfer to these countries.
There are four main themes and each of the theme leads will explain the challenges and potential areas of research.

- Long distance strategic road and rail transport
- Urban transport
- Low carbon
- Gender Vulnerable groups such as the disabled and Inclusion in HVT.
Long distance strategic rail and road transport

What are public’s expectations:

• Well-built and timely-maintained roads and railways
• Affordable road and rail freight tariffs and passenger fares
• Safe travel and climate resilient roads and railways

This demands:

• Sound policies backed by secure funding
• Effective and efficient transport agencies equipped with the right skills
• Open collaboration between private and public sector stakeholders

Transport enables economy to grow & society to develop

Long distance roads and railways are the backbone of a country’s transport network carrying goods and services, and facilitating travel between capital cities and other urban centres. Moreover, these strategic links are vital in connecting country to country for supporting trade and regional integration. However, building and maintaining these transport links is costly, consuming 15% or more of fragile low-income country budgets. Therefore, the public rightly expects:

• Well-built and timely-maintained roads and railways

That offer:

• Affordable road and rail freight tariffs, and passenger fares
• Safe travel and climate resilient roads and railways

And to meet these expectations governments must have:

• Sound policies backed by secure funding

And strategies that seek to build:

• Effective and efficient transport agencies equipped with the right skills

And in order to gain public confidence there needs to be:

• Open collaboration between private and public sector stakeholders
Long distance strategic rail and road transport

Seeking solutions to:

- Collecting and updating reliable data on network condition and usage
- Reducing the time and cost of network maintenance surveys
- Presenting data analysis in formats that help policy decision-makers
- Finding better ways of funding road and rail with the private sector
- Improving material testing and maximising the use of local materials
- Improving the time and cost of transport corridor performance, and cross border operations

Meeting the public's expectations involves tackling a myriad of problems, and therefore we are seeking new solutions for:

- Collecting and updating reliable data on network condition and usage.
  
  *Because without good data decisions on investment planning and the allocation of funds will squander scarce financial resources.*

  And as data collection is costly there’s a need for:

- Reducing the time and cost of network maintenance surveys
  
  *As the current survey methods involve too many people and vehicles travelling long distances*

  And data needs

- Presenting data analysis in formats that help policy decision-makers as not all decision-makers are transport professionals, for example, the current Ministers for Transport and their Permanent Secretaries may have previously been in Ministries of Health or Education

Also, with restricted national budgets, we have to

- Finding better ways of funding road and rail with the private sector
  
  *This means improving demand modelling and attracting private capital, in particular for sustaining railway concessions*

A scarcity of testing facilities in low income countries calls for
• Improving material testing and maximising the use of local materials as a step towards reducing construction and maintenance costs

*Given the vital role roads and railways play in fostering trade*

• Improving the time and cost of transport corridor performance and, cross border operations is viewed as being essential for lowering freight tariffs and passenger fares
Long distance strategic rail and road transport

Seeking solutions to:

• Introducing e-cargo systems used in aviation and maritime systems
• Identifying more effective ways of enforcing transport regulations
• Introducing ways of automating road toll collection
• Identifying tools that assess potential climate change impact on transport
• Streamlining the timeline for developing bankable projects

Another proposal for reducing transport prices is to

• Introducing e-cargo systems used in aviation and maritime systems
  where intelligence systems and technology have streamlined supply chains and reduced transport costs

To protect roads and railways and to ensure travel is safe we need to

• Identifying more effective ways of enforcing regulations particularly axle loading where many past control measures have not proved sustainable

And we are seeking a possible role for new technology for

• Introducing ways of automating road toll collection not only to increase efficiency but to eliminate corrupt practices

Addressing the challenge of climate change means

• Identifying tools that assess the impact of climate change on transport and that such tools can be used successfully in the challenging environment of low income countries
  Lastly, governments and financiers are trying to

• Streamlining the timeline for developing bankable projects.
  Financiers have funds for projects. LICs have projects for financing. Meeting forums exist, but matching funds to projects proves difficult -
often due to the risky environment found in low income countries. Could technology help this dialogue process?
Cities are the centres for African and Asian economy. To enable a save, clean and efficient access for all is critical. Sustainable mobility is in the core of the success or failure of growth in the region. However, through inefficient planning and lack of investment of walking, cycling and public transport we see a lot of negative impacts in cities of the South:

- More than 1.3 million people die through traffic accidents – more than 50% in the global south and here the most vulnerable ones – pedestrians.
- Transport is also a major contributor to air pollution and climate change. Transport contributes to approx. 25% of energy-related CO₂ emissions and is still growing!
- There is insufficient safe space for all transport modes.
In 2007 in a GIZ publication the AVOID SHIFT IMPROVE PARADIGM was shared with the international community and is now a well accepted framework for holistic solutions to take actions towards sustainable mobility.
• **AVOID**: Develop new ideas for demand management

• **SHIFT**: Improve the provision of services to public transport by integrating different data sets.

• **SHIFT**: Improving integration of urban transport systems with the different transport modes.

• **SHIFT**: Improve safety and accessibility for walking and cycling through new assessment and service tools.

• **IMPROVE**: To improve traffic management systems by integrating live data.

• **IMROVE**: To create new services (e.g. ride hailing with informal transport, bike sharing etc.)

Here are some of the areas we like to emphasize when it comes to the challenge. We see with new technologies there are new opportunities arising to improve the planning, design, construction, implementation and monitoring to improve urban mobility. However, it is always important to leave nobody behind when it comes to create solutions so it is vital not to increase the digital divide in the society. Please also note, that vehicle based solution on individual vehicles (e.g. e-mobility) are not part of the scope of the call.
Low Carbon Transport

The Challenge:

- Collating comparable transport data
- Adopting low carbon transport technologies
- Developing low carbon freight transport
- Maintaining and increasing non-motorised transport
- Updating decision support tools
- Implementing adaptation and mitigation measures for low carbon transport

Growth in passenger and freight activity could offset all other means of climate change mitigation unless transport emissions are decoupled from economic growth. Current transport planning approaches and transport infrastructure investment decisions could lock-in transport-related CO₂ emission patterns for the coming decades.

It is therefore important to improve knowledge and uptake of low carbon transport policies by decision-makers in Low Income Countries (LICs) in Africa and South Asia. This will enable LICs to mitigate the potential impacts of the transport sector on climate change, urban air quality and to reduce the reliance on costly and volatile oil and gas imports.

A number of key challenges to low carbon transport has been identified. These include:

- **LACK OF DATA** which prevents an understanding of the current state of transport with regard to polluting emissions and impacts on environment and health. The absence of a common regional/sectoral approach can hamper comparison and inhibit the adoption and
implementation of low carbon transport in different countries.

- **BARRIERS TO ADOPTION OF LOW CARBON TECHNOLOGIES** - authorities are overlooking particular low carbon alternatives to road and rail. It is therefore necessary to better understand the barriers to adoption of a particular technology and identify approaches to overcome such barriers.

- **DEVELOPING LOW CARBON FREIGHT** requires in basic data and statistics on the freight sector in LICs. There is a need to understand better the costs and energy consumption of freight transport modes in developing countries and identify appropriate low carbon strategies.

- **NON MOTORISED TRANSPORT** : we need to understand how mobility in developing countries can be maximised and decoupled from energy consumption. Different countries experiencing economic growth can follow different transport trajectories and patterns of GHG emissions. It is necessary to have an understanding of the different approaches and analyses rooted in their local context.

- **UPDATING DECISION SUPPORT TOOLS** including data and models in necessary to better quantify carbon impacts and capture low carbon transport technology options.

- **CLIMATE ADAPTATION AND MITIGATION** adaptation has received substantially less attention than mitigation in Nationally Determined Contribution (NDCs). Understanding the types of mitigation and adaptation measures to maximise the contribution of the transport sector to NDC targets in LICs in Africa and South Asia is needed
In Scope Examples:

- Improving data collection
- Understanding the benefits of low carbon technologies
- Identifying low carbon freight strategies
- Adopting approaches for non-motorised transport
- Updating decision support tools
- Improving climate change mitigation and adaptation.

Out of Scope Examples:

- Solutions to support individual motorization
- Vehicle specific solutions

Within T-TRID we are looking for proposals that will address the identified challenges and facilitate the adoption of low carbon transport technologies and approaches that will ultimately reduce transport GHG emissions and improve urban air quality in LICs in Africa and South Asia.

In scope examples include approaches, analyses and innovations that:

- Improve transport data collection and analyses for low carbon transport
- Allow a better understanding of the benefits of low carbon technologies and that can facilitate their adoption
- Outline low carbon freight strategies that are appropriate for the local context
- Demonstrate approaches that can maintain and increase non-motorised transport
- Update and improve decision-support tools that can assist in transport planning
- Improve climate change mitigation and adaptation in the transport sector in low income countries.
Out of scope proposals are those that focus on increasing individual motorization or proposals that focus on vehicle specific solutions that do not address emissions.
The Challenge:

- Greater safety for women, More gender-friendly services OR opportunities to be part of transport sector
- Benefits from better transport infrastructure and services are NOT equally available
- Needs of women, young, old people, physical and mental disabilities, sensory and cognitive disabilities are NOT considered
- Safety of users and non-users of transport system is often neglected

The challenge is to develop innovative services and products that overcome this challenge and ensure that as developing economies improve transport infrastructure and services no one is left behind.

The benefits from better transport infrastructure and services are not always shared equally with everyone in developing economies. Women, young and old people and people with physical, mental, sensory and cognitive disabilities are often left behind.

Women and girls have a particularly high transport burden, given that they are responsible for the majority of domestic travel, have less access to private vehicles and have higher safety and security concerns.

On public transport, women and children can often be vulnerable to sexual, physical and harassment. Operator policies and poor siting of bus stops and termini can increase real and perceived dangers of walking to and accessing public transport for women and children and for other groups, such as older and disabled people.

Urban transport systems tend to tailored more to men, who are more likely to have routine travel patterns between home and work during peak hours. Travel patterns for women involve more complex, more frequent short journeys during off-peak hours and longer travel times.
Many older and disabled people are currently excluded from even the most basic opportunities for mobility and their needs are often overlooked or neglected even in new developments of high volume transport systems such as Bus Rapid Transit (BRT), metro or tramway. Without mobility, opportunities for education, employment, healthcare etc are greatly reduced and there is a strong link between disability and poverty.

The safety of all who are affected by the transport system, both users and non-users, is also often neglected. Developing countries often have poor road crash data which means it is difficult to interpret what types of crashes are occurring, where they are occurring, and what contributory factors led to the crash. Often the severity of a crash victim is also wrongly recorded as effective links between hospital and police database systems do not exist as well. This all results in difficulty in targeting the most appropriate interventions to improve road safety and reduce the suffering and hardship that it causes.

The challenge, then, is to develop innovative services and products that overcome this challenge and ensure that as developing economies improve transport infrastructure and services no one is left behind.
Gender, Inclusion and Vulnerable Groups

**In Scope Examples:**

- Greater safety for women, better gender-friendly services or more opportunities to be part of the transport sector.
- Greater accessibility for people with different physical, sensory or cognitive impairments or mental health issues.
- Better road safety through more effective use of data and decision-making tools

**Out of Scope Examples:**

- Women-only public transport service
- Ride-sharing apps

We are interested then are innovative solutions that can deliver greater safety for women, better gender-friendly services or more opportunities to be part of the transport sector by improving the personal safety and security for women and girls and other disadvantaged groups accessing high volume transport.

By improving our understanding of the potential of a wider range of business models and use cases to promote greater involvement of women employees and entrepreneurs in the transport sector and enhance the development gender-responsive service delivery.

We are interested in innovative solutions that can deliver greater accessibility for people with different physical, sensory or cognitive impairments or mental health issues by improving the collection of data on differences in transport patterns and needs of men and women, of people from different social groups and of people with different physical, sensory or cognitive impairments or mental health issues along long-distance corridors and within urban areas.
By improving the depth and quality of knowledge on the most effective and cost-effective strategies for investing in accessible urban transport, including identifying key mobility corridors to enable people with disabilities to get from home to stops and stations to access the network.

Suggest innovative solutions to improve the mobility of people with impaired vision and other disabilities through the development of technology appropriate to low income countries for navigation/guidance systems, real time information or accessible vehicle location, for example.

We are interested in innovative solutions that can deliver better road safety through more effective use of data and decision-making tools.

By improving the quality and cost-effectiveness of road crash data collection and the development of tools from such data to aid decision-making around high volume transport investment options.

We are NOT however, interested in supporting proposals that seek to develop women-only public transport services as the direction we would like to follow is the development of gender-equitable transport systems that can be used by everyone for everyone’s benefit. We don’t think women-only services help in delivering that objective.

We are also NOT interested in supporting any further work on developing the software and technology connected to Ride-sharing apps, especially for individual journeys as we feel that there are lots of these already developed but that does not preclude proposals that seek to use existing ride-sharing apps in solutions for public and collective transport.
You download the Grant Application Form, Guidance Document (general rules), Specifications (gives examples of types of projects of interest under each of the four theme), FAQs documents (provide answers to most of your questions), GOL (the terms and conditions) and DDQ (Due Diligence questionnaire). The Statement of Grant Usage will be needed for the end of the project when reconciling all expenses against actuals and making the final grant claim.

The Application Form is in Word format and needs to be kept in that way. If you have problems accessing this please get in touch with us via HVTprocurement@imcworldwide.com. The Statement of Grant Usage is in Excel – all others are available in Pdf format.

There will be an opportunity at the webinars for FAQs

Final step is to complete the Application Form in Word and send via email hvtprocurement@imcworldwide.com along with the relevant completed DDQ.
Application Process

This is where on the IMC website you will find the documents, under more resources. http://www.imcworldwide.com/project/transport-technology-research-innovation-for-international-development-t-triid/
Applications Process

- Sections A – F are important but not assessed
- Section G – questions 1 – 6 are very important and assessed
- Good quality applications:-
  - Read the question carefully
  - Consult the notes for each question in the Guidance document
  - Consult the assessment criteria (Guidance document), FAQs and Specification Document

Sections A-F are important and you need to completed these carefully. However it is section G that is where you provide your proposal in the Application Form and this is where you can earn the points. To achieve a good quality Application you need to:
  - Read the questions carefully
  - Consult the notes for each question in the Guidance and use the Criteria FAQs and Specification for project ideas
There is a two stage Assessment Process. Initially, only questions 1, 2 & 3 (The Challenge, Innovation & Collaboration) will be assessed by at least two members of staff at IMC. Only those applications receiving an aggregated score of 50% or greater for the three questions (30 or more out of 60) will progress to a full assessment. Any applications scoring less than 30 will not progress to full assessment.

During the full assessment, all six questions will be reviewed by at least three expert assessors at the IMC, KTN and other partner organisations. IMC will conduct Due Diligence on those who progress into the 2nd stage. This is an IMC process ensuring the organisations involved are trustworthy and follow good conduct.
**Assessment Process**

**FULL ASSESSMENT PROCESS**
Applications will be assessed on all six questions by at least three expert assessors from IMC Worldwide and partner organisations.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Weighting factor</th>
<th>Maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Challenge</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>What is the challenge being addressed by the proposed project?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Innovation</td>
<td>★3</td>
<td>30</td>
</tr>
<tr>
<td>How is your Application innovative?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Collaboration/ Lead company based in DFID Low Income Country</td>
<td>★2</td>
<td>20</td>
</tr>
<tr>
<td>Which is the company based in?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Project Management and Team</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>What is your project plan to deliver the project? What are the relevant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>skills and expertise of the team?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Impact and Maximise Outcome</td>
<td>★2</td>
<td>20</td>
</tr>
<tr>
<td>How will the outcome from this research have a beneficial impact on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>transport in National Country?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Project Finances/ Value for money</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>How much will the project cost to deliver and how will this be spent to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ensure value for money?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

The three questions that need more attention are questions 2, 3 and 5 as the answers can earn more scores – it has a weighting factor of 2 or 3 and so needs more consideration.
Assessment Process

• See Guidance Document
• Marking scheme of 0, 2, 4, 6, 8, 10 (out of 10)
• **Example: Section G, Question 4 Project Management**
• Score of 0 :
  • *There is a poor project plan. Little or no details are given of the aims and objectives; deliverables; milestones, the team, or risks. No Gantt Chart is provided.*
• Score of 10 :
  • *The project plan is highly credible and likely to deliver the project effectively. The plan clearly conveys the aims and objectives, deliverables, timescales, milestones and skill of the project team. Comprehensive risks are identified, and suitable mitigation measures are given. A comprehensive and detailed Gantt Chart is provided.*

We have provided you with a clear indication for marking structure. So for example if you look at Project Management, if we receive an Application where there is a poor project plan, little or no details of objectives, deliverables, milestones or staff skills. If the project does not have any risk assessment or a Gantt Chart it will score 0.

However at the other end of the scale if an Application provides a project plan that is highly credible, with clear timescales, objectives, milestones and staff skills. There is a comprehensive Gantt chart, it will score 10. Please note we are keen for companies to collaborate with other organisations in the LIC. There is potential for earning 20 more points if you build such collaboration in your project.
The Finance side is very simple steps.
You need to first choose whether or not you want 25% early payment or 100% at end in the Application form.

If you have opted for the 25% first, only after approval of the first progress report can we process your grant instalment as well as acceptance of the GOL.

For the remaining 75% or if you opted for 100% funding at end, you will need to have an approved final report, plus a signed Grant Usage Form as well as electronic copies of receipts and invoices.
Read the notification:

- **Competition opens 5th July 2018**
- **Briefing webinars for all 4 themes 10th & 12th July 2018**
- **Availability of webinar recordings 16th July 2018**
- **Competition closes, application deadline 23:59 16th August 2018**
- **Decision to successful applicants 17th September 2018**
- **Notification to unsuccessful applicants 15th October 2018**
- **Initiation meetings commence 17th September 2018**
- **Projects start 17th September 2018**
- **Draft Final Report 15th February 2019**
- **Final Report 15th March 2019**
- **Approve all final finance claim documents 25th March 2019**
Q1: In the T-TRIID application downloads, the due diligence questionnaire seeks information about whether people are public officials. In many low-income countries, Universities are frequently state institutions therefore senior University academics are essentially, Public Officials. As a Public Official, would I be excluded from applying for the T-TRIID competition?

A1: No. If an academic is a public official, they would not be excluded from submitting an application. The DDQ should be completed honestly and fully, providing requested information on their public office role.

Q2: What documents do I need to submit to claim my Grant?

A2: To enter the competition, you must submit the following: Grant Application Form in Word format. Do NOT add a password on the editable Word document.

Q3: When does the project work have to be completed by?

A3: The majority of the project work will need to be completed by early March 2019, with a final draft report of the work carried out/ key findings provided to IMC by 15th March 2019. The amended Final Report is due in the following week once IMC experts have reviewed the draft report and provided any comments for amendments.
Are there any further questions?
Afghanistan, Bangladesh, Burma, China, Democratic Republic of Congo, Ethiopia, Ghana, India, Indonesia, Iraq, Jordan, Kenya, Kyrgyzstan, Lebanon, Liberia, Malawi, Mozambique, Nepal, Nigeria, Occupied Palestinian Territories, Pakistan, Rwanda, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Syria, Tajikistan, Tanzania, Uganda, Yemen and Zambia