The importance of sustainable transport infrastructure to the Post-2015 Development Agenda

Background

Transport is an essential part of our everyday lives and is central to sustainable development. It enables access to employment, business, education, health services, and social interaction. The developing and developed world’s prosperity and wellbeing are inextricably linked to transport and the choices made available to them.

This paper has been jointly prepared by ICE1 and TRL 2 as a result of a roundtable on sustainable transport and the Sustainable Development Goals, which involved organisations from a wider group including the private sector, academic institutions and foundations (see Annex A). Its principal aim was to provide input to the UN High Level Panel of Eminent Persons and the Open Working Group to ensure that ‘Access to Transport’ and the ‘Development of Sustainable Transport Infrastructure’ is included as a significant feature of the Post 2015 Sustainable Development Goals.

Failure to factor in sustainable transport to the SDGs as a pathway to creating a successful and sustainable economy will hamper the target to achieve ‘the future we want’ and ‘sustainable prosperity for all’, and reduce inclusive wealth creation globally.

The importance of transport infrastructure to sustainable development

Despite ongoing economic challenges, the tangible benefits that sustainable transport infrastructure can bring to the economy, and its power to transform people’s lives, are well established but not yet widespread.

Sustainable, efficient, and well maintained transport infrastructure allows urban and rural dwellers the opportunity to participate in economic opportunities and access essential services. For example, a new or improved road not only creates new jobs and gives a short term boost to a nation’s economy, but such investment also helps build and facilitate economic activities for decades and generations to come. Road transport today is heavily reliant on fossil fuels and the challenge is therefore to better align development and low-carbon transport.

ICE and TRL believe that any Governments’ priority for developing sustainable transport infrastructure should be to clearly define the outcomes required from transport systems and align

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1 Under our Royal Charter, the Institution of Civil Engineers (ICE) has a duty to provide independent, expert advice on engineering and infrastructure issues to politicians, industry and wider society
2 TRL is a wholly owned subsidiary of the Transport Research Foundation, a non-profit-distributing company. It is an internationally recognised centre of excellence providing world-class research, consultancy, product testing covering all aspects of transport.
strategy, funding decisions and other policy measures to those outcomes. To deliver inclusive prosperity this should also include assessing the impact of co-benefits.3

The five targets for transport in respect to the development of the new sustainable development goals should be taken into consideration. These would deliver a transport system that is fit for purpose, sustainable and provides optimum contributions to successful economic development, while protecting the social and environmental dimensions of sustainable development.

- Facilitate sustainable economic development.
- Enable an enhanced quality of life, including maintaining affordability.
- Reduce harmful local and global emissions wherever possible.
- Deliver an increasingly safe and more resilient network.
- Improve the planning and delivery of new infrastructure.

The following areas should be given special attention:

- Climate change adaptation and mitigation
- Road safety
- International harmonisation of road infrastructure standards and practices
- Sustainable Transport Systems and data collection

Climate change adaptation and mitigation

The world’s climate and weather patterns are changing. Global temperatures are rising, causing more extreme weather events, such as flooding and heat waves. Transport’s dependence on fossil fuels underpins a long-term trend for rising greenhouse gas emissions, while local pollutants contribute to serious health problems. Nitrogen oxide (NOx) and particulate matter (PM) emissions from diesel engines are also responsible for many unnecessary premature deaths, typically in congested and built-up areas.

However, the developing world should not be impeded in its growth or penalised by the environmental damage caused historically by developed countries. Lessons learnt from efforts to deliver the Millennium Development Goals (MDGs) must guide governments to make decisions in favour of low-carbon growth and provide alternatives to fossil-fuel based transport. These include linking transport, spatial-planning and land-use policy to reduce the need to travel long distances and/or promote low-carbon options such as walking, cycling and public transport. Guidance on sustainable urban planning and transport should be available for National and Municipal Governments.

Road safety

Globally, 1.24 million people are killed in road crashes every year and up to 50 million are seriously injured4 Low and middle income countries are most affected and typically, 1-3% of GDP is lost

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3 Co-benefits are those not directly associated with transport such as air quality, road safety, carbon intensity and climate change.

4 Low and middle income countries are most affected and typically, 1-3% of GDP is lost.
through road traffic crashes and it is the leading cause of death globally for 15-29 year olds. Pedestrians and cyclists are often involved in these accidents. The Decade of Action for Road Safety aims to reduce road deaths and injuries across the world, and greater action is needed internationally to reduce these appalling statistics. Road safety is a significant issue in economic development, and the Open Working Group should therefore take note of the need to include road safety as part of a sustainable transport goal.

International harmonisation of road infrastructure standards and practices

International road and rail infrastructure and engineering standards are not yet fully aligned to include increased climate resilience or sustainability criteria. Climate change in particular poses significant challenges and it is not well understood. Increasing accessibility is key to economic development. Rural households in particular should have access to paved or all-weather roads to take products to markets and reach essential services. Multi-sector coordinated approaches are required, utilising appropriate planning tools such as ‘Integrated Rural Accessibility Planning’\(^5\). The whole-life asset management of all land transport infrastructure should be considered, with continuous asset management plans.

In addition, data collection on transport is still patchy, especially in the developing world and this is hindering sustainable transport development.

International expertise and harmonised standards are helpful to enable exchange and knowledge transfer, but local labour, materials and resources should also be used wherever possible. The Open Working group and governments should highlight the need for a co-ordinated effort to ensure that internationally recognised practices, as well as local solutions, are to be part of the reporting and indicators of the post 2015 agenda.

Sustainable Transport Systems

The UN Habitat Global Report on Human Settlements\(^6\) (2013) on sustainable mobility espoused the concept that mobility was not just about developing transport infrastructure and services, but about overcoming the social, economic, political and physical barriers to movement. Roads provide access for motorised and mechanised transport but it is important not to lock people into future car or motorcycle dependency. The public and privates sectors have important roles in delivering sustainable transport systems. Then institutional framework and guidance of the sustainable development goals and the post 2015 agenda should help create an enabling environment for partnerships and collaborative working.

To allow developing countries to grow economically, the international community has a duty to build capacity locally, to cover planning, design, construction and maintenance of essential transport infrastructure. It should be noted that approximately a third of funding allocated for investment in developing countries could not be spent, because of the lack of capability locally. An effective delivery model needs to be identified and promoted. ICE has a successful model whereby it provides

fledgling engineers with access to knowledge, mentors them, and provides them with the facility to communicate with other engineers.

**Closing statement**

In addition to the four target areas mentioned, ICE and TRL and the members of UK FOST\(^7\) broadly support the targets put forward by the international sustainable transport community under the Sustainable Low Carbon Transport partnership (SLoCaT\(^8\)).

These are providing:

- **Urban Access**: Secure universal access by sustainable transport for urban populations by 2030;
- **Rural Access**: Secure universal access by sustainable transport for rural populations by 2030;
- **Road Safety**: Halve the burden of global road traffic crashes by 2030 compared to 2010;
- **Air Pollution and Human Health**: Halve years lost due to premature death and years lived with disability from transport-related air pollution by 2030 compared to 2010;
- **Greenhouse Gas Emissions**: Realise at least 1.6 to 2.5 GtCO2e reductions by 2020.

The UN Open Working Group is therefore urged to fully consider the potential of surface transport as an essential component of sustainable development in their report and development of the goals. Access to sustainable transport infrastructure, new technology and changing behaviour will be crucial to achieving the new sustainable development goals and the post 2015 development agenda.

If sustainable transport is not explicitly mentioned in their work and the final agreed SDGs designed to achieve the ‘Future We Want’ and facilitate “development which meets the needs of current generations without compromising the ability of future generations to meet their own needs (Brundtland, 1987)”; it is likely that global inclusive and sustainable prosperity will be compromised and the lack of a concerted effort to reduce the negative effects of motorised transport will damage the outcomes of all the goals.

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\(^7\) UK Friends of Sustainable Transport  
\(^8\) [http://www.slocat.net/transport-open-working-group-process](http://www.slocat.net/transport-open-working-group-process)
This brief was co-authored by Adam Kirkup of ICE and heather Allen of TRL and was produced as a result of a roundtable meeting on sustainable transport and the sustainable development goals with generous input from the following private sector, academic institutions and foundations. The views expressed however do not necessarily reflect the views of each individual organisation.

- African Community Access Programme (AFCAP)
- Arup
- Atkins
- Cambridge University
- Department for International Development (DFID)
- FIA Foundation
- Greener Journeys
- IMC Worldwide
- Imperial College, London
- Institute of Mechanical Engineers (IMechE)
- Institution of Civil Engineers (ICE)
- International Forum for Rural Transport & Development (IFRTD)
- I.T. Transport Ltd.
- London School of Economics (LSE)
- Overseas Development Institute (ODI)
- Shell Foundation
- Transaid
- Transport Research Laboratory (TRL)
- University of Birmingham