Universal Access[KP1]

Defining access

Universal access is defined as access to both transport infrastructure and transport services. Access to transport has two dimensions: availability and usability. Availability refers to the *existence* of the physical infrastructure such as roads (potential indicator: percentage of population within 2 km of an all-season road). Usability refers to the *condition* of the infrastructure, i.e. maintenance (potential indicator: percentage of transport infrastructure in fair condition). The second dimension [KP2]refers to availability of transport services (potential indicators: freight transport US$ / tonne – km[KP3]; passenger transport US$/km; both disaggregated for short and long distances).

Sustainable Transport Goals

In 2015, the world embraced the 2030 Agenda and its 17 Sustainable Development Goals (SDGs). There is no distinct SDG for transport but there are nine transport-related SDG targets[KP4]. Further to the SDGs, the international community made a series of global commitments related to transport: the Ashgabat Statement on Commitments and Policy Recommendations of the Global Sustainable Transport Conference (2016), the UN Decade of Action on Road Safety (2011), the Paris Climate Agreement (2015), the Vienna Program of Actions on Land-Locked Countries (2014), the New Urban Agenda (2016), and the Vientiane Declaration on 'Sustainable Rural Transport towards Achieving the 2030 Agenda for Sustainable Development' (2017) to cite a few[KP5].

It is important to frame the narrative below in the international context.

Linkage of the Universal Transport Access Goal with SDGs:

Directly or indirectly, rural and urban transport is a key enabler for delivery of the Sustainable Development Goals. Without provision of universal access to sustainable transport infrastructure and services, delivery of the SDGs is at risk. We[KP6] actively promote the concept of a continuum of access from rural to urban, and from subsistence farm access to high volume roads and transport corridors. Access is directly addressed under the SDGs through the following targets:

- 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on **affordable and equitable access for all**.
- 11.2 By 2030, **provide access to safe, affordable, accessible and sustainable transport systems for all**, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

In addition, access relates to three other SDGs targets directly and more indirectly[1]. Transport and mobility arguably relate to the majority of the goals as a facilitator of access to essential goods and services such as food, water, health services, etc. and to economic opportunities (including employment).

The ~~draft~~ Habitat III New Urban Agenda focuses support on the needs of marginalized groups to tackle urban inequality in urban development and transport planning and provision in support of the SDGs. This New Urban Agenda has direct impact on rural access through ~~the~~ urban-rural linkages[KP7].

The Vienna Programme of Actions on Land-Locked Countries (2014)[2] has relevance to transport corridors and related trade. The Programme specifically notes: '*Additional border crossings and the long distance from major markets, coupled with cumbersome transit procedures and inadequate infrastructure, substantially increase the total expenses for transport and other transaction costs, which erodes the competitive edge of landlocked developing countries, reduces economic growth….'*

While sustainable transport has many attributes, these diverse and complicated attributes can be folded into three or four simple objectives.

> **Objective 1: Universal Access.** Ensure access for all to transport by 2030.
> ***(Objective 2: Efficiency.*** *Increase the efficiency of transport systems and the services they provide to businesses and people by 2030.[3] Note: this objective is still under discussion as to whether a stand-alone or to be incorporated into other objectives)*
> **Objective 3: Safety.** Reduce deaths and injuries from road traffic crashes (SDG target 3.6)
> **Objective 4: Green.** Shift transport infrastructure and services to a green and clean path—a low carbon, low polluting, low-noise path—and enhance their resilience by 2030.

Measuring progress along these three or four objectives will help the international community track progress towards sustainable transport, allow us to understand our accomplishments and failures along the way, and identify corrective measures and actions.

[KP8]Scope of whole Universal Access Goal / Objective:

Whatever the mode and whether it is national or regional; urban or rural, formal or informal, transport needs to work for everyone – traders and firms, farmers, social service providers, and populations at large. We don't deliver transport for the sake of transport. We deliver transport to get children to school, for economies to thrive, to help sick people get to clinics. It is about a healthier and wealthier society and global community.

Inadequate transport continues to exacerbate poverty and inequality in many regions and cities of the world, inhibiting economic growth, access to markets, job opportunities and services, particularly for poor people.

[1] SDG: Directly to Target 1.4: Equal access to economic resources/basic services; Target 2.1: End hunger and ensure access to safe, nutritious food; Target 3.6: Road Safety and indirectly includes target 12.3: Reduction of postharvest food losses; Target 13.1: Climate change adaptation and mitigation;

[2] http://www.lldc2conference.org/custom-content/uploads/2014/11/Vienna-Programme-of-Action1.pdf

[3] This goal refers to several dimensions, including technical efficiency/capacity utilization; energy efficiency/emissions reduction; spatial efficiency/land-use improvement, and multimodal integration.

Whether for movement of passengers or freight, "Access for all" to transport means access to transport infrastructure, access to transport services and access to the benefits it provides. 1 billion people globally do not have access to transport[KP9], and 98% of those without access live in developing countries. Where populations are dense the problems are different and there is an overreliance on cars that leads to congestion and pollution.

Investment in transport infrastructure such as roads and rail lowers the transaction costs between employees and firms, between buyers and suppliers and between industries and distant export markets.

Access to transport means transport infrastructure and services takeing account of where people live, the goods they want to transport, the access those people have to markets, schools, health care and other economic and social opportunities. Beyond availability, access encompasses the quality and affordability of transport services, and the physical accessibility to vehicles.

Transport is crucial to the manufacturing industry, exports and job creation– in the formal and informal sectors. The lack of access to transport services has disproportionately negative impacts on women and girls. Transport needs to be equitable and work for all users – particularly the poor, disadvantaged and vulnerable including the aged and the 15% of the global population with disabilities[KP10]. Access to transport can improve social welfare by increasing the proximity and quality of basic health and education services, and broadening livelihood opportunities. The poorest and most vulnerable people generally have least access to transport and have a disproportionately high travel burden. Disabled people have one of the greatest needs for transport yet are among the most excluded from accessing transport.

Access to t~~T~~ransport services ~~are~~ is particularly important for women, who typically spend more time travelling; but have less access to private vehicles. Reliable and affordable transport services are key to improving women's mobility and their economic opportunities as noted by the UN High Level Panel on Women's Economic Empowerment (*http://www.womenseconomicempowerment.org/*).

Access to transport needs to be safe. Road crashes now kill more people each year than HIV, tuberculosis, or malaria[1]. Road crashes are the biggest killer of youth (15-29year olds) globally.

Accessibility needs are significantly different for rural and urban populations. Where populations are dense transport opportunities and challenges are different. Two billion additional people will be living in cities by 2045[KP11].

Transport[KP12] accounts for about 20% of world CO_2 emissions**,** around 60% of global oil consumption, and around 27% of all energy use.[i] Successfully tackling climate change means getting transport right.

From planning through to frontline operations, transport systems are changing and modernising. Rather than lagging behind, developing countries can leap-frog challenges by exploiting smarter vehicle and infrastructure technologies and innovation to make transport accessible for all.

The transport sector as a whole has a paucity of data. Through innovate technologies and digital data we have the opportunity transform the monitoring and management of the transport sector at pace.

Universal[KP13] *Rural Access*

[1] World Bank and University of Washington (2014). Transport for Health – The Global Burden of Disease from Motorized Road Transport. Available at: http://documents.worldbank.org/curated/en/2014/01/19308007/transport-health-global-burden-disease-motorized-road-transport

An adequate and connected rural transport network needs to be complemented with convenient and affordable transport services to allow rural residents to reach markets and essential services. Rural transport infrastructure and services cover~~s~~ low volume rural roads connecting to major roads and transport corridors. In many situations it is the inadequate maintenance of rural roads and the lack of an appropriate regulatory regime for transport services that inhibits the development of effective passenger and freight transport systems. This reduces opportunities to connect rural inhabitants with access to markets and services.

This Rural Access sub-objective within the SuM4ALL initiative is defined as covering all access from low volume rural roads through to high volume road and rail transport corridors that are effectively supported by operational and well-maintained port infrastructure and an effective regulatory framework to facilitate the efficient cross border transit of goods. *(NB: information needed from the Efficiency Working Group to understand their scope of work and whether this includes transport infrastructure and services related to corridors and ports. If so the RAWG will reduce its scope of work to focus on low volume rural roads and transport services).* This sub-objective excludes peri-urban transport, which is included within the Urban Access sub-objective[KP14].

To overcome rural poverty, remote rural settlements need to be connected to local markets by roads that are passable all season and attract reliable and affordable public transport services. In many areas, safe footpaths, footbridges and waterways may be required in conjunction with, or as an alternative, to roads.

Evidence from IFPRI (Dercon, S., et al[4]) shows that public expenditures o~~i~~n rural roads deliver some of the largest impacts on poverty reduction. This is reinforced by the Rural Access Index (RAI) data which show~~s~~ a strong correlation between poor access and poverty. Research shows strong linkages between rural transport access and both educational and health outcomes, strong correlations are shown between poor access and school drop-out rates (Nunez[5]), between poor access and morbidity and mortality rates (Bell et al[6]) and health and poverty outcomes (Rockliffe et al 2011[7]).

> **TEXT BOX:** Summary of correlations between poor rural transport and poverty dimensions: health, education and market access.
>
> Example to be drafted.
>
> Quote: rural villager quote on frequency of vehicles in remote areas (John Hine / Paul Starkey)

The most expensive part of the agricultural supply chain is the first few miles from farm/village to the first market. The ton/km costs for these movements for unimproved access can be two to three times more expensive than for subsequent movements where improved access is provided (Hine 2006[8]).

Availability of transport services at the rural level is key, many communities may have a road but still don't have access to transport services[KP15].

[4] Dercon. S., et al. (2008). The impact of agricultural extension and roads on poverty and consumption growth in fifteen Ethiopian villages. IFPRI Discussion Paper 00840. Available at http://www.ifpri.org/publication/impact-agricultural-extension-and-roads-poverty-and-consumption-growth-fifteen-ethiopian

[5] Reference needed from Tyrone Toole

[6] Need link to reference (Tyrone Toole to provide). Other ref: e.g. Indonesia on school attendance and child mortality. Rockliffe etal.

[7] Tyrone Toole to provide reference document

[8] Reference link needed

Intermediate Means of Transport in rural areas[9] are significant for rural access, both motorised (such as motorcycles and motorcycle ambulances) and non-motorised (such as the use of bicycles and animal drawn carts crucial in hauling farm input and implements as well as transporting crops to market). These are important parts of delivering rural access. In some areas two wheel motorized vehicles may have an impact on the types of infrastructure to be constructed i.e. narrower, predominantly to service motorcycles. In other areas this may not be the case with a need for small truck or animal drawn carts still essential. It will be important to have a flexible and appropriate response informed by local needs and relative costs of infrastructure construction.

Access empowers rural communities, and women in particular, to participate in local politics and local decision making. This is also linked to the decentralization agenda and pushing the management of the network down to the local level. Expenditures at the local level are largely invisible and can be prone to corruption. Improved systems to monitor expenditures and outcomes will directly benefit local people.

Alternative funding arrangements, including results-based funding with payments made following the completion and verification of rural infrastructure provision and maintenance is gaining in popularity, with pre-financing by the local government. This requires greater transparency as a 'pre-condition'. Such arrangements reward good governance, with phased payments made on the achievement of appropriate milestones (published reference from Indonesia needed).

With regard to climate resilience improved management of rural road networks can reduce climate related vulnerabilities to rural communities. A key factor in improving the resilience of rural roads networks is effective maintenance and the incremental reduction in network vulnerabilities. In many cases the risks are increased where poor drainage, both from the road and towards the road, exists. Simple measures can be applied to control such conditions, and when combined with spot improvement strategies can help support low-cost, but effective basic access[10].

Low transport costs on corridors, high volume roads and rail are crucial to increase trade and national level economic development. Trade and transport corridors are important aspects of access in terms of the way they facilitate access to essential goods, the positive impact that more trade harmonisation and effective trade and transit have on lowering the prices of goods, and to facilitate access to local, regional and global markets for goods produced in rural areas. Freight transport costs for LICs in Africa can be more than 4 times higher than in Asia, with passenger fares 2-3 times higher. The Vienna Conference on Land-Locked Countries noted that, *'the estimated time that landlocked developing countries take to import has decreased from 57 days in 2006 to 47 days in 2014 and to export from 49 to 42 days, that it is still almost twice the time taken by transit countries. The average cost of exporting a container for landlocked developing countries is estimated at $3,204, compared with $1,268 for transit countries, and similarly $3,884 compared with $1,434 for importing a container'*. This reduces competiveness, trade and economic growth, locking poverty in to countries that need trade and growth.[KP16]

The first Sustainable Transport objective focuses on achieving **"access for all"**. Equal weight is given to passenger and freight transport and will ultimately improve economic and social opportunities for rural residents and their nations by 2030.

[9] Transaid have a resource for IMTs, Joseph Haule to provide

[10] RECAP/CSIR work on climate vulnerability of rural roads

Explicit reference to Rural Access in international and national fora is crucial in defining actions, targets, indicators and achieving progress.

[KP17]

Female economic empowerment
Section to be drafted on Female Economic Empowerment (FEE) and rural transport.

http://www.womenseconomicempowerment.org/

> **TEXT BOX:** Section to be drafted on FEE and rural access with text box to highlight specific equity issues

Trends in Rural Access:

Although the majority of international dialogue on transport focusses on urban and low carbon transport the domestic budgets of nations and also the lend profile of Multi-lateral Development Banks (MDBs) is still strongly weighted to rural transport where the majority of the populace in low-income countries (LICs) still live.

> **TEXT BOX:** Need figures here on lend and domestic spend, useful to have ratios of rural to urban.

Additional text on: innovative technology, vehicle technology, data, digital, two wheel motorized vehicles, water transport, IMT, needs of pedestrians, local trade costs.

Existing rural transport indicators and data[11]

New section on existing data and indicators will be drafted by end April 2017.

> ***Principles in setting rural access indicators:***
>
> - *Indicators and sub-indicators should align, where possible, with existing internationally recognized indicators and data collection methodologies. This also applies for additional and supporting indicators*
> - *Indicators should be simple, measurable, easily communicable, and should not be data-hungry.*
> - *Indicators and supporting indicators (like quality of roads, effective regulatory regime and all season road) need to be well defined*
> - *Indicators should be fit for purpose.*
> - *Indicators should be able to identify bottlenecks that lock into poverty.*
> - *Indicators should promote standardising procedures on impact evaluations and technical audits on rural access.*
> - *The main or primary indicators should be at the impact level (eg accessibility RAI), the supporting or additional indicators are likely to be a mix of output indicators (e.g. rail lines (total route – km)) and input indicators (eg expenditure in transport).*

[11] V

Existing rural transport indicators:
This section will be a summary of existing indicators and data available to inform choice of rural access indicators.

It will include[KP18]*:*
i) SDG 9.1.1 – Rural Access Indicator (RAI) noted as Tier III (i.e. low global coverage). DFID / WB to propose an action plan to raise RAI to Tier I or Tier II within a reasonable time frame.

ii) WDI - http://data.worldbank.org/indicator (Rail Lines (total route-km); Container port traffic (TEU: 20 foot equivalent units); Logistics performance index (overall 1=low, 5 = high); Investment in transport with private participation (current US$).

iii) Vienna LL~~L~~DC convention 2014

iv) G8 commitment 'to cut bureaucracy at international borders by reducing port dwell time (e.g. from 9 to 5 days by 2017 (NB is this specific to Tanzania?)[12]

Rural Access Indicators

The indicators are informed by existing data and, where possible, aligned with existing, internationally recognized indicators. It is crucial to agree indicators that are simple and measurable. We suggest five areas of focus for the Rural Access Indicators[KP19]:

i) Access of poor people to rural transport
ii) Freight transport and its relation to trade
iii) Maintenance of rural transport
iv) Data and innovative technology
v) Rural transport financing

Additional detail is given in the following sections[KP20].

i) Access of poor people to rural transport

In many LICs and LMICs countries, rural roads and rural access roads are often narrow and do not provide all-season access.

[12] Joseph Haule to provide information on port dwell times for Tanzania

The lack of all-season roads is especially problematic in countries with rainy seasons, when low volume roads often become impassible by tractors, on motor-bike or even non-motorized traffic (NMT) (bicycles or animal-drawn carts). This difficulty locks people into subsistence farming as markets become regularly inaccessible. The poor quality of rural roads also result in significant damage to produce en route to markets and so reduces it value and the income to the farmer.

Access to essential social services, such as health care and schools is particularly limited for poor people (especially women and children).

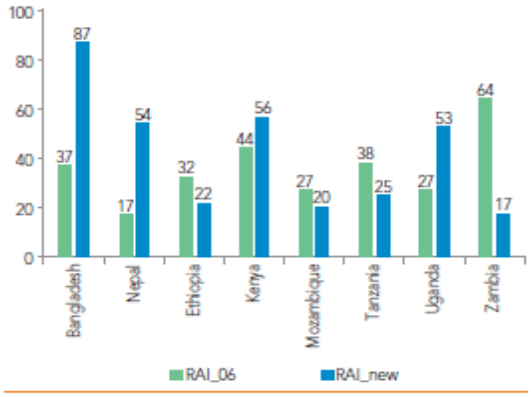
In order to be sustainable and fit-for purpose rural access networks must have: political support at all levels (from national government to village); access to whole-life cost budgets; be local resource based in terms of construction and maintenance materials and the practitioners who design the roads; appropriate contractors, labourers or villagers who will construct and maintain them.

An appropriate mix of labour based methods and machine based contracting should be encouraged in constructing and maintaining rural roads. Emphasis should be on fitness for purpose without considering lower tech, e.g. gravel/earth roads as being "bad" by default and sealed roads as being "good". For instance, a well built and maintained earth/gravel road with appropriate strengthened sections is fit for purpose in the appropriate environment.

Current and future climate threats pose a significant risk to rural access[13]. Low volume roads can be justified if they are designed, constructed and maintained using low-cost methods. This makes low volume roads more vulnerable to climate risk than high volume roads which typically have adequate climate related structures, such as drainage facilities, making them less prone to damage due to increased intensity of rain and floods. Risk assessment and prioritising of climate strengthening are crucial issues which must be dealt with in the Green SuM4ALL Goal.

The SDG's measure progress on rural access using the **Rural Access Index** (RAI)[14]. The RAI measures the percentage of the population <2km from an all-season road. Based on 2006 estimates of the RAI (using household surveys), only 68.3 percent of the global population had access to an all-season road within 2km—leaving around 1 billion people without access to transport.[KP21] DFID has initiated and funded the World Bank to re-examine the RAI and update the methodology.

Figure 2: Comparison of Original and New RAI Results



[BOX ON RAI METHODOLOGY WORK].

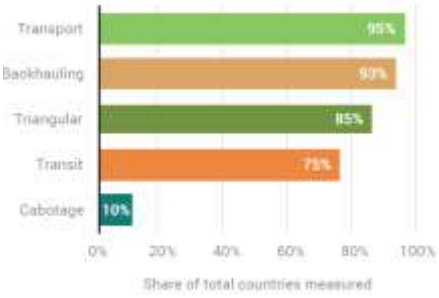
The existing RAI methodology relies on household level survey data and has low global coverage. DFID have funded the World Bank to re-examine the RAI methodology. The first phase of this work was applied to eight pilot counties: Ethiopia, Kenya, Mozambique, Tanzania, Uganda, and Zambia in Africa, and Bangladesh and Nepal in South Asia.

Rural access varies significantly across these countries, from 17 percent in Zambia to 56 percent in Kenya. In total, it is estimated that about 34 percent of the rural population in these countries is connected, with roughly seven million people left disconnected. DFID is exploring further development of the RAI methodology with a final methodology agreed by March 2018.

The UN Statistical Commission and the Inter-Agency Expert Group (IAEG) support the RAI for inclusion as one of the SDG indicators (9.1.1). The low global coverage of the RAI has resulted in the UN Statistical Commission ranking RAI as a Tier III indicator. The above updated methodology and increased coverage of the RAI will be a crucial part of tracking the Rural Access Goal and in raising the RAI to Tier I or Tier II.

ii) Freight transport and its relation to local and regional trade

High transport costs decrease competitiveness at local, national, regional and global levels. Rural transport regulations in-country and cross-border have a significant impact on freight costs and trade at a local and regional level.



There are many examples of Low-income countries where weak regulations for cross-border transport limits foreign transport operators in the domestic market[15].

The Vienna Conference on Land-Locked Countries noted that, *'time land-locked developing countries take to import has decreased from 57 days in 2006 to 47 days in 2014 and to export from 49 to 42 days, that it is still almost twice the time taken by transit countries. The average cost of exporting a container for landlocked developing countries is estimated at $3,204, compared with $1,268 for transit countries, and similarly $3,884 compared with $1,434 for importing a container ..'*. [KP22]

> The International Road Transport Union's (IRU) New Euro-Asian Land Transport Initiative (NELTI), which monitors the transit of trucks along major international transport corridors connecting Europe and Asia found that more than 40% of the time trucks spend en route is spent at border crossings. This highlights the importance of harmonisation measures at border crossing points. NELTI has also captured data on the impact of illicit payments on transit in the region, which has significant economic impact.

Transaction costs have been reduced considerably with the introduction of one stop border post in East Africa promoted and supported by Trademark East Africa; a project co-funded by AfDB, DFID and World Bank[16] . As a result of harmonised customs procedures and IT infrastructure, customs clearance time has been reduced in some instances from one week to one day.

Costs per tonne / km are highest in the first few miles from farm to market. There are far fewer programmes detailing these costs and mitigating the problems. Reduction in these costs is crucial to

[15] Based on the Enabling the Business of Agriculture survey of 40 countries, 95% countries (say country X) allow trucks transport rights—transport rights mean that a truck registered in country A is allowed to transport goods produced in its country to country B for sale. 75% allow transit rights—having transit rights means that truck registered in country Y is allowed to travel through country Z to deliver goods in country X. Very few countries—only 10% allow for cabotage rights—having cabotage rights mean that a truck registered in country A is allowed to pick up goods in country B and transport them to a different point in country B.

[16] Reference and link : www.trademarkea.com

tackling rural poverty. This will be explicitly measured by a supporting indicator for the principa~~l~~e freight indicator.

A principa~~l~~e indicator on freight costs will have sub-indicators on short and long distance transport; on transit times and transaction costs along major (LLDC?) corridors; effective regulatory regime for commercial transport and port dwell times.

iii) Maintenance of rural infrastructure and transport facilities

Maintenance, rehabilitation and the provision of infrastructure are key issues in the asset management of rural transport networks. The benefits of low cost, but appropriate RTI is well documented[17]. Selection of appropriate treatments should focus on achieving the target (transport access) objective at minimum cost, with prioritization based on cost-effectiveness, e.g. per head of population served. At higher traffic levels, conventional cost benefit analysis applies.[KP23]

A number of studies have also supported a minimum annual expenditure for asset preservation purposes, i.e. to cover routine and periodic maintenance, of the order of 2 to 0.5 per cent of the asset value per year[18]. Furthermore, whereas budgeting for the provision of an all-weather surface is usually well understood by practitioners, drainage provision is often under-funded. Addressing this and the needs of water-crossings often attracts insufficient attention, and should be accounted for in both provision and maintenance. The backlog of works is also considerable, and renders routine maintenance ineffective if not addressed. Suitable indicators should therefore address both provision and maintenance.

The challenge of ensuring that local and national governments assign sufficient resources requires consideration of alternative, innovative approaches to financing. An example which is gaining popularity includes the use of results based on-granting, which provides funding or a contribution based on achieving specific quality-based outcomes.[KP24] Specific components of such a funding model may include incentive payments for good governance, including establishing greater community involvement, transparency, ensuring safeguards are adhered to and that the planning, programming and budgeting processes are supported by well-informed procedures and systems.

Supporting indicators will include:

i) Maintenance input indicators for infrastructure will be based on experience of good practice as a percentage of the asset value or be extended to include indicators such as the % Asset Value v GDP[19].

ii) Maintenance of transport equipment (i.e. availability of workshops to repair motorcycles and other NMT~~s~~ equipment) is more difficult and we are assessing the feasibility of this as a supporting indicator.

It is important to maintain a focus on appropriate standards and technology ensuring these are fit for purpose. Human capacity on maintenance is critical and in decline. [KP25]

TEXT BOX: human capacity and maintenance

(from ARRB)

[17] Lebo an
[18] Wood a
[19] See ADB and other studies. Data available

iv) Data and innovative technology

Overall the rural transport sector has a paucity of data and indicators. This means that it is not easy to assess the impact of investments nor learn from them for the future. The new and innovative technologies now available mean that, with the correct focus and indicators, the sector could leap-frog to a situation where it is well monitored and impacts are better understood more quickly.

The applications of some of these new technologies such as high resolution satellite imagery, crowd sourcing information, OpenStreetMap, drones, road condition analysis apps for smart phones, etc, could be rapidly developed to assist the rural transport sector to be more effective in decision making and in the impact of transport investments.

IRU-NELTI have found that collecting data by operators has proven to be effective and delivers highly accurate and reliable information on which to base indicators.[KP26]

v) Transport financing

Note: This section is to be further developed if appropriate once content of other goals (Green, Efficiency, Safe) is clear.

A long standing bottleneck for rural transport investments has been limited project preparation activities and a constrained project pipeline. The amount of investment in rural transport infrastructure and services needs to dramatically increase [to improve access for a larger percentage of the population][20]. Innovative funding mechanisms will be essential to meet the transport investment needed for the SDGs.

There are innovative funding mechanisms on both asset management and construction of rural roads and transport services that have been proposed[21][KP27].

(Some new funding and approaches to contracting focus on results, with reimbursement based on strict verification, audit conditions and pre-financing. The aim is to address governance by rewarding achievements not paying on inputs[22].)

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[i] International Energy Agency, 2013 Key World Energy Statistics, page 33, http://www.iea.org/publications/freepublications/publication/KeyWorld2013_FINAL_WEB.pdf

[20] Increase by X% (ref) Financing For Development data and from billions to trillions

[21] Dieter Schelling and Christina Malmberg: reference from Joseph Haule

[22] Reference

Preliminary DRAFT 14/03/2017

ANNEX 1 : RAWG SUGGESTED TARGET, DATA AND INDICATORS

Principles for indicator development:

1) Indicators and sub-indicators should align, where possible, with existing internationally recognized indicators and data collection methodologies.
2) Indicators should be simple, measurable, not data-hungry and easily communicable.
3) Indicators and supporting indicators (like quality of roads, effective regulatory regime and all season road) need to be well defined
4) Ensure indicators are fit for purpose. [What locks people into poverty is bottlenecks which when appropriately addressed allow accessibility to economic opportunities. Can we get such data easily?] When we conduct technical audits we measure value for money spent and in so doing we also ask auditors to tell us whether the intervention fitted the purpose. We should start to promote standardizing procedures on impact evaluations and technical audits to enable data to be collected on an annual basis.
5) Need to agree how many indicators are required to measure rural transport access (in the narrative above DFID have suggested four indicators). The format for the GTF suggests that there will be a set of (main) indicators and then supporting indicators at a lower level. This is how I have structured the below tables for RAWG input and comment. I suggest where possible the main indicators are at the impact level (e.g. accessibility (RAI)) and the supporting indicators are likely to be a mix of output indicators (e.g. rail lines (total route – km)) and input indicators (e.g. expenditure on rural transport infrastructure and services (US$)).

Objective: Access for all rural residents to transport by 2030. **Target:** *Question: do RAWG want to have an already agreed international target here? Or RAWG member suggested*: Achieve integrated and accessible network of transport infrastructure and services for all rural residents.	
Indicator 1:	**Rural Access Index (RAI): *% of the population <2km from an all-season road*** [i] ***.(SDG 9.1.1) or 100% household villages <2km from an all-season road***
Methodology:	• RAI – a new methodology is currently being developed through funding from DFID. This will utilise satellite imagery technology and ensure we are able to have increased global coverage.
Source:	• http://www.research4cap.org/Recap-news/Lists/Posts/Post.aspx?ID=38

Current status:	• New RAI methodology under development through DFID funding ReCAP and WB • The UN Statistical Commission and the IAEG-SDGs have given assurance that the RAI will be proposed by the Statistical Commission as one of the 10 transport-related indicators to monitor the SDGs and for ECOSOC/General Assembly endorsement. However, this indicator has been categorized as Tier III (very low global coverage). The World Bank is currently the custodian agency for this indicator. The WB has been asked to submit an action plan to ensure that this indicator becomes Tier I (or II, i.e., has a global coverage) within a reasonable period of time.
Next steps:	• To fully develop the revised methodology for the RAI through use of innovative technologies and methods (need timeframe and action plan); to disaggregate this indicator by gender and age. • To define 'safe, reliable, affordable transport services' (e.g. incorporate share of household income spent (affordable), effective regulatory regime (reliable))

Supporting Indicators:

1A. % beneficiaries that are female in additional indicator 1

1B. Rural passenger transport US$/km (would need data for short distance and long distance trips – US$ per km)

1C. National passenger mode shares by sustainable transport {SDG 9.1.2}

(1D moved to maintenance supporting indicators)

1E. Effective regulatory regime for commercial transport services **or** absence of barriers (regulatory or institutional) to entry into the transport services market

1F. Rural transport services indicator: *Share of rural roads in 'good condition' (as defined by new RAI) that are served by safe, reliable, affordable transport services)*

(1G moved to maintenance supporting indicators)

1H. % of household trips by public transport/NMT

Indicator 2:	Need indicator wording: Freight transport and its relation to trade: Suggestion: Transit times and costs along major (?LLDC?) transport corridors reduced by X% (?and 10% increase in average annual real growth in total trade?) **or** Reducing rural freight transport costs (by Y%) and time (by X%) ~~and developing essential infrastructure~~
Methodology:	• (Pending group discussion to finalize formulation of indicator)
Source:	•
Current status:	•
Next steps:	•

Supporting Indicators: 2A. Rural freight transport US$ / tonne – km (would need data for short distance and long distance)	
2B. Vienna UN Conference on LLDC: Number of days to export / import and reduction in this or % increase average time / cost to export from LLDC in relation to transit country	
2C. National passenger mode shares by sustainable transport {SDG 9.1.2}	
2D. Effective regulatory regime for commercial transport services	
2E. G8 Commitment : to cut bureaucracy at international borders by reducing port dwell time (e.g. from 9 to 5 days in Tanzania) 2F. WDI: Rail lines (total route – km) 2G. WDI: Container port traffic (TEU: 20 foot equivalent units) 2H.WDI: Logistics performance index: (overall 1=low, 5=high) 2I. % farms / markets accessible by all-season road	
Indicator 3:	Need indicator wording: Maintenance of rural transport infrastructure
Status of methodology:	• (Pending group discussion; see also 'Next steps' below)
Source:	•
Current status:	•
Next steps:	• To define 'effective maintenance regime' (e.g. dedicated funding streams, participation of national government and local community and workforce)
Supporting Indicators: 3A. Domestic ratio of spend on maintenance Vs spend on construction ~~in X focus countries~~	
3B. (from 1D) Rural road condition and maintenance indicator: *Share of rural roads in 'good condition' (as defined by new RAI)* **or** proportion of the classified road network in good or fair condition	
3C. (from 1G) X million days of employment annually for poor or disadvantaged people in rehabilitation and maintenance of rural roads	
3D.	
3E. 3F.	
Indicator 4:	Need indicator wording: [Break into two indicators] **Indicator 4:** Data, innovative technology **Indicator 5:** Rural transport financing
Status of methodology:	• (Pending group discussion following final formulation)

Source:	•
Current status:	•
Next steps:	•

Supporting Indicators:

4A. Data improvement, % impact evaluations [?]

4B. % ownership of handheld devices in rural areas (potential for innovative technology use)

4C. % of rural roads monitored by ICT

5A. % of country road funds spent on rural (vs. urban) roads, paths, footbridges, etc

5B. WDI: %investment in rural transport with private participation (current US$)

5C. % rural roads infrastructure investment spent on project preparation

5D. % rural roads infrastructure investment spent on resiliency measures

5B.

ANNEX 2: **INDICATORS - RURAL ACCESS**

Note: This table is directly copied from SuM4ALL GTF :Draft Information Note: 21 Feb 2017 for ease of comparison:	
Objective 1: Universal Access	
Ensure "universal access" to jobs and markets by 2030. **Target:** To be determined	
Principal Indicator	
% of national population with access (tbd)	
Additional Indicators	
1. % of population who live within 2 km of an all-season road {SDG 9.1.1}	2. % of urban population that has convenient access to public transport {SDG 11.2.1}
Supporting Indicators	

1A. % beneficiaries that are female in additional indicator 1	2A. % beneficiaries that are female in additional indicator 2 {SDG 11.2.1}
1B. % of household expenditure on transport services (rural)	2B. % of household expenditure on transport services (urban)
1C. National passenger mode shares by sustainable transport {SDG 9.1.2}	2C. % of jobs accessible within 60 minutes by public transport or NMT
1D. Quality of roads	2D. Daily passenger mode shares by sustainable transport (urban) {SDG 9.1.2}
1E. Effective regulatory regime for commercial transport services	