**Proposal for Session on Collecting, Managing, and Using Big Data for Improving Road Safety in Africa**

**For the United Nations Economic Commission for Africa**

High quality, complete, and timely accident data are needed to analyse and understand the occurrence and causes of accidents and injuries, and to develop adequate policy responses to prevent them. A prerequisite for developing a well performing policy response is the collection, classification and interpretation of accident data, and its storage in an easily accessible database. Such databases can be used to determine or monitor the priorities for research and interventions.

The two most important categories of accident databases are:

* General accident databases, usually based on police records, hospital data or insurance company databases, and
* In-depth databases with data from actual crash investigations.

General accident databases contain information on large number of accidents, but the information for each accident is limited. In-depth databases contain detailed accident data, but are often limited to a small number of accidents.

In low and middle income countries, however, the data in both types of databases does not inspire confidence, in fact there are good reasons to believe that traffic fatalities and accidents are seriously underreported. To give an idea about the problems of data, even the number of reported traffic fatalities, on a country basis, differs between the the IHME/World Bank 2014 and the WHO 2013 data. The differences, however, between the national country statistics and the WHO 2013 and IHME/World Bank 2014 data are even larger. For example, in the case of China, the IHME/World Bank 2014 study showed an underreporting of more than 300% for the official country data when compared to the Disease Surveillance Points based data.

The problems with data on road safety are by now well recognized. In 2004, the World Health Organization (WHO) and the World Bank jointly launched the World report on road traffic injury prevention where they identified the need for accurate reliable accident data systems in order to allow countries to develop evidence based road safety strategies. In 2011, the United Nations Economic Commission for Africa (UNECA) presented the African Action Plan as part of the Decade of Action for Road Safety. In this plan UNECA explicitly identified the Improved Management of Data as one of the expected accomplishments of this African Action Plan. In order to achieve this, the African Action Plan called for:

* Developing and implementing a sustainable and accurate national database on RS crashes;
* Enforcing mandatory reporting, standardizing data in conformity with international definitions, and provision of sustainable funding;
* Developing a National Crash Analysis and Reporting System in each country in Africa;
* Harmonizing data format in road crash reporting in line with international standards;
* Harmonizing vehicle and driver registration data system. Build capacity for data management on road safety Engage local and regional research centers on road safety data management;
* Establishing/strengthening and harmonizing injury data system to be recorded by Health Facilities; and
* Establishing a baseline data on road safety.

While the problems with the data on road safety have been recognized, not much has been done to remedy the situation. The road safety situation also remains critical; in most countries in Africa, the number of traffic fatalities per km-driven, or per number of cars, is still increasing. Worryingly, as the number of vehicles increase, and the road networks become better and their coverage increases, unless something is done soon, the situation with regards to road safety is going to become much worse. Going forward, it is imperative that the situation with regards to road safety data be given priority, provided adequate resources, and remedied as quickly as possible.

Dealing with the road safety problem in Africa will require better data and information about the occurrence, causes, location, and impacts of traffic accidents This session is on the collection, management, analysis, and use of road safety data to help develop policy that improves road safety.

The data to support policy making to address road safety should include, at a minimum, data and information on:

* Quality, design, and state of repair of the road network
* Facilities for pedestrians and non-motorised transport
* Composition, condition, and age of the vehicle fleet
* Volume and mix of traffic on the road network (as well as usage of the infrastructure facilities for pedestrian and non-motorised transport)
* Location, possible causes, results of accidents

With regards to the road infrastructure, many African countries have set up what is called an asset register to collect data and information on the quality, design characteristics and state of repair of the road network. What is often missing is the data on the composition and condition of the vehicle fleet, the volume of traffic on the road network, and crash investigation data. Thus, in this session we will cover these topics.

**Session Objectives**

This session aims to do the following:

1. Underline the need and benefits of collecting, analyzing, and using data to support policy making, making investment decisions, determining policy priorities and objectives, evaluating project feasibility, and the performance of policy and actions;
2. Highlight new approaches and technologies for collecting road safety data;
3. Identify institutional, regulatory and financial arrangements barriers for collecting, analyzing, and using data; and
4. Present a road map for collecting, managing, and analyzing data to develop better policy.

The session will be divided into four parts:

1. Making the case for collecting data
2. New approaches and technologies for collecting data
3. Institutional and financial barriers to collecting, managing, analyzing, and using road safety data
4. Road map for improving road safety data in Africa

**Theme 1: The need for good quality data.** This theme will highlight the role of data in supporting the making of transport policy, doing transport planning, making investment decisions, evaluating project feasibility, and the performance of policy. Furthermore, it will assess the quality of available data to support the above needs and identify gaps in the currently available data.

2 Speakers (30 minutes)

Speaker 1 – Makes the case for collecting better road safety data

Speaker 2 – Best practice in data collection and how it has helped in realizing the policy objectives, improved operations, and helped to make the sector more efficient.

**Theme 2: New approaches for collecting more and better road safety data.**  A variety of new technologies such as smart phones, GPS, internet, etc., can be used to collect more and better data, and do this more cheaply, than what has been previously possible. In this session, these new technologies and their applicability in the Indian context will be discussed.

3 speakers (total 45 minutes)

Speaker 1 – Overview of new data collection methods and approached, along with the pros and cons, costs and benefits (Adnan Rahman, Vice President IRF)

Speaker 2 – Case study 1 - Future Mobility Survey (Moshe Ben Akiva, Turner Endowed Professor of Transport Engineering, Massachusetts Institute of Technology)

Speaker 3 – Case study 2 – Collecting crash investigation data (Someone to present RADAR)

**Theme 3: Barriers for collecting, managing, analyzing, and using road safety data**

2 speakers (total 30 minutes)

Speaker 1 – Current situation with regards to road safety data collection, management, and use in Africa

Speaker 2 – Legal, financial and institutional barriers

**Theme 4 - Road map for implementing a national data collection strategy.** Collecting data on transport and mobility on a national scale will require new organisational, regulatory and financial arrangements. This theme will address the issues associated with data collection using these new technologies, outline various options for dealing with each of these issues, and define a road map for implementing a national data collection strategy.

**Panel Discussion (30 minutes) (Particpants to be decided)**