

KEYNOTE ADDRESS
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Greetings and welcome to the First Road Transportation Technology Transfer Conference in Africa. I feel privileged and greatly honoured for the opportunity to address you today.

Introduction: Transport is central to development. Without physical access to jobs, health, education and other amenities, the quality of life suffers. Without physical access to resources and markets growth stagnates and poverty reduction cannot be sustained. However poorly designed and implemented transport systems can result in networks and services that aggravate the conditions of the poor, harm the environment, ignore the changing needs of users, and exceed the capacity of public finances. There is therefore a need to use the best possible technologies in order to improve both provision and maintenance of transport infrastructure and to improve the provision of transport services using that infrastructure.

Technology Transfer which is the subject of this conference can be defined as any process by which existing research findings or new technology are transformed into useful processes, products or programmes. Commonly used methods for technology transfer include seminars, workshops, newsletters, videotapes, short courses, publications, internet web pages and hands on demonstrations. The goal of technology transfer is to improve access to road technology for the relevant highway authorities.

Transportation Knowledge Sharing: The reality of global technology transfer efforts is that resources are limited. However innovative technology continues to make great strides. Given this dichotomy of the wealth of continuing innovation and global access to that wealth, the challenge is to help transportation authorities reconcile their transportation vision with their technical reality. Thoughtful application of available and emerging communication technology and enhanced cooperation with transportation partners may supply the answer.

Many national road agencies and road associations house a wealth of technical information. Establishing electronic libraries that house documentation of good practices, procedures, and research implementation reports dramatically speed-up the technology transfer process. These libraries serve the dual purpose as a resource for those seeking access to the latest developments in transportation, as well as a mechanism for the transportation community to record and share its specific knowledge.

With the existing technology transfer network and a shared global vision, we as transportation managers have the common professional goals and communication technologies to accomplish the *transfer* aspect of our mission. We must use them to help create this community of interest, a community that shares our interest and commitment to effective technology transfer and improved roads and transportation networks worldwide.

Technology Transfer Centres Worldwide Network: A shared vision of interconnected technology transfer catalysts is certainly not a new one. The World Road Association (PIARC) and other international and national organizations have been instrumental in

putting together the various pieces of the puzzle. Tanzania is a founder member of the World Interchange Network (WIN) and was represented at the Casablanca meeting in 1994. WIN is a network of local technology transfer centres in nations and regions that identify and develop or adapt technology to meet specific local conditions. The World Bank under the Road Maintenance initiative has established a network of information exchange known as Sub-Saharan Africa Road Information Network (SSARIN). Typically such centres are located within existing organizations, these autonomous centres access information resources and expertise through existing national and international transportation partners to provide cost-effective training assistance and hands-on practical experience. They use available communication technologies, phone, fax, Internet, E-mail, and the Worldwide Web--to identify resources, technologies, and best practice within other nations and regions. Locally, these centres build a clear working relationship with their own governmental transportation ministries/departments, related authorities, and private sector partners.

Ample opportunities currently exist within which to coordinate and cooperate. There are scheduled conferences of worldwide road institution and sessions where centres' initiatives and their progress are recognized. For example, at this first T2 conference in Africa, and the upcoming International Symposium on Transportation Technology Transfer in St. Petersburg, Florida centre coordinators/managers from around the world will participate thereby further encouraging global technology cooperation.

Technology Transfer in Sub-Saharan Africa: We believe that a network of transportation Technology Transfer centres can contribute to creating the conditions for sustainable development, facilitating foreign direct investment and enhancing the flow of international trade with and within Sub-Saharan Africa. The approach used so far in setting up such centres in sub-Saharan Africa is based on the Local Technical Assistance Programme (LTAP) model in the United States of America. The experience of the United States, as we understand it was those, resource imbalances that favoured major urban areas and interstate highway systems came at the expense of rural areas and smaller municipalities. To ensure that these rural and local road agencies have access to the range of technologies from cutting edge to best practice, LTAP was created. Today the process that began with ten centres in 1980 now has 57 centres, one in each state, one in Puerto Rico and six for American Indian tribal governments. These centres are generally located at State Highway Agencies (SHAs) or universities. All 57 centres share common characteristics that have been adopted for use around the world.

The LTAP system has proved to be a useful model for locally oriented technology transfer programs. LTAP has been adapted for technology transfer initiatives by other nations undergoing intensive development of their own transportation infrastructures as part of broader advances into worldwide commerce and trade. These include a well-established network in the Latin America through the Pan American Institute of Highways, the Baltic Nations, and Eastern Europe, South Korea and is now being used to develop the T2 centres in Sub-Saharan Africa.

The success of the LTAP network of T² centres in The U.S.A is due to the following:

- Provides a unique platform, a process, for systematic technology and information transfer that meets specific local transportation requirements and takes advantage of local expertise.
- Locates T² centres within existing transportation-related institutions.

- Enables centres to function independently.
- Involves public and private transportation partners who share a concern for developing a knowledgeable, productive workforce.
- Enhances the free exchange of information among the centres that are points of contact for their own constituents, and each centre assists others in the LTAP network.

In Sub-Saharan Africa this approach has already reaped great benefits with the establishment of T² centres in South Africa (National Roads Agency, the Province of KwaZulu-Natal and CSIR), Tanzania, Zimbabwe and Malawi. Others are the soon to be centres in Botswana, Zambia, and Namibia and the auspicious hosting of this first T2 conference in Africa. These centres focus on improving access to information on institutional issues, best transportation technologies and practices, training, and enabling the private sector to participate in infrastructure development.

There are several viable and growing technology transfer networks around the world. Modern communications technology and age-old interpersonal communication cooperate to deliver the messages faster and better. Technology transfer is increasingly maturing into technology *exchange* relationships. Knowledge management is not a one-way street. The demand for information will always exceed our ability to supply it at any given moment. However the aggregate of all our experiences that we can share does and can continue to yield benefits to all of us.

We here in Sub-Saharan Africa believe that the countries and regions not currently endowed with technology transfer networks will recognize the value of these intellectual property assets and will begin leveraging their own resources to share in, and contribute to the fruits of this endeavour. The centres in the Southern Africa Development Community are eager and available to share and contribute our knowledge and expertise to those who seek it. The hope remains that someday we will all have technology transfer centres and networks that serve our transportation communities, partners, and clients. Ultimately, the various networks will build on their regional strengths and momentum to band into a viable network of networks – **the international technology transfer centre network**. With commitment and ingenuity, this is an attainable goal.

Conclusion: From previous speakers we have heard about the T² centre in Tanzania, about its success and expectations for the future. In the coming sessions we will hear more about this and other centres in the region. While acknowledging the value of efforts devoted until now, it is important to recognise the difficulties that still exist and are likely to affect the development and influence of the T² network. These difficulties are not only in regard to the strategic orientation and modes of operation of the centres but also in terms of funding and the commitment of the users. Briefly these can be stated as follow:

- Inadequate financial support, which results in very limited interventions and services being offered by the centre to its clients. Development and promotional activities are also slowed down.
- The weak recognition of the centre by the major national organisations in the road sector, which scarcely helps to establish its credibility and hinders its promotion.
- Lack of commitment and action by the majority of the centre's potential users, this has repercussions on the centre's influence and ultimately on its financial stability.

- The periodic criticism, founded or unfounded of the secretariat by some, regarding staff size, organisation structure and operating cost and accusation of creation of another bureaucracy.

The list of difficulties is by no means exhaustive, but it serves to point out that there can be no successful technology transfer without clear identification and expression of needs by beneficiaries. One important task for this conference will be to come out with possible solutions to the problems encountered by the T² centres that have started operating in the region to date.