

Outline of “ITS Guideline for Sustainable Transport in Asia-Pacific region”

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Section 1 Introduction

The purpose of this ITS Guideline for Sustainable Mobility in Asia-Pacific region is to provide the reference for policy makers in Asia-Pacific region to develop their own ITS Master Plans. ITS Master Plan is an essential prerequisite for each region to get consensus of and support from the concerned people and organizations including public sectors, private sectors and academia as well as the concerned international organizations.

We made this ITS Guideline based on the discussions at the past Regional Workshops on ITS held by collaboration with Asian Development Bank Institute with the support by ITS Asia-Pacific Board of Directors. The 1st Workshop was held in Tokyo in March, 2010 and the 2nd Workshop was held in Tianjin in July, 2011.

Summary of the discussion of the workshops is describes as follows,

> Common recognition of the transportation in Asia

- Rapid growth of traffic demands accruing rapid population and economic growth exceeded that of infrastructure development in many cities and regions of Asia.
- Though Intelligent Transportation System(ITS) has been already recognized and introduced as a vital tool to solve safety and environmental problems in many Asian countries, it's not always successful.

>Important points of introducing ITS for developing countries

1. Financing system

2. Capacity Development

3. To formulate national policy on ITS deployment including establishing national technical standard of ITS.

4. To benchmark progress of ITS to facilitate flexible introduction of the system tailored to local

conditions.

Section 2 Outlook

This section will describe the present status of transport and ITS in each countries/areas in AP.

Section 3 Approach to transport problems

This section will explain the fundamental transport (road traffic) problems such as congestions, traffic accidents and environmental pollution, and the potential causes of those problems. The potential causes may include city design, road network, road structure, road facility, traffic signal control, legislation, education and capacity development.

It will present the common transport issues in Asia-Pacific region which were introduced at the Workshops. Then, it will discuss the necessary approaches to deal the problems depending on the cause.

It will discuss the possible areas and conditions that ITS can exercise the ability to solve or mitigate the problems.

Section 4 Role of ITS and its applications

This section will describe the role and applications of ITS. This section will explain each application of ITS corresponding to the transport problems such as congestion, traffic accident and environmental problem as shown in the following matrix.

	Traffic information	Signal control	ETC/ERP	BRT	Multimodal	----
Congestion	✓	✓	✓	✓	✓	
Accident		✓				
Environment	✓		✓	✓	✓	

In addition, how to solve the transport problems by each application of ITS will be described. Furthermore, the new innovative methods such as utilization of probing data and mobile devices as well as conventional methods will be explained.

Section 5 Benefit and evaluation of ITS

This section will explain the type of benefits and also how benefits are evaluated. It will exemplify benefits of each application of ITS shown in Section 3, referring the real experiences in field. The benefit may include saving time, saving accident controlling

emission and others. The evaluation may include quantitative and qualitative ones.

It will also discuss that ITS is effective as evaluation tool to monitor the traffic situation and identify the potential causes of the problems in off-line.

Section 6 Conditions for development and deployment of ITS

This section will explain the important conditions for the development and deployment of ITS in especially developing countries. Those may include the issues of financing support, standardization, capacity development, and policy making which were raised at the workshops.

Financing is the issue includes a question on financial source and one on social and economic justification to introducing ITS in developing areas. ITS Master plan of introduction of ITS including evaluation of ITS are missing. This is another reason why developing countries are losing opportunities of ITS investment.

Standardization is an important process to ensure sustainability, compatibility, expandability and also cost effectiveness of introduced ITS. Building required standards is a challenge as it requires vast knowledge on technical options, coordination among stakeholders, and a vision to achieve varying objectives with one standard. Using and feeding international standardization process such as ISO helps countries to build national standard in an effective and fair manner.

Capacity development is a must for acceleration of ITS deployment in countries. Although there can be many forms capacity development, emphasis should be placed on the need to combine bottoming-up level of awareness and expertise of urban and transport practitioners.

Appendices

The detail description of each application of ITS in Section 4, and the information on the benefit as well as evaluation in Section 5 will be attached in appendices.