Understanding the Benefits and Costs of Intelligent Transport Systems - A Toolkit Approach

GUIDANCE LAUNCHED TO HELP AUTHORITIES UNDERSTAND THE BENEFITS AND COSTS OF INTELLIGENT TRANSPORT SYSTEMS
**INTRODUCTION**

New guidance has been published which aims to complement the previously published ‘New Technology in Transport - Improving Network Management’ resource pack and the Department’s Guidance on Transport Analysis, which provides specific advice on:

- the selection of ITS tools to meet policy objectives;
- the benefits & costs of ITS deployment;
- what others have done to incorporate ITS within transport plans; and
- lessons learnt from their experience.

The Guidance, ‘Understanding the benefits and costs of Intelligent Transport Systems: A toolkit Approach’, is aimed at decision makers who identify strategic goals to help achieve local and national transport objectives, and transport planners who undertake the more technical aspects of a project, fulfilling the decision maker’s strategic requirements.

Together these documents will help authorities assess the business case for investment in ITS and identify how best to use ITS to meet their own, local challenges, and further supports the recently issued LTP guidance (Second Edition - December 2004).

**THE CHALLENGE FOR LOCAL AUTHORITIES**

As transport networks become more congested, and new highway construction recedes as a sustainable long-term solution, there is a growing need to adopt policies that manage demand and make full use of existing assets. Advances in information technology are now such that “intelligent transport systems” (ITS) offer real possibilities for authorities to meet this challenge: by monitoring what is going on, predicting what might happen in the future and providing the means to manage transport proactively and on an area-wide basis.

Importantly, ITS can facilitate the delivery of a wide range of policy objectives, beyond those directly associated with transport, bringing significant benefits to transport users and those who live and work within the area.

They can help protect the natural Environment and the historic fabric of our towns and cities, by reducing the adverse effects of otherwise unsustainable traffic growth. They can improve Access to workplaces, facilities and services for all, and ensure the Safety of motorists, vulnerable road users and pedestrians.

Social Inclusion is fostered, by helping to meet the transport needs of all social groups, including rural residents and they can help promote a more Efficient and sustainable, Integrated transport system. This overview explains how authorities can relate their own objectives to an investment in ITS, highlights some of the tools available and the benefits that can be achieved.

**WHY IMPLEMENT ITS?**

ITS systems have an important role to play in delivering policy objectives, including tackling casualty reduction, traffic congestion and pollution, as well as improving accessibility, providing integrated transport solutions and making best use of existing infrastructure. They can deliver noticeable economic benefits through reduced journey times and increased journey time reliability, as well as improvements in safety and reductions in pollution.

They increase the economic viability and vitality of rural and urban areas alike, making them attractive areas for future inward investment.

ITS can help:

- reduce the use of the private car, by supporting the offer of genuine alternatives;
- provide cost effective travel choices for all;
- improve transport services to areas with poor access; and
- foster economic regeneration without increasing the level of car traffic.
WHAT ARE THE BENEFITS OF USING ITS?

ITS can:

Make travel more efficient (safer, less polluting, cheaper, better informed travel);

A study in Southampton found that a Parking Guidance and Information system reduced the average time spent searching for a space by 50%.

Help achieve ‘Best Value’ as a result of greater information gathering and improved decision-making;

Simplify public transport use by providing accurate real time information about services; 90% of users of the Leicester Star Trak system consider the electronic displays either useful or very useful.

Reduce the effects of pollution from vehicles by better traffic management;

The London Congestion Charge Scheme has resulted in a 30% reduction in congestion within the zone (following 6-months of operation), with consequent reductions in vehicle related emissions.

Access control schemes in Europe resulted in reduction in traffic delay of up to 18% with associated reductions in emissions.

Traffic Control Centre, Reading.

Reduce the number of accidents by providing drivers with more information about conditions on the roads they are using;

Help drivers find the best route to their destination, and change that route if major incidents occur on it;

The Cleopatra project in London found that 58% of respondents would immediately respond to VMS congestion warnings, of which 83% would reschedule their journey and 6% would change modes.

Improve the security of public transport passengers and staff by providing extra communications, CCTV and better information.

WORKING WITH NEIGHBOURING AUTHORITIES

ITS, especially when deployed in an integrated fashion, offer a new level of strategic capability for authorities to meet local and national policy objectives. Increasing emphasis in the integration of different tools and the delivery of new and enhanced services across geographic and institutional boundaries enables information sharing between tools and between authorities, with maximum benefit being derived from the investment made.

Integrated systems and information sharing give:

- Better coordination from area-wide strategies;
- Lower unit equipment and operating costs;
- Better communication between authorities and coordination of actions; and
- Partnerships, which can help reduce costs.
THE NEXT STEPS

The guidance associated with this overview provides supplementary information on how to develop a cohesive package of investment and the ITS tools to deliver maximum benefit for minimum cost.

The Toolkit provides further information on what others have done and have learnt from their experience of deploying and operating ITS, and will help authorities identify how best to use ITS to meet their own, local challenge.

The Department is now considering what further advice and guidance might be helpful in this area, particularly in the area of evaluation and monitoring of ITS related schemes, and how this can help ensure the toolkit remains up to date and relevant.

To obtain a free copy of the Toolkit CD ROM, please write to the address below quoting Product Code: 45RVD02310.

DfT Publications,
PO Box 236, Wetherby,
West Yorkshire, LS23 7NB,
Tel: 0870 1226 236,
Fax: 0870 1226 237,
E-mail: dfr@twoten.press.net

For further advice on the use of the Toolkit, to feedback comments or to propose additional case studies, please write to:

Transport Technology and Standards Division
ITS Policy Coordination
Department for Transport
Zone 2/06
Great Minister House
76 Marsham Street
London SW1P 4DR

Details of Traffic Advisory Leaflets available on the DfT website can be accessed as follows: www.dft.gov.uk
From the DfT homepage, click on Roads and Vehicles, then Traffic and Parking Management and then Traffic Advisory Leaflets.

The Department for Transport sponsors a wide range of research into traffic management issues. The results published in Traffic Advisory Leaflets are applicable to England, Wales and Scotland. Attention is drawn to variations in statutory provisions or administrative practices between the countries.

The Traffic Advisory Unit (TAU) is a multi-disciplinary group working within the Department for Transport. The TAU seeks to promote the most effective traffic management and parking techniques for the benefit, safety and convenience of all road users.

Requests for unpriced TAU publications to:
Charging and Local Transport Division,
Zone 3/19, Great Minster House
76 Marsham Street, London, SW1P 4DR.
Telephone 020 7944 2478
e-mail: tal@dft.gsi.gov.uk

Within Scotland enquiries should be made to:
Scottish Executive, Development
Department, Transport Division 3, Zone 2-F,
Victoria Quay, Edinburgh, EH6 6QQ
Telephone 0131 244 0847
e-mail: roadsafety2@scotland.gsi.gov.uk

Within Wales, enquiries should be made to:
Welsh Assembly Government,
Transport Directorate, 2nd Floor, Cathays Park,
Cardiff, CF10 3NQ
Telephone 02920 826444
e-mail: keith.alexander@wales.gsi.gov.uk

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