

IBEC Secretariat



**Proceedings of the International Workshops on ITS Benefits,
Evaluation and Costs at the 11th ITS World Congress, Nagoya,
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Issue 3

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Acknowledgements

This report presents the results and conclusions of a series of Benefits, Evaluation and Costs (BEC) workshops organised, as part of the 11th World Congress on Intelligent Transport Systems (ITS) in Nagoya, Japan, October 2004, by the IBEC (International Benefits, Evaluation and Costs) organising committee in conjunction with the IBEC Secretariat, UK Department for Transport, ITS America and the US Department of Transportation.

The editors and organisers of the four workshop sessions wish to acknowledge the important contributions made by all those who participated in organising and building the sessions, and the speakers who all gave so generously of their time. Thanks also go to the 11th ITS World Congress organising committee for scheduling two concurrent half-days on this theme under the guidance of ITS Japan, ITS America and ERTICO. It is hoped that this successful formula will be repeated again at the next (12th) ITS World Congress in San Francisco under the auspices of the IBEC Working Group.

Abbreviations

ATLANTIC	A Thematic Long-term Approach to Networking for the Telematics and ITS Community
AVL	Automatic Vehicle Location
APTS	Advanced Public Transportation Systems
CBA	Cost Benefit Analysis
CBD	Central Business District
DfT	Department for Transport, UK
IBEC	International Benefits, Evaluation and Costs Working Group
ITS	Intelligent Transport System
ITS America	Intelligent Transport Society of America
NPA	National Police Agency, Japan
R & D	Research and Development
RTI	Road Traffic Information
TTI	Traffic and Traveller Information
VICS	Vehicle Information and Communication System
WTP	Willingness to Pay

Executive Summary

Background

IBEC is the International Benefits Evaluation and Costs Working Group. The objectives of the group are set out in its Charter. These concern providing support to decision-makers on cost-benefits and cost-effectiveness analysis of ITS, promoting consistent and reliable evaluation methodologies, providing information to a wide range of stakeholders on ITS costs and benefits, and sharing information across the profession on non-technical and institutional issues and lessons learned. The group organised a series of four thematic workshops which were scheduled to be held during the ITS World Congress held in Nagoya in October 2004. Due to Typhoon Number 23, which occurred in Nagoya during the conference, two of the workshops were cancelled and did not take place as planned.

The workshops were the latest in a series organised each year at the ITS World Congress. Previous workshops had been organised by members of the IBEC group in Toronto 1999, Turin in 2000, Sydney in 2001, Chicago in 2002 and Madrid in 2003. The workshops aim to develop links between evaluation communities around the world, and are one of the ways in which the objectives of the IBEC Charter are met.

IBEC organises the workshops by setting out the main themes to be covered, and then inviting specific individuals who are known to be able to present high quality material, to present their ideas and findings.

Overview of Content

This report summarises the proceedings of the technical workshops, in which experts in ITS evaluation and decision-makers from around the world were brought together to present results and share ideas and experiences.

The workshops were divided into four main sessions:

- Private Sector Decision-Making on ITS Investments: Making the Business Case for ITS
- Pan-Asian Survey of ITS Evaluation Activities
- How do the Japanese do It? Overview of ITS Evaluation in Japan
- Panel Debate – Why Invest in ITS? – Where is the Evidence that it provides a Return on Investment?

It should be noted that the first two sessions listed above did not take place in Nagoya so will not be included within these proceedings.

For each session, the report presents an outline of the objectives of the session, and provides a table listing the presentations, which includes hyperlinks to enable the reader to view the presentations that were made to the audience. The following text summarises each of the presentations and ensuing discussions. The final section of the report presents some overall conclusions.

The annex includes a listing of IBEC Management Committee members as well as background material developed to promote the workshops.

Conclusions

After a significant amount of time was spent to establish a set of four workshops covering a range of issues related to assessing the benefits and costs of deploying ITS services and applications, the organisers and participants were, on the one hand, very disappointed that two of the sessions were cancelled. On the other hand, they were also quite relieved that the scheduling of the sessions was spread across two days of the ITS World Congress such that two of the sessions were maintained.

Regarding the two cancelled sessions, the IBEC Management Committee (the organising entity for the workshops) has decided to offer all planned speakers an opportunity to participate in the IBEC Workshops which are being planned for the 12th ITS World Congress in San Francisco in October 2005.

The session on "Overview of ITS Evaluation in Japan" provided valuable insights into how Japan undertakes comprehensive evaluation activities as a means of both justifying public expenditure and providing a framework for private enterprises to launch ITS services and applications. In particular, the highly successful and interesting business model developed in Japan provides an approach that other countries could learn a lot from. This session also provided an independent viewpoint on the results of long-term evaluation activities of the VICS mega-project.

The last session, planned as a panel debate on the rationale for investing in ITS and what evidence exists on the return on investments in ITS, involved four presentations followed by a period for discussion. An outcome of this session was the general agreement amongst the approximately 25 people in attendance that the evidence to support the return exists, but the challenge to the evaluation community is to publish lessons learned and, in general, undertake and establish a more comprehensive approach to outreach activities to get the ITS message to decision-makers and the general public.

Also, the IBEC community was established as a means of exchanging information and best practice because decision-makers often tend to undervalue ITS solutions. As an example, comparisons of the costs and benefits of implementing an ITS-based solution versus a more costly infrastructure-based solution may not take full account of safety benefits.

A retrospective review of IBEC workshops held in previous years clearly shows that, despite significant increases in the awareness and focus of the relevance of assessing the benefits and costs of ITS, there still remains a need for a concerted effort in disseminating the myriad of results and resource material currently available from a range of sources such as the benefits and costs databases supported by the ITS Joint Program Office of US Department of Transportation, results of the VICS evaluation activities and recent guidance on investment in ITS developed by the UK Department for Transport.

1 Introduction

1.1 Background

IBEC is the International Benefits Evaluation and Costs Working Group. The objectives of the Working Group are set out in its Charter. These concern providing support to decision-makers on cost-benefits and cost-effectiveness analysis of ITS, promoting consistent and reliable evaluation methodologies, providing information to a wide range of stakeholders on ITS costs and benefits, and sharing information across the profession on non-technical and institutional issues and lessons learned¹. The Working Group organised a series of four workshops scheduled to take place during the ITS World Congress held in Nagoya in October 2004. However, one day of the ITS Nagoya Conference was cancelled due to Typhoon Number 23 which swept through Nagoya on Wednesday, 20th October, which included cancellation of two of the four planned IBEC sessions.

The workshops were the latest in a series organised each year at the ITS World Congresses since 1999. Previous workshops organised by members of the IBEC Working Group include:

- 6th: Toronto in 1999,
- 7th: Turin in 2000,
- 8th: Sydney in 2001,
- 9th: Chicago in 2002, and
- 10th: Madrid in 2003.

The Sydney and Chicago workshops were organised as a joint effort with the EU-sponsored ATLANTIC project.

The workshops aim to foster and develop links between evaluation communities around the world, and are one of the ways in which the objectives of the IBEC charter are met. Several materials from the Toronto workshop are available on the IBEC website (www.ibec-its.org). The proceedings of the Turin workshop are available on the U.S. Department of Transportation Website (www.itsdocs.fhwa.dot.gov/jpodocs/repts_te/@@c011.PDF). The proceedings of the Sydney and Chicago workshops are available from ATLANTIC (www.atlan-tic.net). The proceedings of the Madrid workshops are available on the IBEC Website (www.ibec-its.org).

The Workshops reported here were organised by the IBEC Management Committee (see Annex 1 for a list of current members) with support from the IBEC Secretariat. Planning for the workshops began with a brainstorming session that took place during the 83rd Transportation Research Board (TRB) Annual Meeting in Washington, D.C. in January 2004 among a small group of members of the IBEC Management Committee. Using the framework developed at the brainstorming session, members and the IBEC Secretariat performed the hands-on work of identifying, recruiting and confirming speakers and moderators, and organising the final programme for the sessions.

IBEC organises the workshops by agreeing the main themes and then inviting specific individuals who are known to be able to present high quality material, to present their ideas and findings. This introduces an element of 'peer review' to ensure that the workshops are of a high standard.

These proceedings comprise a culminating aspect of this joint effort of all participants, and dissemination is intended to be oriented to the community involved in evaluating the benefits and costs of ITS throughout the world. It is being made available in two ways:

- Paper copies of the main report are distributed to key participants of the IBEC Management Committee during the 84th TRB Annual Meeting in Washington, D.C. in January 2005, and
- Both the main report and the presentations will be made available on the IBEC website: www.ibec-its.org.

¹ See the IBEC website www.ibec-its.org for more information on IBEC, the Charter, etc.

1.2 Overview of Content

This report summarises the proceedings of the technical workshops in which experts in ITS evaluation and decision-makers from around the world were brought together to present results and share ideas and experiences. The workshops were divided into four main sessions:

- Private Sector Decision-Making on ITS Investments: Making the Business Case for ITS
- Pan-Asian Survey of ITS Evaluation Activities
- How do the Japanese do It? Overview of ITS Evaluation in Japan
- Panel Debate – Why Invest in ITS? - Where is the Evidence that it provides a Return on Investment?

Due to the cancellation of one day of the ITS World Congress in Nagoya, it should be noted that the first two sessions listed above did not take place. Consequently, they will not be reported on in these proceedings.

The structure for this report is as follows:

- Chapter 2:** **Summary of Sessions and Individual Presentations** provides an overview of each session, presents an outline of the objectives of the session, and provides a table listing the presentations which includes hyperlinks to enable the reader to view the presentations that were made to the audience. The report then summarises each of the presentations and a review of the main questions and answers.
- Chapter 4:** **Summary / Conclusions** provides a summary of the main issues from the two workshops reported in these proceedings and presents some main conclusions.
- Annex 1:** **List of IBEC Management Committee Members**
- Annex 2:** **Session Flyer**
- Annex 3:** **IBEC Press Release for ITS Nagoya Sessions and list of press contacts**
- Annex 4:** **Nagoya Conference Sessions including an Evaluation element to target with IBEC publicity**

2 Summary of Sessions and Individual Presentations

2.1 Session AE 3: Private Sector Decision-Making on ITS Investments: Making the Business Case for ITS

Moderator: William Johnson, Research, Education and Development Services, Canada

Time: Wednesday, 20th October, 14:00 – 15:30

Description: When determining whether or not (and how much) to invest in ITS, the decision-making process is different in the private sector than the public sector. What kind of data does the private sector collect? How do companies analyze data in order to support their decision-making process? In this session, speakers from private sector organizations, large and small, from around the world will shed light on this aspect of ITS investment decision-making which is not well documented in the public arena.

This session did not take place due to Typhoon Number 23 causing the cancellation of all congress events.

The original planned presentations and speakers were as follows.

Presentation title	Speaker
Making the case for ITS	Mike Doyle, Chairman, Econolite Products, USA
Travel time prediction: the low cost solution	Dan Manor, President, Electronic Integrated Systems (EIS), Canada

2.2 Session AE 5: Pan Asian Survey of ITS Evaluation Activities

Moderator: Dr Joseph I. Peters, Manager of ITS Program Assessment, ITS Joint Program Office, US Department of Transportation, USA

Time: Wednesday, 20th October, 16:00 – 17:30

Description: Speakers from across the Asia-Pacific region will describe the role of evaluation in ITS implementation in their countries. Where evaluation features in major ITS initiatives, speakers will address the goals of the initiative, what data are being collected to measure progress towards those goals, any evaluation results that are available, and how those results have affected the course of the project. In cases where evaluation is not part of the ITS implementation process, speakers will discuss why and how ITS implementation decisions are made.

This session did not take place due to Typhoon Number 23 causing the cancellation of all congress events.

The original planned presentations and speakers were as follows.

Presentation title	Speaker
ITS and evaluation activities in India	Amitabh Bajpai, President, Association for Intelligent Transportation Systems, India
Intelligent Transport Systems in Korea	Sang Hyup Lee, Director of ITS, Division, Transport Policy Office, Ministry of Construction and Transportation, South Korea
Intelligent Transport Systems in Singapore	Kian Keong Chin, Senior Manager, Land Transport Authority, Singapore
Some benefits of ITS in Hong Kong SAR	Yah Wah Cheung, Senior Engineer, iTransport Division, Transportation Department, Hong Kong SAR

2.3 Session AE 6: How do the Japanese do It? Overview of ITS Evaluation in Japan

Moderator: Dr John Miles, Managing Consultant, Ankerbold International Ltd, UK

Time: Thursday, 21st October, 9:00 – 10:30

Description: In this session, speakers from within Japan presented case studies of evaluations of ITS projects. The speakers addressed what ITS system is deployed/tested, the goals of the deployment/test, the goals of the evaluation, the evaluation results, and how those evaluation results have been put to use.

Approximately 20 people attended Session AE 6.

Presentation title	Speaker	Content	Hyperlink to presentation
What makes big progress in VICS	Masashi Ikemura, VICS Center, Japan	Description of the history of VICS developments with a view to the future.	AE06 1 Ikemura M.PDF
The current situation of private businesses and the expectations for VICS centre	Tetsuo Yamashita, ITS Business Promotion Department, Matsushita Electric Industrial, Ltd., Japan	A review of current numbers of VICS units in car and the relationship between the private and public sector.	AE06 2 Yamashita T.PDF
Current Approaches to Benefits	Kazumitsu Hayashi, VICS Center, Japan	Summary of current evaluation results of the impact of VICS in Japan in terms of user acceptance and societal impacts.	AE06 3 Hayisha K.PDF
Evaluation of VICS as a "Mega Project"	Ryuichi Kitamura, Professor, Department of Urban Management	Evaluation of VICS in terms of current levels of deployment and future prospects.	AE06 4 Kitamura K.PDF

2.3.1 What makes big progress in VICS – Masashi Ikemura, VICS Centre, Japan

VICS is the centre for Vehicle Information Communication Systems in Japan, and provides in-vehicle travel information nationally. In this presentation, the history of VICS was summarised. The important events were highlighted from the founding of VICS to date. Mr Ikemura described how VICS has completed nation-wide deployment of a range of initiatives during the period 2001-2003. For more information, see the website: www.vics.or.jp.

An interesting comparison was made between the level of roadside infrastructure in the Paris CBD (Central Business District) and Tokyo.

The main issues/lessons learned were summarised as being:

- The public sector rather than the private sector has had much confidence in VICS systems and has seen them as superior to the role of infrastructure, due to the substantial market penetration of car-nav and VICS units.
- VICS stakeholders became convinced when a flow of similar foreign systems followed the success of VICS in Japan.
- Five Ministries prescribed a long-term programme for facilitating ITS deployments in 1996, which is exemplified by the inauguration of VICS.
- Public sector has contributed towards doubling infrared beacons so as to increase the data volume required, and to completing far faster nation-wide deployment of VICS system by strengthening their systems.
- Public-private cooperation is shown in public sector updating of VICS links and the development of a highly efficient protocol for transmitting VICS information data.

Next steps for the deployment of VICS include:

- Enlarging FM service area;
- Improvement of information quality including accuracy and freshness, and quantity of traffic information and expanding the kinds of information such as video images;
- Development of the VICS second stage: Location referencing, centre-to-centre (C2C) protocol such as ASN.1-Abstract syntaxes Notation One; and
- Harmonisation with international standards.

John Miles made the observation that Japan has a very interesting and successful business model that other countries could learn a lot from.

Questions:

No specific questions were asked.

2.3.2 The current situation of private businesses and the expectations for VICS centre – Tetsuo Yamashita, ITS Business Promotion Department, Matsushita Electrical Industrial Co. Ltd, Japan

In recent years the circumstances that surround the road traffic information business in Japan have been improved. Especially, since the deregulation of providing road traffic information in 2002, many road traffic services managed by the private sector have been significantly developed. Mr Yamashita presented the view of the private sector on road traffic information services and the VICS centre.

The current situation on the road traffic information business was presented and is summarised as follows:

- Almost 10 million VICS units have been installed,
- Deregulation has led to the launching of many new businesses,

- Expectation of private enterprise is for the VICS centre to provide more precise road information in order to improve the private business opportunities, i.e., the effort of the VICS centre should be evaluated.

In future, Mr Yamashita claimed that road traffic information will be a differentiating factor for carmakers.

Questions:

Q: What about the issue of over deployment of VICS units.

A: There is always this question which is not addressed at this stage.

Q: What is really a VICS link?

A: VICS links currently providing traffic information comprise 70 000 links out of a total number of 190 000 links. The business community in Japan is not satisfied with the fact that only about 37% of all links provide traffic information.

2.3.3 Current Approaches for Benefits – Kazumitsu Hayashi, VICS Center, Japan

Mr Hayashi outlined the three levels of evaluation undertaken:

- Technical,
- User evaluations via the use of questionnaires, and
- Societal evaluations including specific road tests.

The focus of this presentation was on User and Societal evaluations. User questionnaires have been undertaken annually since 1998. A series of results were presented on the expectations at the time of purchasing a VICS unit versus satisfaction levels months later covering relief of mental stress, reduction of travel times, reduction of fuel consumption and improvement in safety.

Road tests were undertaken of vehicles equipped with a VICS unit versus vehicles not equipped. The main analyses were to determine level of reduction in travel time, if any, and the variance in the level of fuel consumption. The results presented were that a vehicle equipped with a VICS unit had on average a 20% reduction in travel time and 10% reduction in fuel consumption. The caveat was that these figures required an assumption of the existence of traffic jams with average speed of vehicles being 15 km/h or less.

Questions:

Q: What was your sample segmentation for user evaluations?

A: A specific breakdown of the sample size is not available at this time.

2.3.4 Evaluation of VICS as a mega project – Ryuichi Kitamura, Professor, Department of Urban Management, Kyoto University, Japan

Professor Kitamura indicated from the outset that he is not an insider to VICS as were the three previous speakers. The purpose of his presentation was to provide an overview on how it (VICS) was supposed to be in terms of current levels of deployment and future prospects. The overview focused on plans to relieve congestion (cost of congestion in Tokyo alone is estimated at \$7.37 million per day), support technological developments and use of three main communications media (short-wave radio beacons, infrared beacons and FM multiplex broadcasting). VICS implementation costs versus benefits were highlighted with a focus on the 5th October press release announcing that the historic benchmark of over 10 million VICS units sold had been achieved.

Specific adoption rates were summarised as being way ahead of schedule:

- 2003 projected: 6.69 million units sold with a penetration rate of 12.1% with nation-wide vehicle sales in Japan estimated at 6.5 million/year.
- 2002 actual: 9.12 million units sold with a penetration rate of 13.7%.

The remainder of this presentation focused on evaluation aspects in terms of a range of evaluation criteria including the cost/benefit impacts of VICS, promotion of ITS technologies, technological edge in ITS, impacts on the way people travel (impacts on lifestyle) and general contributions to technological improvements.

Professor Kitamura's conclusions included some interesting issues:

- The VICS project experienced expeditious implementation with encouraging results regarding user acceptance,
- However, the achievement of social objectives remains unclear, and
- In contrast to the provision of equipment, there has been little private sector involvement in processing or providing traffic information, so the impacts of deregulation on information services have yet to be seen.

He closed by asking a question: Is a "VICS lifestyle" emerging in Japan?

Questions:

No specific questions were asked.

2.3.5 Issues raised

The moderator John Miles thanked the speakers for presenting and he commented that VICS demonstrated the philosophy "act while you think". John Miles noted that the two perspectives of evaluation (the consumer viewpoint tested by the market and economic and social impact) must both be successful.

Questions/issues: General questions/issues raised at the end of the session:

Q: What is the business model for private companies? There is combining of events but what are the other things?

A: Mr Ikemura explained that the private sector has two key developments:

- 1) The implementation of Road Traffic Information (RTI) technology
- 2) New business that can combine RTI

Mr Ikemura's opinion is that combining road traffic information with other information is useful, however, others may have a different view. Different manufacturers will have a different look and feel to the product. This is a deregulation.

Q: There are location based services and services for business. Do you plan services from VICS to other services?

A: Japans' taxi cab and bus operation companies use traffic information and investment. There are many businesses. Customer data is useful.

Q: Within the presentations there was no information on whether VICS information could be included in train schedules, etc. Are there any plans for this?

A: Mr Kitamura stated that he knows of two companies who are thinking of it.

2.4 Session AE 7: Panel Debate – Why Invest in ITS? – Where is the Evidence that it provides a Return on Investment?

Moderator: Richard Savenije, Rijkswaterstaat AVV, The Netherlands

Time: Thursday 21st October, 11:00 – 12:30

Description: Speakers from around the world debated the key questions: Why Invest in ITS? – Where is the Evidence that it provides a Return on Investment? Decision makers about to invest in ITS eagerly are awaiting the answer. Those participating addressed issues fundamental to the debate; What is ITS meant to deliver?; Who has invested in ITS and do we know what has been achieved; Is the evidence there to be seen, is it accessible and can we believe the answers? These are all issues of interest to IBEC.

Approximately 25 people attended Session AE7.

Presentation title	Speaker	Content	Hyperlink to presentation
Why Invest in ITS?	Andrew van Emmerik, Manager Infrastructure Development, Department of Infrastructure, Energy & Resources, Tasmania, Australia	Overview of ITS research in Australia and the implications of ITS-based solutions versus infrastructure-based solutions for improving road safety.	AE07 1 van Emmerik A.PDF
The DfT Guidance on Investment in ITS: Using Available Evidence to Guide Those Considering Investment in ITS	Steve Tarry, Associate Director, FaberMaunsell, UK	Presentation on current guidance promulgated by the UK Department for Transport relating investments in ITS.	AE07 2 Tarry S.PDF
Policy-led Road Traffic & Traveller Information Services: Results from European ATLANTIC project	Dr John Miles, Managing Consultant, Ankerbold International Ltd, UK	Summary of results of recent research into the development of traveller information services in Europe.	AE07 3 Miles J.PDF
ITS in the Developing Countries: The World Bank ITS Toolkit, and some more	Dr John Miles, Managing Consultant, Ankerbold International Ltd, UK	Mr Hiroo Yamagata, Consultant, NRI originally developed this presentation.	AE07 4 Miles J.PDF

2.4.1 Why Invest in ITS? – Andrew van Emmerik, Manager Infrastructure Development, Department of Infrastructure, Energy & Resources, Tasmania, Australia

Mr Van Emmerik's presentation focused on the implications of Australian research related to ITS in terms of implications for programme level of transport options. Expected benefits of ITS often related to safety improvements, travel time savings and vehicle operating cost savings. Current research in Australia implies that only four of 18 benefits are actually evaluated at the programme level.

He presented a case study for Longford, Tasmania, whereby a specific intersection had specific recurrent accidents with the solution being either infrastructure-based for a roundabout (AUS \$2 million, US \$1.52 million) or implementation of an ITS-based speed camera solution (AUD \$150 000, US \$114 000). The decision to install the speed camera was cost-effective and provided the projected savings in reduction of accidents.

He concluded with four key issues/questions:

- Should ITS investments continue because it is a “best guess solution” or should some funding be redirected to research into evaluation of ITS success?
- Does a lack of comprehensive ITS evaluation limit the scope for its use?
- Should there be incentives / requirements for implementers to look beyond achieving their own objectives?
- Is there a role for Willingness to Pay (WTP)?

Questions:

Q: Why is there a tendency to compare infrastructure solutions to ITS solutions?

A: This is because WTP, in particular, in the area of safety is a crucial factor for comparison. Also, decision-makers tend to undervalue ITS solutions, which is a main motivation for forming the IBEC group as a means of exchanging information and best practice.

2.4.2 The DfT Guidance on Investment in ITS: Using Available Evidence to Guide Those Considering Investment in ITS – Steve Tarry, Associate Director, FaberMaunsell, UK

Mr Tarry provided an overview of current guidance on the investment of ITS being developed by the UK Department for Transport. The need for such guidance is necessary, in particular, because ITS is becoming an important tool at the disposal of decision-makers for the delivery of transport policy.

The UK DfT's guidance is primarily based on the development of an interactive web-based tool entitled, “ITS Planning Guide” which contains a range of useful information related to generic guidance, decision tree linking policy objectives to specific tools, information on specific ITS tools, guidance on evaluation, case studies and a digest of reported outcomes.

Mr Tarry concluded with the remark that IBEC can play a role in encouraging ITS evaluation and sharing of experience.

Questions:

Q: How does this “ITS Planning Guide” relate to systems architecture?

A: In the UK there is no relationship even though there should be a relationship. This is the topic of a current debate in the UK.

Q: Does this guide present only UK case studies?

A: No, a range of case studies from around the world are presented.

2.4.3 Policy-led Road Traffic & Traveller Information Services: Results from European ATLANTIC project – John Miles, Managing Consultant, Ankerbold International Ltd, UK

Dr Miles began with the announcement that the PIARC (World Road Association or AIPCR Association mondiale de la Route) has published the “ITS Handbook 2nd Edition” – see the website www.piarc.org/publications for more information. This Handbook has been published on behalf of the PIARC Committee on Network and Traffic Management for which John Miles is the Chair. It includes a chapter on ITS evaluation and an annex on unit costs which should be of interest to transportation evaluators on how they might apply to ITS.

He provided an overview of the results of the European-sponsored ATLANTIC project in the area of road traffic and traveller information services. The key aims of this were to analyse conditions for successful implementation including a review of best practice case studies and the provision of support in defining European (EU) policies.

The main conclusions of this research activity into the delivery of policy-led traveller Information services included:

- Identify your stakeholders and their interests,
- Establish a consensus-building process,
- Define and agree clear objectives and schedules,
- Ensure openness and transparency,
- Convince your local media, and
- Agree on 'local champion(s)'.

Questions:

No specific questions were asked.

2.4.4 ITS in the Developing Countries: The World Bank ITS Toolkit, and some more – John Miles, Managing Consultant, Ankerbold International Ltd, UK

Dr Miles presented material developed by Mr Hiroo Yamagata, NRI, on a recent publication by the World Bank covering a toolkit on ITS in developing countries.

The presentation highlighted the specific issues faced by developing countries. A potential deployment path for ITS was set out, benefiting from the 'latecomer's advantage', enabled by factors such as focusing on affordable ITS and using ITS to improve reliability and business efficiency, taking a step by step approach and involving public-private partnerships. Barriers to ITS deployment in developing countries were discussed, and possible ways of overcoming them identified. The toolkit suggests policies for introducing ITS, and provides case studies, overviews and other material relevant to ITS deployment.

For further information, please refer to the website www.developingits.org/toolkit.

2.4.5 Issues raised

The moderator Richard Savenije thanked the speakers for presenting. He then opened the floor to a discussion of key questions/issues raised.

Questions/Issues:

Q: What should be our next step? Are we ready?

A: Joe Peters of the U.S. Department of Transportation said that it is apparent that we have come the distance. We are using Internet tools for increased information and communication problems. We look more towards costs and benefits of ITS sharing lessons learned in Deployment. Evaluation must service the community.

A: John Miles commented that it is difficult to get people to speak openly about the negative aspects. The ATLANTIC project delved into two means of obtaining information – interviews and workshops.

Q: Where is the evidence?

A: Joe Peters of the U.S. Department of Transportation said that it was apparent that we have come a long way. We are using internet tools to share information and communicate our problems. We in the U.S., however, are looking more at determining costs and benefits of ITS than sharing lessons learned in the deployment process. He noted that evaluation must serve the community with information on benefits, costs and lessons learned.

Q: Amy Polk of Cairo Corporation in the U.S. commented that she is concerned about political leaders being unaware of what we know (outreach) regarding the evidence that currently exists. There may not be a need for a “mega database” but we must not re-invent the wheel by duplicating efforts such as PIARC, UK cost-benefits databases and the UK’s DfT guidance on investment in ITS.

A: John Miles stated that a systematic programme is required. He also stated that we must let each professional group do their own thing regarding the results of ITS evaluations.

3 Summary and Conclusions

After a significant amount of time was spent to establish a set of four workshops covering a range of issues related to assessing the benefits and costs of deploying ITS services and applications, the organisers and participants were, on the one hand, very disappointed that two of the sessions were cancelled. On the other hand, they were also quite relieved that the scheduling of the sessions was spread across two days of the ITS World Congress such that two of the sessions were maintained.

Regarding the two cancelled sessions, the IBEC Management Committee (organising entity of the workshops) has decided to offer all planned speakers an opportunity to participate in the upcoming IBEC Workshops being planned for the 12th ITS World Congress in San Francisco in October 2005.

The session on "Overview of ITS Evaluation in Japan" provided valuable insights into how Japan undertakes comprehensive evaluation activities as a means of both justifying public expenditure and providing a framework for private enterprises to launch ITS services and application. In particular, the highly successful and interesting business model developed in Japan provides an approach that other countries could learn a lot from. This session also provided an independent viewpoint on the results of long-term evaluation activities of the VICS mega-project.

The last session, planned as a panel debate on the rationale for investing in ITS and what evidence exists on the return on investments in ITS, involved four presentations followed by a period for discussion. An outcome of this session was the general agreement amongst the approximately 25 people in attendance that the evidence to support the return exists, but the challenge to the evaluation community is to publish lessons learned and, in general, undertake and establish a more comprehensive approach to outreach activities to get the ITS message to decision-makers and the general public.

Also, the IBEC community was established as a means of exchanging information and best practice because decision-makers often tend to undervalue ITS solutions; for example, comparisons of the costs and benefits of implementing an ITS-based solution versus a more costly infrastructure-based solution may not take full account of safety benefits.

A retrospective review of IBEC workshops held in previous years clearly shows that, despite significant increases in the awareness and focus of the relevance of assessing the benefits and costs of ITS, there still remains a need for a concerted effort in disseminating the myriad of results and resource material currently available from a range of sources such as the benefits and costs databases supported by the ITS Joint Program Office of US Department of Transportation, results of the VICS evaluation activities and recent guidance on investment in ITS developed by the UK Department for Transport.

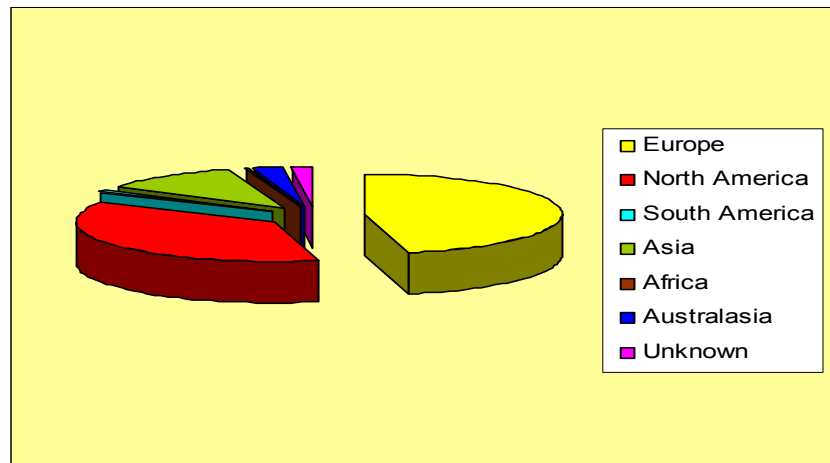
Annex 1: IBEC Management Committee and Membership

A1.1 IBEC Management Committee, December 2004

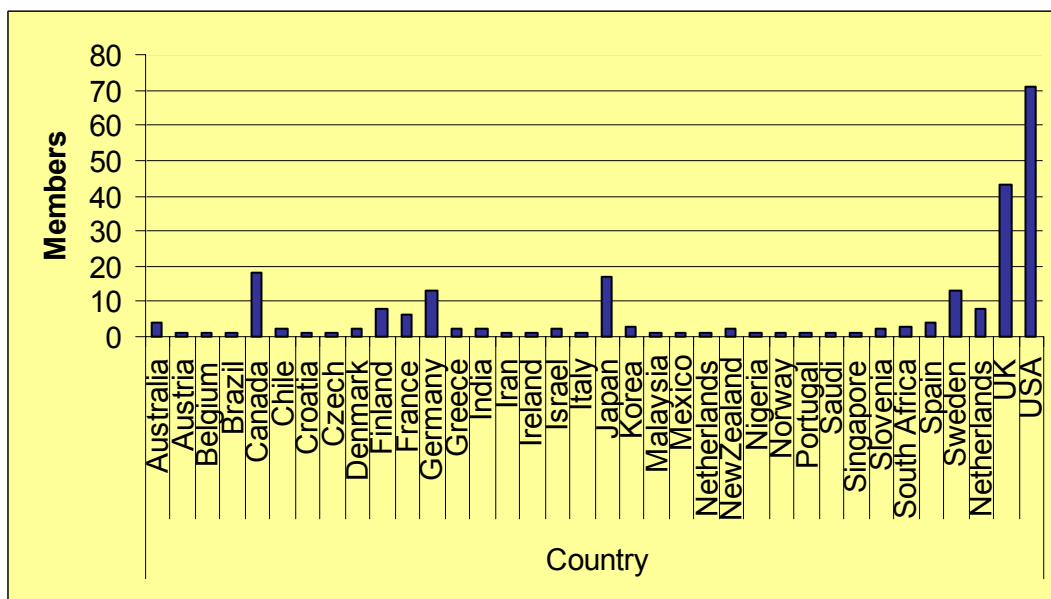
Contact name	Organisation, Country	Role
Steve Tarry	FaberMaunsell, UK	Chair
Jane Lappin	Volpe, USA	Vice-Chair
Steve Morello	ISIS, France	IBEC Secretariat
Sally Bygrave	TRL, UK	IBEC Secretariat
Jean Hopkin	TRL, UK	IBEC Secretariat
Joe Peters	Department of Transportation, USA	Management Committee
Amy Polk	Cairo. Corporation, USA	Management Committee
Mark Carter	SAIC, USA	Management Committee
William Johnson	Research, Education and Development Services, Canada	Management Committee
Alan Stevens	TRL, UK	Management Committee
Eric Sampson	Department for Transport, UK	Management Committee
Richard Harris	FaberMaunsell, UK	Management Committee
Barbara Staples	Mitretek Systems, USA	Management Committee
Dick Mudge	Delcan, USA	Management Committee, Past Chair, 2002-2004
Guido Schuster	Landesbetrieb Straben, Germany	Management Committee
John Miles	Ankerbold International, UK	Management Committee
Keith Keen	European Commission, Belgium	Management Committee
Patty Del Pozo	ITS America, USA	Management Committee
Risto Kulmala	VTT Building and Transport, Finland	Management Committee
Steve Kuciemba	ITS America, USA	Management Committee

A1.2 Geographical spread of IBEC membership

As of 1st December 2004, IBEC had 246 members from 37 countries; the spread of members can be seen from the charts below:



Regional representation of IBEC members²



Countries represented by IBEC members

² Two members have not provided sufficient contact details to identify the country where they work



Annex 2: Session Flyer

The session flyer for distribution by key IBEC participants prior to and during the workshops provided a means of presenting the final programme for the workshops and information on the related activities.

The following hyperlink provides access to this file in PDF format:

[IBEC Nagoya session flyer 20042.PDF](#)

Annex 3: IBEC Press Release for ITS Nagoya Sessions

The IBEC Secretariat produced and distributed to the technical press a Press Release as a means to disseminate information regarding the IBEC Sessions planned for ITS Nagoya. The following organisations were sent this press release:

Company	Contact name
Advanced Transportation Technology News	Publisher
ERTICO	Michele Ousterhoudt
Inside ITS	mailbox
Intelligent Highway	Stephen Longden
ITS America	Nancy Mayes
ITS International	David Crawford
Tecon Vial Mundial	Alan Peterson
Telematics Update	Simon Butt
Telematics Update	Maggy Blagrove
TeleTraffic	Ulrich Smyrek
Toll Roads Newsletter	Peter Samuel
Traffic Engineering and Control	Brian Bing
Traffic Technology International	Kevin Borrás
Transportation Management Engineering	Tim Gregorski

The following hyperlink provides access to this file in PDF format:

[**IBEC_press_release_October_FINAL.PDF**](#)

Annex 4: Nagoya Conference Sessions including an Evaluation element to target with IBEC publicity

In addition to the specific Workshops on the Benefits, Evaluation and Costs of ITS, which were part of the ITS Nagoya World Congress, another vital source of information on ITS related evaluation topics related to ITS included a review of planned papers published in the preliminary programme which were planned up to the first IBEC sessions, i.e., up to midday on Wednesday, 20th October. In that regard, the authors perused the titles of papers and selected those which seemed to address issues related to IBEC aspects of ITS.

The following tables provide list of the papers presented and includes the corresponding theme as published in the Preliminary Programme for sessions where IBEC participants targeted their attendance as a means to distribute the IBEC promotional flyer. For more information on given papers, the reader is kindly invited to examine the Congress proceedings.

Date	Time	Session	Theme	Paper(s)	Ref
19 Oct	9.00 – 10.30	TP02	Bus operations	Impact of ITS	1012
				Effectiveness of bus management	3476
		TP03	National plans / projects	Road safety and telematics – conditions of success	2083
		TP04	Roadside information	Information on mountain passes - ITS evaluation	3123
Evaluation and analysis on VICS	3489				
19 Oct	11.00 – 12.30	SP02	Road safety	Evaluation of incident detection	4116
		SS6	Predictive Travel Times	No details but organised by Kan Chen Richard Harris speaking	
19 Oct	14.00 – 15.30	TP15	Human factors and safety	Safety evaluation of people mover	2023
		TP16	Parking	User's evaluation of parking guidance	3291
		TP19	Traffic / trip information	Effectiveness of VICS Joe Peters Moderating	3486
		TP20	Vehicle speed information	Evaluation of ISA	3235
		TP21	Advanced driver assistance	Evaluating HVI	2077
19 Oct	16.00 – 17.30	TP24	Simulation and evaluation	Safety impacts on commercial vehicles	1011
				Impact of 'green extension' strategies	1030
				Evaluation of Chauffeur Assistant	2157
				Field test of DSSS for unsafe junctions	3022
		TP28	ADAS	Evaluation of safety factors	3461
		ES3	Accessibility & comfort – enhancing choice	Eric Sampson speaking	



Date	Time	Session	Theme	Paper(s)	Ref
20 Oct	9.00 – 10.30	TP34	User Acceptance of ADAS	What drivers think of ADAS	3161
				Evaluation method for ADAS	3040
20 Oct	11.00 – 12.30	TP37	Public transport	Evaluation of signal priority	3006
				TP38	UTC
		Assessment tools	2089		
		TP39	Positioning	Impact of Galileo - RICHARD HARRIS speaking	2101*
				Benefits and constraints	2169
		TP40	VMS	Effectiveness of live images	3443
				Study of impacts with driving simulator	3283
		TP42	Evaluation of ITS implementations	Benefits of electronic bus guidance	1082
Economic assessment of driver assistance systems	2085				
How to evaluate the impacts of ITS	2178				
Multi criteria evaluation model	2161				
			Determining reductions in VOC and other benefits	2062	