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# International Benefits, Evaluation and Costs (IBEC) Working Group

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[www.ibec-its.org](http://www.ibec-its.org)

# Agenda

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- What are benefits, evaluation and costs?
- Why is evaluation important at the project level?
- What is evaluation important at the national level?
- Evaluation in the US
- Evaluation in Europe
- IBEC
  - IBEC Organization and Events
  - IBEC Activities
  - IBEC Future Plans
  - Why join IBEC?

# What are benefits, evaluation and costs?

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- **Focus on system impacts**

- Not technical performance

- **Measure how well project goal are being achieved**

- **Frequently used goal areas & example measures:**

- Safety # of crashes, severity of crashes
- Mobility travel time, delay, travel time reliability
- Productivity cost savings
- Capacity # of vehicles facility can accommodate
- Energy/Environment emissions reduction, fuel savings
- Customer satisfaction results of customer surveys

# Why is evaluation important at the project level?

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- Evaluation provides an opportunity to learn from those who have come before.
- Evaluation provides evidence of benefits to justify further investments in ITS.
- Evaluation enables deployers to modify system operation for continuous improvement.

# Why is evaluation important at the national level?

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- Evaluation helps countries make better use of limited resources.
- Evaluation makes it easier to choose between competing proposals.
  - Easier to choose the most cost-effective option
- Evaluation helps concentrate national efforts on those projects that offer the better return on investment.

# Current Status of ITS in the US

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- Over 20 years of ITS research and development
- New research continues apace
- Many applications are now 'mature'
  - ITS has become mainstreamed
- Investment decisions are primarily made at the State, local and industry level
- The Federal Government is coordinating these efforts and encouraging standardization

# Future Direction for ITS: Federal (USA)

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- Federal Government has reduced funding for *deployment* and is focusing on nine areas of *research*
  - Cooperative Intersection Collision Avoidance Systems
  - Electronic Freight Management
  - Emergency Transportation Operations
  - Integrated Corridor Management Systems
  - Integrated Vehicle Based Safety Systems
  - Mobility Services for All Americans
  - Nationwide Surface Transportation Weather Observing and Forecasting System – Clarus
  - Next Generation 9-1-1
  - Vehicle Infrastructure Integration (VII)

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# Electronic Freight Manifest

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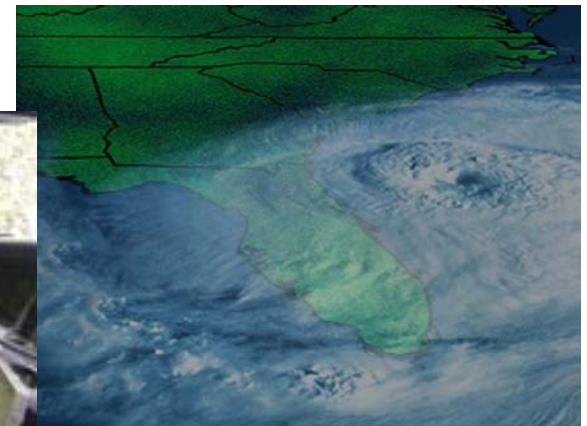
- Focused on truck-air-truck shipments between China and the US
- Testing the benefits of moving from paper based supply chains to electronic supply chains
- Prototype will:
  - Exchange information electronically in a standardized format;
  - Provide an open architecture in which all shippers, across all modes can access needed information



# Emergency Transportation Operations



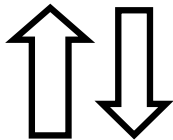
- Focused on use of technology to improve evacuations
  - Improved monitoring and coordination
  - Support for reversed lanes



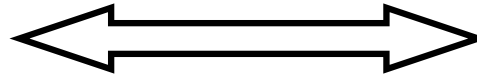
# Integrated Corridor Management



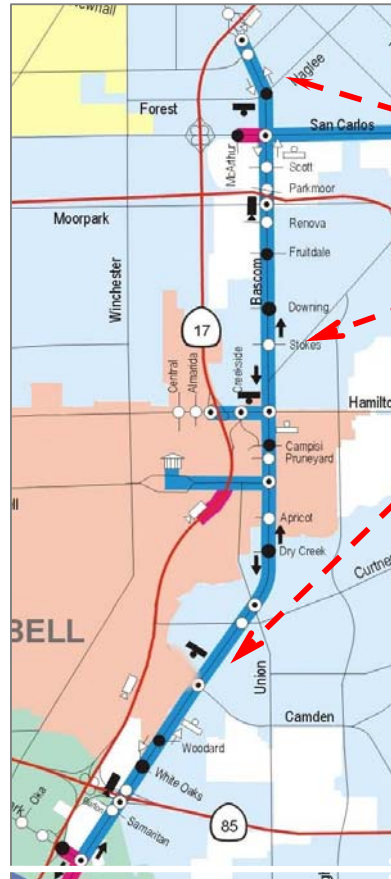
## Freeway Management



## Incident Management



## Arterial Management



# Integrated Vehicle Based Safety Systems



**Forward** Collision Warning System



**Rear Impact** Collision Warning System



**Commercial** Side Object Detection System

# Future Direction for ITS: State and Local (USA)

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- Dedicated Federal funding for ITS deployment eliminated
- ITS must now sink or swim on its own
- State and local officials
  - Economic development solutions
    - Especially for growing traffic congestion
  - Recognize benefits of ITS
    - Difficult to demonstrate / convey benefits to the public
  - Even greater need for evaluation

# Success Stories (USA)



- Significant deployment on metropolitan freeways
  - 80% of toll facilities have electronic collection capabilities
  - Nearly all major cities have freeway traffic management centers
- Significant adoption of ITS by transit agencies
  - 69% of agencies have automated technologies
- Traveler information services are growing
  - Available in 24 of the 50 states
    - Accessible to 50% of the nation's population by 2006

# Room for Improvement (USA)

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- Development of in-vehicle systems has been slow
- Relatively few inter-urban applications
- Limited surveillance on arterial streets
- Integration challenges remain

# Current Status of ITS in Europe

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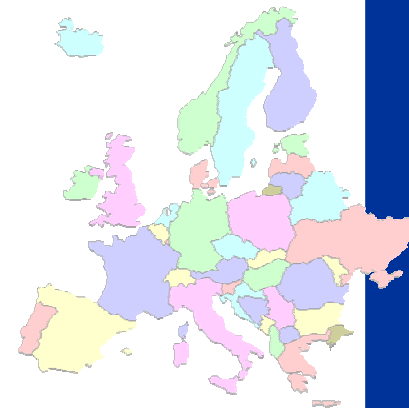
- 10-15 years in ITS research and development
- Some applications are now 'mature'
- Each nation state has its own ITS applications
- The EU is encouraging standardisation, especially in the delivery of services



# Major Areas of ITS Investment in Europe

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- Urban on-road applications
- Inter-urban on-road applications
- Monitoring and enforcement applications
- Trip planning systems
- Driver information
- Freight and fleet management
- Automated vehicle applications
- Vulnerable road user applications



# Future Direction for ITS: In Europe

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- Major investment in Galileo
- Increasing emphasis placed on eSAFETY systems
- Underpinned by Information and Communication Technologies (ICT)
- Move is towards:
  - Intelligent ICT-based transportation (Co-operative vehicle highways, eCALL systems etc)
  - Improved traffic and travel information
  - Improved traffic management and road safety
- EC's aims for the transport sector are:
  - More competitive alternatives (to the private vehicle)
  - Integrated, greener, smarter, and safer transport systems
  - 7th EC Framework to start in 2007 and last until 2013

# IBEC Organization

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## ■ Mission

- To provide an international forum for information exchange on ITS evaluation methods and results

## ■ Membership

- **FREE** and open to all interested persons
- Over 300 members in over 30 countries
- To join, send e-mail to [membership@ibec-its.org](mailto:membership@ibec-its.org)

# IBEC Organization



## ■ Chair

- Jane Lappin, Volpe Center (U.S.)

## ■ Vice Chair

- Steve Morello, Egis Group (France)

## ■ Secretariat

- FaberMaunsell, U.K.

## ■ Website

- [www.its-ibec.org](http://www.its-ibec.org)



# IBEC at ITS World Congresses

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## ■ **Toronto, Canada, November 1999**

- Seminar prior to World Congress

## ■ **Turin, Italy, November 2000**

- Workshop on final day of World Congress

## ■ **Sydney, Australia, October 2001**

- Workshop as four Special Sessions

## ■ **Chicago, U.S., October 2002**

- Workshop as four Special Sessions
- Training course on ITS evaluation
- Official launch of IBEC Working Group at evening reception

# IBEC at ITS World Congresses

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## ■ **Madrid, Spain, November 2003**

- All-day workshop as four Special Sessions
- Training course on ITS Evaluation
- Breakfast business meeting
- Evening reception

## ■ **Nagoya, Japan, October 2004**

- Workshop as four Special Sessions
- Evening reception
- Lunchtime business meeting

## ■ **San Francisco, US, November 2005**

- Workshop as four Special Sessions
- One-day international “tour” on ITS Evaluation prior to World Congress
- Breakfast business meeting
- Evening reception

# IBEC at ITS World Congresses



## ■ London, U.K., October 2006

### ■ Workshop as four Special Sessions

- Update on the Impacts of Road Pricing: Beyond the Technology
- The “Big Shift”: From Building Roads to Operating Transportation Networks
- The Economy, Security, and Efficiency Benefits of Emerging Freight Technologies
- ITS Case Studies from Economies in Transition and Developing Countries

### ■ One-day international “tour” on ITS Evaluation

### ■ Business meeting

### ■ Evening reception

## ■ Beijing, China, 2007

## ■ New York City, US, 2008

## 23 ■ Stockholm, Sweden, 2009

# IBEC at Regional ITS Forums

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## ■ I2tern - Euro Regional Projects - Conferences

- Dusseldorf, Germany, 2003
- Vienna, Austria, 2004
- Dublin, Ireland, 2005
- Barcelona, Spain, 2006

## ■ ITS in Europe Conferences

- Budapest, Hungary, 2004
- Hannover, Germany, 2005



# IBEC at Regional ITS Forums



## ■ Other venues at which to promote IBEC

- World Bank In-House Training on Transportation, Washington, D.C., April 2006
- ITS Canada Annual Meeting, Whistler, Canada, June 2006
- World Bank Seminar on International Experience in ITS, Beijing, China, June, 2006
- ITS Asia Pacific Forum, Hong Kong SAR, July 2006
- **PIARC Committee C.14 on Management of Network Operations Seminar, Kuala Lumpur, Malaysia, August 2006**
- **Pan American ITS Congress, Santiago, Chile, November 2006**
- **Transportation Research Board Annual Meeting, Washington, D.C., January 2007**
- **ITS South Africa Annual Meeting, Pretoria, South Africa, March 2006**

# IBEC Future Plans

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- **Monthly e-mail communication to members**
  
- **International compilation of best practices on selected topics**
  - Under consideration: “ITS and Special Events”, “ITS for Civil Protection”
  
- **Increase participation from under-represented regions**
  - Africa, South America, Asia-Pacific, Middle East, Eastern Europe



# Why join IBEC?

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- **To tap into a worldwide pool of expertise on ITS benefits, evaluations, and costs**
  - Thought-provoking and informative sessions at ITS World Congresses
  - E-mail discussion group where members can post questions and get answers
  - Networking opportunities at regional ITS meetings, e.g.:
    - ITS America, ITS in Europe, ITS Japan
  - International compilation of best practices on selected topics
    - Topics under consideration: “ITS for Special Events”, “ITS for Civil Protection”
  
- **How to join**
  - Send e-mail to [membership@ibec-its.org](mailto:membership@ibec-its.org)

# Contact Information

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*Visit our stand 16 at the exhibit hall of this conference!*