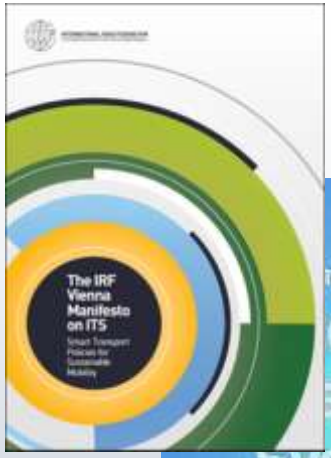


Marrakesh, 20th March 2013

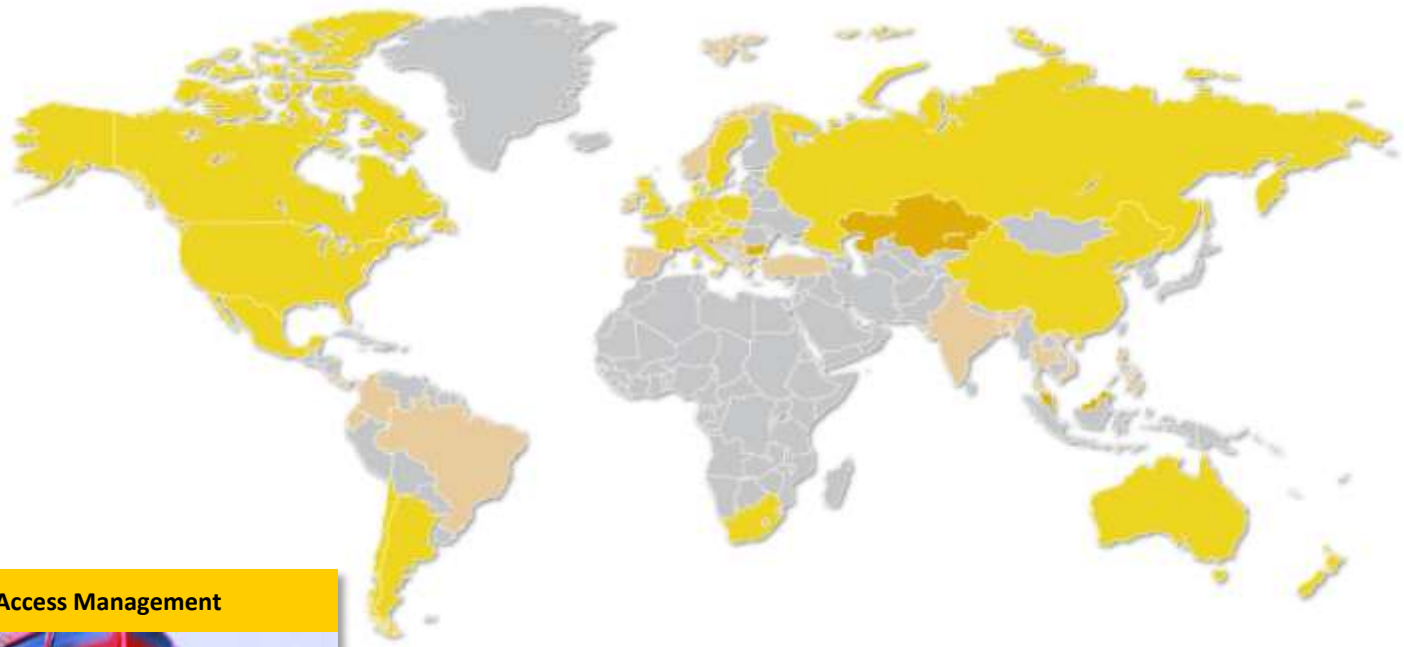
Workshop
"ITS in the MENA Region"

Joint ITS Arab/IRF Conference

Keynote Speech
Josef A. Czako
Chair, IRF Policy Committee on ITS
Vice President, Kapsch TrafficCom

Who is Kapsch TrafficCom?

Kapsch TrafficCom Group.



Urban Access Management

Safety & Security

Toll Collection

260	Projects in 41 countries
80%	Of Multi Lane Free Flow (MLFF) Systems worldwide are supplied by Kapsch TrafficCom
100	Cars per second are passing through Kapsch TrafficCom's MLFF tolling points
44	Million drivers that use our OBUs (On Board Units) as a means of payment
3 of 5	National truck tolling schemes in Europe use Kapsch TrafficCom's technology and services
12	Months (average) to deliver complete national truck tolling schemes (for the Czech Republic and Austria)

Kapsch TrafficCom Portfolio.

Toll Collection

Customers
- Road operators
- Concessionaires

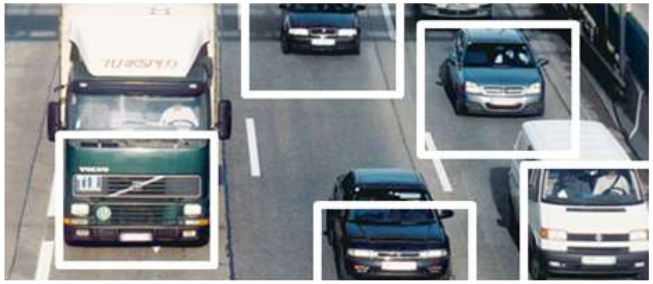
Applications
- Highway tolling
- Area tolling
- Plaza tolling
- HOT lane tolling
- Toll enforcement

Urban Access Management

Customers
- Municipalities

Applications
- City tolling
- Access restriction
- Low emission zones
- On-street parking

Traffic Safety & Security



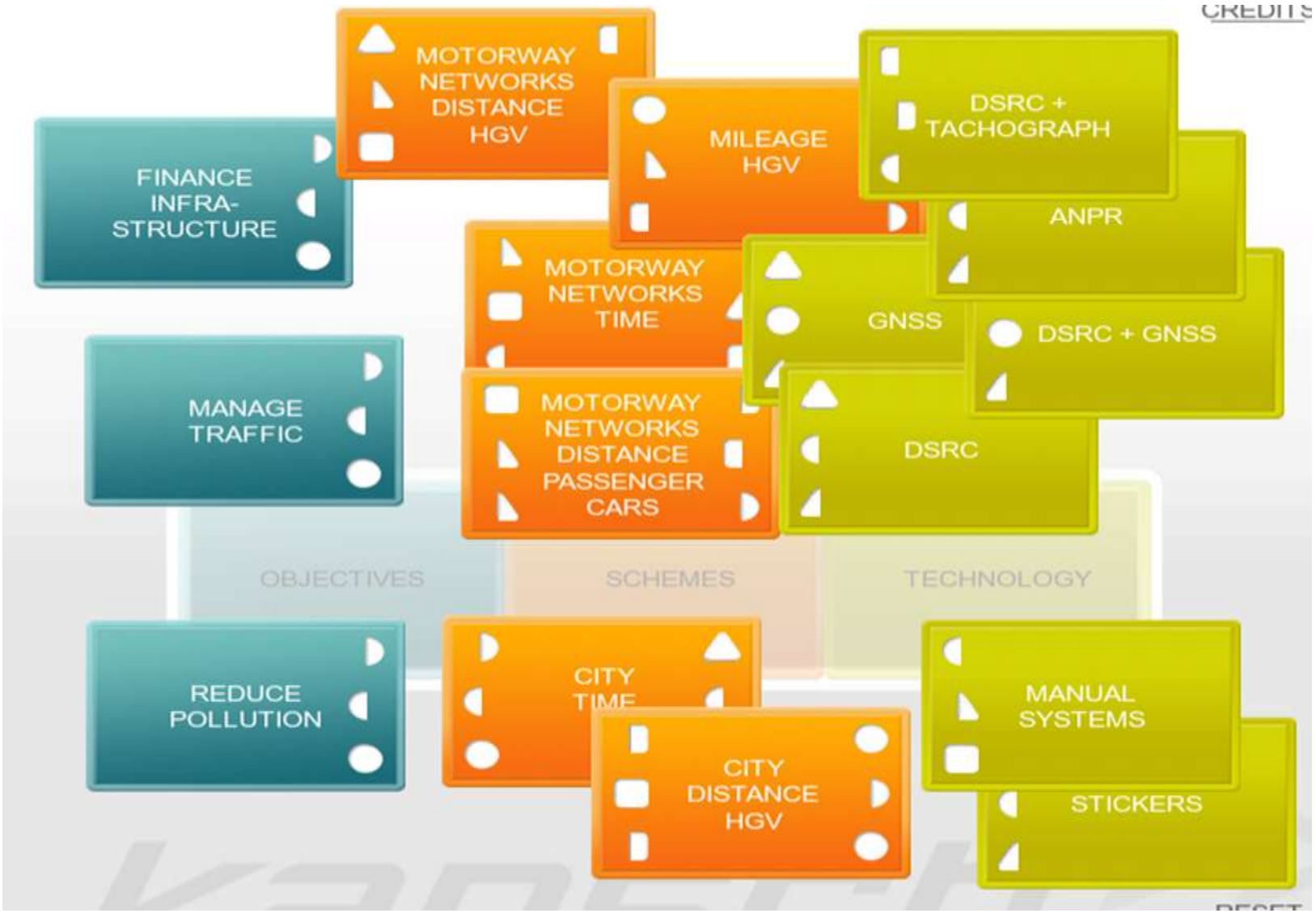
Customers
- Police authorities
- Road authorities

Applications
- Speed monitoring
- Weigh in motion
- Incident detection
- Traffic surveillance

Add-on Applications

Products & Components – (Sub-)Systems – System Integration – System Operations.

From Patchwork to Network – Match objectives, schemes and technology.



Electronic Tolling in Morocco

Kapsch has delivered On Board Units to

Société Nationale des Autoroutes du Maroc (ADM).

الطرق السيارة بالمغرب
Autoroutes du Maroc

Approach of IRF on ITS

Why does IRF look at ITS

- Increase of traffic, urbanization, accident, financial bottlenecks, environmental problems
- Vision and Mission & Role of ITS:
  Safe, Sustainable and Efficient Roads
- ITS / Smart Technologies to be included
  in Transport Policies ; new trending developments
  - Vehicle-to-Infrastructure (V2I) communications
  - Intelligent infrastructure

Figure 1. Projected Infrastructure Investment Needs

Canada. Plugging Canada's infrastructure gap requires an investment of six to ten times the level of current annual government infrastructure spending. Canada's local governments alone face a $60 billion annual infrastructure deficit—a number growing at a rate of $2 billion a year.[7] Investment needs for urban roads and bridges are $66 billion over 10 years.

Europe. The infrastructure needs for the European Union run into trillions of dollars. The energy sector alone requires $1.2 trillion over the next 20 years.[8] Approximately $90 billion is needed for infrastructure investment in Germany alone each year.[9]

South Pacific. A survey by Econotech and the Australian Council for Infrastructure Development (AusCID) puts Australia's infrastructure deficit at $19 billion.[15] Meanwhile, the infrastructure deficit in New Zealand is estimated at 5 percent of its GDP (around $4 billion).[16]

United States. The US infrastructure deficit totals $40 billion a year in the roads sector alone.[5] Overall, the American Society of Civil Engineers (ASCE) estimates total US infrastructure investment needs over the next five years to be $1.6 trillion—an amount equivalent to Italy's GDP in 2004.[6]

East Asia. The developing economies in East Asia need to invest $165 billion per year over the next five years for electricity, telecommunications, major inter-urban roads, rail routes, water and sanitation. This amounts to nearly 6.2 percent of the GDP for the region – 4.0 percent for investment and 2.2 percent for maintenance.[10] China, with its enormous electricity needs, is expected to account for 80 percent of all regional infrastructure expenditures.[11]

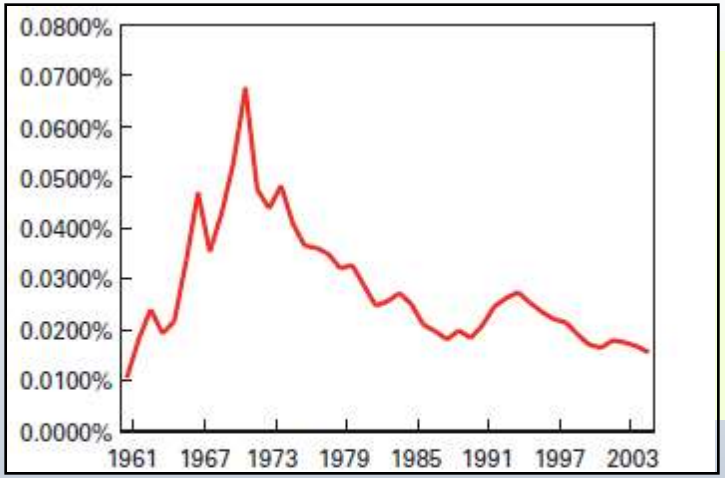
South Asia. India spends just 6 percent of its GDP on infrastructure, compared to China's 20 percent.[12] To achieve its targeted GDP growth rates, the country will need to invest approximately $250 billion in infrastructure over the next five years.[13] "The importance of infrastructure for rapid economic development cannot be overstated," explains P.Chidambaram, India's Finance Minister. "The most glaring deficit in India is the infrastructure deficit."[14]

Sources: World Bank, American Society of Civil Engineers, McGill University, ProjectFinance, A&L Goodbody Consulting, RailPage Australia, Business New Zealand, Government of India

rld.

Some challenges in figures:

- **United Nations figures**: 1,3 million road deaths a year, 50 million injured, costing society 100 billion US$ annually



Public-sector transportation research and development as a percentage of GDP (USA)

- **Urban congestion in US 2007**: 4,2 billion hours wasted in traffic jam, 87 billion US$ congestion costs
- **European Union**: 1,9 % of GDP “eaten” by congestion, i.e. 233 b€

- **World Health Organisation:** urban air pollution kills 1.2 million annually

Priority areas for ITS policy making

Financing road infrastructure

Optimising traffic flow

Protecting the environment

Improving road safety

ITS to finance road infrastructure

Government budgets are insufficient to fund widening and maintenance of road infrastructure

Role of ITS

- Apply the “User pays principle” to finance road infrastructure (ear-marked funding) and to internalize external costs
- Finance general budget, to cross-finance other modes of transport and to make road transport directly comparable (in prices) to other modes of transport

ITS to optimize traffic flow & reduce congestion

Urban congestion in the US:

- **4,2 billion hours wasted in traffic jams,**
- **= US $ 87 billion congestion costs (2007)**

In the European Union:

- **1,9 % of GDP "eaten" by congestion,**
- **= € 233 billion congestion costs**

Role of ITS :

- Create a traffic management tool or "steering mechanism" to make better use of existing infrastructure, to optimize capacity of the network and to better distribute traffic
- Apply pricing strategies to set incentives to users to choose different routes, different departure times or different modes of transport
- Assure high level of service to travellers (provision of real time information, smooth traffic, ..)

ITS for protecting the environment

WHO - World Health Organization: Urban air pollution kills ~ 1.2 million people annually!

Role of ITS:

- Reduce emissions through smoothed traffic
- Adapt drivers behavior to real time situation (e.g. high particulate concentration, slippery lanes, ..)
- Assure seamless linkages between different modes of transport to offer the “greenest” routing
- Show one’s carbon footprint and valorize ecological behavior (e.g. mobility card/points, ..)

ITS to improve road safety

United Nations:

- 1,3 million road deaths a year
- 50 million injured
- costing society 100 billion US$ annually

Role of ITS

- Provide real time information to users (conditions of road, weather, traffic flow, ..)
- Smoothen traffic flow and prevent speed variations
- Enforce speeding
- Detect incidents, shorten reaction times for appropriate rescue measures

Challenges for ITS in road transport

Political framework

Needed: top down vision, framework conditions for deployment, political will & leadership

Legal framework

Top down approach to align policy with legislation and deployment, varying stages of development of ITS legislation

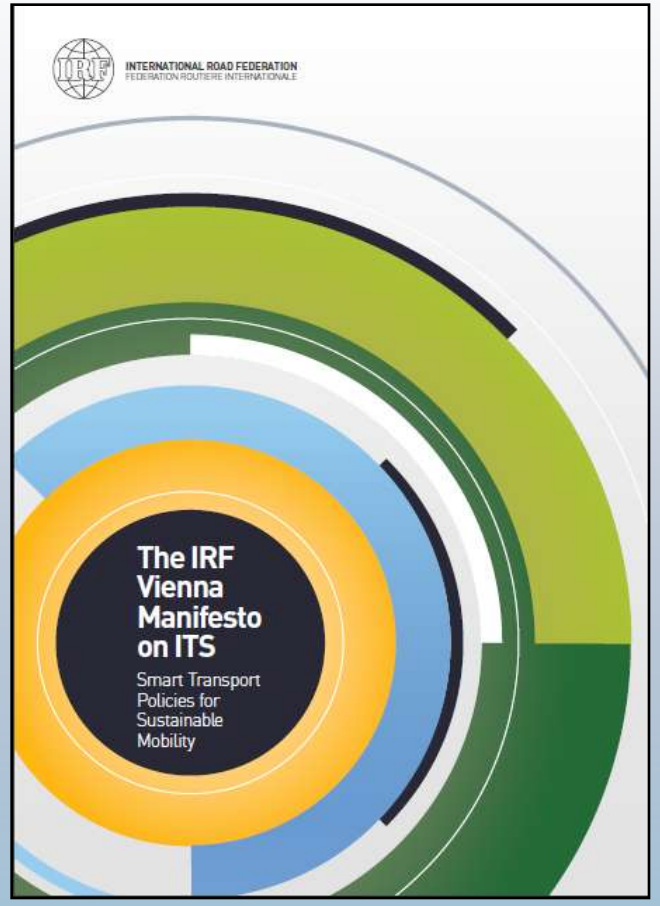
Other hurdles

Isolated & fragmented deployment, short term thinking & mental bounderies, no interagency connection, lack of standards and systematic cooperation

Role of ITS

Safety	Environment	Reducting congestion	Innovation, jobs, business development
• 3 E's: Education, Engineering and Enforcement • Measures that smoothen traffic flow, improving speed compliance • Incident detection & management & response • In-car driver support & safety tools etc.	• Modifying people's & vehicles' behaviour rather than restricting demand • Encouragement (incentives) & enforcement • Facilitation of greener choices, awareness raising • Monitoring and comparing impact on emissions of traffic management	• Knowing the performance of road networks • Managing available road capacity • Offering different paradigm for paying for mobility and funding roads • Provision of tailored real time travel information • Supporting compliance to traffic regulations	• Networking effect in ITS value chain, leading to job creation • Higher level of innovation, replacing traditional methods for traffic management • Enhanced information exchange, leading to greater cooperation within the market and the creation of new products and services

Launch of the **IRF Vienna Manifesto on ITS**



- Launch during ITS World Congress 2012
- Inception of IRF Policy Committee at ITS World Congress 2008 in New York
- 12 meetings and exchanges during 2009-2011 around the globe
- Key messages gathered in IRF Vienna Manifesto on ITS
- **Manifesto on ITS:**
  Positive movement embracing technology to improve quality of transport and thus of life

IRFs Vienna Manifesto on ITS

Endorsed by global ITS leaders

UNECE

ERTICO ITS EUROPE

ASIA-PACIFIC ITS

ITS AMERICA

ITS RUSSIA

TTS ITALIA Italian ITS Association

kapsch

TECNOPEAJE

PRC ASSOCIATES
MANAGEMENT CONSULTANTS TO I.T.S.

xerox

ARUP

Connekt ITS Netherlands

ITS South Africa Smart Mobility

EasyWay

IRF Manifesto: The Role of ITS for Sustainable Mobility

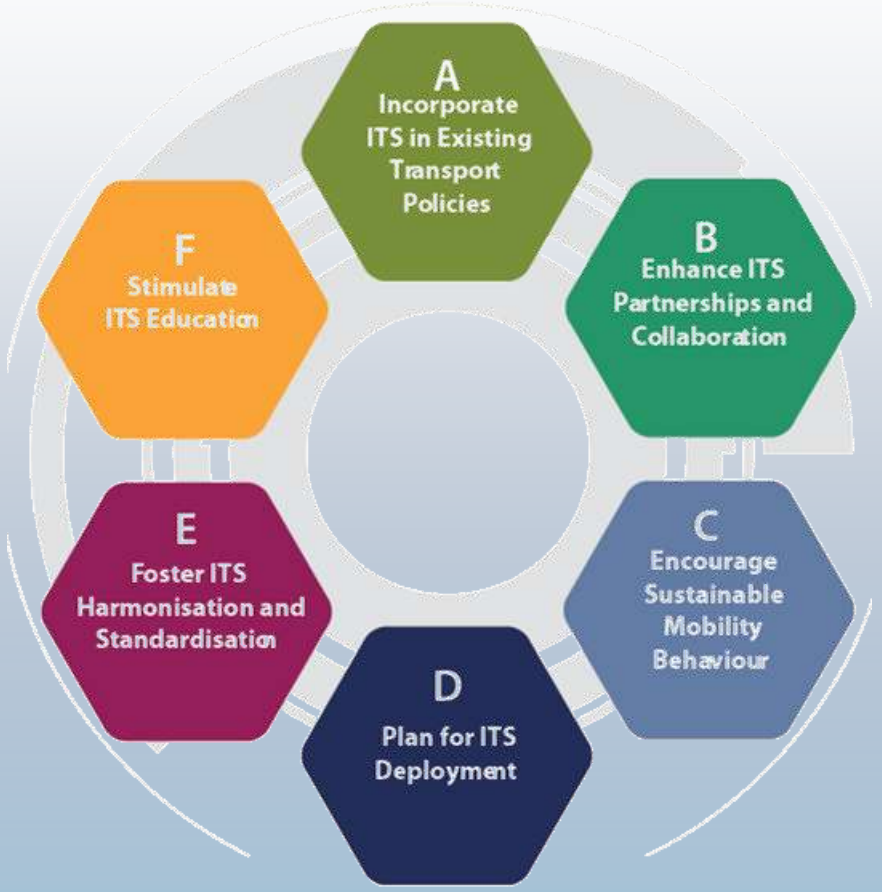
IRF Manifesto on ITS

Sustainable Mobility and Transport

Challenges

IRF Manifesto: ITS Policy Recommendations

- Smart Technologies are here
- now is the time to commit
- Recognise the importance
- create proper ITS policy frameworks in Road Transport



Summary of recommendations

A. Incorporate ITS in existing transport policies

- Affordable, reliable and safe services
- Fit into comprehensive framework comprising integrated grid of solutions
- Elements: role of mobility, role of technology, accompanying policies, educating the general public

Summary of recommendations

B. Enhance ITS Partnerships and Cooperation

- Evolving roles of public and private sectors; traditional boundaries blurred
- Develop partnership models
- Fit between societal KPI and business KPI
- Public-public corporation

Summary of recommendations

C. Encourage Sustainable Mobility Behaviour

- Translate user pay principle into pragmatic pricing strategies
- Paradigm shift for financing transport investments

Summary of recommendations

D. Plan for ITS Deployment

- Starting out with proper assessment
- Defining institutional settings, realistic timetables
- Evaluation of deployment
- Who will pay?

Summary of recommendations

E. Foster ITS Harmonisation and Standardisation

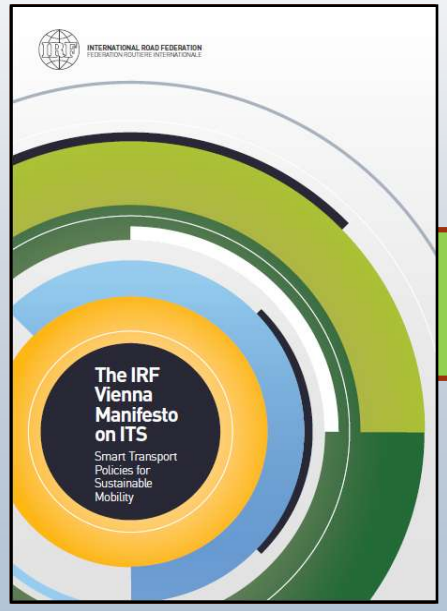
- Advantages for all those involved
- Significant savings, economies of scale
- Continuation & consistency of services from user/consumer point of view

Summary of recommendations

F. Stimulate ITS Education

- Integrated curriculum for ITS?
- Collaboration among governments, industry and universities to define research programmes, needs and solutions
- Inform general public to enable intelligent use of infrastructure, vehicles and services

IRF ITS PC & Manifesto – The Way Forward



Continue the efforts and commitment:

- Active involvement of all Stakeholders
- National initiatives to address ITS policy
- Joining forces and collaboration with stakeholders
- International Forums and Organizations
- Workshops
- Distribute Manifesto in **your** Network

An ITS strategy provides coherence

- National vision
- Defining the interfaces between system components
- Economies of scale
- Service consistency
- Technology independence and easy incorporation of new technology
- Common understanding by all stakeholders

The case of Mexico

Calendar of Events:

Think Tank Meeting on Key Performance Indicators (KPIs) for ITS

26 April 2013 – Brussels, Belgium

IRF Workshop on ITS Policy

11-12 September 2013 – Singapore/Hongkong, China

Conclusion

Added Value to Sustainable Roads with ITS deployment.

- Intelligent Transportation Systems solve challenges in Road Transport: Financing, Environment, Congestion, Road Safety
- ITS has high return of investment
- ITS technologies exist, ready for use
- ITS needs to be included in Transport Policies

Rabat, Morocco

kapsch >>>

… always one step ahead …

The Kapsch Group will always pursue
the vision of
Sustainable Mobility
with Intelligent and Smart Solutions

More for Less – The Benefits of ITS

Josef A. Czako
Vice President, International Business Development
Chair, IRF Policy Committee on ITS

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