# Intelligent Transport Systems

Trends, Advancements and Best Practice in Europe

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# ITS Technologies





# **ITS Applications**







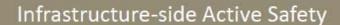






Commercial Vehicle Operations

Intelligent Vehicles



Parking Management

**Mobility Services** 









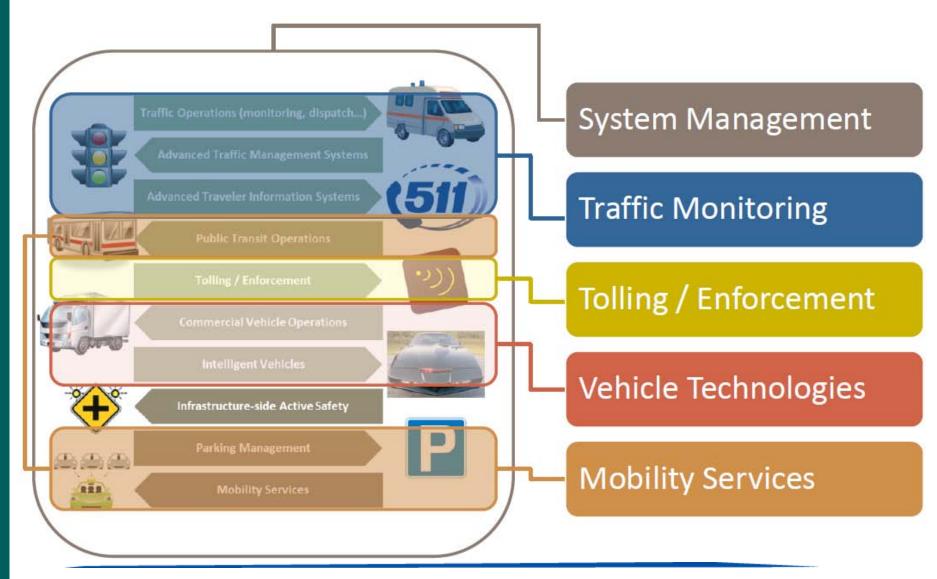




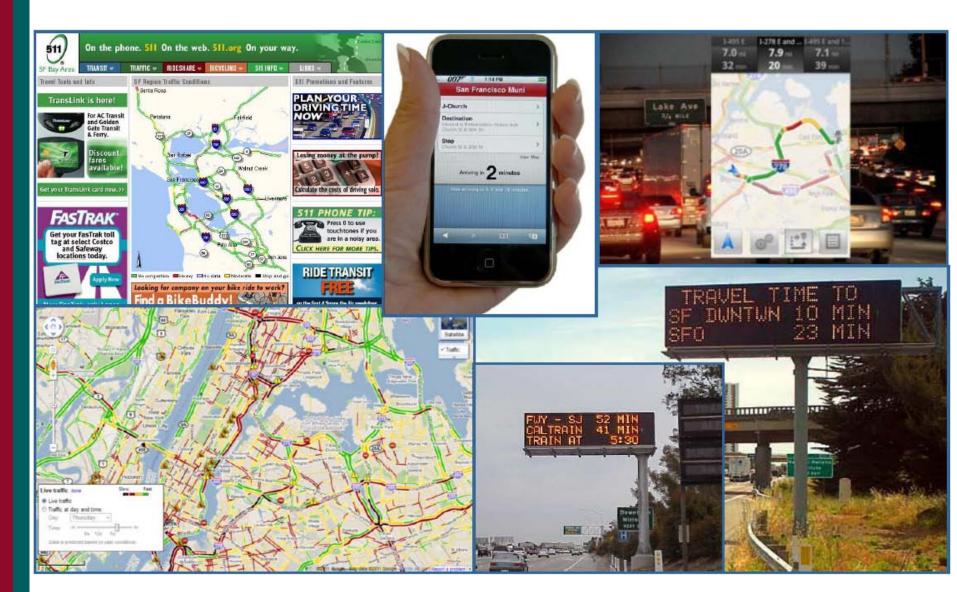




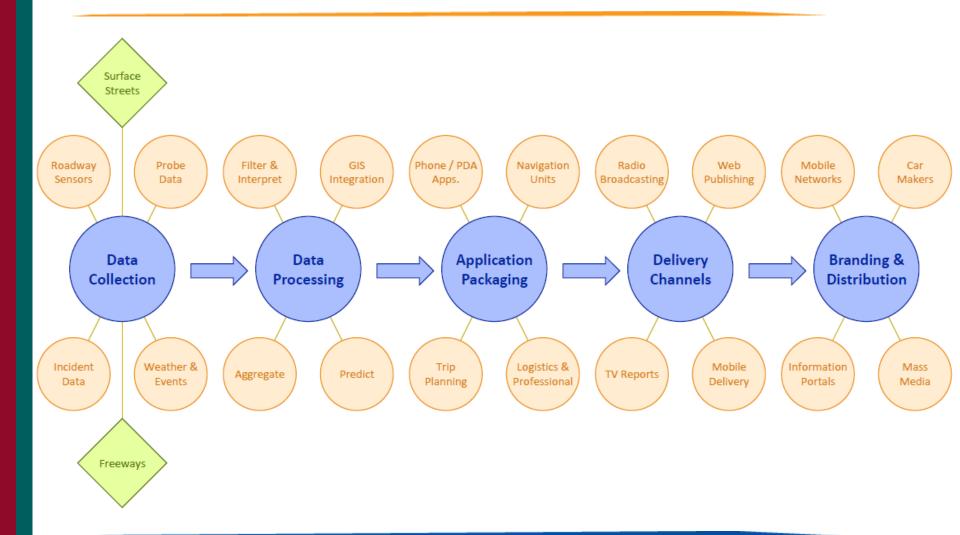
### Main Areas



# Traveler Information (Infomobility)



# Infomobility & Traffic Information



# **Emerging issue: Information Quality**



- Traffic information has become abundant but quality remains seldom monitored/addressed
  - End users are relatively clueless about information quality
  - Margins of error are not well understood and used in practice
- There are no widespread metrics or evaluation procedures to measure data quality
- Harmonized benchmarking methods would benefit both suppliers and customers
  - Improved consistency and fairness of evaluations
  - Lower overall costs by eliminating duplication of efforts
  - Better recognize true value-added and pull quality upward



#### New models

#### Crowdsourcing

#### Mobile Development





For phones with text messaging



Searches for nearest stops, provides errivel information, and shows vehicle



Displays arrival information intended for use on full-size computer screens or kinsk displays.

For web browsers





See where it takes you.



Transit Maps

Displays public transit routes.

For web browsers



#### Transit Surfer

Provides arrival information.

For mobile web browsers



#### Transit Time Map

Displays how far you can travel on public transit from a given location in a cartain amount of time

For mab browsers







# **Best practices**

- Wien
- Turin
- Amsterdam
- Barcelona
- London



## **Wien 1/2**

- According to Siemens and MRC McLean
  Hazel Wien is the «first European Smart City»
- Wide and Reach Infrastructure Network
- 937 km
  - 5 Metro Lines
  - 28 Tram Lines
  - □ 90 Bus Lines



ITS to coordinate all the mobility services





## Wien 2/2

- Project «Complete Mobility»
  - Free App to be downloaded from the city web site
    - □ Information on bus/tram/metro schedules, real time data about the state of those services, possible problems occurred, etc.
    - Booking and Pay through smartphone
- Platform EKV 3300
  - Ensure a better V2V and V2I communication for enhance efficiency and security of the traffic network
  - Give to users news on accidents, particular traffic situations, «seconds for green light» on the traffic lights.



### **Turin**

- ITS provided by the company 5T
  - Subsystem for traffic monitoring (every 5 minutes)
  - Subsystem for infomobility on public transport services
  - Subsystem for real time information (through SMS or via web) about traffic conditions, free parking slots, etc.)
  - Subsystem for traffic management (priorities for public vehicles, traffic light management, etc.)
  - Subsystem for parking slots management



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## Thank you

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