

STADIUM project overview.

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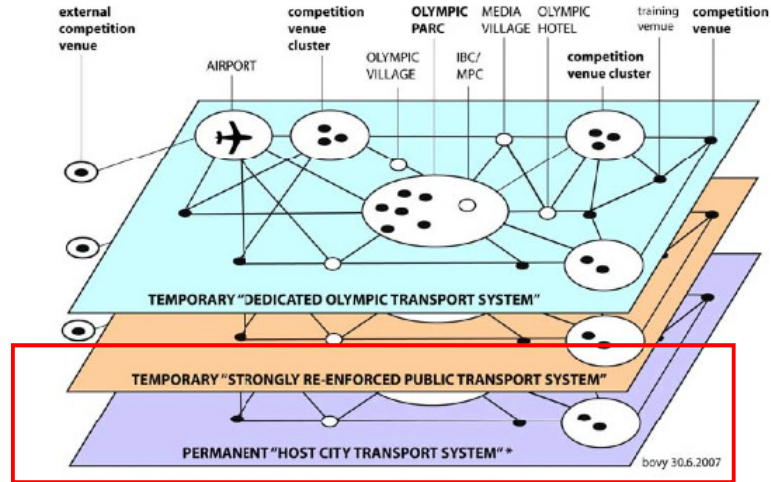
STADIUM



- **Smart Transport Applications Designed for large events with Impacts on Urban Mobility**
 - Aims at improving the performance of transport services and systems made available for large events hosted by big cities.
 - Addressed to Cities administrators to support appropriate and long lasting ITS choices
 - Co financed by DG RTD with 3,6 M€
 - Started: 1 May 2009, lasting 48 mo

- **EC strategic goals:**
 - Enhance the International Cooperation
 - Promote the European ITS Know how

Large event transportation Networks



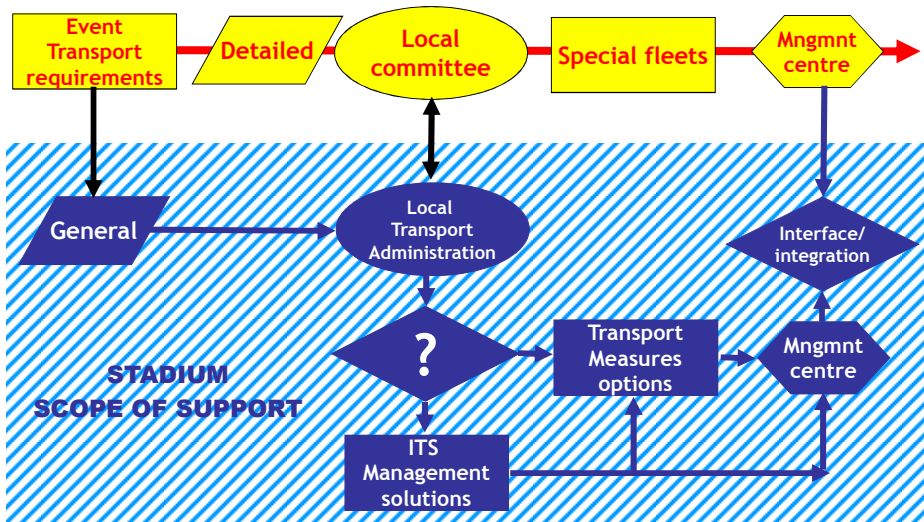
* With new, extended, renovated infrastructures and Operation systems
With connections to national + international transport systems

Events and transport demand

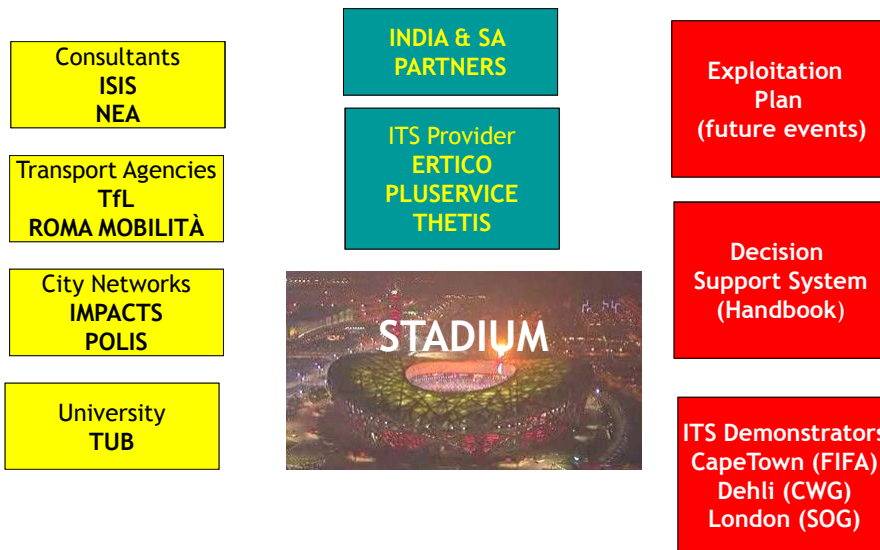


Numbers:	Athens 2004	Torino 2006
Athletes		
Technical Officials	19.000	5.200
International Federations		
Workforce	110.000	34.000
Media	21.600	11.000
Olympic Family	5.500	3.000
Sponsor	31.000	6.000
Spectators (per day)	410.000	80.000
TOTAL	597.100	139.200

Transport requirements, special fleets, city options



Participants and outcomes



Demonstrators and DSS



- The project **demonstrates** ITS applications at three major events:
 - the South Africa World Cup (2010) in Cape town,
 - the India Commonwealth Games (2010) in Delhi,
 - and the London Olympics (2012).
- Design, deployment, demonstrations and evaluation involve SA and Indian partners.
- The **Handbook is a Decision Support System (DSS)** at different stages of the decision, planning, implementation process, covering domains such as:
 - Dynamic traffic management systems & real-time traffic information
 - Public transport: tracking, fleet management/ demand-responsive transport/ etc
 - Tools to optimize operational transport plans according to historic and real-time demand data

Aims of the demonstration in Cape Town



- Improve the long term performance of minibus taxi public transport services through the use of ITS
- Implement an ITS Demand Responsive Transport (DRT) application on collective taxis that can be used effectively during the **2010 SWC** and beyond



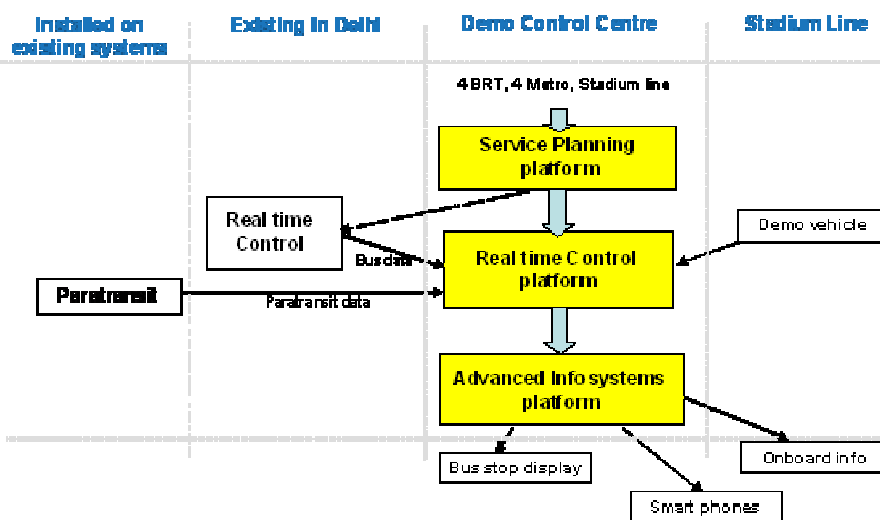
Aims of the demonstration in Delhi



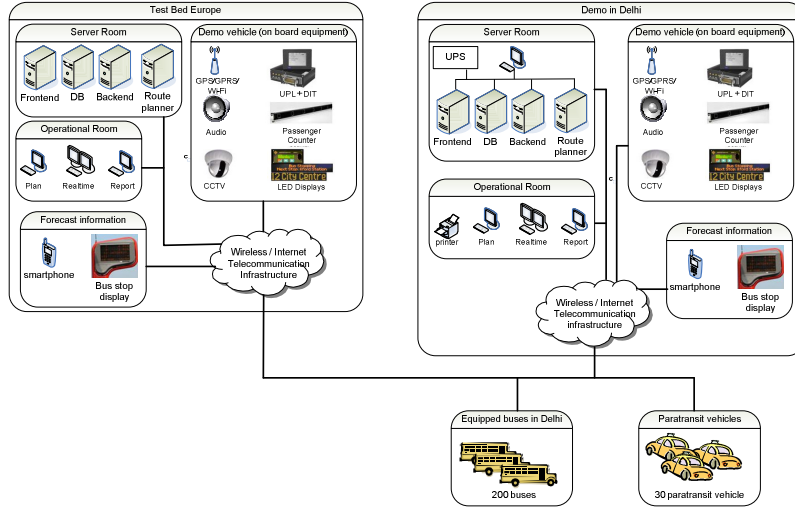
- Develop, implement, test and execute the Demonstration during the **Commonwealth Games 2010**, testing the ITS applications of Public Transport:
 - planning,
 - real time fleet management,
 - infomobility on mobile devices.

- Combine the results to achieve an adequate assessment of potential long term benefits of STADIUM services

Functional structure



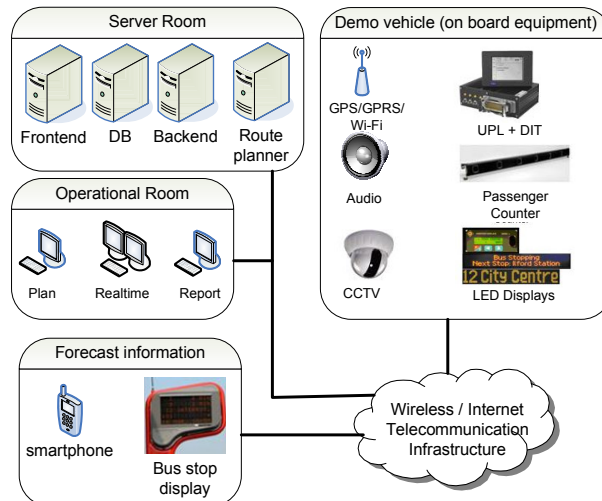
Delhi demo system architecture



Test bed Europe

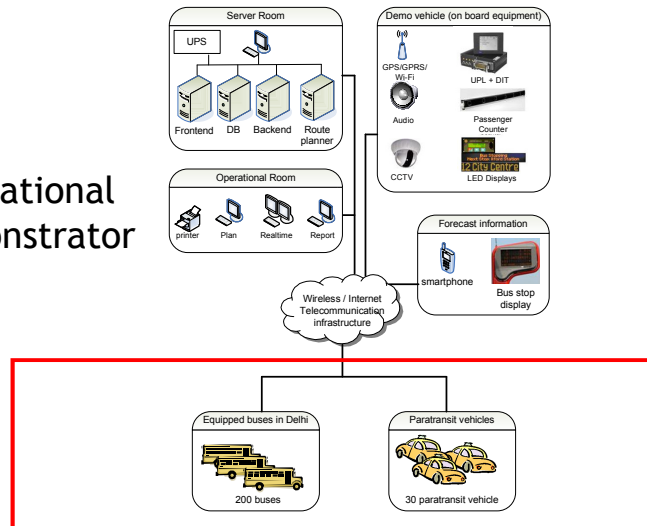


- Proof of design.
- SW development, installation, updating and maintenance.
- Remote on line monitor and support.



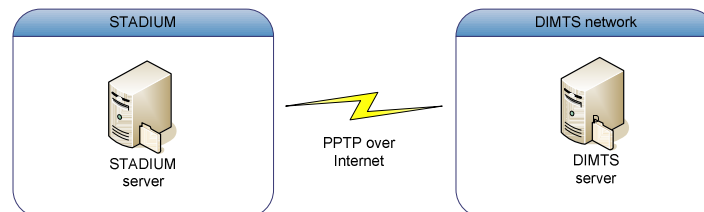
Test bed Delhi

Operational demonstrator



Interface with real time bus monitoring

- This interface will be used to integrate in the demonstration platform the existing GPS data of the bus lines.
- The communication will rely on a PPTP communication, hosted by **DIMTS (Local Transport Operator)**
- STADIUM will therefore establish a PPTP VPN over Internet by authenticating on DIMTS network infrastructure

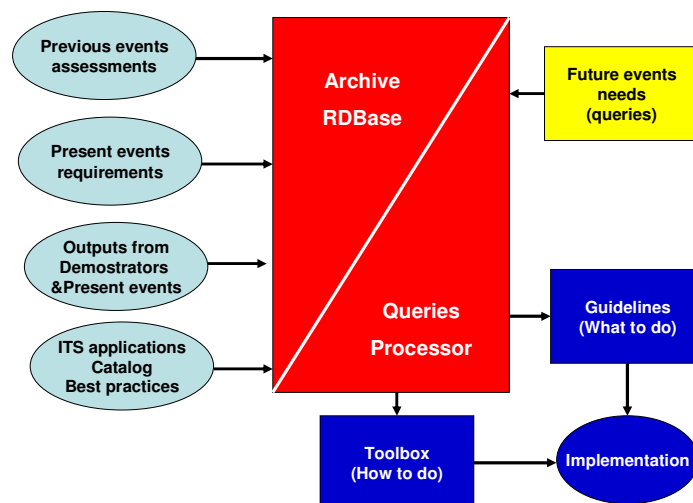


Interface with paratransit

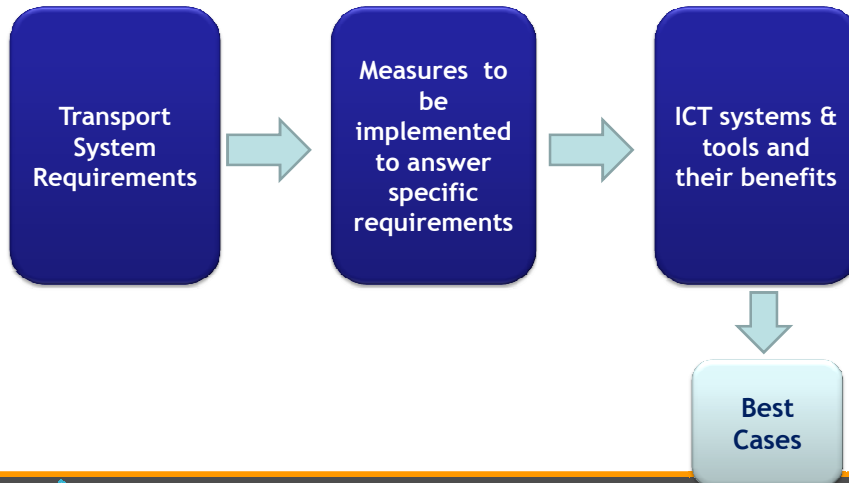
- An interface will be used to integrate in the demonstration platform the GPS data of the paratransit.
- The onboard unit for paratransit supplied by Ashok Leyland
- Paratransit data will be transmitted according to a specific protocol that will include the following information:
 - Vehicle Identifier
 - Latitude and longitude
 - “In use” status



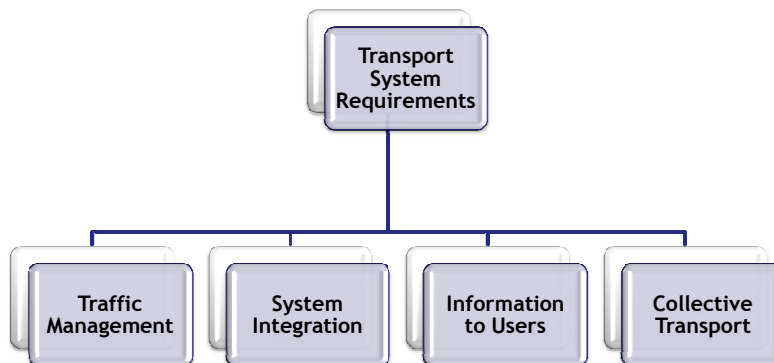
STADIUM Handbook



From Transport Requirements to ITS Tools



Transport System Requirements



An example: Collective Transport



Requirements	Measures	ICT Systems & Tools	Benefits
Manage day-to-day delivery of all agreed PT services	Operation & Fleet management	<ul style="list-style-type: none"> -Automatic passenger counter systems -Transit signal priority systems 	<ul style="list-style-type: none"> -Congestion decrease -Reduction in travel time per mode -User satisfaction
Monitoring PT activities along routes	Traffic Control	<ul style="list-style-type: none"> -Automatic Vehicle Location and Computer Dispatch systems 	
Redistribute PT assets as required	Transport Demand Systems	<ul style="list-style-type: none"> -Car sharing mngt systems -Taxi services mngt systems -PT routing and scheduling systems 	
Ensuring high quality of PT services	Safety & Security Emergency management	<ul style="list-style-type: none"> -In-vehicle surveillance systems -Emergency call-taking systems 	

Exploitation: The STADIUM user group



- The fact that cities prepare for the organization of large events years in advance is an opportunity to develop a targeted exploitation activity engaging specifically the cities which will be involved in the organization of large events from 2012 onwards and are interested in the product of this process.
- Cities contacted:
 - Glasgow (Commonwealth Games 2014),
 - Warsaw, Krakow, Poznan, Kiev, Kharkov (Euro 2012)
 - Sochi (WOG 2014)
 - Milan (World Expo 2015) and Madrid.
 - Rio de Janeiro (SOG)

Exploitation: The STADIUM user group (2)



- The user group will ensure the long term impact of the project...
- ...and will establish the STADIUM handbook as a reference

- It provides the ground for cooperation between European cities on mobility and the organization of large events beyond the mere duration of the project.

- In fact:
- Provide input on requirements to the draft of the handbook;
- commit to use the draft handbook as a reference document in preparing the large, providing feedbacks
- attend two workshops (Rome Oct. 2009 - Glasgow Oct. 2010) focusing on the exchange of experience with other cities.



Stadium: works in progress

