Sostenibilità e logistica urbana:

LE TECNOLOGIE COME FATTORE ABILITANTE

September 18th

IBM

Ci siamo resi conto che il nostro sistema di trasporto non è, di fatto, UN sistema. E' un aggregato di "industrie" correlate che operano in stretta prossimità funzionale.

La convergenza di asset fisici e applicazioni ICT richiede un nuovo approccio per gestire infrastrutture e servizi

Smarter Transportation

Leverage information to create visibility across transportation networks and improve operations

Anticipate commuter / company demand to optimize capacity and minimize congestion

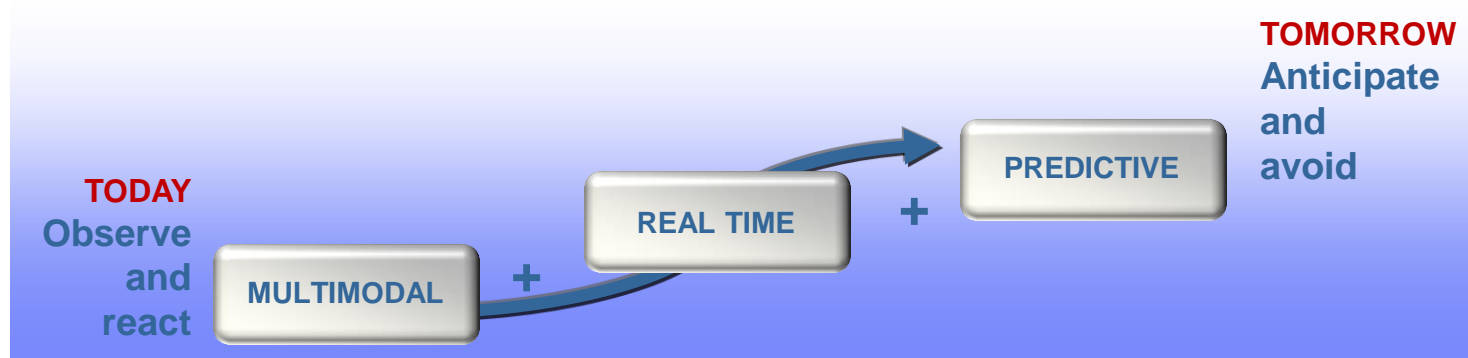**Coordinate** resources to assure safety and improve the user's experience

Urban Mobility
Platform

Electric Vehicle
Platform

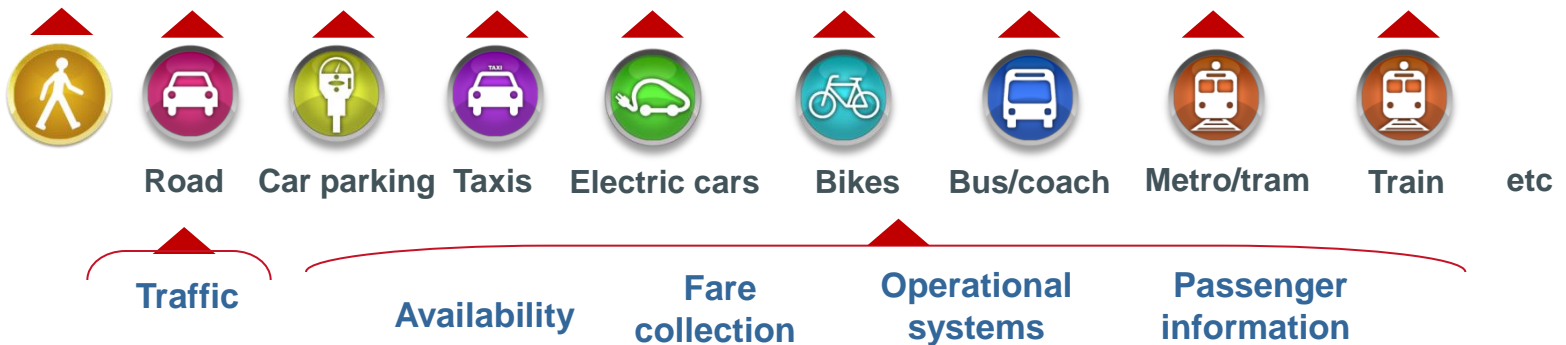**Transportation and Distribution**
Platform

Benefits to citizens and transport authorities

TOMORROW
Anticipate and avoid

PREDICTIVE

REAL TIME

TODAY
Observe and react

MULTIMODAL

+

+

GSM traces
Weather forecast
Security video

Real time data integration and processing

Social networks

Road   **Car parking**   **Taxis**   **Electric cars**   **Bikes**   **Bus/coach**   **Metro/tram**   **Train**   **etc**

Traffic

Availability   **Fare collection**   **Operational systems**   **Passenger information**

IBM

Lyon

- 2nd urban area in France
- 2.2m inhabitants
- 220 000 cars entering daily
- 58% car trips below 3km
- 30% CO2 emissions related to transport

Optimod Project

- 7m€ investment
- 12 partners
- Start April 2012
- Delivery trip planner end 2012

Real time data from all modes of transport

- Road traffic
- Car parking
- Shared bikes
- Urban public transport: buses, trams, metro
- Long distance and regional rail
- Inter-city coaches (static data)
- Urban logistics

Expected benefits

- reducing car traffic by 8%
- reducing CO2 emissions by 200 000 t/year

Optimod Services

- Urban transport operation improvement through 1h traffic prediction and traffic light priority management at 1500 locations
- Multimodal, real time and predictive journey planner
- Personal mobility assistant
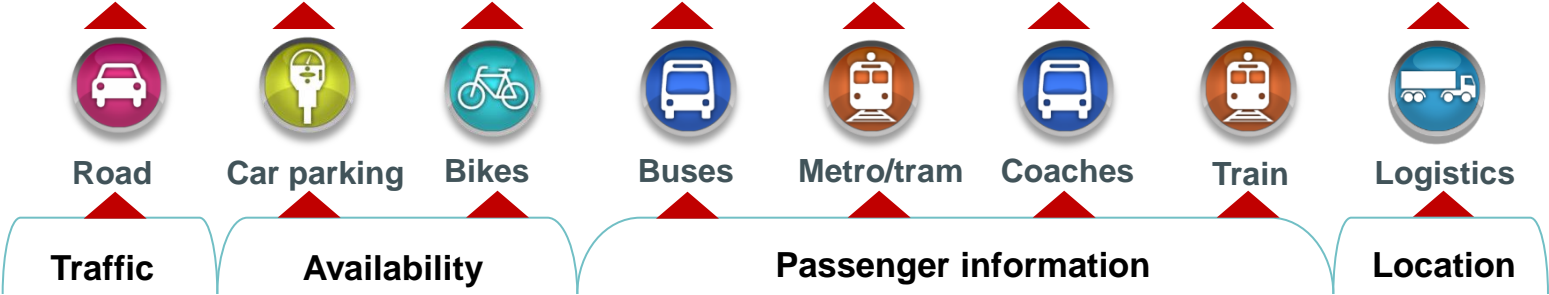- Predictive urban logistics assistant
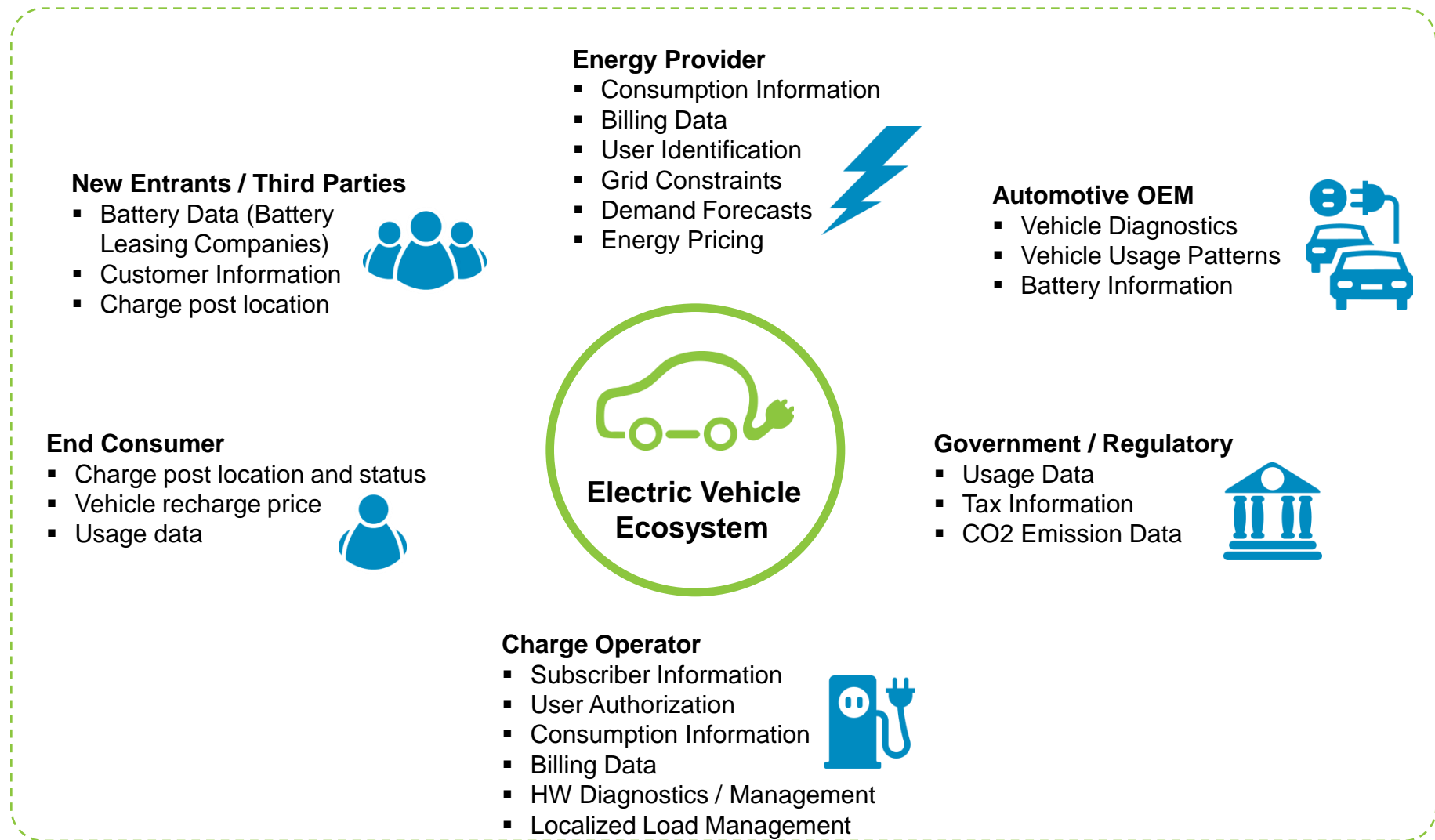
Veolia Transdev / IBM solutions

- Integrated real time data base
- Open data platform
- Traffic prediction
- Multimodal real time journey planner
- Mobile personal assistant

8% reduction in car traffic
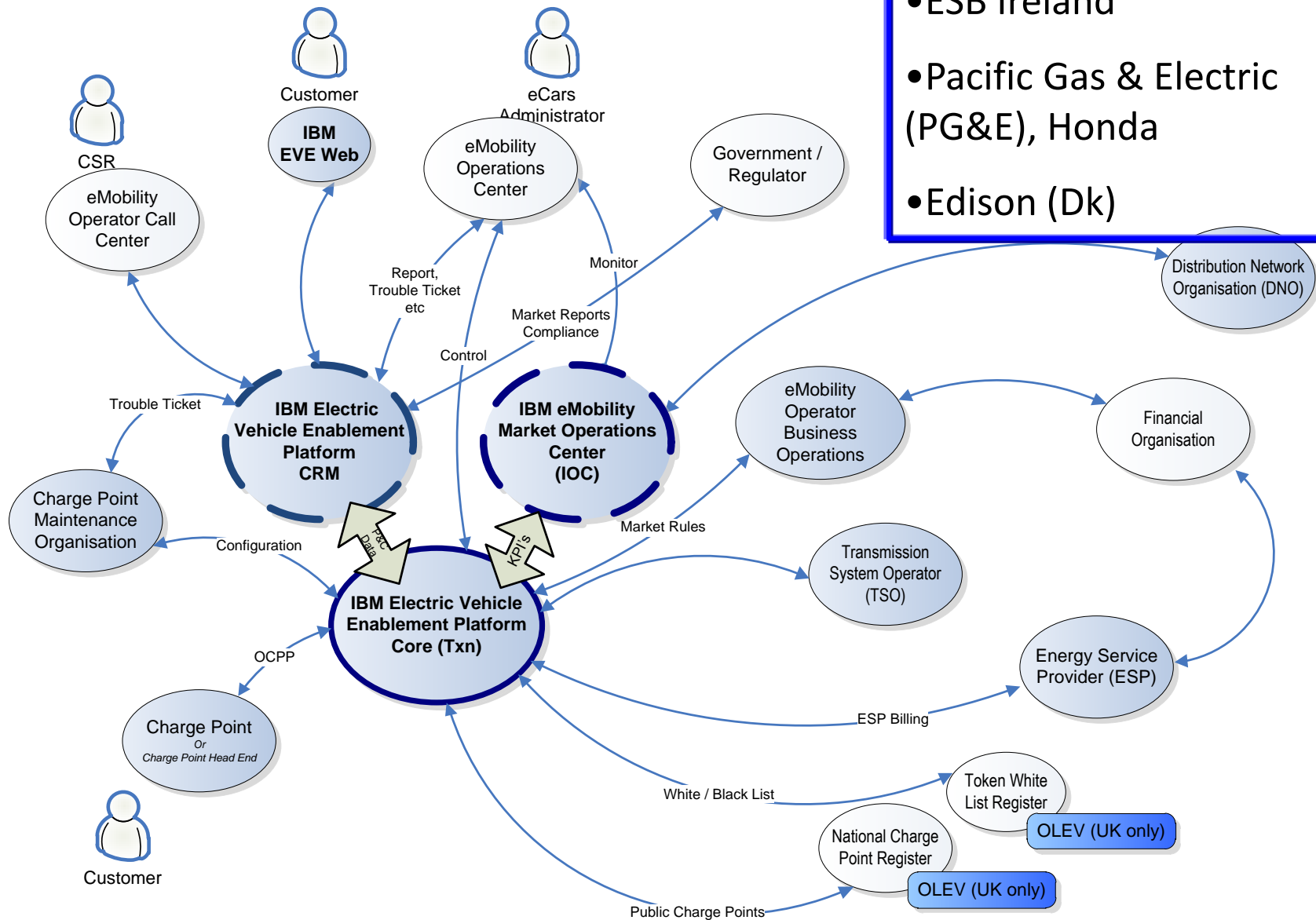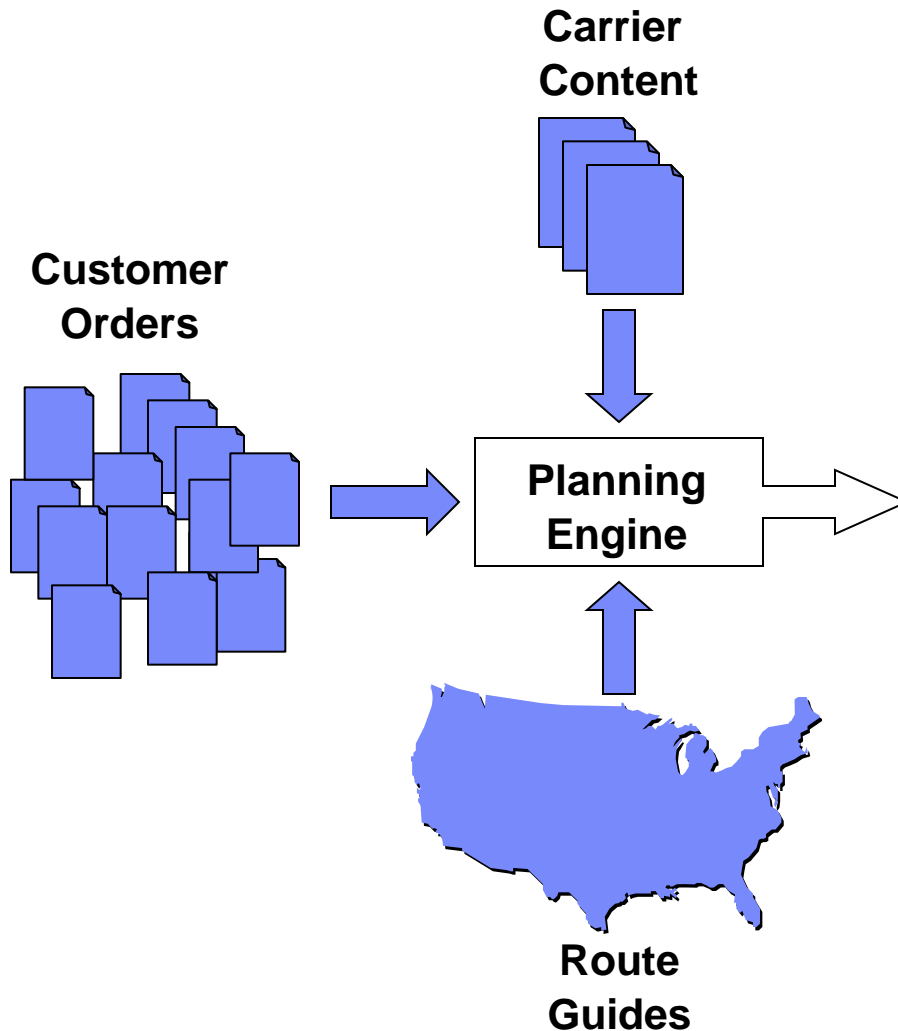
200 000 CO2 t reduction per year

1h traffic prediction

Urban transport optimization through traffic light priority

Multimodal real time predictive journey planner

Mobile personal assistant

Road	Car parking	Bikes	Buses	Metro/tram	Coaches	Train	Logistics

Traffic	**Availability**	**Passenger information**	**Location**

Electric Vehicle Ecosystem

Energy Provider
- Consumption Information
- Billing Data
- User Identification
- Grid Constraints
- Demand Forecasts
- Energy Pricing

New Entrants / Third Parties
- Battery Data (Battery Leasing Companies)
- Customer Information
- Charge post location

Automotive OEM
- Vehicle Diagnostics
- Vehicle Usage Patterns
- Battery Information

Electric Vehicle Ecosystem

End Consumer
- Charge post location and status
- Vehicle recharge price
- Usage data

Government / Regulatory
- Usage Data
- Tax Information
- CO_2 Emission Data

Charge Operator
- Subscriber Information
- User Authorization
- Consumption Information
- Billing Data
- HW Diagnostics / Management
- Localized Load Management

- ESB Ireland
- Pacific Gas & Electric (PG&E), Honda
- Edison (Dk)

Carrier Content

Customer Orders

Planning Engine

Route Guides

Optimized Load Plan

- Carrier Community of +10,000 Carriers
- LTL Carriers
- Intermodal: Truck, Air, Ocean and Rail Networks
- Parcel & 3PLs
- Supplier Portal to SCN

Azienda
- TA
- ERP
- YMS
- WMS

IBM sterling commerce

On Demand TMS

- **Integrazione col proprio YMS/TA/ERP**
- **Gestione contratti**
- **Scambio Documenti**
- **Gestione Carrier**
- **Quadratura Fatture**
- **Consolidamento Ordini**
- **Selezione Rotta**
- **Selezione Carrier**
- **Gestione Flotta (mixed)**
- **…**

Supplier e Customer Portal

| Orders Received | Optimize | Shipment Tender | Carrier Selection | Tender Accept | Schedule Appt. | Status Updates | Settlement | Reporting |