



From the West Midlands branches of
Transport Planning Society
& Chartered Institution of Highways and
Transportation

Thursday 1st December 2011

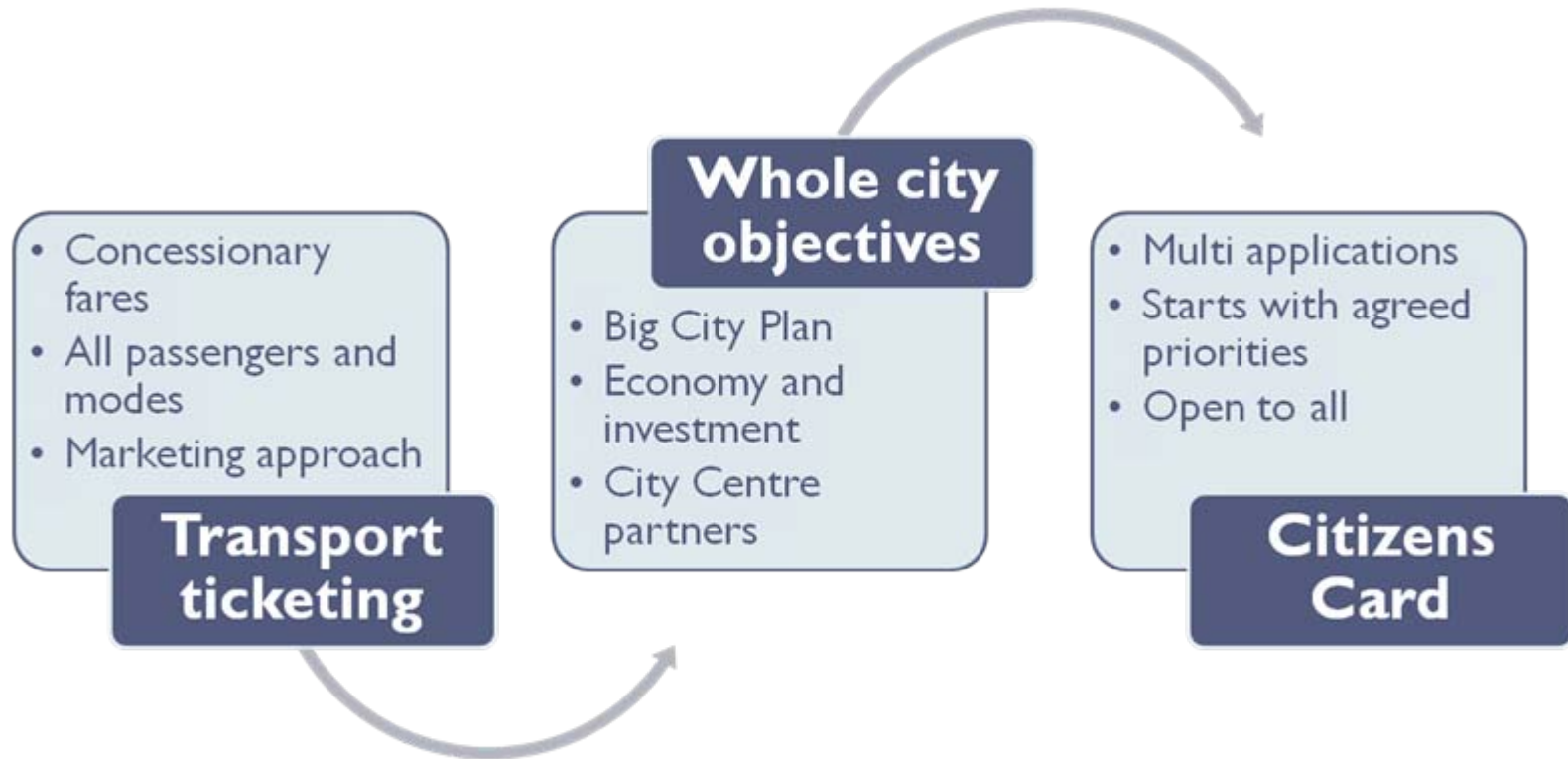
What is Smart Mobility?



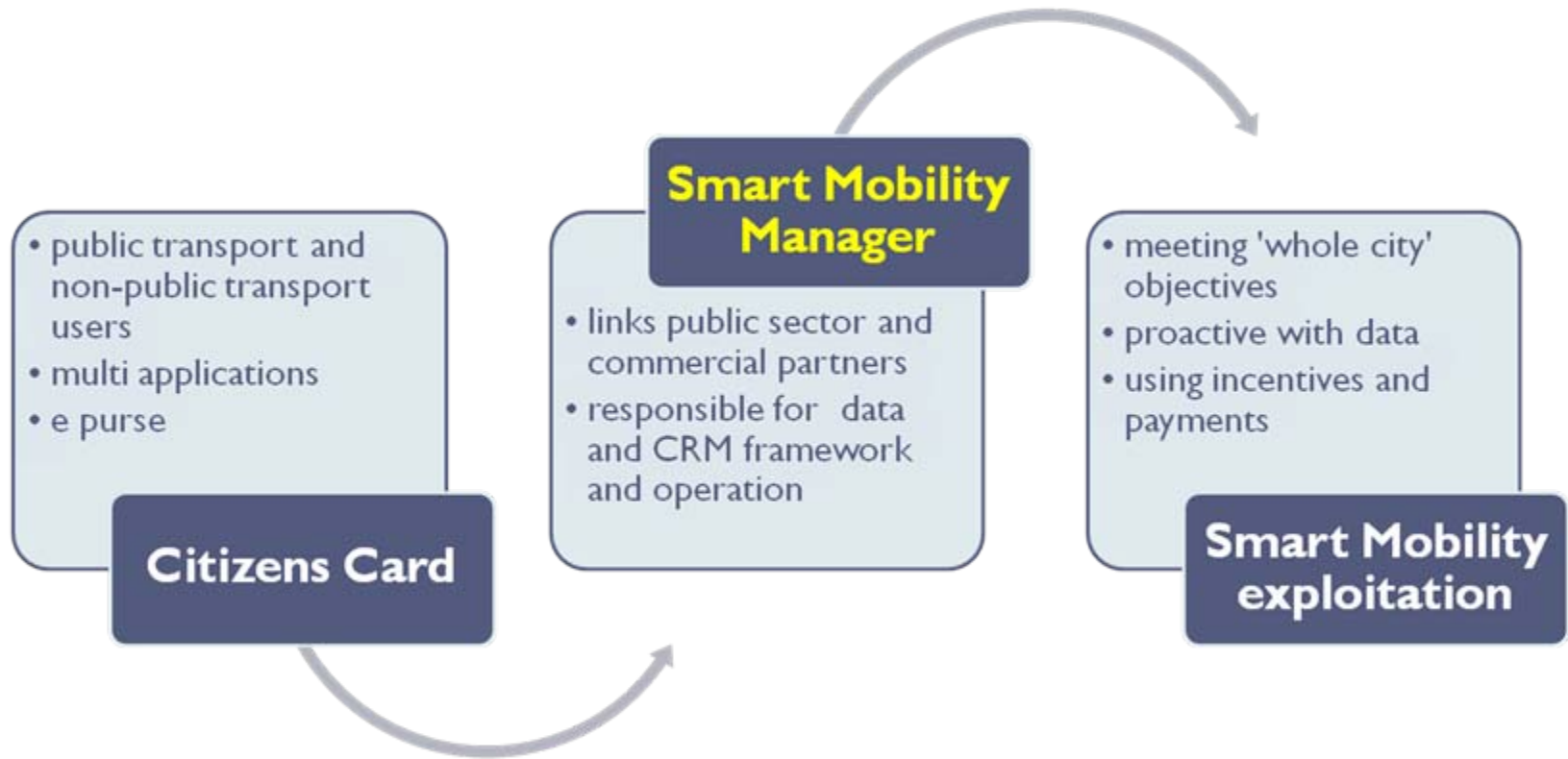
Aims of the study

- ▶ To consider both a long term strategy to move towards Smart Mobility in Birmingham and a series of short term ‘Quick Wins’
- ▶ To contribute towards the objectives of the Big City Plan, particularly those related to economic development
- ▶ To engage City Centre businesses in the form of Business Improvement Districts (BIDs)

From transport ticketing to Citizens Card



From Citizens Card to Smart Mobility



Behaviour change and incentives – lessons learnt

- ▶ Need ongoing knowledge from use
- ▶ Segmentation helps
- ▶ Personalised information and feedback works
- ▶ Transport has often not taken enough account of psychological factors
- ▶ Transport application vital to Citizens' Card but not Visitors Card
- ▶ Considerable interest in incentives in Birmingham (22% already using loyalty/discounts)
- ▶ 55% of our survey self identified to two groups known to be most receptive to incentives
- ▶ Even 'Die Hard Drivers' might be open to technology based incentives

Quick Wins

- 1. BID incentives trial**
- 2. Working with a major store**
- 3. Smart mobility centre**
- 4. Visitor Card**
- 5. Managing traffic during disruptive events**
- 6. Personalised Travel Planning (PTP) legacy**

Conclusions and Recommendations

- ▶ **Potential based on Centro smart card rollout**
- ▶ **A necessary step is a Citizens Card (and Visitors Card?)**
- ▶ **BIDs could take the lead to shape Smart Mobility development**
- ▶ **Possible pilots to demonstrate ‘what it will look like’ including traffic management, events and PTP ‘legacy’**
- ▶ **Detailed work still needed – research and trials were limited**



OUTSMART.

Programme and Project Overview

Alan Bailes

The Future Internet Public Private Partnership (FI-PPP) programme

- Relevance of ICT for the EU economies.
- Economic impact of the Internet.
- Realisation of ICT driven value generation in different (non-ICT) usage areas.
- Identification of target usage areas:
 - Energy
 - Cities and utilities
 - Environment
 - Transport
 - Agriculture
 - Healthcare
- Basis is the Internet of Things applied to the usage areas.

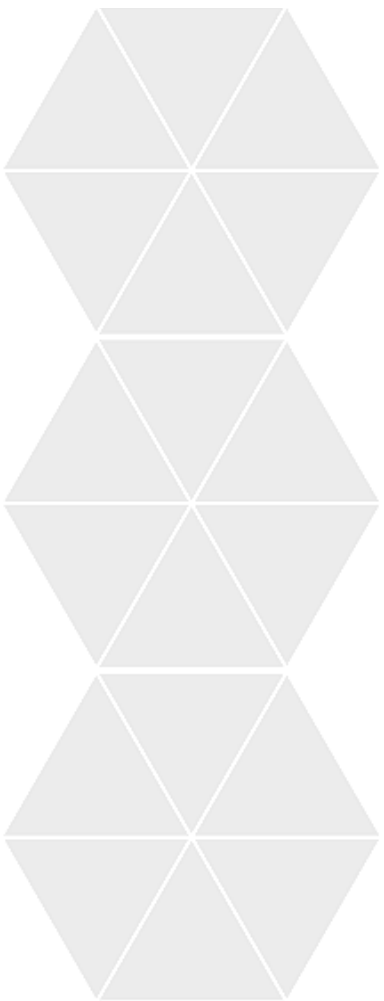
PROGRAMME DESCRIPTION: USAGE PROJECTS

- ENVIROFI: The environmental observation Web and its Service Applications within the Future Internet
 - coordinator: Atos Origin – Spain
- FINSENY: Future INternet for Smart ENergY
 - coordinator: Nokia Siemens Networks - Germany
- FI-CONTENT: Future media Internet for large scale CONtEnt experimENTation
 - coordinator: Technicolor – France
- Flnest: Future Internet enabled Optimisation of Transport and Logistics Business Networks
 - coordinator: Kuehne + Nagel – Switzerland
- Instant Mobility: Dynamic and real time optimisation of passengers and goods mobility in urban areas based on (Internet assisted) continuous localisation & cooperative service delivery
 - coordinator: Thales – France
- **OUTSMART: Provisioning of urban/regional smart services and business models enabled by the Future Internet**
 - **coordinator: France Telecom – France**
- SAFECITY: Future Internet Applied to Public Safety in Smart Cities
 - coordinator: Ingeniera de Sistemas para la Defensa de Espana SA-ISDEFE – Spain
- SmartAgriFood: Smart Food and Agribusiness: Future Internet for Safe and Healthy Food from Farm to Fork
 - coordinator: Stichting Dienst Landbouwkundig Onderzoek - Netherland

PROGRAMME DESCRIPTION: TRANSVERSE PROJECTS

- Core Platform IP project
 - FI-WARE: Base Platform for Future Service Infrastructures
 - COORDINATOR: TELEFONICA – SPAIN
- Capacity building & infrastructure support SA project
 - INFINITY: INfrastructures for the Future Internet commuNITY
 - COORDINATOR: TECHNICAL UNIVERSITY OF MADRID(UPM)
- Programme facilitation & support SA project
 - CONCORD:
 - COORDINATOR: AALTO UNIVERSITY - FINLAND

PROGRAMME FINANCES

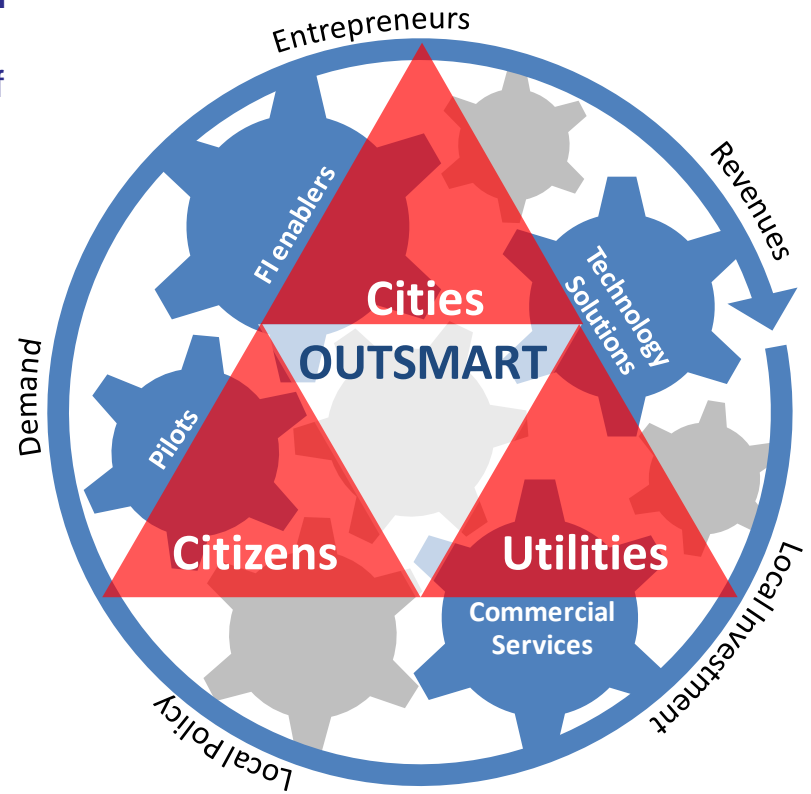


	Acronym	Length (years)	Cost (€)	Grant (€)
	FI-Ware	3	66,376,426	40,999,661
	ENVIROFI	2	6,474,026	5,015,348
	FI-CONTENT	2	8,239,575	4,996,906
	Finest	2	7,998,181	4,889,930
	FINSENY	2	9,256,616	5,183,351
	Instant Mobility	2	8,015,659	4,994,969
	OUTSMART	2	7,603,473	4,996,000
	Safecity	2	4,960,223	3,719,598
	SmartAgriFood	2	7,435,397	4,974,250
	INFINITY	3	3,785,138	3,000,000
	CONCORD	5	5,875,274	5,875,274
			136,019,988	88,645,934

VISION AND OUTCOMES

OUTSMART contributes to the **sustainability of resources** by establishing a **Future Internet enabled eco-system**, supporting the creation of innovative services and applications with **real value to European economy and citizens in five example areas highly relevant to our society.**

Outcomes: Detailed functional and non-functional requirements; domain specific enablers, prototypes of domain specific functionality and a business framework .



PROJECT DESCRIPTION: USAGE PROJECTS

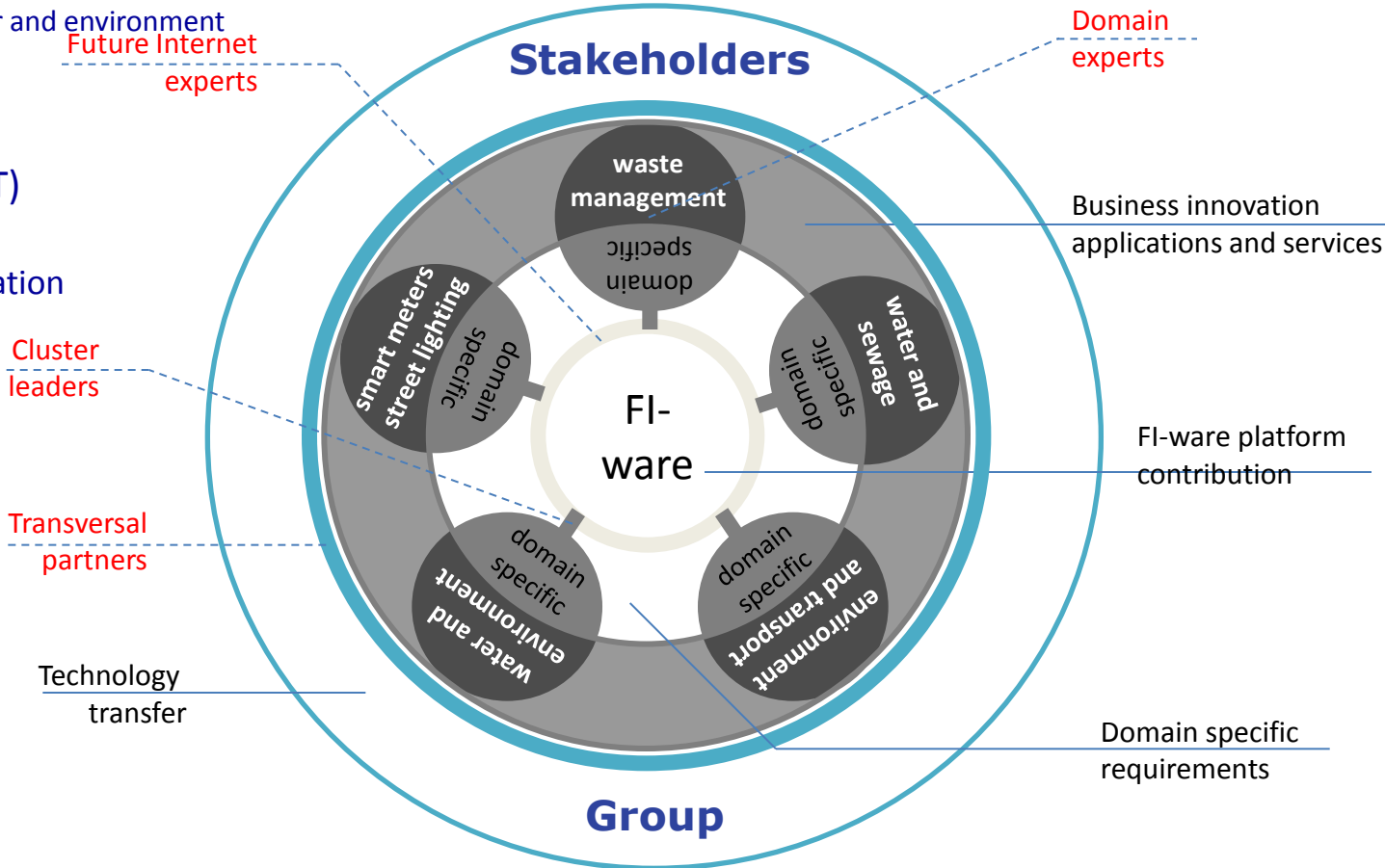
- **5 clusters**

- Aarhus (DK) Water and Sewage
- Berlin (DE) Waster management
- Birmingham (UK) Environment and transport
- Santander (SP) Smart meters and street lighting
- Trento (IT) Water and environment

- **cluster composition**

- cluster leader (ICT)
 - utility
 - public organization

- **Stakeholders group**



CLUSTERS AND ACTORS

Cluster

Domain specific
technology provider

FI common
technology partner

GER

Domain specific
service provider

FI
Technology expert

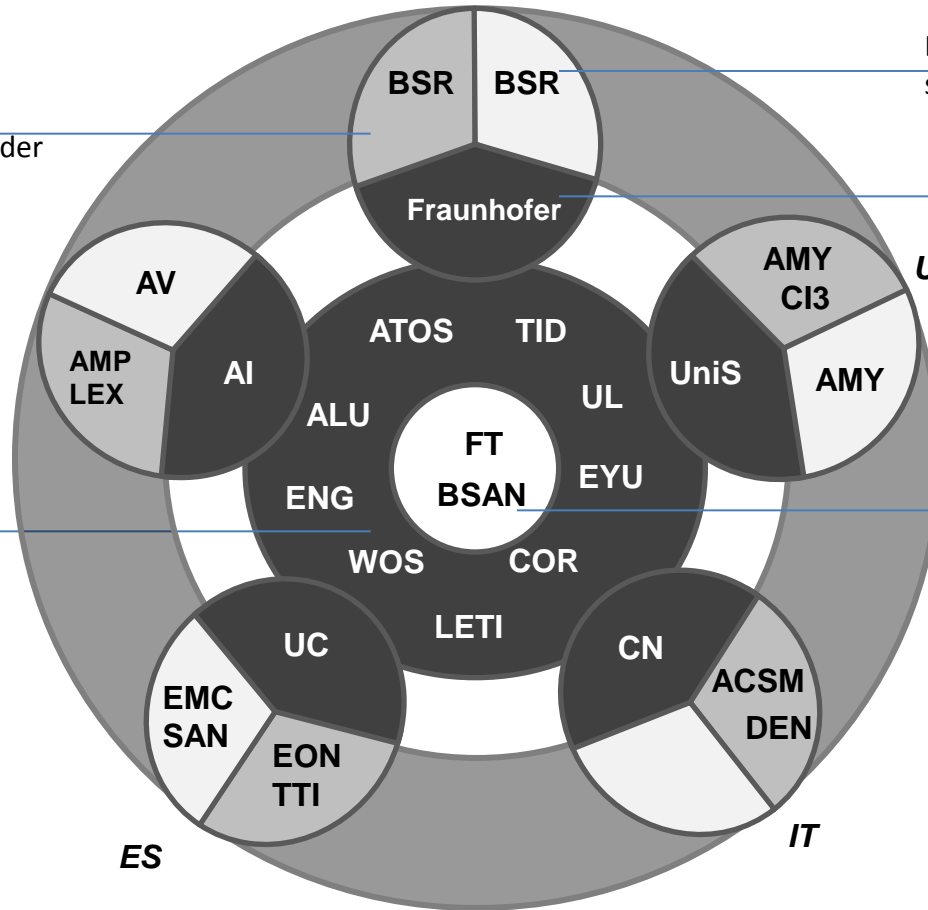
DK

UK

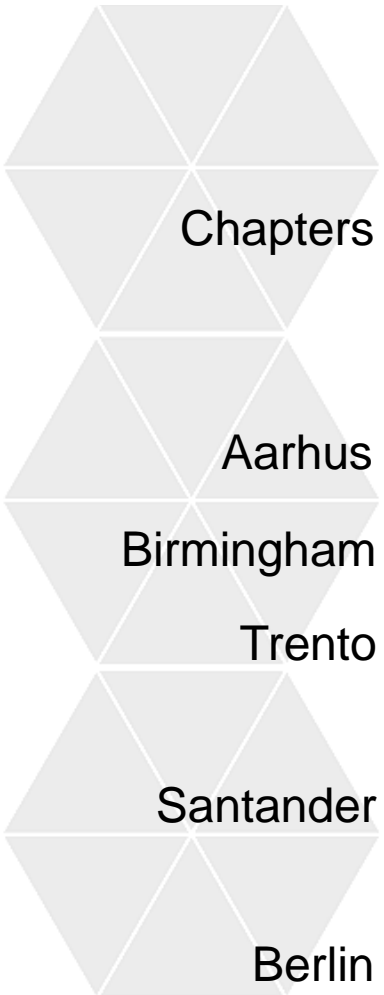
Special role

ES

IT



CONSORTIUM



FT	FRANCE TELECOM SA
TID	TELEFONICA INVESTIGACION Y DESARROLLO SA
ALU	ALCATEL-LUCENT ITALIA S.P.A.
EYU	ERICSSON D.O.O FOR TELECOMMUNICATIONS
ENG	ENGINEERING - INGEGNERIA INFORMATICA SPA
ATOS	ATOS ORIGIN SOCIEDAD ANONIMA ESPANOLA
COR	Elster SAS
WOS	WorldSensing S.L.N.E.
LETI	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
UL	UNIVERSITE DU LUXEMBOURG
AI	ALEXANDRA INSTITUTTET A/S
AMPLEX	AMPLEX AS
AV	ARHUS VAND A/S
UniS	UNIVERSITY OF SURREY
AMY	AMEY OW LIMITED
CI3	CENTRO DE INNOVACION DE INFRAESTRUCTURAS INTELIGENTES
CN	CREATE-NET
DEN	Dolomiti Energia
UC	UNIVERSIDAD DE CANTABRIA
BSAN	BANCO SANTANDER SA
SAN	AYUNTAMIENTO DE SANTANDER
EMC	EMPRESA CANTABRA PARA EL DESARROLLO DE LAS NUEVAS TECNOLOGIAS EN LA ADMINISTRACION SL
EON	E.ON SERVICIOS SL
TTI	TTI NORTE, S.L.
FRAUNHOFER	FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V
BSR	BERLINER STADTREINIGUNGSBETRIEBE

- **Cities**

- Malaga city council
- Manchester city council
- Barcelona city council
- Istanbul Metropolitan Municipality
- City of Belgrade
- Comune di Genova
- Luxembourg
- Nice Cote d'Azur
- Belgrade
- Issy-les-Moulineaux
- Milano (represented by Fondazione Politecnico di Milano)

- **Industrial/utilities**

- CSTB
- Istanbul, Water & Sewage Administration
- Véolia Environment R&D
- enlarge group, include additional and cross check requirements
- 2 meetings (July 2011, March 2012 (tbc))



OUTSMART.

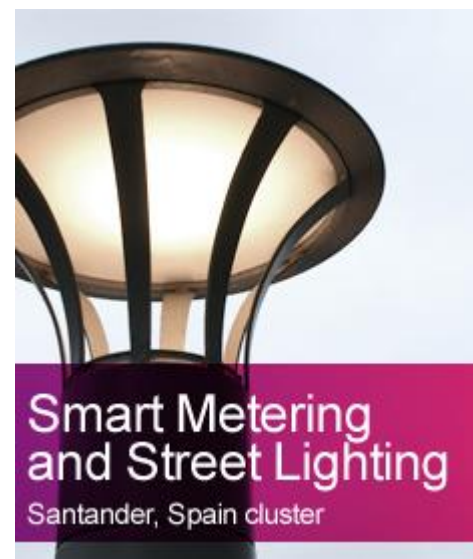
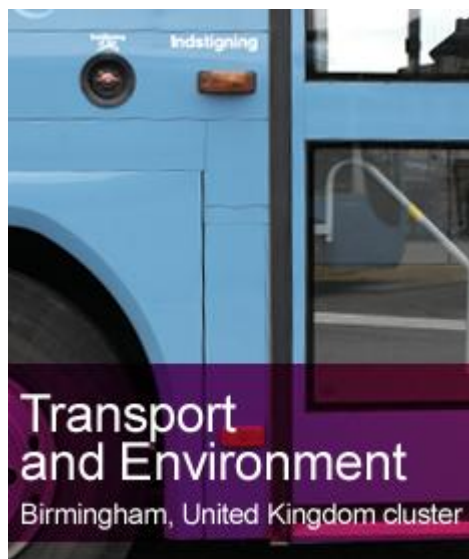
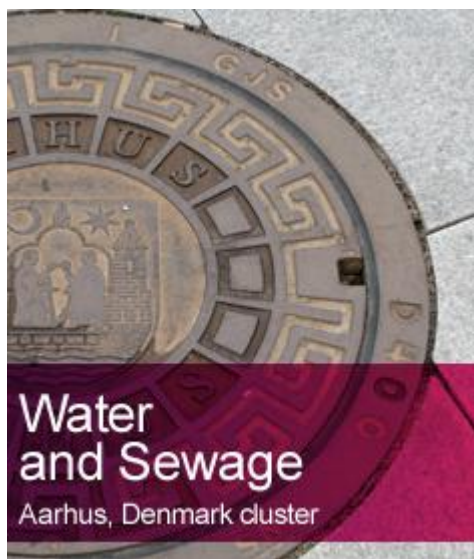
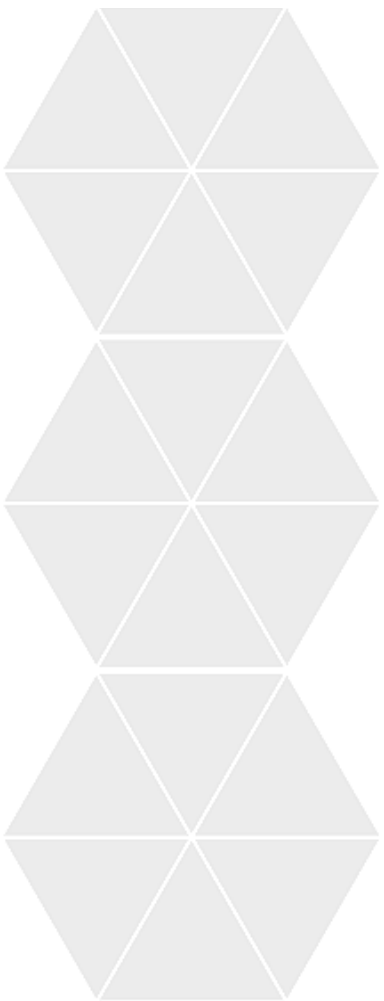
PROJECT OVERVIEW

18.07.2011 – OUTSMART

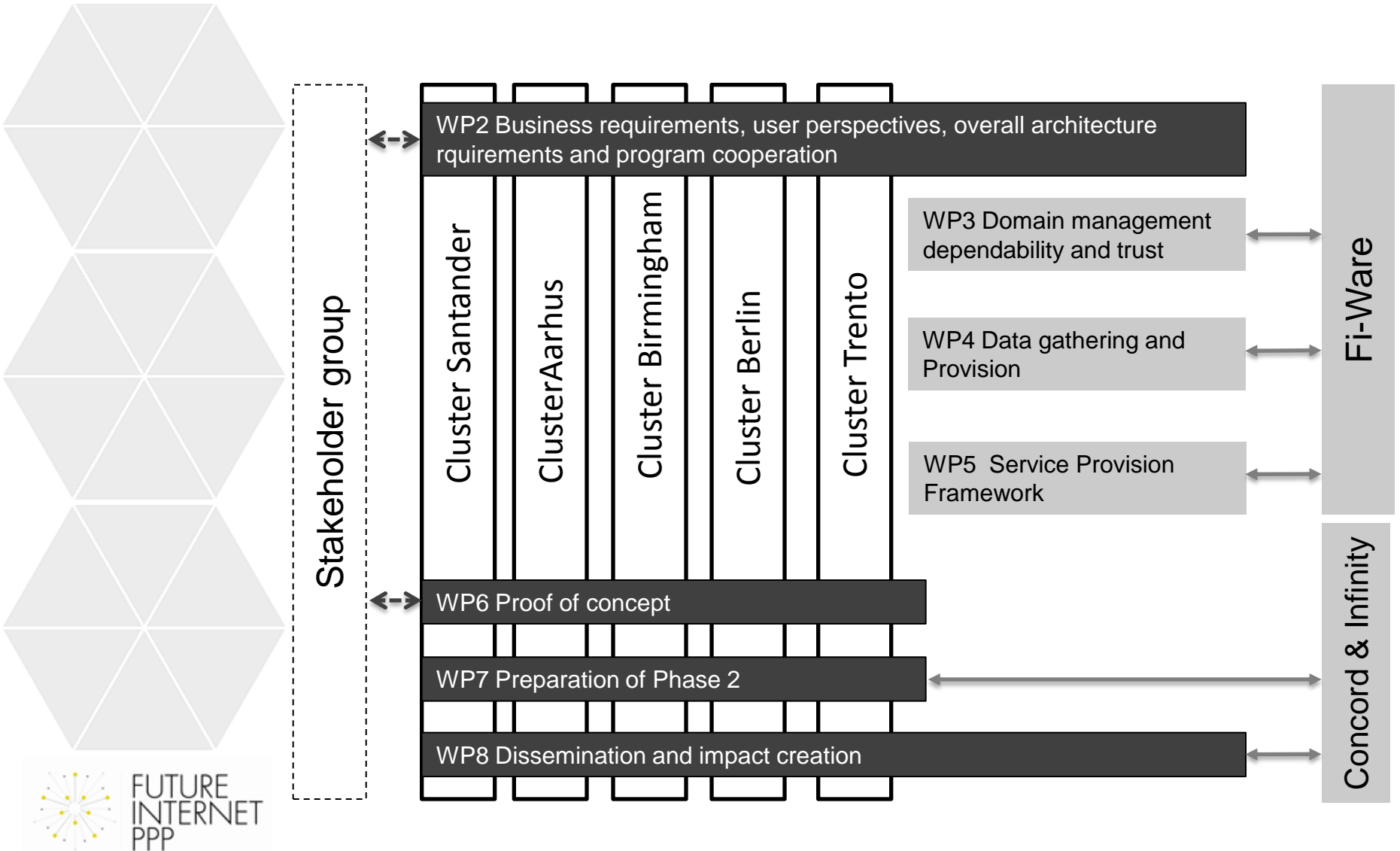
VISION, GOALS AND OBJECTIVES

- OUTSMART contributes to the sustainability of resources by
 - establishing a Future Internet enabled eco-system for cities, and
 - supporting the creation of innovative services with real value to European economy and citizens
- OUTSMART addresses five essential Smart City services:
 - Water and Sewage
 - Smart Metering and Street Lighting
 - Waste Management
 - Water and Environment
 - Sustainable Urban Transport

USE CASES - CLUSTERS



PROJECT STRUCTURE



PLANNED OUTCOMES

- Outcomes: Detailed functional and non-functional requirements; domain specific enablers, prototypes of domain specific functionality and a business framework for Essential Smart City Services.
 - Delivery of utilities and environment smart services based on the five pilot eco-systems
 - Delivery of smart services' requirements
 - Proactive participation to the FI PPP activities
 - Delivery of functional and non functional requirements for the overall architecture
 - Specification of domain specific enabler functionality
 - Definition of a service provision framework
 - Definition of a utilities and environment specific middleware enabling dependable services
 - Definition of a platform for data gathering and provisioning
 - Proofs of concept prototypes of domain specific enablers to provide early validation of results hosted on the five pilot eco-systems
 - Delivery of business models and local eco-system frameworks
 - Contribute to the FI PPP standardisation and regulation plan
 - Pursue standardisation and regulation activities for domain specific topics
 - Plan for phase 2 large scale trials

MAJOR MILESTONES

Milestone

Expected date

Full list of requirements completed

NOV11

Specifications of core and domain specific enablers completed

JUN12

Proofs of concept deployed

DEC12

Proofs of concept assessed, deployments of phase 2 pilots ready

MAR13

PPP exploitation plans and business models consolidated

MAR13

OUTSMART.

Sustainable Urban Transport



OUTLINE

- Cluster theme
- Partners and role
- Overview use cases
- Incentivization schemes
- Key technology challenges

Theme – Sustainable urban transport

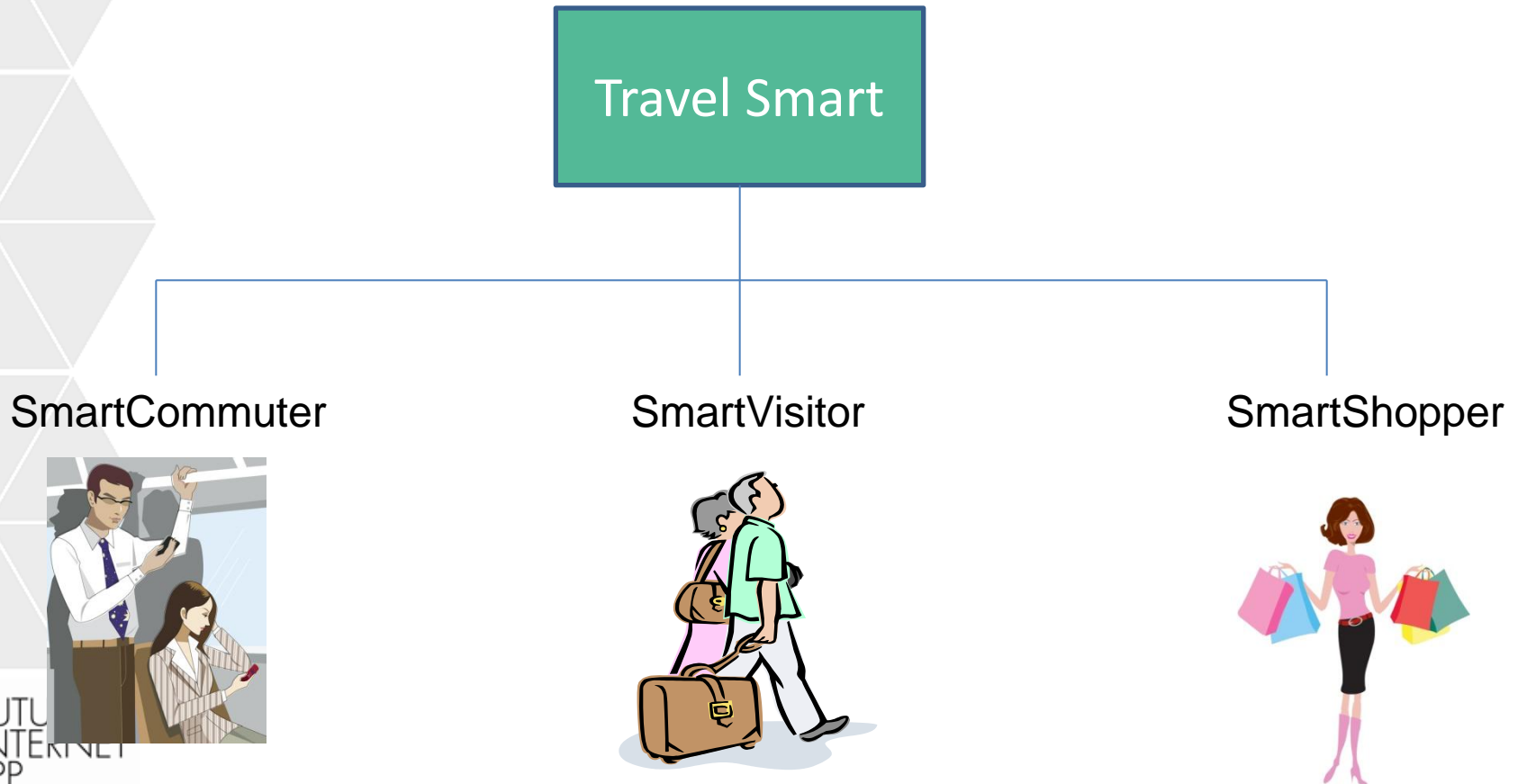
- Underpinning the importance for major UK cities to
 - Manage increasing urban populations and traffic
 - Meeting carbon footprint targets
 - Sustainability of the transport network
- Approach
 - Provide new Future Internet based solutions to deal with increasing urban populations and traffic and resulting environmental impact
 - Encourage use of most appropriate sustainable transport modes through improved situation awareness and cross-sector based incentive schemes
 - Creating fiscal opportunities for participants and the wider local business community through location based services

UK CLUSTER PARTNERS

- UNIS (Knowledge institution)
 - UK cluster lead, link to core platform, tech provider
 - INTERNET OF THINGS TECHNOLOGY, CONTEXT-AWARE MOBILE SERVICES AND APPLICATION DELIVERY
- AMEY (Public services provider)
 - Link to public sector partners, domain knowledge of transport sector
 - DEVELOPMENT AND IMPLEMENTATION OF TRANSPORT SYSTEM USER DEMANDS AND TRAVEL BEHAVIOUR, USER INCENTIVES
- CI3 (Innovation and technology centre)
 - Link to innovative transport related services
 - OPEN INNOVATION SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEMS
- Birmingham City Council (Public Partner)
 - Hosting of field trial, link to wider stakeholder network

TRAVEL-SMART “BUSINESS” CASE

- Multi-modal travel decision aids for City commuters, visitors and shoppers which provide incentives for travellers to use sustainable travel modes



WIDER STAKEHOLDERS

- Centro (Local transport provider)
- Highway agency
- TravelWise (Travel Plan companies, schools and special transport)
- Car park and park& ride operators
- Chamber of commerce
- Tourist information office
- Selected local businesses
- Selected local attractions



QUESTIONS?