European Commission

CIP ICT PSP WP2012 Theme 1 : ICT for “smart”” cities

CIP ICT PSP Call 6 Info Day
Brussels, 3rd February 2012

Theme 1: ICT For "smart" cities

Objective 1.1
smartSmart urban digital services for energy efficiency
Pilots B

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Objective: to stimulate the creation, provision and use of innovative digital services

- ✓ supporting energy-efficient, low carbon activities in an urban context
- ✓ building on and interoperating with existing infrastructures

Funding instrument: Pilot B

Budget:

- ✓ 8 M€ EU contribution
- ✓ several pilot actions to be funded up to maximum budget allocated

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Target group:

- ✓ publicly owned buildings and buildings in public use or of public interest;

Involvement of:

- ✓ service providers, energy service companies (ESCOs), other businesses, public sector organisations, citizens

Strategic purpose:

- ✓ digital foundation for energy-efficient "smart cities", impetus to the digital services market

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Focus and outcomes:

significant contribution of service providers

integrated approaches, for achieving systemic energy efficiencies and emissions reductions in cities (between 15% and 30%)

expected involvement of ESCOs (business models for energy consumption; detailed information on energy consumption and savings)

Pilot actions aim to: validate the effectiveness of ICT-based solutions; serve as show-cases and facilitate wider uptake and replications; support the concept of "smart cities"

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Conditions and characteristics (1):

Use of existing ICT (off-the-shelves or mature/tested research results);

Validation must:

- be carried out in real life conditions, at least for 1 year;
- result in a consolidated set of best practices: guidelines, business models, manuals, training material;

Consortia including energy service companies, ICT providers, building managers

Acceptance and uptake: involvement of public authorities, public building owners, building managers

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Conditions and characteristics (2):

socio-economic evidence for ICT investments, including user's acceptance and recovery of investment – detailed plans for sustainability and large-scale uptake beyond project's life time

Interoperability; relevant standards; best practices and standardisation efforts; appropriate ethical and privacy safeguards

Information sharing, synergies with relevant projects (in particular for a common methodology to measure energy savings via ICT)

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Conditions and characteristics (3):

Dissemination and communication, exploitation plans, addressing experts, public authorities, relevant stakeholders, the large public

Specific and realistic quantitative indicators to monitor progress at different stages in the project's lifetime

Link to existing pilots funded through ICT PSP and to broader initiatives on sustainable smart cities; develop synergies with areas like Future Internet

Build new stakeholders networks in the area of creation, provision and use of services in various domain, as energy efficiency, health, inclusion, security, etc

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Expected impact:

- ✓ ***Cities: leading role in maximising the ICT potential for energy savings and reduced GHG emissions***
- ✓ ***Europe's climate and energy 2020 targets: enlarge the network of smart, energy-efficient, low-carbon cities; impetus to the* Green Digital Charter**
- ✓ ***Innovative ICT solutions creating smart urban digital services for energy efficiency: acceleration of market acceptance & wide deployment***
- ✓ ***Energy service companies (ESCOs): empowered to play a role in increasing energy efficiency and reducing CO2 emissions***

Thank you for your attention!

Additional information and support

ICT for Sustainable Growth:

http://ec.europa.eu/information_society/activities/sustainable_growth/index_en.htm

CIP ICT PSP funded projects:

http://ec.europa.eu/information_society/activities/sustainable_growth/funding

The* Green Digital Charter*:

http://ec.europa.eu/information_society/activities/sustainable_growth/green_digital_charter

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Theme 1: ICT For "smart" cities

Objective 1.2
Cooperative transport systems for smart mobility
Pilots B

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Europe's Transport Challenges

- ***Safety (- 50% by 2020)***
- ***Congestion Energy Efficiency & Emissions by 2050***
- ***Growth in demand***
- ***Balance between modes***
- ***Make use of research and developments including ICT***
- ***Increasing urbanisation***
- ***Accessibility***
- ***Dependence on oil and increasing oil prices***
- ***Aging population***

CIP ICT PSP and ICT for Smart Mobility

- *Contributing to meeting the challenges of Europe's transport sector*
- *Under the themes "**ICT for smart cities**" & "**ICT for innovative government and public services**"*
- *Making use of research results*
- *Promoting pre-deployment of applications and services*
- *Scalable base for long term deployment (beyond funding)*

ICT PSP and ICT for Smart Mobility
What have we done so far?

- 2007:
  - 4.3 Intelligent Car Awareness Actions (1 TN)
- 2008:
  - 2.2: ICT for adaptive urban transport management infrastructure and services (2 Pilots B)
- 2010:
  - 1.3: Energy efficient co-operative transport management systems (2 Pilots B)
  - 1.4: Support to eCall implementation based on 112 (1 Pilot A)
- 2011:
  - 1.3: Smart Connected Electro-Mobility (4 Pilots B)

Ongoing CIP Pilots ICT for Smart Mobility

FREILOT
Urban Freight Energy Efficiency Pilot

Cooperative Systems for Sustainable Mobility and Energy Efficiency

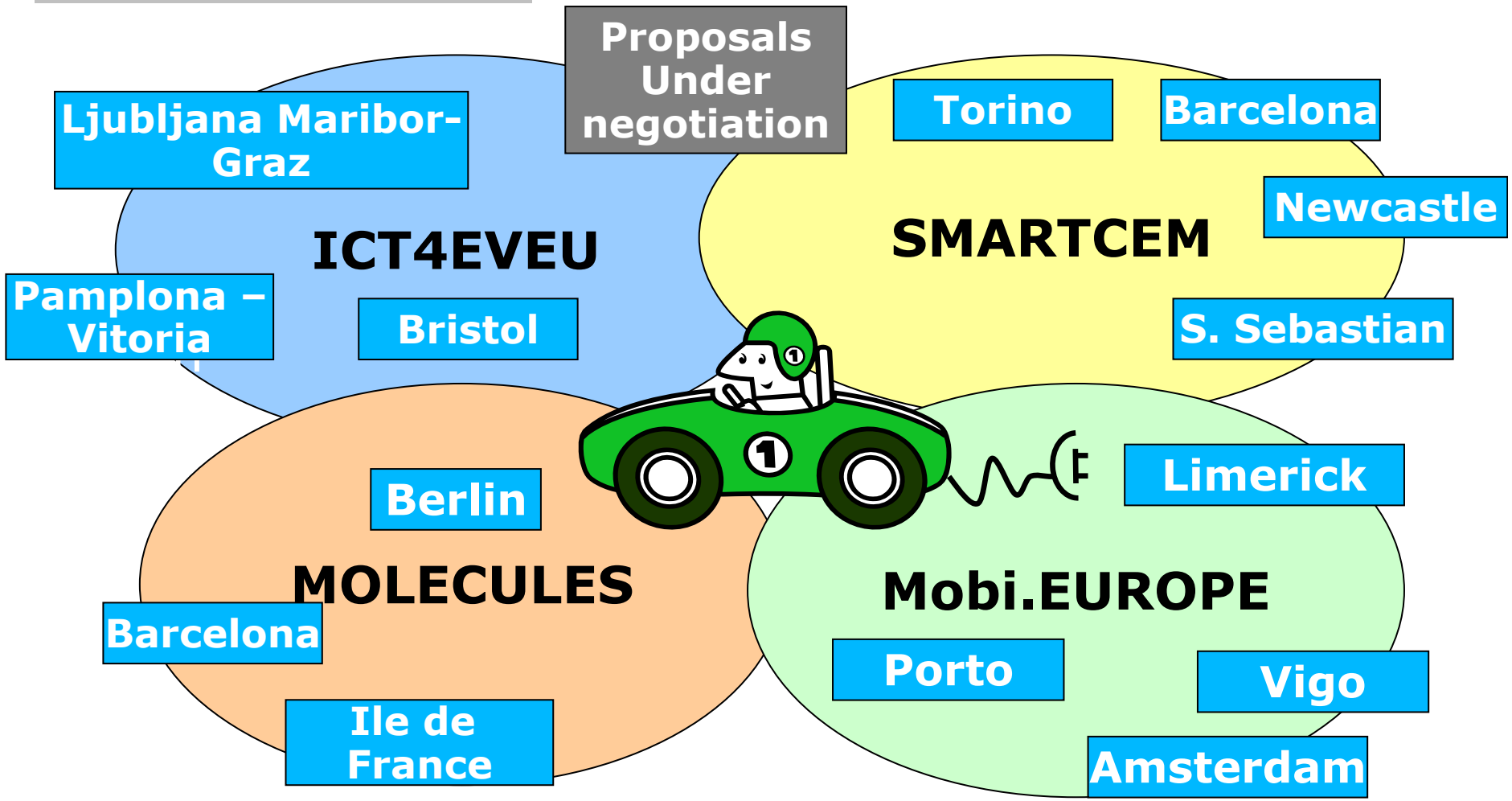
Intermodal Real -Time Travel Information Service

Cooperative Cities extend and validate mobility services

Harmonised eCall European Pilots

"Smart Connected Electro-Mobility" Pilots

Joint launch event
Brussels, 08-02-2012



Pilot Type B - Contribute to a pre-deployment and wider uptake of smart connected Electro Mobility

Objective 1.2 Cooperative transport systems for smart mobility

- *To facilitate the uptake of a set of globally prioritised cooperative systems applications in Europe*
- *Pilots should lead to harmonised testing, installation, monitoring and assessment **
- *Applications to include vehicle-to-vehicle and vehicle-to-infrastructure communications*

Examples of applications are:

- ***Forward Collision Warning Systems***
- ***Red Light Warning Systems***
- ***Energy Efficiency Intersection Control***

Source: EUCAR

* *More info on common methodologies may be found on FOTNET CSA www.fot-net.eu*

What is Cooperative Mobility?

Cooperative Mobility means

- Interconnection of vehicles and infrastructure
- Creation and sharing of new kinds of information
- Enhanced cooperation amongst drivers, vehicles and roadside systems

… an attractive option contributing to **safer, cleaner, and more efficient and sustainable traffic solutions** …

Why Cooperate Mobility?

- **Improving safety and energy efficiency**
- *Making transport more intelligent*
- *Optimising existing transport system*
- *Increasing interoperability between modes*
- *New applications and services*

Conditions and characteristics

Pilots should include:

- ***Validation in real life*** *conditions, for* ***at least 1 year****, resulting in a consolidated set of best practices, including guidelines, business models, manuals, training material.*
- *Strategy for a* ***sustainable deployment*** *of the systems and services beyond the pilot phase.*
- *Use of* ***existing standards****, namely those developed by ETSI and CEN within the Commission mandate M/453 to support the interoperability of co-operative systems .*
- *Consider* ***global dimension****, in particular the cooperation agreements with USA and Japan*
- *The pilots should be* ***complementary*** *to the ongoing pilots from previous CIP and other programmes projects launched in this area*

Participation of relevant stakeholders

Involve key stakeholders like public authorities, automotive and telecom industry and suppliers, users, infrastructure providers, road and traffic management operators, regional and city transport providers.

Thank you for your attention!

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More information:

http://ec.europa.eu/information_society/activities/esafety/

http://www.comesafety.org

http://icarsupport.org

Theme 1: ICT For "smart" cities

Objective 1.3
Open Innovation for Internet-enabled services and next generation access (NGA) services in 'smart' cities

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ICT is making cities and regions 'smarter'

- *Smart Cities and Regions are at the core of the implementation of the European Digital Agenda*

- *Smart Cities and Regions are a fertile ground for Internet innovation*

1st Open Innovation for Smart Cities portfolio

Common Objectives - ICT PSP 2010

- *apply user-driven open innovation ecosystems, such as Living Labs*
- *build on innovative but mature Internet technologies*
- *boost deployment of Internet enabled services*
- *carry out real-life piloting at representative scale in cross-border networks of cities*

7 Pilots - Complementary Priorities – 15 M€ EC funding

- *EPIC: Platform for intelligent cities, cloud computing and Living Labs - Brussels (BE), Issy-les-Moulineaux (FR), Manchester (UK), Tirgu Mures (RO)*
- *Life 2.0: Geographical positioning services to support independent living and social interaction of elderly people - Aalborg (DK), Barcelona (ES), Joensuu (FI), Milano (IT)*
- *Open Cities: Open innovation in smart cities; Crowdsourcing, Open Data, Fiber to the Home, Open Sensor Networks - Amsterdam (NL), Barcelona (ES), Berlin (DE), Paris (FR)*
- *PEOPLE: Smart open innovation urban ecosystems - Bilbao (ES), Bremen (DE), Thermi (GR), Vitry sur Seine (FR)*
- *Periphèria: Smart peripheral cities for sustainable lifestyles; Internet of Things, Services and People - Athens (GR), Bremen (DE), Genoa (IT), Malmö (SE), Palmela (PT)*
- *SMARTiP: Smart metropolitan areas through innovation & people - Bologna (IT), Cologne (DE), Gent (BE), Manchester (UK), Oulu (FI)*
- *Smart-Islands: 3D smart webservices for Mediterranean islands - Agkistri (GR), Majorca (ES), Malta (MT), Santorini (GR), 7 Hellenic Small Islands*

Smart Cities portfolio enlargement

Smart Cities platforms – ICT PSP 2011

- *focus on open shared platforms*
- *with the aim of accelerating the uptake of innovative "ultrafast Internet" based technologies and services in cities*

6 Pilots starting - 14 M€ EC funding

- *CITADEL: Combining Open Access Data and mobile application tools*
  Gent (BE), Issy-les-Moulineaux (FR), Manchester (UK), Athens (GR)
- *CitySDK: Service Development Kit and a city-led innovation ecosystem*
  Amsterdam (NL), Barcelona (ES), Helsinki (FI), Istanbul (TR), Manchester (UK), Lamia (GR), Lisbon (PT), Rome (IT)
- *Commons4EU: Code Commons, Bottom-up-Broadband Commons - Amsterdam (NL), Barcelona (ES), Berlin (DE), Helsinki (FI), Manchester (UK), Rome (IT), NESTA (UK)*
- *iCity: Services deployment using appropriate municipal infrastructures*
  Barcelona (ES), Bologna (IT), Genova (IT) and London (UK)
- *I-Scope: Interoperable 3D Urban Information Models*
  Baia Mare (RO), Drama (GR), Indjija (SR), Lazio (IT), Malta (MT), Newcastle (UK), Trento (IT), Velletri (IT), Wien (AT), Zadar (CR), Zagreb (CR)
- *LiveCity: Live interactive high quality video-to-video platform*
  Dublin (IE), Luxembourg (LU), Athens (GR), Tubingen (DE), Valladolid (ES)

Open Innovation for Internet-enabled services and next generation access (NGA) services in 'smart' cities - WP 2012

Focus and Outcomes:

The aim is two-fold:

a) Facilitate the creation of efficient innovation ecosystems that develop services and applications making use of information generated by users (e.g. through social networks) or captured from sensors (Internet of Things);

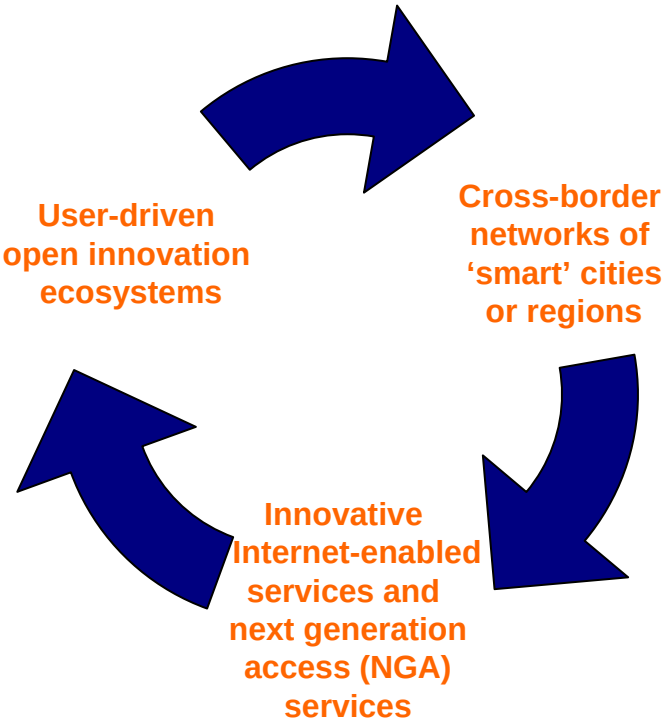
b) Stimulate demand for innovative services and applications based on next generation access (NGA) networks.

Open Innovation for Internet-enabled services and next generation access (NGA) services in 'smart' cities - WP 2012

- *Several pilot B actions*
- *14 M€ EU funding*

- *Reinforcing common strategies and methodologies*

- *Quick development of services through open platforms, and accelerating their adoption*



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Open Innovation for Internet-enabled services and next generation access (NGA) services in 'smart' cities - WP 2012

- *This will be achieved through large scale service demonstrations, accelerating the take-up of innovative digital services for cities or regions committed to improving living, working and environmental conditions through ICT based solutions.*

- *This will require the involvement of key stakeholders such as public bodies and businesses, with strong involvement of end users, as well as SMEs (as providers of services and applications).*

Conditions and characteristics, specifically for point a)

Adapt, integrate or extend existing open platforms/environments for stimulating the development and validation on the platform of innovative Internet-based services. The pilots should, as far as possible, build on Living Labs or open "city platform" initiatives supported with EU, national or regional funding.

The pilots need to have a strong focus on the integration of several services on a single platform, and on the cross border capabilities of that platform.

Use of Free and/or Open Source Software is encouraged.

All pilots under this objective are to:

- collaborate in a joint working group to exploit synergies such as addressing legal, governance and platform interoperability aspects,
- position European concepts and approaches in an international context.

Objective 1.3 point b) rationale

Observed lack of consumer demand for ultra fast Internet connections (above 30Mb/s).

Stimulate the development of attractive services and applications, hence, fostering consumer demand.

Several pilots (Pilot Type B) to encourage a subsequent wider deployment of innovative services and applications (not yet tested on a large scale) and assess consumer response.

In addition to connected TV applications (to be tested and validated by at least one pilot), other services and applications may also be tested as to achieve the same goal i.e. foster consumer demand.

These applications may be provided over connected TV platforms, over other hardware and/or software platforms (web-based, cloud-based) or based on social networks. Some examples:

- *High Definition Tele-Presence or Tele-working applications (recreate the feeling of immersion and closer interaction).*
- *Cloud computing services and applications (e.g. backup of large files, online games, streaming of media files to multiple devices).*
- *Telemedicine and Remote Surgery services and applications.*

Focus and outcomes - point b)

Stimulate demand for innovative services and applications based on next generation access (NGA) networks.

One or two pilots will be supported. At least one pilot will be funded that tests and validates sophisticated connected TV applications that are open to collaboration with third parties, with a view to promoting the early adoption of new paradigm for users and media interactions.

These connected TV applications should integrate information provided from multiple private and public sources and be tested in real life pilot conditions with supporting institutions (public and private) from different EU countries.

Conditions and characteristics – b)

Applicable specifically to topic b):

The pilots need to adapt, integrate or extend existing open platforms/environments for stimulating the development of services and applications over next generation access (NGA) networks.

1/3 - Conditions and characteristics, both a) and b)

Each proposal needs to justify their approach by providing concrete information in terms of:

- *the functionality of the platform on which the integration will take place;*
- *the services / applications that are proposed to be delivered on the platform;*
- *the scale at which these services are planned to be piloted;*
- *the extent to which users and citizens will be involved at all stages;*
- *the value added in comparison to existing services and applications*

The funding of infrastructure is beyond the scope of this Objective.

2/3 - Conditions and characteristics, both a) and b)

Each proposal will include at least 3 cities or regions located in different Member States or Associated Countries (in total at least 4 Member States or Associated Countries represented).

User-centred methodologies are to be applied in order to enable the early adoption of new services or applications and reduce time-to-market.

It is expected that industrial stakeholders take-up a strong role, that SMEs with high growth potential be engaged as services and applications providers and that large user groups be involved.

3/3 - Conditions and characteristics, both a) and b)

Exploitation plans for the platforms and services tested during the course of the pilots need to be provided.

Dissemination and communication activities need to constitute an integral part of the proposed work.

Proposals should include specific and realistic quantitative indicators to monitor progress at different stages in the project life.

Expected Impact

Establishment of common strategies, methodologies and standards for delivering user-driven, innovative Internet-enabled services through open platforms with proven efficiency in accelerating the provision and wider up-take of those services.

Showcases of value added and users interest for services based on NGA networks.

Improved capacities for SMEs to develop, validate and rapidly scale-up new product and services through open platforms.

Thank you for your attention

Further Information

ec.europa.eu/livinglabs – livings labs, smart cities

ec.europa.eu/ict_psp – ICT Policy Support, Competitiveness and Innovation Framework Programme

ec.europa.eu/foi – read about the many activities the EC undertakes on Future Internet

ec.europa.eu/ict4ee ; www.eumayors.eu/
Green Digital Charter

www.openlivinglabs.eu – The European Network of Living Labs – the community site

www.future-internet.eu – The European Future Internet Portal – the community site

www.internet-of-things.eu ; www.race-networkrfid.org

Internet of Things, RFID

www.forumvirium.fi/en/node/364
Connected Smart Cities Conference, Helsinki, Nov 2010