ENTER.HUB

Thematic Workshop 3. New Technologies - Smart Cities

INTRODUCTION

Lugano, 20-21 February 2014

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European Union
European Regional Development Fund

Connecting cities
Building successes

URBACT

Thematic Expert

AN URBACT II PROJECT

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Presentation Index

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1. Objectives
2. Why Smart City?
3. Examples
4. Systemic View
5. The citizen-centered view
6. Wrap up & conclusion

Objectives of workshop:

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Pragmatic:

- to help to bring focus and suggest a framework for the working groups and joint sessions;

- to prepare for the update on the thematic concept maps;

-- to enable focused pos-workshop 1-page reports, incorporating the added-value brought by the workshop;

- to facilitate partners contributing to a rich thematic report (by lead and thematic experts).

Vision:

- to convey a few strong concepts we need.

- to challenge partners to contribute to an inovative integrated framework for the Enter Hub of the future..

Objectives of presentation:

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Pragmatic:

- Contribute to our Workshop

Vision:

- Convey a few strong concepts
    - user needs assessment:
    - systemic vision,
    - integrated models,
    - look at some key externalities.

- Challenge partners to contribute to an inovative **integrated framework** for the **Enter Hub of the future**, based on
    - best practices,
    - lessons learned,
    - our shared experiences.

The workshop framework:

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- **Seed products**:

  - Thematic expert 4 key questions and guidelines;

  - Partner reflections / answers to 4 key questions;

  - Thematic expert presentation;

  - 3 City cases and presentations (Creil, Rostok, Lugano)

- **Build-up products**:

  - Joint “warm-up” braisntorming:
    - Key vocabulary

  - Group sessions:
    -- Case-based ICT + system ID cards, filled together
    -- Update concept maps

  - Joint session:
    -- Synthesis and wrap-up

Why Smart City?

- Why should we care ?

- What do we need?

- What can ICT do for us?

Why Smart City?

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Where did we begin :

Focus on:

- How to exploit the new technologies for (1) communication, transmission to users of the potential of the hubs, in terms of transport connection (real time information) and (2) data recording and representation useful for the understanding of the hub working and users needs;

- How to develop integrated information and ticketing/payment systems of the different channels, so increasing the potential of hubs if there is a low barrier intermodal exchange.

From ENTER.HUB presentation document

Why Smart City?

Maslow - hierarchy of needs

User Needs Assessment

Why Smart City?

Hackos - Goal Analysis

User Needs Assessment

According to Hackos (1998), a user needs assessment and task analysis seeks to understand:

- What user's goals are; What they are trying to achieve
- What users actually do to achieve those goals
- What personal, social, and cultural characteristics the users bring to the tasks
- How users are influenced by their physical environment
- How users' previous knowledge and experience influence how they think about their work and the workflow they follow to perform their tasks
- What users value most that will make a new interface be a delight for them (i.e. speed? Accuracy? Error recovery? Human contact? Fun?)

Why Smart City?

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Beginning with transportation…

User Needs Assessment

What we need	What ICT can do for us
- move faster and safer, for less cost;	ICT for speed performance and engine efficiency, and safety management
- not waste time in poorly articulated inter-modal schedules;	ICT for better information on real-time schedules
- have more alternatives for each point-to-point travel;	ICT to locate nearest pool of cars, bykes, etc. but also to locate nearest public stop / station, according to destination
- not waste time buying tickets for each journey leg or transport mode;	ICT for integrated ticketing
- combine personal trasport with public system	ICT to locate parking, its vacancies and pricing, and automate payment
- make commuting time less wasteful	ICT in transient system (both stations and vectors) for tele-work, socializing, entertainement
- faster identification of public transportation system faillure and corresponding repair	ICT for monitoring but also ICT for citizen input and link it to standard procedures

Etc.

Examples

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Faster maintenance…

Helsinquia – smart phone app 'FixMyStreet' to report situations that disturb public space. The app allow to geo-locate the problem, take a picture and send it together with a description..

http://www.citysdk.eu/2013/10/30/fixmystreet-service-in-active-use-in-helsinki/

Examples

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Better safety in low cost solutions…

London / Paris – separation platform / tracks in glas, for passenger entry / exit in train / metro without driver. Protection doors only open when passage is considered safe and are aligned with train doors

Examples

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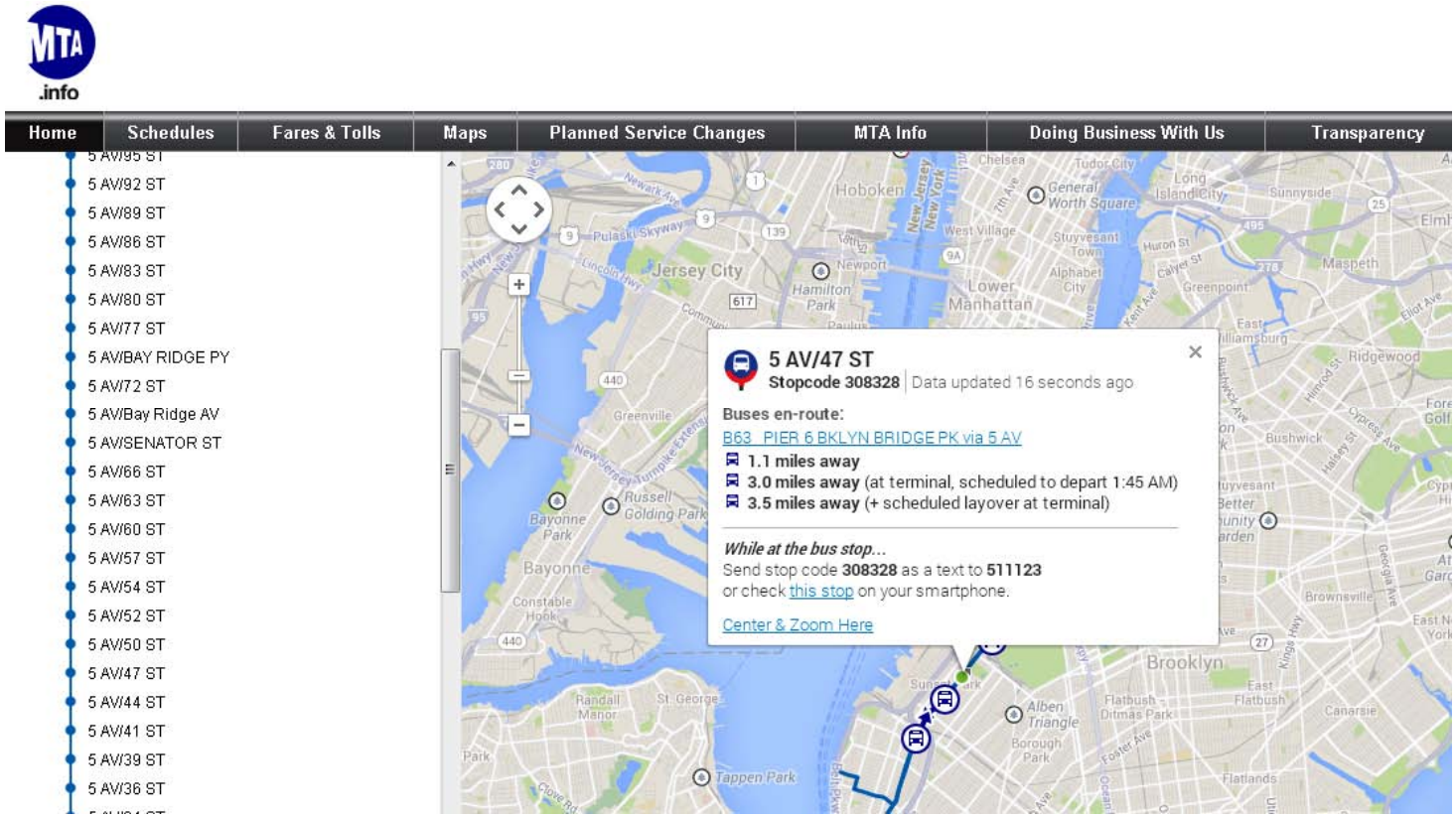
Better info for citizen self-management of options…



New York - monitoring location of each bus allowing to know real-time delays

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Examples

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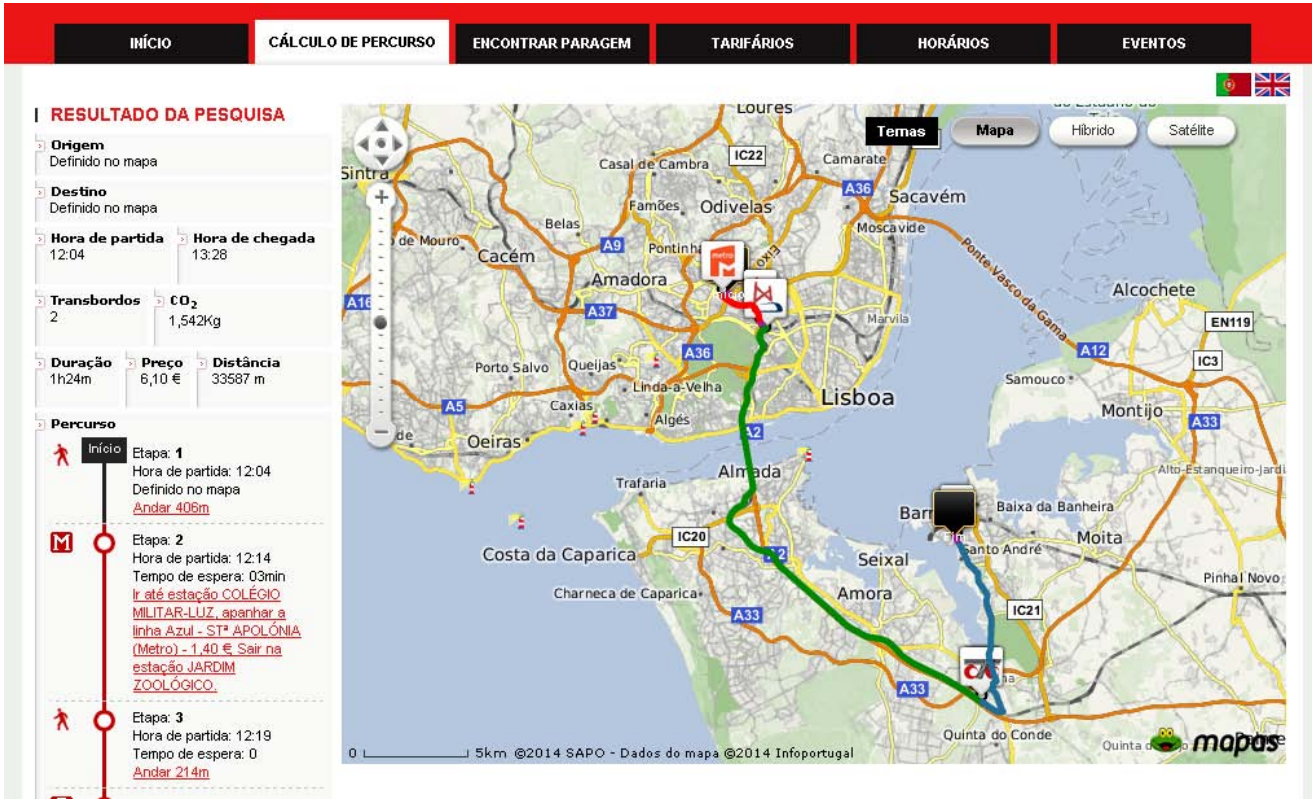
Better info for citizen self-management of options…



Lisboa - multi-modal information system, with path calculation, with different modes and operators

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Examples

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Better info to suport citizen unforeseen requests…

Virgin Atlantic Airlines - Google glasses to provide employees with real-time information in different languages

Examples

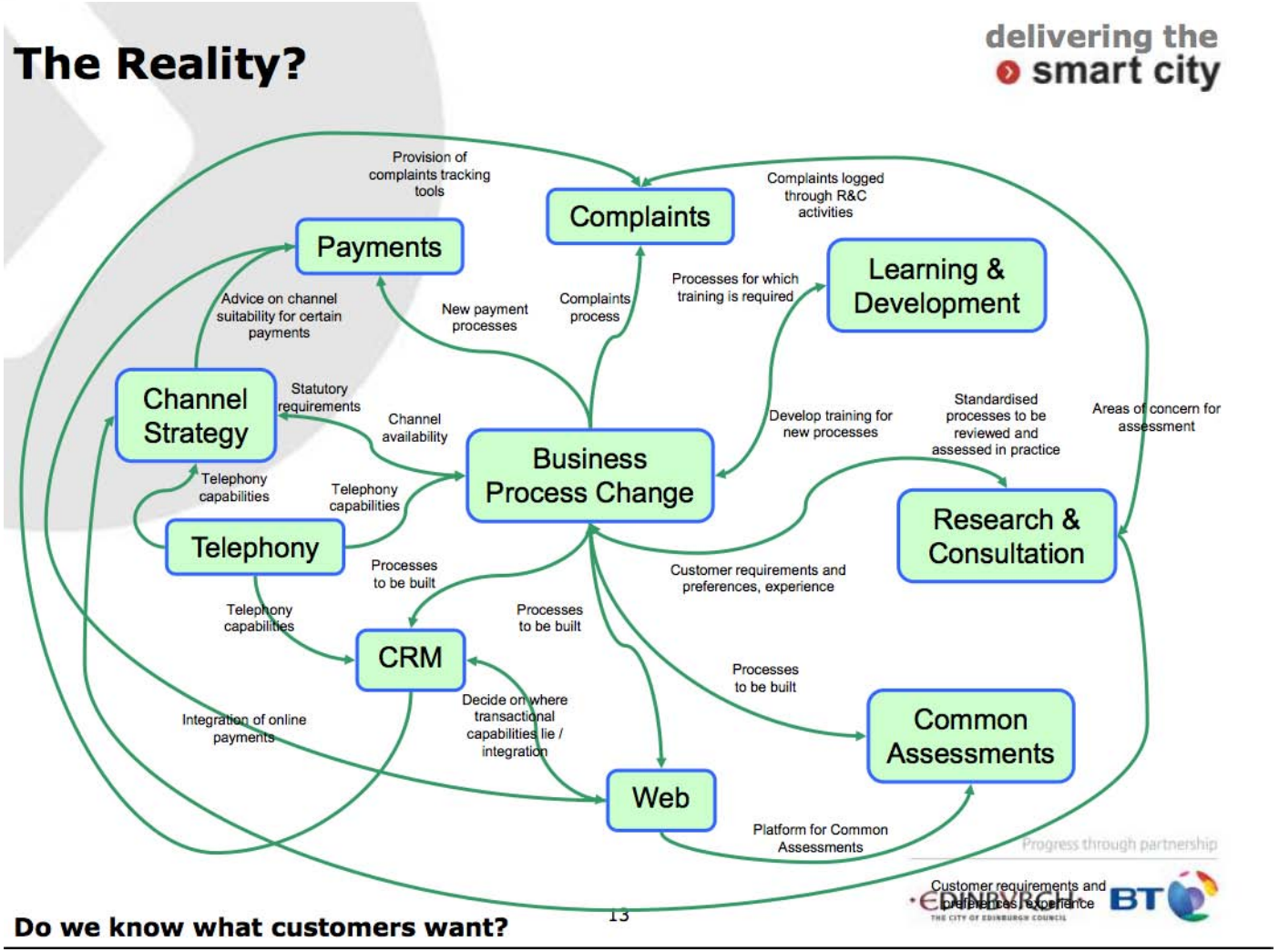
ICT enables satisfying niches and special needs…

Caceres – Espanha – aplicação móvel que permite portadores de deficiência física encontrar rotas acessíveis e reportar barreiras ou inacessibilidades.

Examples

Systemic view

Systemic view



Systemic view

- Conservation vs. Development (Olmstead)
- Corner - blessing or curse

Systemic view

ICT is not enough to warrant good integration

We need to think about

- Institutions
- Processes
- Regulatory framework
- Political reality

Systemic view

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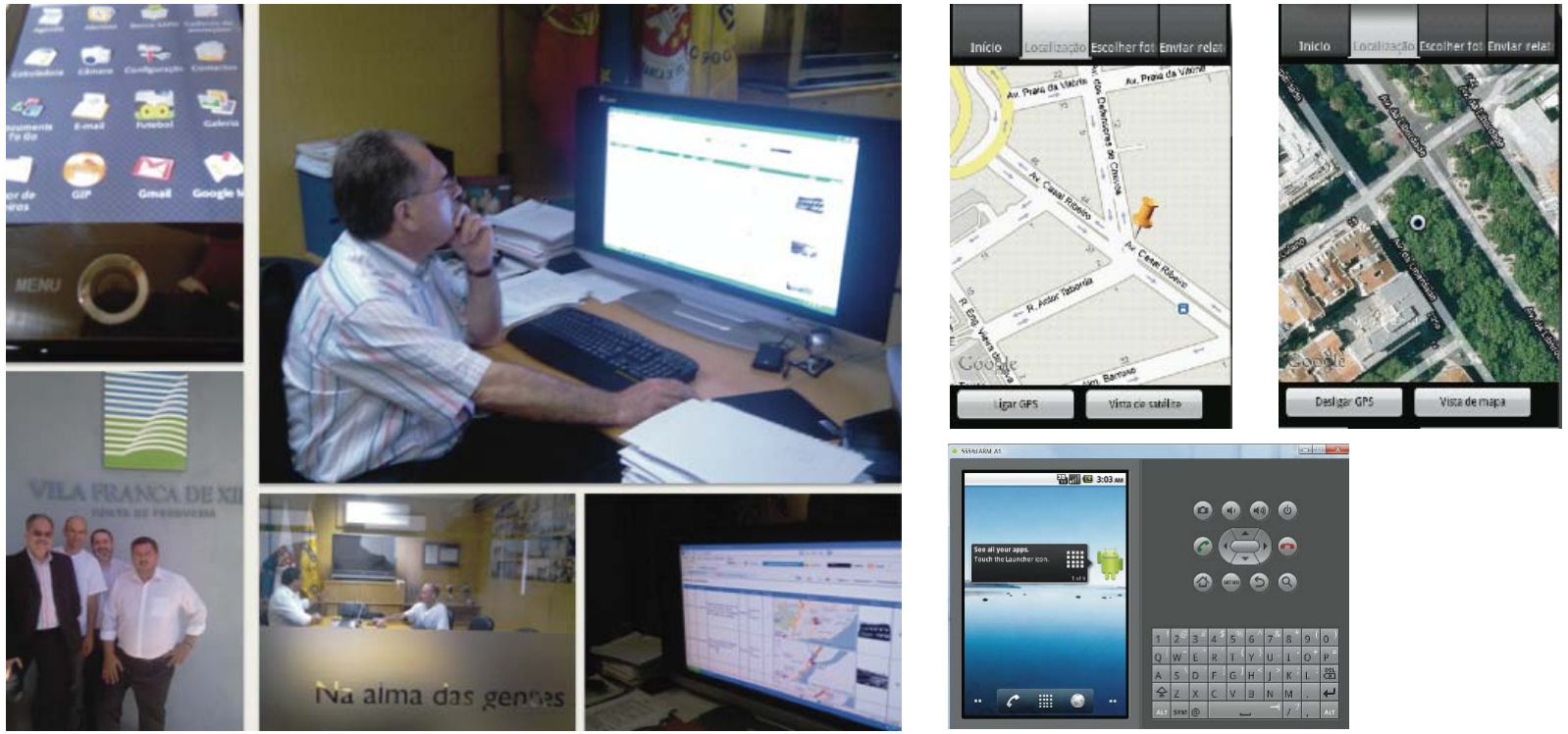
Faster maintenance… with integrated citizen participation



Vila Franca de Xira - LabTec e-Planning app “Gestão Inclusiva Participada”, allows citizens to send from their smart phones location of problems to fix, but integrated in the municipality back-office and procedures.

www.e-planning.org www.labtec-ts.net/fcul/

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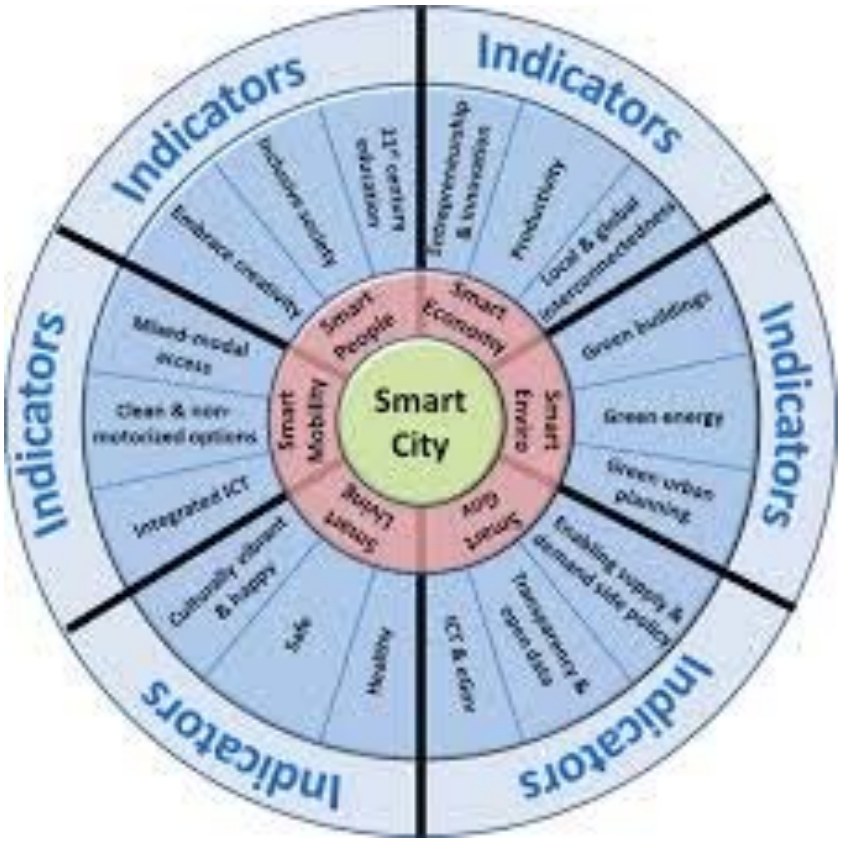
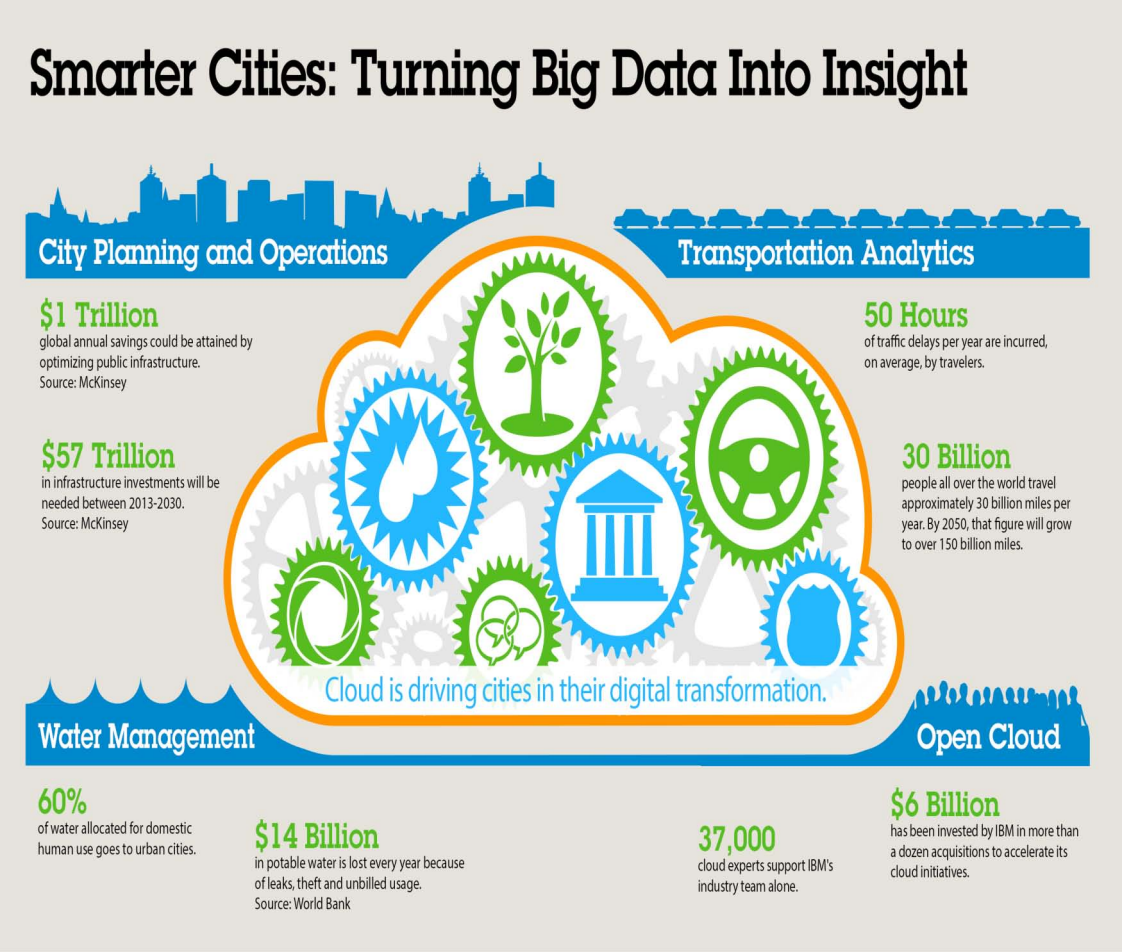
Systemic view



Systemic view



Systemic view

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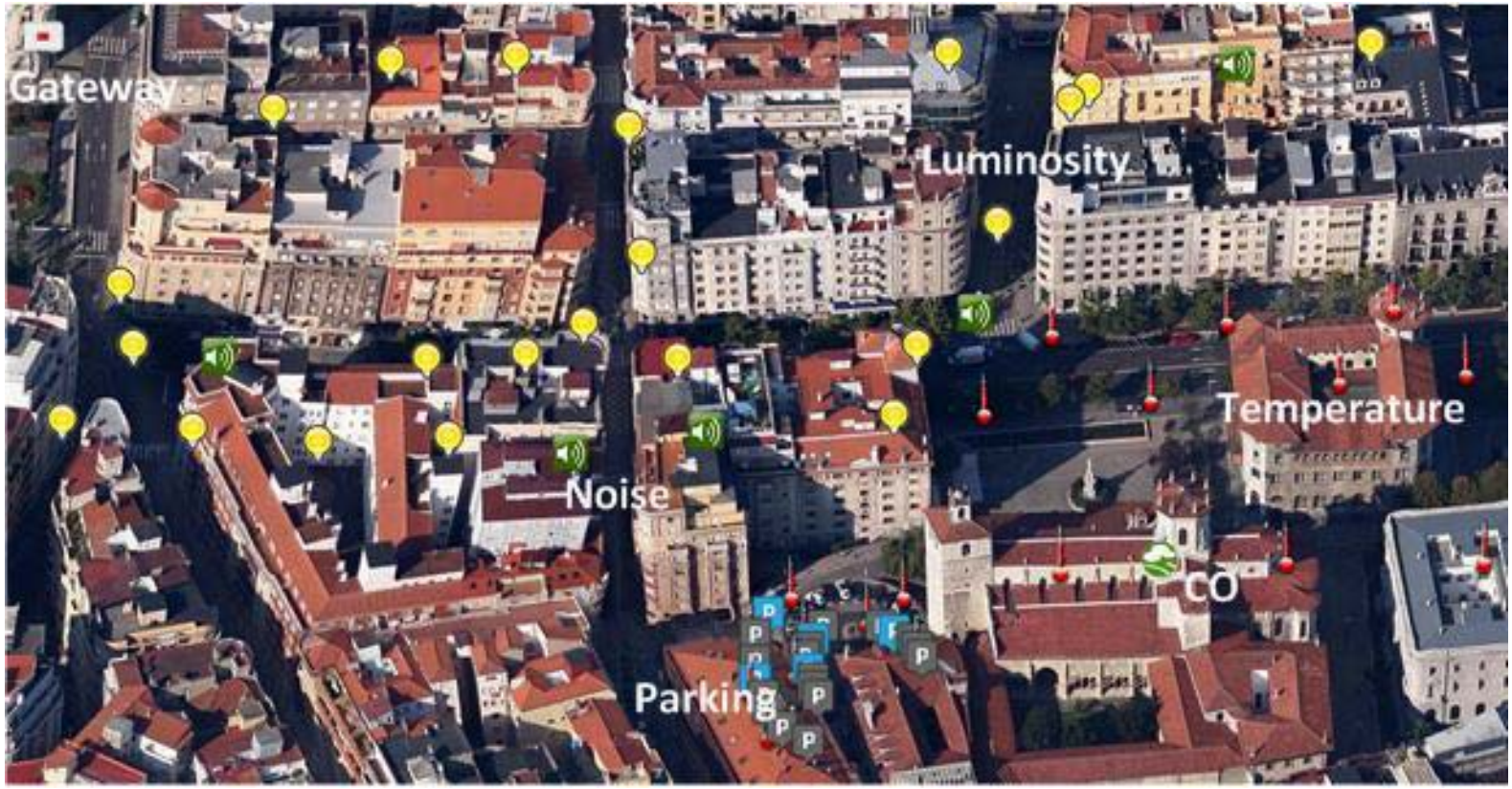
Looking into externalities…



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Systemic view

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Looking into externalities - pollution…

Santander – Espanha. 1200 sensors to monitor trafic, air quality, noise…

The citizen at the core

Looking into externalities - pollution, but with citizen participation…

www.eurolifenet.eu mobile sensor participatory science

The citizen at the core

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www.eurolifenet.eu

The New York Times
nytimes.com

June 12, 2007

Parents and Health Experts Try to Ease Italy's Pollution

By ELISABETH ROSENTHAL

MILAN — This part of northern Italy is renowned for fashion, food, Fiat. But now it has another, less welcome claim to fame: the cities here have the worst air pollution in Europe.

By mid-May, Milan had already exceeded European Union and World Health Organization limits for particle pollution in the air on 80 days. Last year was bad, too. By the end of March, Milan had 64 such days, Turin had 77, Bologna 51 and Venice 49.

Particulate pollution is tied to heart disease and respiratory ailments like asthma, and poor lung development in children.

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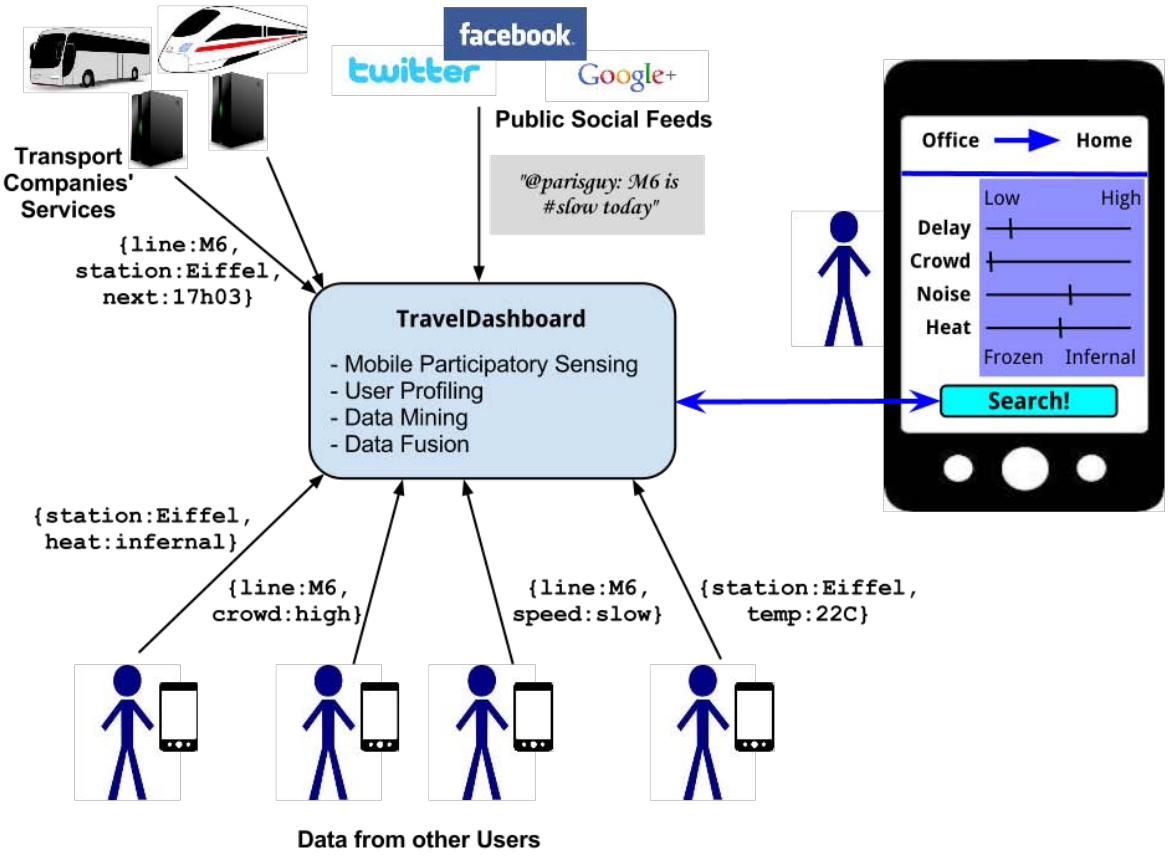
The citizen at the core

Participatory solutions are exploding…



Wrap-up & Conclusion

The initial 4 key questions revisited

Through the “checklist”

Wrap-up & Conclusion

A- Actors/ Stakeholders
B - Stages of ICT uses in Hubs
C - Levels of ICT uses in Hubs
D - Technologies
E - Ethical issues

Wrap-up & Conclusion

A- Actors/ Stakeholders

1) Inform and communicate -> users / citizens (1/3)

2) Inform and communicate -> planners / decision makers

B - Stages of ICT uses in hubs

C - Levels of ICT uses in Hubs

D - Technologies

E - Ethical issues

Wrap-up & Conclusion

A- Actors/ Stakeholders

B - Stages of ICT uses in hubs

1) During concept, design and planning

2) During implementation

3) During use , maintenance and upgrades

C - Levels of ICT uses in Hubs

D - Technologies

E - Ethical issues

Wrap-up & Conclusion

A- Actors/ Stakeholders
B - Stages of ICT uses in hubs
C - Levels of ICT uses in Hubs
1) Basic uses (expected functions)
2) Special uses (special needs)
3) Innovative uses (the dream alive)
D - Technologies
E - Ethical issues

Wrap-up & Conclusion

A- Actors/ Stakeholders
B - Stages of ICT uses in hubs
C - Levels of ICT uses in Hubs
D - Technologies
1) Current state-of-art (in place or projected)
2) New ICT driven by needs (users,planners)
3) New ICT dependent of resources available
E - Ethical issues

Wrap-up & Conclusion

A- Actors/ Stakeholders
B - Stages of ICT uses in hubs
C - Levels of ICT uses in Hubs
D - Technologies
E - Ethical issues
1) Big Brother risk
2) Balanced agendas (users,planners,decision-makers)
3) Control tools (procedures, regulation) in place
4) ICT for accountability & transparency & auditing

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Ethics born with Internet and Web - the Commons

BCBK
be courteous, be kind

DNE
do no evil

BYOC
bring your own contribution

- no SPAM
- good citizenship
- freedom & rights
- privacy; PRIVACY
- transparency
- accessability (special needs)
- intelectual property
- preserve heritage
- no SPAM

Policy Issues:

-Cookies
-Advertising
-Pop ups
-Redirects
-Stealth gathering
-Open standards
-Opt in vs. Opt out

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ENTER.HUB ICT system ID CARD

1. Identify a key technology or system (summary description of concrete functionalities and operation).

2. What needs it responds to;

3. What limitations / problems have been observed (technology-wise or planning/procedure/regulation), during operation, or by not responding , entirely or in part, to the needs in question;

4. What “extensions” / improvements (of technology, and/or systems, and/or regulations, and/or institutions) can we put in place, to respond to the identified needs and limitatons.

Wrap-up & Conclusion

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The need for progress is clear	The opportunity is here
Traffic congestion costs the European Union over **1% of GDP**, or over **100 billion Euros** per year	A European city reduced traffic by up to **18%**, and increased use of public transit by **80,000 passengers per day**. Citizens voted to support the project.
60% of consumer sentiment around the U.S. air travel industry is negative, and there are **19%** fewer brand-loyal travelers in 2008 than 2006—a recipe for commoditization	A European airport reduced mishandled baggage by **60%** using an innovative RFID-based solution
U.S. road traffic congestion in 2007 wasted **2.8 billion gallons** of fuel and **4.2 billion hours**. Total cost of wasted fuel and time was **$87.2 billion**.	**One ton** of rail freight can be moved **423 miles** using **one gallon** of fuel. A **single freight train** can replace **280** trucks, reducing fuel use, congestion and emissions.

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Wrap-up & Conclusion

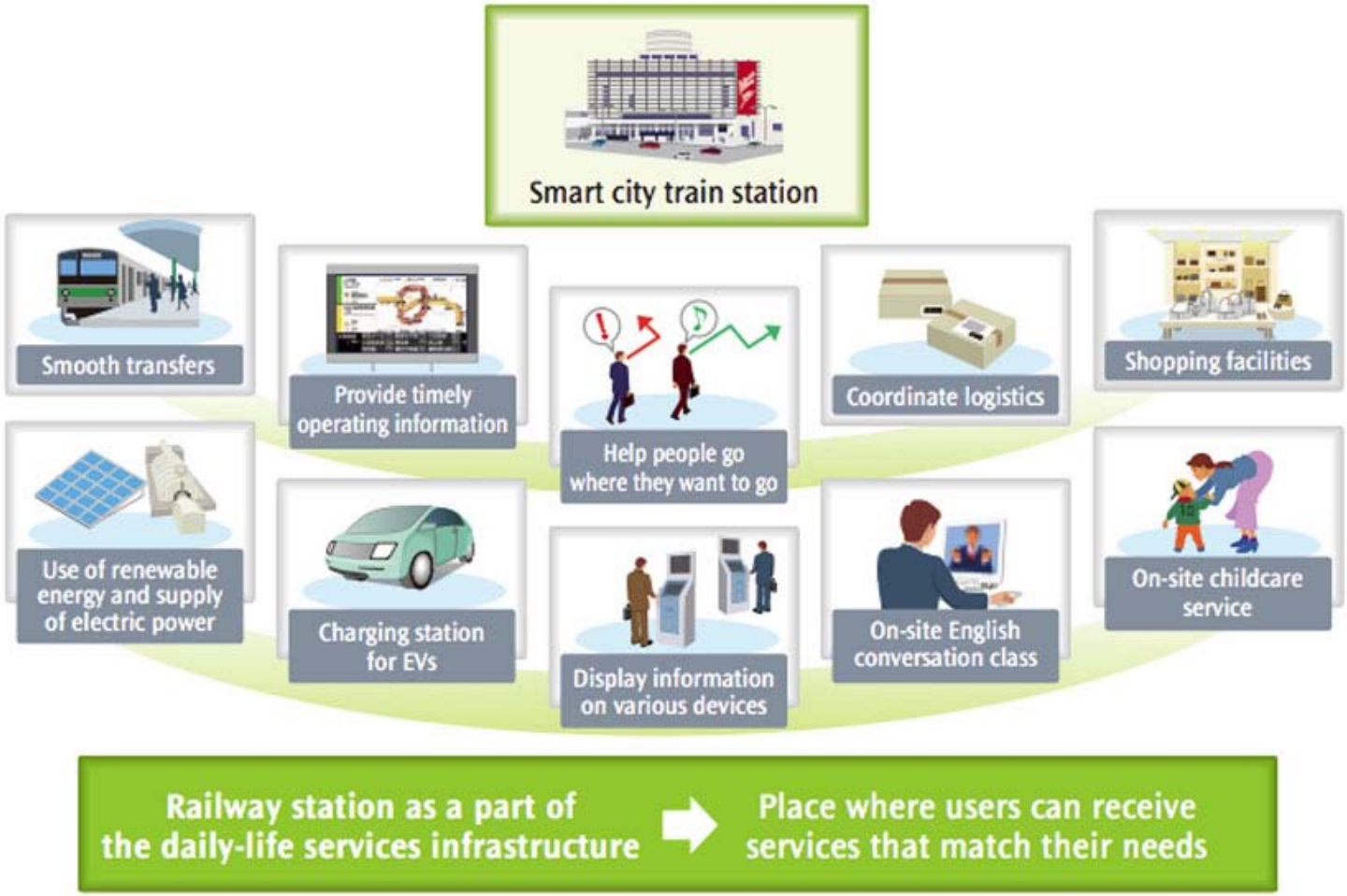

Fig. 4.5: How disassembly and reassembly might benefit railway stations

Conclusion

We need systemic vision, integrated models, citizen-centered architectures and governance, and look at some key externalities.

There is no all-encompassing model of integrated smart systems concerning a space reality such as Enter Hub.

Here is the opportunity for the Enter Hub Project to contribute with a new paradigm towards such view.

Conclusion

To communicate,
It is not enough to send information
someone has to want to receive it…

Conclusion

poetas Andaluces de Hoy

Rafael Alberti

Que cantan los poetas andaluces de ahora?
que miran los poetas andaluces de ahora?
que sienten los poetas andaluces de ahora?

Cantan, y cuando cantan parece que estan solos
Miran, y cuando miran parece que estan solos
Sienten, y cuando sienten parece que estan solos

I left Spain with a closed fist , and now I return with an open hand, In a sign of peace and fraternity among all spanish

Conclusion

Information and Communication Tecnologies will be useless if citizens will not be interested in listening, and we are not listening to them…

This is a critical condition to the “smartness” of a Smart City.

enter hub

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Grazie Thanks
Danke Merci Gracias
Ευχαριστώ mulţumesc
Takk dziękuję dakujem hvala
Obrigado dziękować
tänan kiitos köszönöm aciu
Tack děkuji paldies
niżżik ħajr dank u wel

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