



F O N D A Z I O N E
T O R I N O S M A R T C I T Y
P E R L O S V I L U P P O S O S T E N I B I L E

TOWARDS TORINO SMART CITY

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CITTA' DI TORINO

- **Cities around the world** are now facing very similar concerns linked to the impact of urbanization and its pressures on the environment and onto the economic and welfare systems. However, they also represent centers of exchange, economic, knowledge and cultural resources.
- To handle these **urban challenges**, city administrations have to find **new ways to manage complexity, increase efficiency, reduce expenses, and improve quality of life**.
- There is a need, then, to **redefine city operating models** and develop **new visions and tailor-made strategies** for the sustainable development of our cities, in line with territorial traditional and new vocations.
- And to do so, cities have to play a **major role in territorial innovation processes**, offering themselves as **co-creators of urban solutions**, as **laboratories for innovation** and **hubs for fostering new business opportunities** in the growing areas such as that smart&clean technologies and new urban system models.
- **ICT** is seen as a **key-enabling factor** in the aforementioned processes.

THE PATH TOWARDS TORINO SMART CITY

- **2007** → **Integrated Territorial Programme “Sustainable energy as local competitiveness factor: a plan for Turin”**: first urban integrated action plan in the field of energy, aimed at supporting both the demand (public and private) and the offering of smart&clean products/services/technologies
- **2009** → Signature of the **Covenant of Mayors**
- **2010** → **Approval of Turin Action Plan for Energy - TAPE** which includes an inventory of main consumption sources at city level and defines a set of interventions in the building and transport sector (public and private) with the final objective to decrease CO₂ emissions of up to 41,9% by 2020.
- **Today**
 - > The main idea beyond Torino Smart City is to **improve the overall urban infrastructures and services** in the view to **achieve better environmental conditions, to maximize connectivity and to enhance opportunities for all, putting the city user at the center of development policies.**
 - **Torino Smart City Platform**, represents the project framework for the new urban innovation policy
 - > **Ongoing Strategic Planning Project – SMILE Project**

WHAT IS THE TORINO SMART CITY NOW?

Torino Smart City is now perceived more as a **project platform** – both cultural and technical – than a rigid receipt to territorial development, specifically aimed at identifying:

- a collection of urban and **metropolitan-scale** problems to be addressed ...as well as **new ideas** to solve them
- **Strategic investment priorities**, in line with endogenous territorial strengths as well as with upcoming development trends
- Social and economic **inclusion** paths
- **New Public / private** engagement models
- an innovative **financial and management structure**
- **Public sector innovation measures** in the field of **simplification, transparency, smart regulation, qualification and strategic procurement**

=> To this scope, one of the main ongoing projects called SMILE is about “Smart Planning” and is aimed at **gathering multi-sectoral and multi-stakeholder knowledge**, thanks to the realization of an **integrated ICT enabled tool** collecting territorial and socio-economic data in order to predict environmental and societal phenomena and **guide main policy and investments choices**.

GOVERNANCE

1 A NEW TERRITORIAL MANAGEMENT STRUCTURE

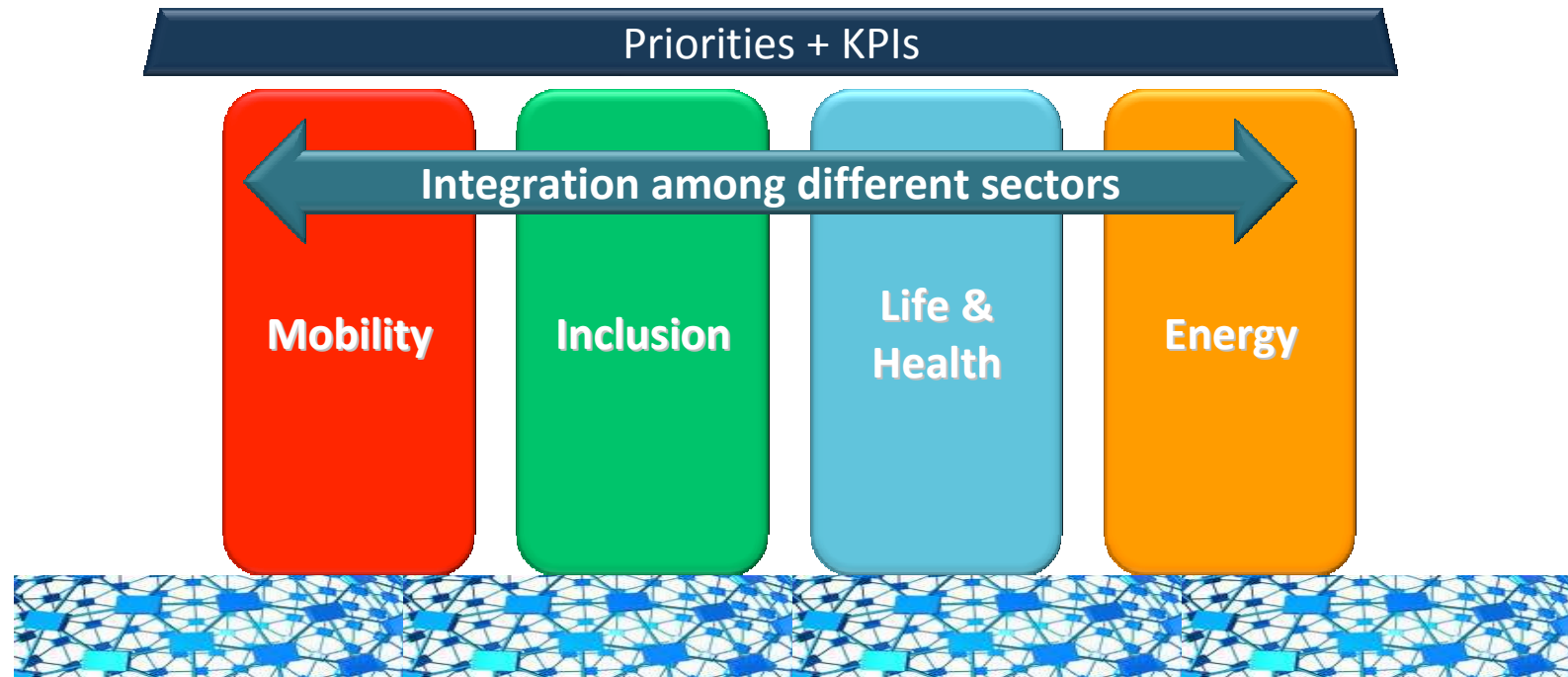
- **TORINO SMART CITY FOUNDATION** - Founded in 2011, the Foundation Torino Smart City involves the City of Torino, the Polytechnic of Turin, University of Turin, the Chamber of Commerce, the municipalities of the metropolitan area and other local key actors in the view to assure the territorial management and support the realization and evaluation of the TSM strategy (now more the 150 attendees)

3 MAIN INSTRUMENTS:

- **CRUSCOTTO URBANO (urban dashboard)**, in partnership with CSI Piemonte, it is a platform of business intelligence for the analysis of data coming from the territory
- **PORTALE TORINO SMART CITY**, in partnership with CSI Piemonte, it is a webnetwork for sharing activities and strategies of Torino Smart City with the community of citizens
- **MATCHING BOARD**, in partnership with Fondazione Torino Wireless, it is a structured action plan for the involvement and the engagement of different economic and productive realities on the territory

STRATEGIC PLAN - SMILE

4 vertical domains :



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MAIN ACTUAL INTERVENTION AREAS:

5 SECTORAL PRIORITIES:

- ENERGY
- ENVIRONMENT AND TERRITORY
- MOBILITY
- DIGITAL CITY
- SOCIAL INNOVATION AND COHESION

2 TRANSVERSAL PRIORITIES:

- ADMINISTRATIVE INNOVATION
- CITY USERS INVOLVEMENT

ENERGY

Main objective: CONTRIBUTE TO DECREASE ENERGY CONSUMPTIONS AND RELATED CO2 EMISSIONS THANKS TO THE ENHANCEMENT OF ENERGY EFFICIENCY, THE DIVERSIFICATION OF ENERGY PRODUCTION AND BETTER ENERGY MANAGEMENT AT URBAN LEVEL

- **Towards and beyond “Zero energy Buildings”:** Trigger energy efficiency investments into the built environment
- **Smart Grids:** improve the infrastructures for a more efficient energy production, management and distribution
- **Smart Consumers/Smart behaviours/Energy Management:** to rationalize energy consumption patterns also thanks to energy management systems and behavioural change measures
- **Smart & Clean Technologies/R&D :** to support research, development and innovation activities into the energy sector.

MOBILITY

Objective: To develop and support smart, alternative and sustainable urban mobility patterns for people and goods in the view to reduce CO2

- **Infomobility and Information Transport Systems**

- ✓ **SIMONE Project** (infomobility infrastructures) – co-funded by the National Programme Elisa
- ✓ **Dedicated Local Agency –5t** – charged with the management of traffic

- **Last mile logistic**

- ✓ Experimentation of platforms for goods delivery (Eu project: **CITY LOG**, VIIPQ)

- **Electrical vehicles**

- ✓ Experimentation of the van sharing service with electrical vehicles (EU project: **SMART CEM – PSP ICT 2011**, in collaboration with Fiat Research Center)

- **Intermodality**

- **Sustainable mobility**

- ✓ **TOBIKE** – bike sharing service

DIGITAL CITY

Objective: MANAGEMENT AND EFFICIENT USE OF PUBLIC DATA, INTEGRATED DATABASES, SERVICES TO CITIZENS AND BUSINESSES

- **E-government**/ Spatial data management, accessibility to public services, administrative simplification and transparency
 - ✓ **Torino FACILE**: Register Office online services and direct communication with the City
 - ✓ **GEOPORTAL**: Digital geographic information and associated geographic services for both professional and casual users
 - ✓ **URBAN DASHBOARD**: Business intelligence tool for the permanent, dynamic and georeferenced analysis of context indicators, evaluation indices and predictive simulation scenarios.
- **Digitalization**/ Efficient internal management of assets and public data
 - ✓ **DOQUI**: Administrative procedures dematerialization
- **Open Data e Smart Services**/Public data and open and interoperable technology solutions available to citizens and businesses
 - ✓ **APERTO**: Open Data portal of the City of Turin
 - ✓ **Mobile services e WEB 2.0**
 - ✓ **100 free Wi-Fi access points in the city area**
- **E-democracy**/Participation in decision making and civic engagement

ENVIRONMENT, TERRITORY, PLANNING

Objective: SMART PLANNING / Encouraging sustainable urban regeneration through urban planning tools environmental monitoring

- **Transformation of the northern area of Turin** (1 mln mq) - new subway line, Eco Residential District and Smart Business District ; ongoing urban regeneration plan in BARRIERA DI MILANO : more than 35 mio euros investments for a mix of structural intervention and socio-economic supporting measures. Use of common energy, environmental and social innovation criteria for public and private interventions.
- **Planning and measurement tools** used to ensure quality standards, monitoring and evaluation of ICT to be used in redevelopment or redesign urban projects.

NEW EU PROJECTS – Under negotiation



ICT for SMART MOBILITY
FP7 – Project “Opticities”



ICT for WASTE MANAGEMENT
FP7 – Project “ALMANAC”



ICT for ENERGY EFFICIENT BUILDINGS
FP7 – Project “TRIBUTE”



NEW EU PROJECTS – Under evaluation



ICT for URBAN SECURITY
FP7 – Project “*Watch n’ shout*”



ICT for efficient WATER USE
FP7 – Project “*YDOR*”



Capacity building for smart city planning
LLP/Leonardo (Innovation



NEW EU PROJECTS – Under submission



Electrical Vehicles Action Plan

IEE – *Ermis project*



EV Carsharing System

IEE – Project “UVS”



ICT for environmental education and policy making

LIFE+ - GD6D



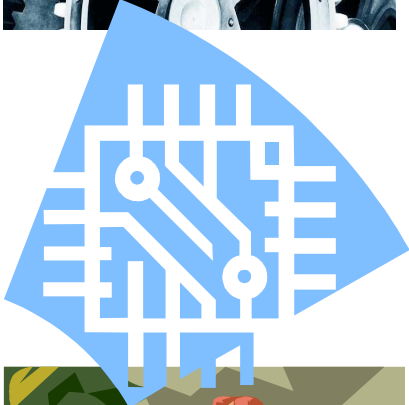
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SOCIAL INNOVATION and COHESION

Objective: to contribute to improve the overall quality of life in the urban environment promoting experimental projects aimed at creatively respond to upcoming societal challenges in the field of education, welfare, social inclusion, tourism and culture and creating the right environment for social innovative businesses

Some ongoing projects:

- **Smart School** : deployment of energy efficiency and ICT technologies in school buildings
- **Teleassistance and services for the aged population**– concessions of public spaces to realize high technology centres for the aged population
- Launch of a **new incubation services for young entrepreneurship in the field of social innovation**
- **Experimental EU projects, like “CROSS - Citizen Reinforcing Open Smart Synergies ”**, aimed at boosting not monetary social exchange through a wider use of ICT enabled services (exchange platforms, APPs, etc.)
- **Policy exchange and development** (e.g. My [generation@work](#) project)



HORIZONTAL PRIORITIES



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ADMINISTRATIVE INNOVATION

Main Goal: *favour the qualification and efficiency of value creation processes within the PA*

Action1 - Strategic use of public procurement

-> **3 EU projects on Public Procurement of Innovation**

Action 2 - Identification of innovative funding models thanks to a wider use of Public Private Partnerships

-> **Ongoing study to develop PPP in the field of public lighting**

Action 3 – Capacity building, networking and training for “Torino SMART CITY”-> Participation to relevant national and international networks

CITY-USERS INVOLVEMENT

Objective : *Favour the participation of citizens into the planning and realization of the smart city*

Action 1 - Communicate the change

⇒ **Torino Smart City Portal-** <http://torinosmartcity.csi.it/>

⇒ **Communication events like the « Smart City Festival» (Educate**

• **Involvement of city users and co-creation**

⇒ **Interest in experimenting new cooperative ways to co-develop urban innovation (e.g. living lab approach)**

Networking and capacity building at international level



Smart Cities Stakeholder Platform –

*Among the different WG:
ICT4Smart Cities Group*



GDC - Torino is one of the Signatories



City Protocol Society (Barcelona)

A new open, global, and progressive working framework for cities worldwide to assess and improve performance in environmental sustainability, economic competitiveness, quality of life, and city services, by innovating and demonstrating new leadership models, new ways of engaging society, and by leveraging new ICT

The role of ICT for SCC

Main scopes

- Better management of public assets, including facilities, buildings, public data and services
- Improved and/or new services for citizens
- Improve the overall city planning and management
- Boosting economy and social innovative businesses
- Stimulate and Engage citizens in public transformations

The role of ICT for SCC

ICT within SMILE

- **ICT** is seen as a **connecting tissue** enabling and/or enhancing different sectoral policies and projects and not as an objective per se.
- **SMILE PLAN** includes to this scope an **“Integration” axis**, specifically aimed to:
 - **enhance the technology infrastructure** – broadband and wi-fie – in order to reduce the digital divide within the city and at the metropolitan scale as well as to enlarge and improve the quality of internet enabled urban services
 - **Define and experiment a new approach to the use of PUBLIC DATA** in the view to: 1/ contribute to improve transparency and accountability of public processes ; 2/ enable e-democracy and e-participation processes
 - > **Torino OPEN DATA**
 - **integrate data and actions coming from different sectoral interventions** to be used into dedicated **urban platforms for city planning, management and monitoring**
- >> data mining - data modeling - integration of existing data through the use of existing data sources and databases.
- > The idea is **not** to create a new/unique **“Urban Operating system”**, but to **connect different actors (public&private), share territorial data and already available platforms/monitoring tools.**

The role of ICT for SCC

Main application challenges

VERTICAL DOMAINS

- Energy
- Mobility
- Waste
- Water management
- Environment
- Urban security
- Education
- Culture and Tourism
- Social and health services

HORIZONTAL CHALLENGES

- Achieve Efficiency gains
- Allow Accessibility for all
- Trigger participation and civic engagement
- Support to Integrated City Planning, management and monitoring
- Boost the market not only for technical developments, but also through innovative service business models

The role of ICT for SCC

Perceived Barriers

- Technical barriers: lack of interoperability among different standards/solutions; technical complexity (...)
- Social/behavioural barriers: ict technologies are enabling factors but it has been demonstrated that in some fields, the human dimension still plays a prominent role and should be taken in account.
- Risk/change aversion + Knowledge gaps in big organizations
- Difficulty to act with different public and private actors to best use available data and systems
- Legal issues (e.g. privacy concerns– security - correct use of public data)
- Perceived potential negative impact of ICT on the environment and on the overall citizen's mental and physical health
- Financial constraints

The role of ICT for SCC

Possible strategies

- **New city governance and funding** for the SCC
 - > new business models – PPP – partnering with industry and academia
- **Citizen-centric policies and services**
 - > no (or not only) solutions offer-led but innovation pushed by the needs and so socially and economically viable
 - > remember the social dimension in innovation processes: social innovation - e.g. changes in values, lifestyles or organizations - aided by participatory processes has to play a central role
- **Capacity building and learning processes**

Best practices exchanges – International cooperation - Training
- **Integrated planning for SCC**
 - > not pilots anymore, but integrated & multi-sectoral strategy
 - > ICT as an integration layer for the different vertical domain in the SCC to be deployed for policy planning, management and impact assessment
- **Favour cooperation in the ICT for SCC domains**
 - > support standardisation and favour applications exchange – re-use of innovative solutions
 - > work on impact assessment of existing solutions

Next perspectives in TSM

- Planning for delivery the smart City Strategy
 - > MASTER PLAN SMILE to be delivered in July 2013
- Strategic planning of the use of next EU Structural Funds (2014-2020) and other sectoral EU programmes
- Promote Innovation at 360 degrees: not only technology pushed strategies but user-centred innovation, including social innovation
- Administrative innovation as a process towards the smart city: organization – new funding models – new business models – strategic use of all administrative tools (regulation – procurement – access to funding)
- Capacity Building
- City branding



THANKS FOR YOUR ATTENTION!

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