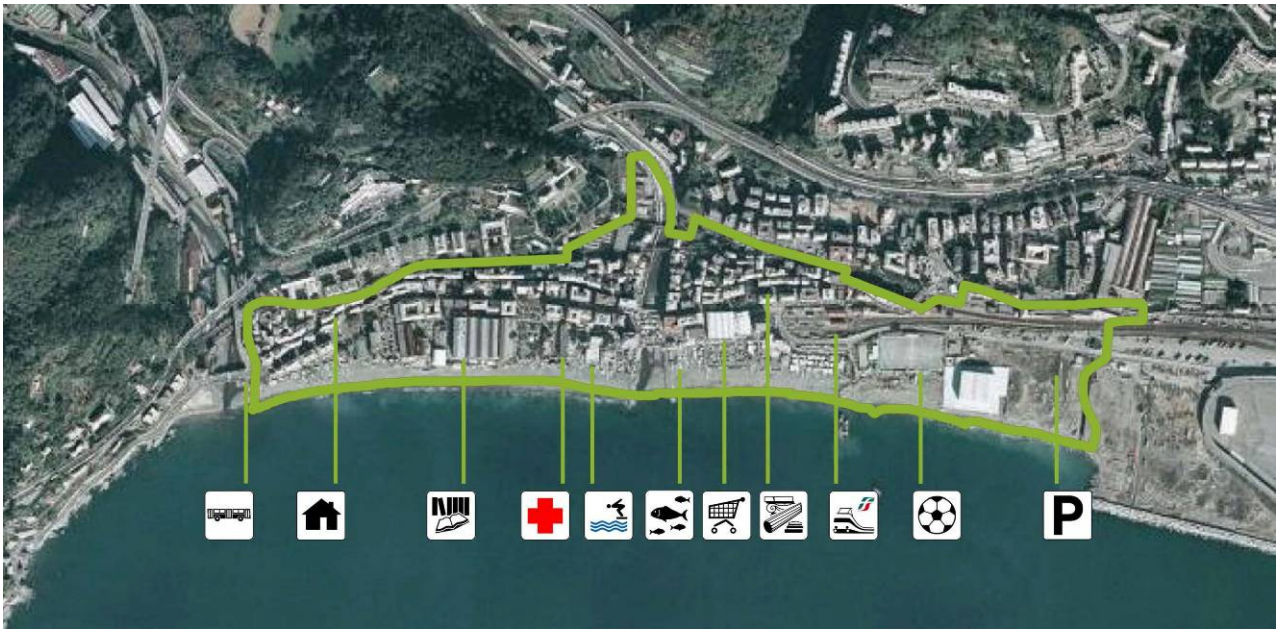
ILS - Intensive Lab Session
Smart Urban Lab di Genova
Voltri – Mela Verde



Results & Roadmaps

Agenda

Day One Wednesday, May 14th

Genoa Voltri, Biblioteca Benzi, Piazza Odicini 10

Setting the scene: Introduction to Mela Verde

9.00	Welcome	Anna Maria Dagnino - Mobility Alderwoman Mauro Avvenente – Municipio VII Ponente President
9.15	TRANSFORM visual presentation; introducing stakeholders	Francesco Oddone – Deputy Mayor Genoa Smart City Gloria Piaggio – Municipality of Genoa
9.45	Introducing Voltri: • Western Territorial System • Mela Verde, Catmed , Urban Empathy , Transform	Silvia Capurro – Participatory Urban Planning Management Director Antonio Pastorino – Participatory Urban Planning Management
10.15	Let's go: **Mela Verde Tour** • Promenade and future extension • Cargo Theatre building • Ex Co.pro.ma. building • Mameli Swimming Pool • PAM supermarket building	• Fishermen's shacks • Football field • Railway area + car park • Old Town Centre • Via Viacava
	Espresso & Focaccia during tour	
12.15	Wrap up and first impressions	Christof Schremmer – OIR Austria
13.00	***Light Lunch***	
14.30	Assignment for working groups	Gloria Piaggio – Municipality of Genoa
14.45	**Working Groups: Session 1** **<u>Development and common understanding</u>** Technicians describe situation and listen to questions, suggestions, advice SWOT analysis	**WG1 Energy (a):** Smart grid Filippo Gasparin – ENEL WG2 Mobility (a): Railway metro gate Ilaria Delponte – University of Genoa **WG3 Governance (a): Cat Med & Urban Empathy** Antonio Pastorino – Municipality of Genoa
16.15	***Wrap up and Coffè/Tea Break***	
16.30	**Working Groups: Session 2** **<u>Development and common understanding</u>** Technicians describe situation and listen to questions, suggestions, advice SWOT analysis	**WG1 Energy (b): Seawater heat pumps** Alex Sorokin – ARE Liguria **WG2 Mobility (b): Intermodality Public transport** Ilaria Delponte – University of Genoa **WG3 Governance (b): AGSC and other forms to promote the process** Gloria Piaggio – Municipality of Genoa
17.45	Wrap up and conclusions of Day 1	
18.00	End of Day 1	

Day Two, Thursday, May 15th

Downtown Genoa, Palazzo Tursi, Via Garibaldi 9

Meeting Stakeholders. Working On Swot Analysis & Roadmaps

9.00	Welcome	Marco Doria – Mayor of Genoa
9.15	**Round Table:** **Smart District "Mela Verde" concrete realization**	Moderated by Maria Fabianelli – ARE Liguria and Corrado Schenone – University of Genova • Mauro Avvenente – Municipio VII Ponente President • Pier Paolo Tomiolo – Urban Planning Director • Genova Riccardo – University of Genova • Roberto Laghezza – Italian Railway Company (RFI) • Marco Sanguineri – Genoa Port Authority
10.30	**Transform experts Q&A moment**	
11.00	***Coffee and Tea Break***	
11.15	**Working Groups: Session 3** **Goals and actions** How can we involve Private, Public, People (PPP)?	**WG1 Energy** **WG2 Mobility** **WG3 Governance**
13.00	***Light Lunch***	
14.30	**Working Groups: Session 4** **Roadmap writing**	**WG1 Energy** **WG2 Mobility** **WG3 Governance**
17.45	Wrap up and conclusions of Day 2	
18.00	End of Day 2	

Day 3, Wednesday, May 16th

Downtown Genoa, Palazzo Tursi, via Garibaldi 9

Presentation Of Swot Analysis Results & Roadmaps To Stakeholders And Politicians

9.30	Introduction	Francesco Oddone – Alderman for Genoa Smart City
9.45	Presentation of results	All WGs
10.45	***Coffee and Tea Break***	
11.00	**TRANSFORM Cities Smart Urban Lab** • *Vienna*: Aspern Seestadt and Liesing • *Copenhagen*: Nordhaven • *Hamburg*: IBA Wilhelmsburg • *Lyon*: Part Dieu • *Amsterdam*: Amsterdam South-East	
12.00	Considerations by: • Stefano Bernini – Deputy Mayor Municipality of Genoa • Mauro Avvenente – Municipio VII Ponente President • Anna Maria Dagnino - Mobility Alderman • Luigi Merlo – Genoa Port Authority • Paola Girdinio – Genoa Smart City Association • Antida Gazzola – University of Genova • Vincenzo Macello / Calogero Di Venuta- Italian Railway Company (RFI) • Local stakeholder	
13.00	Conclusions	
13.10	***Light Lunch***	

Intensive Lab Session

The Intensive Lab Session (ILS) worked in cooperation with international experts and local experts and stakeholders on the "Mela Verde (Green Apple)" Smart Urban Lab (SUL) in Genoa.

The three chosen topics were:

1) Energy

a) Smart grids
b) Sea-water heat pumps

2) Mobility

a) Railway metro gate
b) Intermodality public transport

3) Governance

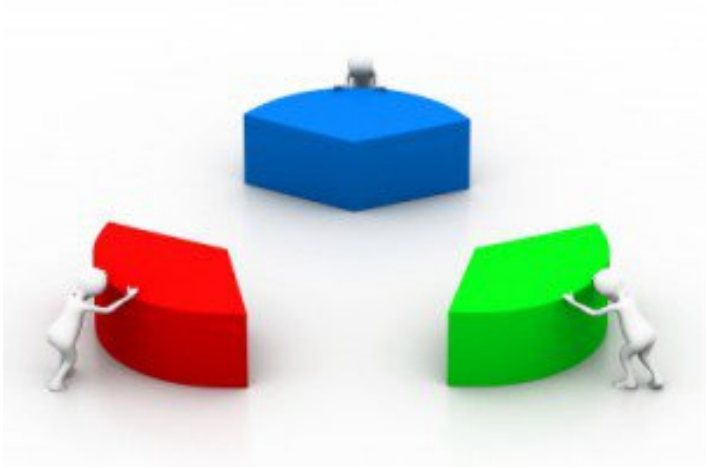
a) Cat Med & Urban Empathy EU Med Projects
b) Genova Smart City Association - AGSC and other ways to promote the process

The topics were the outcome of both meetings with stakeholders investigating actual realization of Green Apple project and of the Transform Intake Workshop held on October 23rd and 24th 2013. The main aim of the latter was putting together stakeholders (companies, municipality, research) to find instruments, understand links and relations and identify priorities for a joint process towards the smart city.

Working Groups

Experts and stakeholders were divided in three groups, according to their role.

MOBILITY



ENERGY

GOVERNANCE

Participants:

- Transform partners:
  - City of Genoa, politicians and technicians
  - Local Council (Municipio VII Ponente)
  - ENEL Distribuzione S.p.A.
  - ARE Liguria (now IRE Liguria)
  - Transform partners
  - University of Genoa
- Liguria Region
- Port Authority
- RFI (Italian Railway Company)
- Local stakeholders (associations)
- Genoa Smart City Association members (Abb, Selex, Siit)

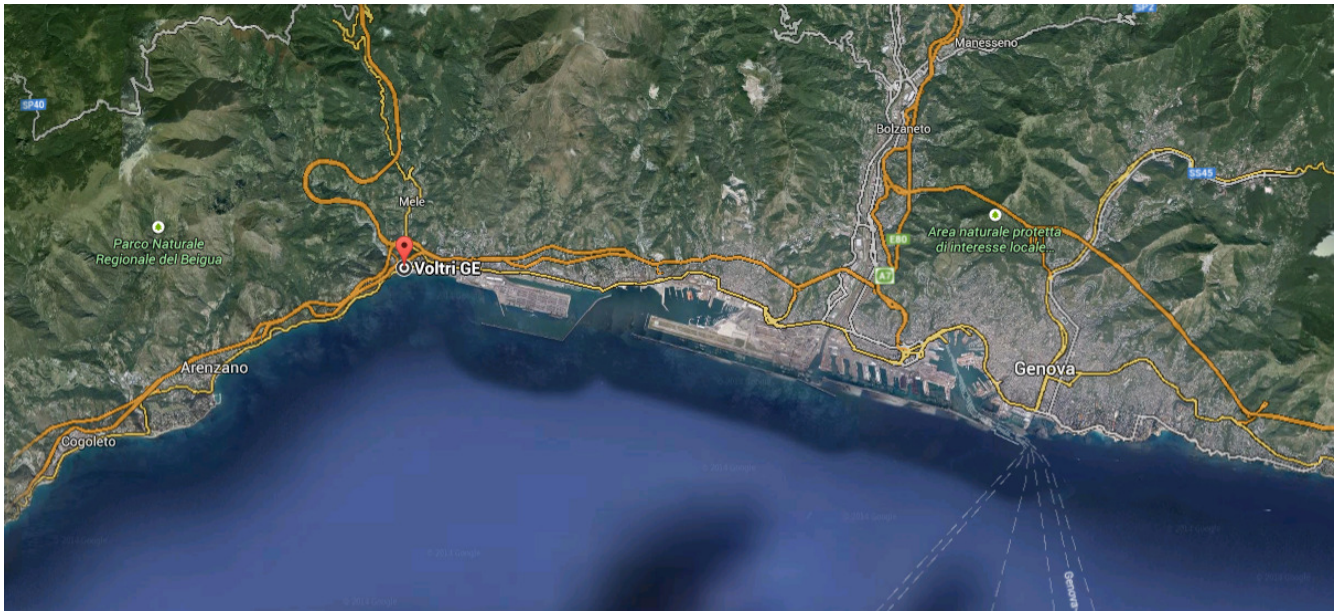
General leading questions for all participants were:

- How can we drive Green Apple to a concrete realization?
- In which sense could the SUL's designing contribute to a smarter Genoa?
- What is the added value of the ILS methodology?

Working groups were divided in **four sessions**:

1) **Development and common understanding** (Smart grids/Railway metro gate/Cat Med and Urban Empathy):
    a. Technicians describe situation
    b. Technicians listen to questions, suggestions, advice
    c. SWOT analysis
2) **Development and common understanding** (Seawater heat pumps/Intermodality public transport/AGSC and other ways to promote process):
    a. Technicians describe situation
    b. Technicians listen to questions, suggestions, advice
    c. SWOT analysis
3) **Goal and actions**:
    a. How can we involve Private, Public, People (PPP)?
4) **Roadmap writing**

The project includes a concrete experience in the Smart Urban Labs: essential elements of the project will lead to a Transformation Agenda and a Smart Cities Handbook, allowing other cities to apply Transform methodology by highlighting characteristics and situations.



Mela Verde is in the Voltri district, westernmost part of the city, within the boundaries of the VII Ponente Local Council.

It was determined and a first study was conducted in the framework of a previous EU (Med) **Cat Med Project**, which analysed Mediterranean sustainable district planning and guideline writing (www.catmed.eu). Started in 2009 in Malaga the (Change Mediterranean Metropolises Around Time) it arised from the need to prevent climate risks through an urban model reducing the environmental impact of urbanization and greenhouse gas emissions. Cat Med has now entered a second phase through **Urban Empathy** project (www.catmed.eu/urban_index.php) aimed at consolidating a permanent structure - the existing CAT MED Platform for Sustainable Urban Models - bringing together projects, policy makers & stakeholders to share concrete

results to improve the efficiency of sustainable urban policies in the Mediterranean, ensuring their consideration in future programming periods.
During Cat Med all interested stakeholders, including population, had been involved in a preliminary overall urban planning envisaging the development of Mela Verde.

An important factor is the plan RFI, Rete Ferroviaria Italian, the Italian railway company is now implementing turning Voltri into the gateway entrance for trains coming from the West. The new station will separate long range traffic not destined to Genoa through a bypass starting at Voltri, from Genoese local urban traffic. The present rails which pass directly in the city will be used as a sort of surface subway, the so called urban use of trains, improving and simplifying connection to downtown Genoa, specially important considering the morphological situation of the city, tightly enclosed on the narrow strip - sometimes non-existent - before the Apennine plunges directly into the deep Mediterranean Sea.

Some spaces will be left free by the transformation and with collaboration from Port Authority – formally owner of the coastal areas – an overall re-planning of the entire district is being considered, stressing sustainability and improvement in citizens' quality of life enhancement.

The challenge is now to use all projects past and present (Cat Med, Urban Empathy, Transform, Gateway) to actually realize a smart district improving quality of life and constituting a pilot case for further replication.

SWOT analysis

Energy

The Energy working group focused on two topics:

- conditioning technologies
- smart grids.

In the first part both were described and analysed

a) SMART GRIDS

A Smart Grid is an electricity distribution system integrating actions of connected users, such as energy producers, consumers and prosumers, enabling sustainable, safe, efficient and cheaper electricity distribution.
Smart Grids apply innovative systems along with cutting-edge technologies for monitoring, controlling and communicating, in order to:

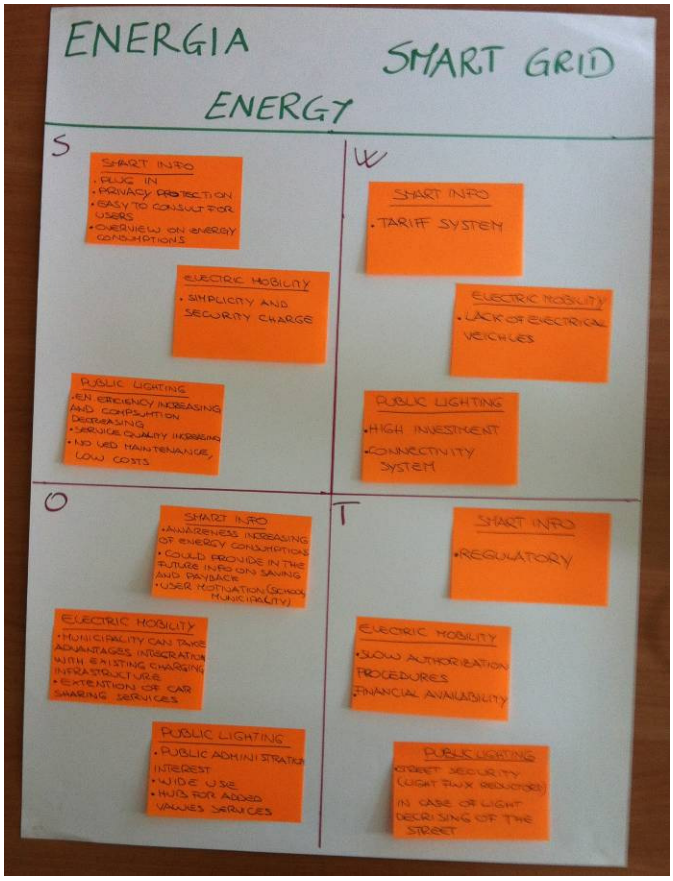
- integrate distributed energy resources such as renewable energy plants
- foster active participation of end-users in electricity markets (e.g. enabling Active Demand)
- promote development of smart recharge infrastructures for electric vehicles and offshore power supply (so called Cold Ironing)
- spread a smart public lighting system through use of SSSL (Solid State Lighting) technologies and remote control and management systems
- enable added value services (security systems – smart parking)

Smart grids lead to **benefits** for both environment and customers, since they support:

- ✓ reliable and quality supply of electricity
- ✓ flexible management of the grid
- ✓ environmental protection, better support for spreading renewable Energy technologies and electric mobility
- ✓ contributing to reduce CO_2 emissions
- ✓ consumers' consciousness of their own consumption patterns and boost for an increased rational use of Energy, followed by savings
- ✓ creation of new employment opportunities

SWOT analysis were developed on three topics:

i. **Electric Mobility:** electric vehicles play a key role in considerably reducing CO_2 emissions from conventional fossil fuels, at the same time fighting air pollution in urban areas. Smart Grids, through the advanced management of recharge infrastructures, will foster roll-out of sustainable mobility. The technological solution for electric vehicle recharge infrastructures is based on the Electric Mobility Management System developed by Enel Distribuzione, that enables installation and management of two different recharge stations: *Pole Station*, public recharge stations installed in strategic spots and *Box Station*, recharge devices that can be installed in garages to easily self-recharge private vehicles.



ii. **Active Demand/Smart Info:** Enel Smart Info is a smart device that will enable end-users to read electricity consumption data collected by smart meters in real-time, consenting more efficient behaviour leading to optimized electricity consumption. Perfectly integrated with the remote management system (Telegestore), Enel Smart Info provides easy access to data through a dedicated display, a computer and/or a smart phone.

iii. **Public Lighting:** replacement of conventional and low-efficient public lightings system with SSL technologies will enable energy savings paired with cost reduction steming from lower and more efficient maintenance. The Archilede® LED systems, developed by Enel, achieve up to 80% of energy savings compared to conventional technologies, also extending time life of lighting plants up to 100.000 working hours, which means roughly 24 years of normal operating conditions. The remote control system enables remote tailor-made lighting profile of each individual lighting post, increasing service quality by identifying disruptions in real time. A smart public lighting net (Smart Lighting) can host smart devices providing added value services such as video surveillance, Wi-Fi connection, traffic and environment monitoring, …)

SWOT Analysis: ELECTRIC MOBILITY

STRENGTHS	WEAKNESSES
• Setting up upgraded urban services based on Smart Grids technologies • Ensuring a perfect interoperability with existing recharge infrastructures • Simplicity and security of recharging process: recharge infrastructure system put in place by Enel Distribuzione acknowledges membership cards (linked to a contract) provided by all free market operating Vendors • Limited environmental impact by installing the recharge station on existing parking areas	• Few electric vehicles in urban area • Risk of breaking interoperability if installation follows a "Service providing" instead of a DSO model • Possibility of vandalism
OPPORTUNITIES	**THREATS**
• Municipalities can lead, support and spread sustainable mobility • scale up the decarbonization of the whole mobility chain • integrate Mela Verde with existing recharge infrastructures downtown • Possibility to extend existing eclectic car sharing	• Need to invest and operate in the Low Voltage grid for implementation of recharging infrastructure • Slow administration and approval procedures • Need to identify a service/business model and have a stable regulatory framework

SWOT Analysis: ACTIVE DEMAND/SMART INFO

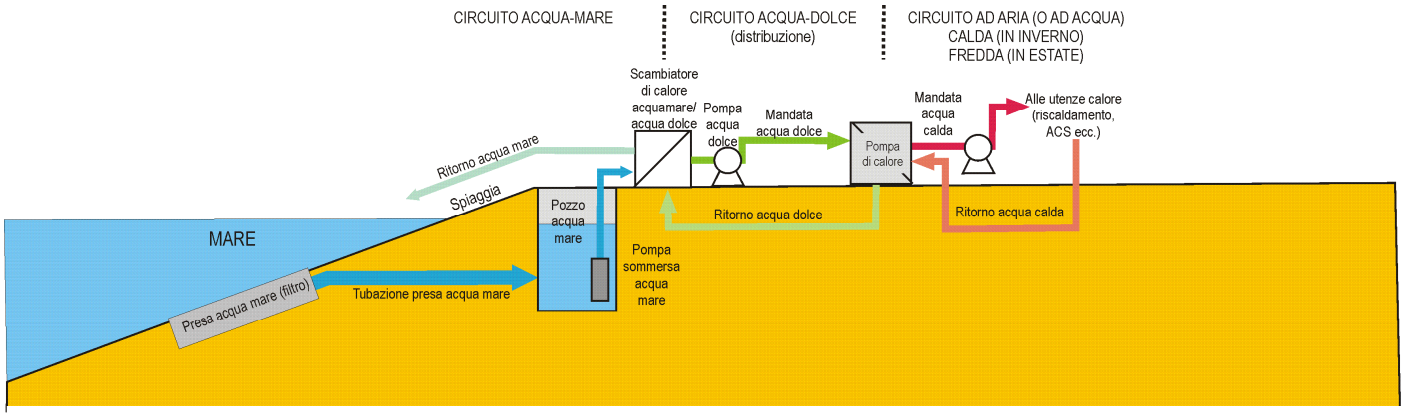
STRENGTHS	WEAKNESSES
• Easy to install • Provides end-user with certified data collected by Smart Meter (electricity consumption and production) • Provides end-user on standard usb interface • Privacy protection: each Smart Info is bindingly linked with its own Smart Meter	• Tariff profiles currently provided by Vendors do not always consent end-users consumption awareness • At the moment Smart Info does not show electricity consumption of each in-house appliance
OPPORTUNITIES	**THREATS**
• Enabling innovative and added value services (suggestions on replacement of low energy efficiency devices) • Facilitating development of interfaces that will enable a fast and easy data access collected by the Smart Meter • facilitating awareness of electricity consumption data improving related consumption	• distribution at national level of Smart Info is not regulated presently • Smart Info is does not consent electricity consumption real time analysis showing inefficient appliances in need of replacement

SWOT Analysis: PUBLIC LIGHTING

STRENGTHS	WEAKNESSES
• Technological upgrade of public lighting system with SSL technologies • Energy savings and reduction of maintenance costs • Enabling remote control of system and tailor-made lighting profiles of each lighting post • Improving quality of light benefitting security and aesthetics	• Need for initial consistent investments • Need for connectivity to enable the system communication
OPPORTUNITIES	**THREATS**
• Added value services (sensors) integrated in public lighting infrastructures, optimizing use of existing infrastructures without replacing them	• Need to share measures to be implemented with competent entities, such as Port Authority, Municipality, Police, etc.

b) SEA WATER HEAT PUMPS

A heat pump is a device moving heat from a cooler environment to a warmer one, the latter needing energy. The reversible heat pumps provide both heating during winter and cooling during summer, but only the winter heating is considered a renewable energy source as cooling for summer use requires additional energy.



Car engines are water-cooled due to the higher thermal performance of water compared to air. In the same way, water heat pumps are more efficient than air ones: for a given performance, water heat pumps consume less energy. In addition, during spring and autumn it is possible to implement "free-cooling" directly using the cooling effect of sea water without a refrigerating machine, with further energy savings. Under these conditions the only energy consumption is the very limited one needed for water circulation pumps.

In the figure below an operational diagram of a sea water heat pump is shown.

Within "Mela Verde", the installation of this technology is proposed to air-condition public buildings located along the coast and, eventually, private residential buildings behind. This would make buildings energetically independent and the Municipality would save on utility bills. A pilot plant could test effectiveness before further replication.

SWOT Analysis: SEA WATER HEAT PUMPS

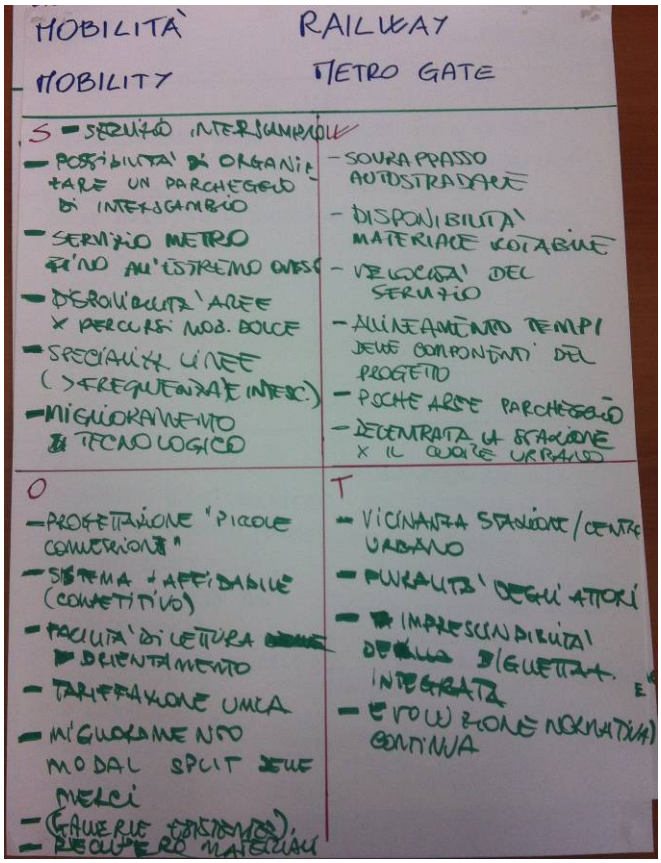
STRENGTHS	WEAKNESSES
• It is a Renewable energy source during winter • No local CO2 emissions • Free source of energy • High efficiency • Simple technology	• Digging and laying costs • Pipeline length • Building position (a.s.l.)
OPPORTUNITIES	**THREATS**
• Energy cost savings • Integration with RES (electricity) • CO2 emissions decrease • management optimization through controlling systems • Pilot projects on public buildings	• Authorization process (water, street digging, etc.) • Ownership • Stakeholder involvement • Citizen involvement

Mobility

Considering foreseen key-interventions in Voltri, two topics investigating the realization of the new railway metro station have been chosen.
The first one is related to the "gateway" role assumed by Voltri and the second to the overall organization of the system of "Intermodality".

a) RAILWAY METRO GATE

The opportunity offered by such an important project, considered the biggest in our territory in the last 50 years was underlined from the very beginning of the workshop.
Railway development details (not reported here) will be included in the Implementation Plan.



Foressen works in public transport network and train mobility require (urban) planning a train station integrated with and having low impact on surrounding areas
Unlike some big North European cities such as Amsterdam and Copenhagen, Genoa's territory does not permit long bicycle lanes, due to frequent significant slant increases in short ranges. Although long road stretches bicycles use is not feasible, it is however possible for shorter lapses such as joining the train station, thus diminishing the number of cars on district streets.
Another weakness of the city is the limited use of both car sharing and carpooling services, not very popular in Genoa so cars often have only one or two passengers. The knot that is being created in Genoa Voltri will not only play a role within the city, but also as "city gate", becoming the crossroad between metropolitan and long rage traffic. The metro and railway systems will be improved and encourage citizens to use public transport for getting to work.
More frequent trains could cause an excessive noise pollution; instead of soundproof panels some artificial grass hills could be used in order to get a better integration with the city as well as a lower environmental and visual impact.

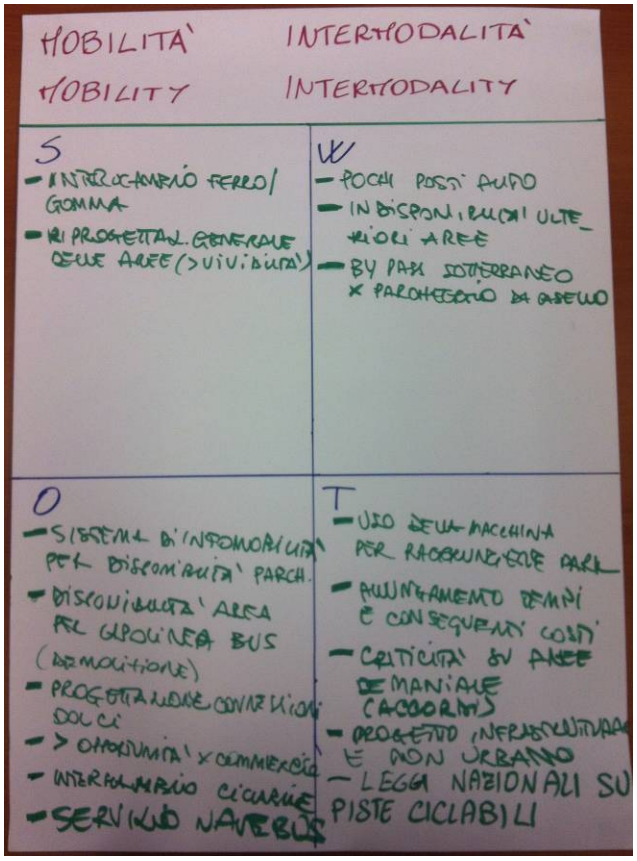
SWOT Analysis: RAILWAY METRO GATE

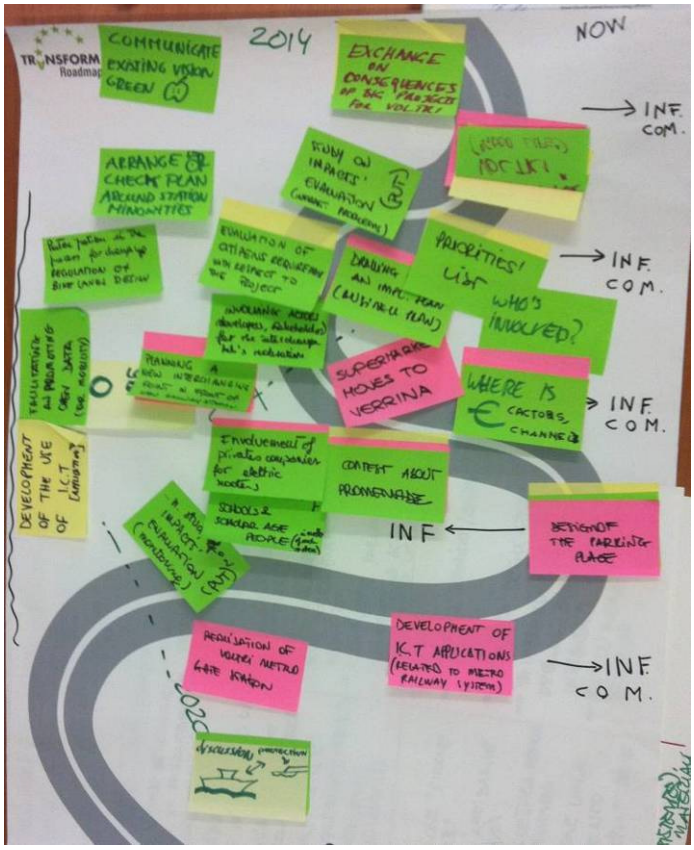
STRENGHTS	WEAKNESSES
• Possibility to build a park-and-ride facility • Metro line to the westernmost part of the city • Areas available for "soft" mobility paths • Specializations of metro and railway lines • Increased frequency and interchange • Technological improvement	• Availability of rolling stock • Highway overpass (improvement) • Alignment of the different project phases (timing) • Few areas for car parks
OPPORTUNITIES	**THREATS**
• Planning small connections • More reliable (competitive) system • Easy orientation • Single scale of fares • Improvement of the goods modal split • Recovery of materials	• Proximity of the station to the urban centre • Plurality of stakeholders • Integrated ticketing is essential • Continuous regulatory evolution

b) INTERMODALITY

Between Voltri and Piazza Terralba, there will be a real metro line. Trains coming from west (Savona) and east (La Spezia) will bypass the northern part between Sampierdarena and Brignole, so that the lines will be specialized – in the halfway stretch there will only be metropolitan trains.

From Voltri it will be possible to connect trains to the so called "Terzo Valico" ("Third Crossing" of the Apennines with a yet-to-be-built tunnel), which is an important project at European level constituting the final link of the TEN-T Corridor 24 Genoa-Rotterdam, involving urban and goods transport.





SWOT Analysis: INTERMODALITY

STRENGHTS	**WEAKNESSES**
• Park-and-ride facility • General re-planning of areas (improved livability)	• Few parking lots • Not other available areas • Underground bypass to park near the toll booth (not financed and difficult to construct)
OPPORTUNITIES	**THREATS**
• Infomobility system informing about parking lots availability • Availability of the area where to construct a bus terminus (demolition) • Licenses for "soft" interventions • More opportunities for trade • Interchange (bicycles) • Navebus (boat service)	• Using cars to get to the park near the station • Lengthening time thus leading to increasing costs • Critical issues on public domains allocated free of charge (agreements) • Infrastructural (not urban) project • National laws on cycle paths

Governance

Most significant considerations emerged are highlighted, also in connection with other topics.

a) CAT MED AND URBAN EMPHATY

A brief description of both EU projects is provided below, in order to simplify comparison and dialogue with Transform Project.

CAT MED

The main aim of CAT-MED is the development of sustainable urban models based on the classical Mediterranean city; compact, complex and where the proximity of public services is determined by people's ability to access them on foot. The project has developed a system of common indicators and has carried out a pilot experience which involved planning and design of the "Green Apple". The project represents a symbol of territorial, social and technological cohesion, promoting participation and public debate through the launch of a platform for Mediterranean cities.

CAT-MED PLATFORM FOR SUSTAINABLE URBAN MODELS

The definition of a common system of urban sustainability indicators enables us to track the evolution of urban systems in time. The indicators are designed precisely to check whether we are approaching the desirable ranges set or, conversely, whether we are moving farther away from them.

The set of indicators has been developed in common by the city partners, and is organised around 4 main axes: territorial management & urban design, mobility & transport, natural resources management and social and economic cohesion.

The district of experimentation of the project, a sort of "living laboratory", is Voltri: a few remaining residences as well as a building devoted to commercial activities and motorised mobility assistance, the local police force barracks, a hotel and car park, several sports facilities, a shipyard, several clubs and sports associations, bathing establishments and shops, and port activities. The

road that connects Voltri to the city centre separates the coastal strip from the historic area that lies behind, characterized by residential typology. Here, some stakeholders groups interrogated themselves around what is essential for e real urban regeneration: the outputs which came up are renewable energies, improvement in mobility public services (a metropolitan system of the railway will have an important gate in Voltri) an safeguard of the Mediterranean characteristics of the building stocks.

URBAN EMPATHY

The CAT Med project established a direct relation between the prevention of natural risks, specially related to climate change, and the development of an urban model based on the classical Mediterranean city.

This urban model based on an integrated approach and in line with the Leipzig Charter, the Toledo Declaration and the objectives of Europe 2020 which, was defined & supported on the Malaga Charter through the commitment of the maximum political representatives of the 11 participating territories. The sustainability strategy of these results was articulated within a structure: the CAT MED Platform for Sustainable Urban Models. A natural capitalization process started under this platform, promoting initiatives like the Cluster of Policies for Sustainable Urban Models & Climate Change in the Mediterranean (within the Med Programme clusterization process, Urban Empathy belongs to).

Territorial cooperation projects demonstrate that there are still a lot of disparities in the application of European directives in the Mediterranean space, despite of its common characteristics and specificities, and a strong necessity to better coordinate funds, making them more efficient, in a context of economic crisis and reduction of public expenses. This is particularly the case in the domain of sustainable urban development, which requires transverse and multi-actors approaches and strong capacities of investments.

Capitalizing on results achieved making them operational, interconnected and transferable require actions involving stakeholders in the discussions of results and their practical implications and use.

The main objectives of the project are:

1. To ensure the long-term impact of the capitalized project's deliverables by the direct involvement of decision makers & key actors, facilitating the integration of these results in sustainable urban policies.
2. To develop a set of propositions adapted to the Mediterranean Transnational Cooperation to be included in the next programming periodic calls.
3. To strengthen, enlarge and institutionalize the existing Platform and Cluster for Sustainable Urban Models building a “Network of Networks” as an open multilevel capitalization space, to create synergies among projects & partners to disseminate & transfer their results towards the development of sustainable urban models.

Evident is the connection between the two; the second is the capitalisation of the first one, but probably the first would not have been so relevant without the opportunity given by the second one.

SWOT: CAT MED AND URBAN EMPHATY

STRENGHTS	WEAKNESSES
• Beauty • Cultural heritage • Villa Duchessa • Paper factories (Cartiere) • Landscape as place to live in not only to contemplate • Endogenous quality of life and urban landscape (climate, pre-existing image) • Social cohesion • Strong social network • Completed projects (SAU 2002)	• Exchange parking close to the sea • Public transport system • Difficult & long procedures • Time (timing) • Funding • "Exhausting methodology • Too many discussion groups, few results • Low knowledge of real situation • Incoherent prioritization • Interaction between master plan and Smart process
OPPORTUNITIES	**THREATS**
• Create an exchange parking in industrial areas • Small is beautiful • Strong role of associations • Waterfront , seaside, beach • No need to involve other neighbouring cities • Smart Citizen • "Puzzle" actions consent flexible differentiated public or private innovative solutions • Find business model • Increase population (new inhabitants?)	• Economic crisis • Bureaucracy • Continuous changes in law • Uncertainty of law • Too many authoritative institutions in planning process • Cross prohibitions • Different, long, non synchronized timings • Uniformity and homogenity

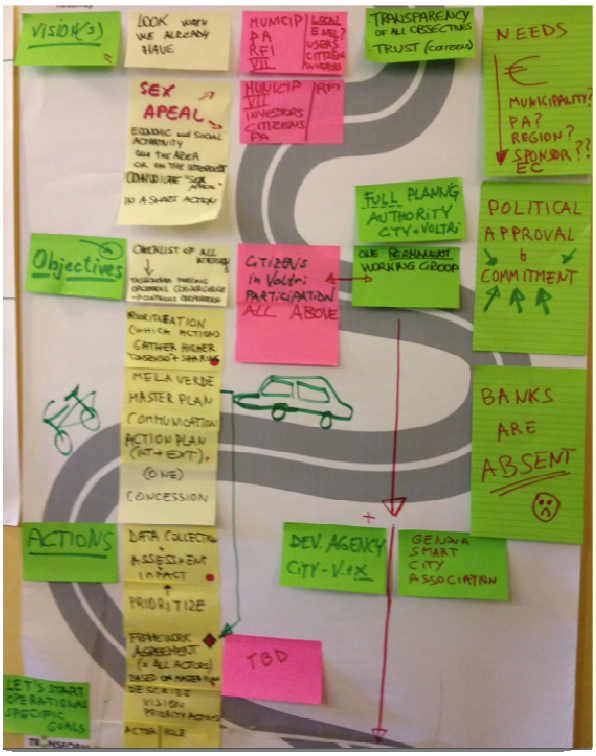
b) AGSC (Genova Smart City Association) AND OTHER WAYS TO PROMOTE PROCESS

In 2010 Genoa, aware of on-coming crisis and societal challenges, started a transformation process towards a Smart City, which improves quality of life through sustainable economic development based on innovation and research and led by the local government in a process of integrated planning.

Under the Municipality's leadership a fertile ecosystem has been created and fostered, involving public bodies, business, academia and citizens working together in a comprehensive strategy to promote innovation and its concrete application in the real world, while thriving towards the shared vision, coherent with Europe 2020 targets, of a Smart City where people lead better lives.

Genoa promoted the creation of an innovative involving governance methodology – even more so in Mediterranean cultures - connecting the quadruple helix (Institutions, academia, business, civil society):

- citizens' needs
- political vision & strategic planning
- academia's creativity
- businesses' marketing strategies
- job creation opportunities
- regulatory systems
- funding opportunities

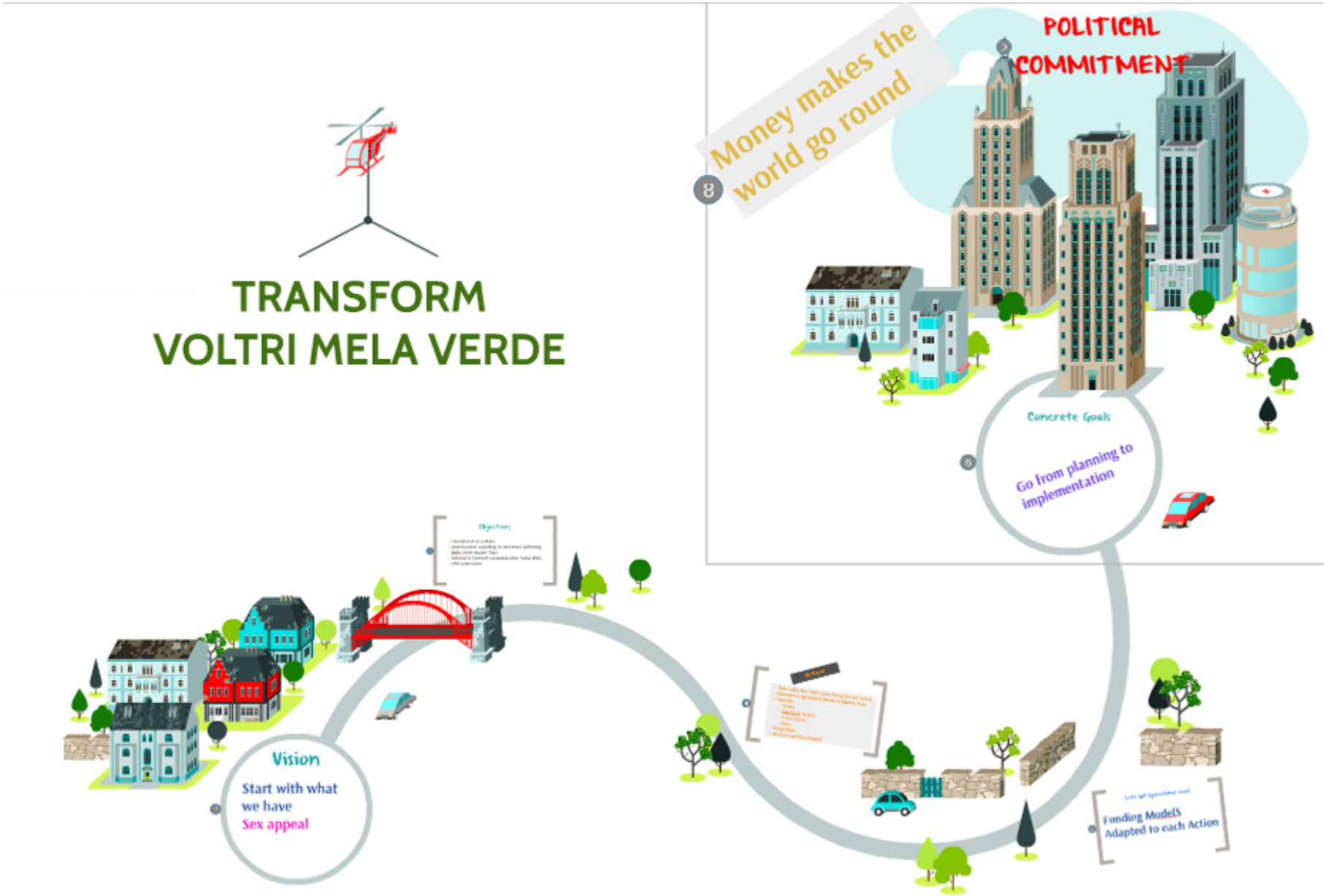


by giving life to the **Genoa Smart City Association** which counts over 90 members working together towards the common goal of making the city a fervent and productive ground where intelligence is applied in planning and actions in a collaborative and positive environment supported by stakeholders and networks. The strategic vision is shared with stakeholders and translated into concrete proposals, through European projects, national initiatives, specific tailor made business cases and projects.

The Genoa Smart City Association enables connection through a challenging, interactive and stimulating environment, promoting innovation leading to concrete results integrated in the overall strategy of environmental safeguard and improved quality of life, which will inspire further innovation triggering a transformation process involving academia, business, the city, the people. This self supporting tool (businesses pay annual fees) has demonstrated its usefulness and solidity having worked for three years and undergoing a change in Administration; the new Mayor and his team confirm support and strong political commitment to the important smart city and innovation processes it triggers

SWOT Analysis: AGSC AND OTHER WAYS TO PROMOTE PROCESS

STRENGHTS	**WEAKNESSES**
• Genova Smart City Association: added value • Information and communication	• Little Information and communication • Lack of internal communication • Energy efficiency in Heritage building • Too negative ☹
OPPORTUNITIES	**THREATS**
• Diversify strategy for each public building • Reconstruction and retrofitting should go together • Energy efficiency in Heritage building: develop creative solutions • Demonstrator pilot projects • VOLTRANO: annexion to Merano!	• Multiplicity of actors


TRANSFORM
VOLTRI MELA VERDE
Money makes the world go round
POLITICAL COMMITMENT
Concrete Goals
Go from planning to implementation
Vision
Start with what we have
Sex appeal
Funding Models
Adapted to each Action

Conclusions

The Intensive Lab Session proved to be a **unique opportunity of putting together all involved stakeholders** in a thorough and frank discussion of possible developments, barriers, opportunities and ways to promote the process.

Locally, results from ILS will be used in further promoting Voltri Smart "Mela Verde" District actual realization **giving decision-makers a clear, detailed and shared view** and also highlighting possible ways, instruments, actions to be taken.

Starting from results, **further studies** should be made into **technical aspects**, such as development of sea-water pumps or implementation of smart grid connected tools, but specially into **business models** useful for triggering works in the current overall economic crisis hitting Italian (and not only) economy thus permitting a virtuous cycle leading to the **district's transformation, job creation, energy efficiency and consumption reduction, diminishing CO2 emissions and overall climate and quality of life sustainability**.

In the context of Transform Project, Genoa's ILS is an interesting showcase of the **preliminary phases in an ambitious urban smart development**, which will help Buddy Cities and others interested in replication better understand the steps to be taken in the process towards a smart district and a smart city.

Partial answers to the g**eneral leading questions** emerged:

- ***How can we drive Green Apple to a concrete realization?***
  - Gaining political commitment
  - Finding enabling business model
  - Finding funding
  - Developing smart grids and linked concrete applications of smart management
  - Strengthening dialogue and connections among key players, i.e. Municipality, Port Authority, RFI, Municipio (Local Council)
  - Developing the "Agenzia Smart Sviluppo Voltri" - ASSVO, an operative agent with manpower and resources to facilitate and steer the process (meetings, communication, feasibilities, updating the masterplan. This agencies could become the main agent and

player in order to bargain the framework agreement with PA, RFI and the city, plus achieving the 'one concession' idea in the agreement.

- The citizens of Voltri and the political representatives from the city level will need to significantly guide and support the activities of ASSVO (round table, board etc..)
- It will be essential to define and implement 2-3 lighthouse projects in order to give a clear signal to public and private partners and to the residents that this area will be upgraded (e.g. boardwalk #2, library/theater+school refurbishment combined with innovative heat pump energy supply
- Reinforce the upgrading of existing buildings and energy systems in the residential part of the area, to better represent this issue in the masterplan and in the smart energy development perspective

- ***In which sense could the SUL's designing contribute to a smarter Genoa?***
  - Demonstrate feasibility of *transformation* into a smart(er) district
  - Gather stakeholders around one common table and show concrete advantages of cooperation
  - Prove feasibility of new business models
  - Show possible energy savings and greenhouse emissions reductions
  - The "Railway Metro Gate" idea should be extended into a 'innovation gateway' for the city of Genoa, with a concretely show-case and integrated pilot project for replication in other parts of the city (and in other cities) but also with a living lab for young innovators, students and entrepreneurs

- ***What is the added value of the ILS methodology?***
  - Putting together stakeholders to discuss very concrete issues in an open, friendly pro-action context
  - Working on an active role for Genova Smart City Association: bringing together enterprises, University, students and NGOs to participate in smart pilot projects in Voltri
  - Concentrating important aspects in a short period of time
  - Analysing and highlighting SWOTs

Collaboration between Port Authority and Municipality offers the opportunity to develop a project for a strong and effective integrated urban planning in one of the most problematic and complex areas of the city, with high social tension and difficult social integration, yet it is essential for the new Master Plan, the new Port Master Plan e the new Urban Master Plan.

This is a brand new project for the Italian planning system, in line with the new European Regulation on port activities and can be somehow the example for the new Italian regulations in the framework of the Port Law No. 84/94 reform, also for an effective integration with environmental policies.

So, an area that can be considered as an important starting point for the local system of the western part of Genoa, which foresees urban transformations connected to use of the urban railway line as city metro thanks to a strong enhancement of public transport, a cycling path that will connect about 10 kilometres on the coastline. In addition, some advanced solutions for a sustainable energetic development and an improvement in energy efficiency will lead to a sharp fall in energy consumption and a significant air pollution abatement.

Open question and potential improvements

- Energy Working group results seem much dominated by Smart Grid concept (Active Demand/Smart Info, Electric Mobility, Public Lighting) and ENEL influence; the innovative heat pump concept apparently was only one of a number of project ideas (with much less relevance in terms of innovation and energy savings).

- The heat pump concept should be clearly linked to all refurbishment projects, public and private.
- No presence of PV in the area.
- Could e-mobility (also as e-scooters) become a relevant mobility means to access the railroad from the hilly regions – with a larger number of charging stations in or near the railway station ?
- Combine street light posts with charging cable plugs for e-cars/e-scooters, thus increase greatly the number of available posts.
- Could cable cars (modern, individual steered multi-cabin systems) be a relevant new means of mobility for the hilly sections of Genoa, extending the traditional elevator-approach ? (e.g. Perugia)

Next Steps

The Municipality will use results from ILS and Transform, integrating them with Urban Empathy and the overall current transformation, to promote a Smart District turning a dream, an idea, a plan into real action.