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## GreenITNet Good practice in Rome:

### *Apa - Air Pollution Abatement*

APA is an intelligent modular platform, patented, able to abate anthropogenic pollutants in the atmosphere, especially particulate matter, heavy metals, PAH - Polycyclic Aromatic Hydrocarbons, pollen, and spores. In order to better meet the needs of diverse industrial sectors, Is TECH is finalizing the development of an integrated two-stage process: the first next stage is functional to electrolytic oxidation of light hydrocarbons, to the seizure of metals and to the dissociation of inorganic compounds, such as NO<sub>x</sub> and SO<sub>x</sub>; the second next stage is functional to the chemical conversion of CO<sub>2</sub> in the form of bicarbonate.

**Policy precondition or policy intervention**

The presence of ozone at concentrations higher than 70 mg/m<sup>3</sup> accounts for 0.6% of all causes of mortality. Higher figures were obtained for effects on health that result in morbidity. The magnitude of the estimated impact underscores the need for urgent action to reduce the health burden of air pollution. Compliance with European Union legislation can result in substantial savings in terms of ill health avoided. Local authorities, through policies that aim mainly to reduce emissions from urban transport and energy production, can also help achieve sizeable health gains.

# “City Clean Air” at Cisco Live 2014



City Clean Air innovative solution (APA – Air Pollution Abatement) is part of the BizMall solution catalog ([www.bizmall.it](http://www.bizmall.it)), built by Cisco and Computer Gross, the Cisco’s distributor on the Italian market.

The Bizmall solutions are a combination of Cisco and the best third party applications selected from Cisco to answer to the market demand and needs.

A BizMall solution corner, including the City Clean Air Solution “APA”, will be exposed at the international event “Cisco Live 2014”, as a worldwide best practice and proposal to the innovative stakeholders.

The conference will be held in Milan from 27<sup>th</sup> January to 31<sup>st</sup> January 2014.



“Multimedia system”  
Indoor and Outdoor



## Implication and challenges

Is TECH Company starting works to combine technological innovation processes and testing, integrating multidisciplinary projects with specific approaches and intervention models in 2010. During the 2011 Is Tech has been started and succesfull complete an extensive test sessions in different industrial and urban areas. Expected: reducing air pollutants of 80% on average, compared to different ranges of PM, with peaks of 99% of the PM 10.

## Role if ICT

The System installed are connected to a special wireless telecommunication’s network, designed by WiTech. Through this network, the information gathered by the sensors are transmitted to a monitor from which the level of air pollution is monitored in real time. After that, each prototype, through a sophisticated mechanism, purifies the air by breaking down hydrocarbons in the form of particulates, heavy metals, particulate matter, and pollen. APA has been designed to fit different operative situations, with specific operating characteristics of the system in according with, mainly, the unique basic principle to sustainability in terms both of economy and environment: no emissions, no waste.

## GreenITNet Good practice in Czestochowa: Monitoring systems in the context of optimizing the energy consumption and management energy.

Network analyzers PowerLogic ION7650 and ION8800 are designed to local and remote monitoring of the main points in the distribution system electricity. Meters monitor the quality of energy as with the applicable standards, check specifications contained in contracts for the supply of energy and provide data on the load and the stability of the power supply. The devices have advanced power quality analysis functions, such as registration and detection oscillographs transient disturbances and a number of communication options web-enabled and also control functions. The analyzers can be supported by a dedicated ION Enterprise software or they may share data with existing SCADA systems by multiple channels and communication protocols.

### Energy efficiency

The energy will be used more efficiently. Electricity costs will decrease up to 30% through the use of capacitor banks. In addition, the power consumption monitoring system and appropriate supervision contribute to a more conscious behavior, which will save up to 10%.

### Role of ICT in the practice

PowerLogic System from Schneider Electric provides a comprehensive solution for monitoring consumption and power quality. The offer includes: power meters, network analyzers, measuring transformers, communications equipment and computer monitoring system. Since 2005, the offer was completed with the highest quality network analyzers with family ION Integrated Object Network and Professional ION Enterprise software. The leading products are this device ION 7650 and ION 8800A, which perform a variety of system functions below: Precise measurement of energy (class 0,2 S) Advanced Power Quality Analyzer (certified Class A), Programmable computing unit , Hub measurement data for other measures.



## News from the partners:

### Transfer of the “WI-MOVE” good practice: Rome → Catania

On 4<sup>th</sup> February Roma Capitale hosted a delegation from the City of Catania to share the experience of the *Wi-move* project, recently developed in Rome.

It aims to create advanced services to be distributed over a metropolitan Wi-Fi network accessible in open mode which allows the exchange of information and networking between multiple entities within a metropolitan area, providing in real-time the situation of the urban mobility network to the citizens and companies operating in the area. The meeting took place at the headquarters of the Agency for Mobility, an in-house company of the administration of Rome for the local public transport, which has intensively worked in the *Wi-move* project to bring together all the information deemed useful for the purpose, processing them and making them accessible on the network. During the meeting the main technical details of the entire operation, the points of success and those of greater complexity were shown, as well as some products which are not yet up to speed despite the experimental phase has shown their feasibility. This is the case for the vocal version of the bus waiting service for blind people. The meeting was also attended by researchers of ‘Sapienza’ University of Rome, who collaborated on the project to develop different versions of the software in accordance with the device being used.

The City of Catania is now planning the implementation of *Wi-move*, taking advantage of some technical updates made possible by the rapid advancement of ICT, and adapting the service for the Roman mobility to the needs of the area of Catania. The technicians who made possible the *Wi-move* experience will travel to Catania before the end of the *Greenitnet* project, in order to oversee its implementation and bring back useful suggestions that will help for the system to evolve in Rome.



Meeting at Rome Mobility Agency

## News from the partners:

### Green IT Amsterdam and OMALA collaborate to transfer Urban Lab from Barcelona

Green IT Amsterdam and OMALA are collaborating to transfer a green IT success story to the Amsterdam Region.

Green IT Amsterdam is one of the leading partners in the [GreenITNet](#) project. One aim of this project is to identify and showcase green IT good practices from various European regions.

At this moment you can access an online platform with more than 140 good practices from wide variety of application area's and regions.

Another aim of GreenITNet is to activate European cities to develop green IT implementation and create energy efficient regions with the technology tools available today. The GreenITNet practices are a great inspiration and source of expertise, which can be used by green IT ambitious cities to develop their own plans.



Green IT Amsterdam role is that of a catalysator and facilitator. We are supporting cities in the process of developing plans and help in establishing the transfer of knowledge and expertise from one EU city to the other.

Omala is developing [Airport Garden](#) City, an area next to Airport Lelystad. Their vision and ambition is to create a sustainable and innovative area for business, leisure, events, retail and logistics. Airport Lelystad is aiming to open the new airport in 2018, aiming to be third largest airport on the long term. Green IT Amsterdam and Omala are collaborating to transfer the knowledge which was generated in Barcelona while developing the [“22@ area”](#), a success story as an urban lab, a technology testbed and popular area for both business and residents. The GreenITNet project includes two partners from Barcelona and they will assist in this process.

The knowledge transfer will focus on 3 area's of interest, social, urban and economic innovation. Those three elements are fitting with the Omala Airport Garden City vision and combined with the knowledge and expertise from Barcelona it would really strengthen the development plans regarding technology, innovation and sustainability.

## News from the partners:

### Odysseus project study case. Manchester town hall extension

Over the last 4 years Manchester has been working hard to refurbish some of its major buildings in the city. For the historically important building, the Town Hall Extension Complex the brief was to make sure building was as energy efficient as possible. Because this is grade 1 listed building it was not possible to change the



appearance significantly and this restricted the design options for retrofitting insulation and double-glazing and forced the design team to look for efficiencies in the new heating and lighting systems instead. To this end an innovative new Combined Heat and Power (CHP) system has been installed. With the help of European funding, the city has been able to explore the effect of this strategy through a pioneering new project to develop a new energy management decision support aid for neighborhoods and large estates - the Odysseus Project.

Some of the funding enabled the installation of ultrasonic heat and electricity sub meters during the refurbishment period (Danfos SONOMETER 1100), which automatically report to the building energy management system. On a practical level, this now means it is possible to monitor energy usage on a granular, sub-floor level and provide timely (daily, weekly, etc.) data on consumption. For example, for each of the four elevations on floors 1-4, there are 2 sub meters per elevation (and others for the four stairwell and toilet areas), so at least 8 sub meters per floor, which will enable consumption in each department to be assessed.

The first part of the project will take the form of an experiment, looking at if energy conservation measures (ECMs) can be positively encouraged, or not, to assess how staff behaviour can impact on energy usage. To engage staff from across the building, 'floor energy champions' are being recruited. There will be twelve energy champions, one for each of the six areas participating. The floor energy champions will be able to access simplified zone-specific energy consumption data. They will relay the 'results' of the experiments (their floor's energy use compared to other floors, or compared to last fortnight) to colleagues.

The champions will meet up every 2 months to discuss their findings, and compare successes in encouraging energy efficient behaviour.

Alongside these ‘soft’ measures, there will be a number of ‘hard’ technical changes which could be things like:

- Reducing illumination level
- Automatic shutdown of computers
- Window open ‘alarms’ to warn if windows are left open into the evening
- Reprogramming of the hot water boilers which are used for hot drinks

The experiments will take place in three month ‘phases’ allowing time for assessment, and the addition of further measures.

The second part of the project will be for the three technical partners in Odysseus to use the data to design the Odysseus energy management tool.

Energy management tools already exist for individual building applications but the aspiration and innovation of the Odysseus tool is to manage energy at the scale of a whole estate. For example, at certain times of the year or daily cycle it may be more cost effective to export electricity and/or waste heat from the new CHP units to other buildings in the city’s estate so that equipment can be run at maximum efficiency. The council is applying a commercial energy management tool called Trend Energy Manager and the monitoring work to be undertaken in the building will enable cross calibration between this system for the building and the new Odysseus tool.

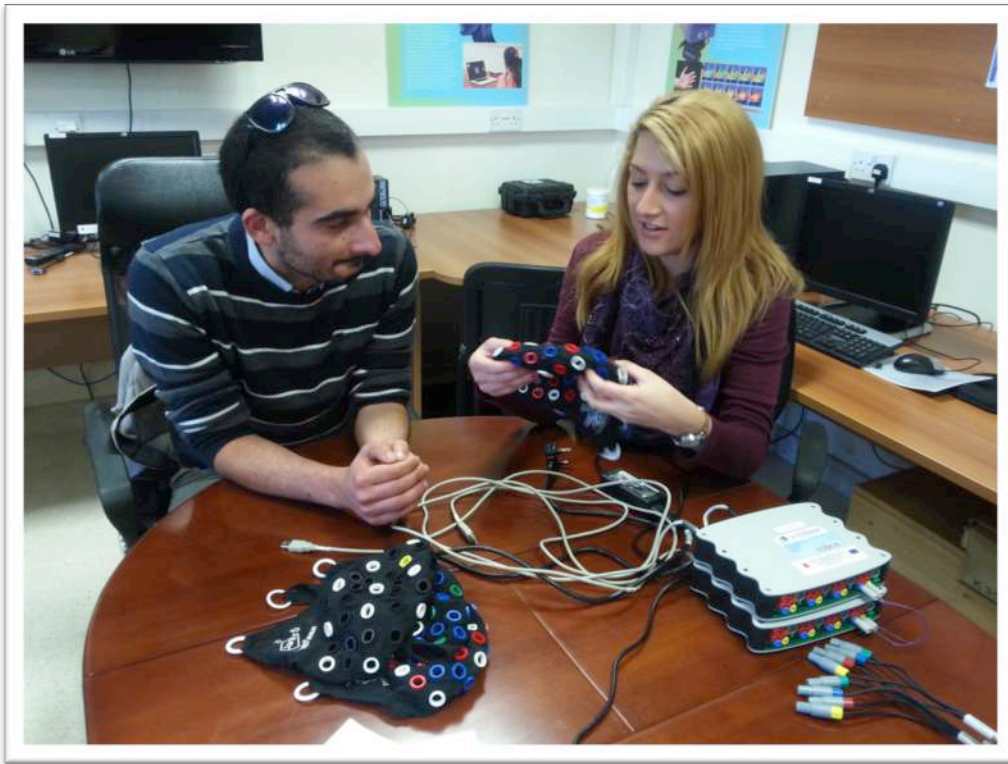
Ultimately the Odysseus tool is to be used for modeling experiments on the proposed Civic Quarter Heat Network.

The Odysseus project has 2 more years to run and the work on the THX will report in April 2015 so watch this space for news and updates. <http://www.odysseus-project.eu>.

## Past and coming events:

### Visit and meeting at the Department of Control and Artificial Intelligence at the University of Malta

November 2013



*Visit and meeting at the Department of Control and Artificial Intelligence at the University of Malta*

Miema Intelligent Energy Management Agency participated in an event project brought over a couple of interesting points with regards to the role of smart phones and Apps in combatting the exorbitant emissions of Green House Gasses. We want give the opportunity to the public to keep using their smartphones in a smooth and efficient way, that's why it is important to classify which apps may be draining their battery life more than they know.

Enhancing the IT infrastructure in Malta will aid at achieving the 2020 goals set by European Commission. More over the integration within the Covenant of Mayors, their SEAP's and other strategic documents will give a very strong geographic coverage.

The European Parliament experienced is backing the Green Digital Charter which was signed in Zagreb in November 2013. This charter is integrated within the Covenant of Mayors so that other European Cities who are members can express their commitment within this sector.

## Past and coming events:

### GreenITNet local dissemination day in Rome

December 3<sup>rd</sup> 2013

The Dissemination Day organized by Roma Capitale and Risorse per Roma SpA for the European projects GREENITNET ([www.greenitnet.com](http://www.greenitnet.com)) and CLUE ([www.clue-project.eu](http://www.clue-project.eu)) was held in Rome on 3rd December 2013 and was entitled: ***"How innovation, information technology and energy efficiency can make cities smart."*** The event, which started at 9.00 am and finished at 5.00 pm, attracted over **140 participants** and was structured in three working sessions and four intervals for discussion and networking, called "World Café".

The event was in line with the aims of the two European projects and promoted the exchange and transfer of experiences, knowledge and best practices aiming at reducing energy consumption and greenhouse gas emissions through the use of new technologies. It also dealt with issues related mainly to mobility, networking with Wi-Fi, procurement, quality of urban life, street lighting, tourism, energy efficiency, climate and greenhouse gas emissions. The Dissemination day was attended by representatives of Rome, Amsterdam, Barcelona, Catania, Czystochowa, Kranj, Malta, Manchester and Riga, Roman associations of entrepreneurs, universities, research centers and professional bodies, to name a few, with the aim to share experiences, ideas and strategies to implement concrete and effective actions in Europe in environmental matters.

The event was also an opportunity for promoting new urban regeneration and renewal projects in Rome, within the framework of the Urban Agenda of Roma Capitale and the European Union policies.



# Past and coming events:

*Mobilna Fabryka "Mobile Factory"*

*May 15<sup>th</sup> 2014*

**May 15<sup>th</sup> 2014**

*Hotel Mercure Centrum*

*ul. Roosevelta 20*

***Poznań (Poland)***

Mobile applications that increase productivity (the ability to transfer a variety of reports from virtually anywhere).

Mobile systems for production planning (including the reservation of raw materials, human resources and production equipment).

Internal service and maintenance (registration complete the repair process or maintenance). Mobile applications in transportation and distribution (modifying routes in real time, navigate to designated sites, ecological fuel use, save time and manage confirmation of delivery).

Applications to support the full product development process (tracing the production of real-time data collection to optimize processes and to provide information about the availability of raw materials and semi-finished products).

Supports entered by users to the company (BYOD) Obligations of the owner of mobile applications. Duties of the user mobile applications Security of mobile devices and the data (collected and stored on them). Trends and innovations in the architecture of mobile systems (in the area of hardware and software).



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