



– Press Release –

Athonet Smartgrid and 3 Italy provide Enel with an innovative *Industrial Internet of Things* solution

Enel's Federico II power plant in Brindisi has been equipped with a communications platform that delivers dedicated coverage, using TDD-LTE wireless technology, and integrated communications between personnel, sensors, machines and applications, further increasing the quality, efficiency and safety of the plant for the management of mission-critical processes.

Brindisi, 25th February 2015 – Athonet Smartgrid, part of Enel's startup incubation program, and 3 Italy, a mobile operator part of the Hutchison Whampoa Group, have implemented a dedicated 4G-LTE network for Enel's Federico II plant in Brindisi, one of the most important and advanced power plants in Europe. Leveraging Athonet Smartgrid's technology, enhanced by Enel's acceleration, and the services of mobile operator "3", a TDD-LTE ultra-broadband micro-network has been implemented covering the entire plant, ensuring data, live video and voice services, both fixed and mobile, with an optimal level of coverage, very low latency and service continuity assurance even during critical emergency situations.

The solution creates an independent dedicated micro-network that can be easily reproduced at any production plant and construction site.

The "IIoT", *Industrial Internet of Things*, is the new Smart Industry paradigm that in this case has not only been applied to Enel's Brindisi power plant but also to the adjacent construction site of new coal storage domes. The two key strengths of the micro-network solution are:

- Athonet Smartgrid's distributed LTE Virtual Mobile Core Network (EPC) platform that provides guaranteed very low latency, highly reliable ultra-broadband service, delivering full control to the customer in a cost-effective manner using a fully virtualized software approach;
- 3 Italy's TDD-LTE technology, that enables optimal distribution of capacity amongst the two directions of data transmission: those that originate from sensors, terminals and videocameras (*uplink*) and those that originate from network platforms (*downlink*);

Athonet Smartgrid and 3 Italy have delivered a system that implements the distributed mobile network concept, often referred to as NFV, *Network Function Virtualization*: an innovative network, completely integrated with Enel's ICT infrastructure, that meets the industry's most stringent technology requirements. The solution enables both fixed and



mobile applications such as live video surveillance of the entire area, monitoring of moving vehicles, audio-video communication amongst plant personnel and with the enterprise network or the outside world, sending and receiving alarms from fixed or mobile body-worn sensors.

The performance offered by the solution has enabled Enel to implement services for predictive diagnostics, workforce management, machine automation and, last but not least, safety of all operations in the power plant and construction site.

“We decided to invest in Athonet Smartgrid because we believe that the ability to rapidly create dedicated networks using LTE technology is an important enabler for us to improve productivity and safety of our production assets and to offer integrated services to our customers”, said Ernesto Ciorra, Head of Innovation and Sustainability at the Enel Group. “Through our open innovation strategy comprising continuous collaboration with highly innovative startups we aim to broaden our offer towards our customer base and Group companies”

“This new installation in a complex environment has confirmed the flexibility and high performance of our *virtual mobile core* that enables the creation of dedicate secure LTE mobile networks in very short timeframes and in remote areas”, said Karim El Malki, President of Athonet Smartgrid. “This is an important step towards the distribution and virtualization of the mobile network to offer innovative services to enterprises that were previously unthinkable, tailor-made to customer needs and that can be quickly reproduced for different environments and operational needs”.

“Once again 3 Italia demonstrates that it is a pioneer in the implementation of new technologies in support of development and innovation”, said Dina Ravera, General Director of 3 Italia. “Thanks to the opportunity we secured during the Italian government’s LTE frequency auction, having identified TDD as the ideal technology for the IoT, Internet of Things, we are now able to build efficient and competitive platforms to cater for this important sector of innovation and growth, including industrial and mission-critical applications”.

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3 Italia was the first mobile operator launching UMTS services commercially in 2003. Under the "3" brand, the company offers communication, fast Internet and TV mobile services to nearly 10 million customers. 3 Italia has always been at the cutting edge of next generation mobile technology by focusing on the mobile broadband as a driver to grow. 3 Italia has been contributing to Italy's development and to the digital divide reduction through investments of nearly 15 billion Euros in innovation. The company reaches, through its mobile fast Internet network, the 97% of population and has created employment for more than 10,000 people. 3 Italia is part of Hutchison Whampoa Ltd Group, an investment holding and Fortune's top 500 company, one of the main groups listed at the Hong Kong Stock Exchange, with operations in 52 countries, 270,000 employees and turnover for 53 billion dollars.



Enel is a multi-national power company and a leading integrated player in the world's power and gas markets, with a particular focus on Europe and Latin America. The Group operates in 32 countries across 4 continents, generating power from over 95 GW of net installed capacity and distributing electricity and gas through a network covering around 1.9 million km. Enel is a forerunner in the use of alternative renewable energy sources as well as in the development and implementation of smart meters, smart grids, electric mobility and energy storage projects.

Athonet Smartgrid is an Italian company specialized in the field of mobile telecommunications that has created an innovative mission-critical mobile network solution for electrical utilities. Using a virtual ultra-broadband mobile network infrastructure that provides very low communication latency, is compact, reliable, simple to install and manage, Athonet Smartgrid satisfies the most evolved requirements of Smartgrid distribution networks, Smartcities, production plants, construction sites and enterprise Microgrids. Athonet Smartgrid deployed the first wireless LTE Smartgrid using LTE technology in 2011. Athonet Smartgrid is a partnership between Athonet (www.athonet.com) and the Enel Group.

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