

# Italy brings to New York the project "Logistics of the future in Sustainable Smart Ports"

- The project realized for the Port of Livorno is the only Italian case presented at the Global Solutions Forum in New York
- A model for assessing the impact of digital transformation on the 17 United Nations Sustainable Development Goals was implemented
- It is estimated that the use of 5G to optimize port activities will allow an increase in efficiency, safety, productivity and an 8.2% reduction in CO2 emissions

The project "**Logistics of the future in Sustainable Smart Ports**", realized thanks to Eni Enrico Mattei Foundation, Port System Authority of the Northern Tyrrhenian Sea, National Inter-University Consortium of Telecommunications (CNIT), Ericsson Italia and TIM, is one of the 10 *solution initiatives* of excellence that will be presented at the Global Solutions Forum organized by the Network for Sustainable Development of the United Nations (SDSN), scheduled for September 25<sup>th</sup>, 2019 at Columbia University in New York.

The event, which will take place during the UN Climate Week, brings together leading sustainability experts and aims to share the best local projects focused on the 17 Sustainable Development Goals of the 2030 UN Agenda.

The Italian team has the credit of having defined an innovative model for assessing the introduction of new technologies, as 5G, in port processes in order to understand the impact of digital transformation and connections with Sustainable Development dictated by Agenda 2030. The model is based on the "SDSN Italia SDGs City Index", developed by researchers of the Eni Foundation Enrico Mattei - *hosting Institution* of SDSN Italy -, a composite indicator referring to Italian cities, which provides the degree of implementation of Sustainable Development Goals (SDGs) in Italian municipalities.

This model of analysis has been adapted to the port reality of Livorno municipality, considering the 5G enabled digital transformation as the main driver both for the evaluation of port performances and for the pursuit of sustainable development *tout court*.

In the context of Corealis EU project, it has been shown that 5G connectivity is able to generate a multiplicity (about 60) of direct and indirect benefits for the port system by promoting an increase in competitiveness and safety for personnel (Objective nr. 8 of the UN

Agenda), the sustainable growth of the port city (Objective nr. 11), the management of the responsible business in logistics (Objective nr. 12) and a positive environmental impact that is estimated in a CO2 savings of 8.2% per year, equal to almost 148,000 kg of CO2 (Objective nr. 13).

In addition to the specific results obtained by the project, the solution initiative is an excellent example of a driven partnership: different types of stakeholder sharing a common vision on sustainable development. This vision, joined with a strong commitment in providing innovative research tools, was fundamental for the success of the project.

Declares **Elisabetta Romano, Chief Technology and Innovation Officer at TIM**: "We are very proud of this result. Together with the other partners, TIM is engaged in making the digital society increasingly sustainable. This project of excellence highlights the quality and state-of-the-art of TIM's network infrastructure, allowing to exploit the 5G's full potential as the platform supporting the digital transformation. 5G enables advanced services such as environmental monitoring, intelligent logistics and mobility leading to energy savings to the benefit of the green economy."

**Rossella Cardone, Head of Sustainability and Corporate Responsibility at Ericsson Market Area Europe and Latin America**, says "At the Livorno port, 5G networks and IoT solutions have the potential to optimize logistic operations boosting efficiency and competitiveness of territory, which in turn helps to cut down on emissions meanwhile keeping a safe workplace. Both 5G and the "Partnership for the goals" approach helped progress the initiative, resulting in an expected 8.2% CO2e potential reduction. Ports are fundamental to the global economy, responsible for up to 90% of goods being transferred all over the world. So, a wider adoption of 5G ports would have huge environmental impact. Overall, ICT plays a critical role in supporting other sectors to decrease their own environmental footprint with 15% CO2e saving, which can be accelerated with 5G."

**Antonella Querci, Director of Development, European Programs and Innovation - Port System Authority of the Northern Tyrrhenian Sea**, comments: "The achievement of sustainable development objectives is to be attained through an ever greater control of the processes, and a deeper knowledge of the actual operations. This is particularly true for ports, as complex environments where industrial, logistic and energy-related functions are intertwined and interdependent. Declining SDGs in the port area means therefore investing in research and technological innovation, with the twofold result of making the processes more sustainable over time and increasing the global competitiveness and efficiency of the port. The "Logistics of the future in Sustainable Smart Ports" project has shown what are the benefits deriving from the application of new technologies, in this

case 5G, and how digitization can contribute to improving port operations. We would like to point out the fruitful collaboration among public bodies, research centers and undertakings, in order to define and measure these effects with a shared approach and for laying down a common development path."

**Paolo Pagano, director of the Joint Laboratory AdSP-MTS/CNIT and Alexandr Tardo, Project Manager of COREALIS,** comment: "Enabling via the 5G the so-called Massive Machine-Type Communication represents a concrete possibility to experiment innovative Use Cases supporting the logistics of the goods and in particular of cargo handling operations in the port area. The deployment of the 5G network in the Port of Livorno we will realize in the H2020 COREALIS project, complements the other digital infrastructure upgrading processes included in the port's innovation plan. As researchers, we are happy that 5G innovation allows also to achieve a positive impact on the sustainable growth of the port system, in addition to improving the efficiency of industrial processes."

**Paolo Carnevale, Executive Director of the Eni Enrico Mattei Foundation,** claims: "Achieving sustainable development means to understand the needs of the territory, knowing it and studying it. In order to do this, it is necessary to establish the research synergies of stakeholders belonging to different sectors, recognizing the centrality of "Partnerships for the goals" and the potential of technological progress, without chasing it or fearing it. Technological innovation is not only a lever for development, but it is the engine of sustainable, social, economic and environmental development, as shown by the project "Logistics of the future in Sustainable Smart Ports".