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Porto receives funding to develop intelligent systems

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The Institute for Systems and Computer Engineering, Technology and Science (INESC TEC), in Porto, received 3.2 million euros of funding to develop intelligent systems in the areas of transport, infrastructure, creative and manufacturing industries and multimedia.

TEC4Growth, one of the projects funded by the North 2020 program, intends to create complex tools to solve problems of interaction between different systems, some with autonomy of decision, and to put them in fusion with the human intervention, said to Lusa the coordinator of the project, Vladimiro Miranda.

The program is divided into three interrelated lines of research, related to "what is meant by Internet of Things", which means, "in a simplified way", "addressing real-world objects and integrating them in order to be able to be treated by information systems", he explained.

In Smiles, the first line, researchers are developing theoretical and fundamental concepts, geared towards dealing with large data ('big data'). The models will be tested in the areas of transport and infrastructures, aiming for a "greater efficiency, security and privacy".

This investigative block involves the use of the massive flow of data generated by automatic information exchanges between vehicles equipped with on-board computer, sensors installed in road infrastructures - to detect movements or avoid collisions -, dynamic traffic lights change, automatic license plate recognition and tolling, for example.

Smiles results feed the other two lines of research, one of which is FourEyes, which applies these concepts to the creative and multimedia industries.

"The extraction of knowledge from the data stream, automatically, is an example of what you can do in this line, which also includes issues related to communications and virtual, physical and augmented reality" and that will impact the creation of content and the business model of the companies in this sector.

Iman is the third focus of this research, following the "same philosophy of utilizing large volumes of data", applied, in this case, to the manufacturing industry in process optimization and industrial robotics, with "a reflection on the creation of qualified employment and production of greater added value".

At this point, the question of transports is again raised due to the movement of goods and trucks, which dynamic planning also implies a great deal of data traffic, in real time.

These data are processed and integrated in the collaborative networks of supply chains, that is, in companies interested in the same product, which interact with each other.

TEC4Growth, which lasts for three years and ends in June 2018, has a total investment of 3.8 million euros, a value supported in 15% by INESC TEC (almost 600 thousand euros), which Vladimiro Miranda considers to be a "violent self-financing".

"If we were a for-profit company and had access to financial results, because of the commercialization of the products we manufacture, one could understand that logic, but, not being the case, for a science institution like ours, it is difficult to maintain this effort as if we were a lucrative institution", concluded the administrator.