



Press Release


INDRA PARTICIPATES IN THE eVACUATE PROJECT FOR DEFINING OPTIMAL EVACUATION ROUTES FOR LARGE CROWDS IN REAL TIME

- **Its aim is to design a system based on the latest information analysis, simulation and data collection technologies that is capable of proposing at any time the best alternatives based on the conditions and saturation levels of safe areas**
- **The multinational consulting and technology firm assumes the technical leadership and is responsible for the feasibility design and integration of all the developments, providing the project with its extensive experience in the field of security and emergency solutions for Smart Cities**
- **It includes the development of four pilots located in the Anoeta Stadium (San Sebastián), Athens Airport, the Bilbao Subway and a cruise ship along the French coast**

Indra, the leading Spanish multinational consulting and technology firm and one of the main players in Europe and Latin America, is participating in eVACUATE as a company with expertise in comprehensive safety and emergency solutions for Smart Cities. This ambitious European R&D&i project is aimed at guaranteeing citizen safety in evacuation operations for complex infrastructures and locations. The multinational will be responsible for the project's technical leadership as well as providing the required certification by integrating all the technological modules that comprise it through the design of the software architecture (*framework*).

The project, with a €13 million budget and a four-year execution period, is funded by the European Commission's Executive Research Agency as part of the Seventh Framework Programme. It is coordinated by Exus Solutions and includes a number of companies, organisations and universities, as Telecom Italia, Vitrociset, Tekniker, Diginext and HKV or the universities of Southampton, Dresden, Athens and Turin, among others.

The aim of eVACUATE is to develop a comprehensive system that includes analysis, management and decision-making technologies as well as data collection solutions installed in mobile and also fixed platforms. By combining all this information, it will be possible to adapt plans to the changing conditions of an emergency in order to define optimal evacuation strategies in real time based on the conditions and saturation levels of safe

An abstract graphic consisting of several overlapping, semi-transparent blue shapes that resemble liquid or smoke, flowing from the top left towards the bottom right.

areas. It also aims to serve as a basis for defining a common evacuation protocol for all European Union countries.

The automatic update of the optimal evacuation strategies and routes through the use of the latest "incident snapshot" (a unified operational view of the incident's status) is one of the greatest technological challenges for the project. Another goal is to ensure more updated knowledge of the situation so all the agents may be actively involved in the evacuation process, control the evacuation flow and predict panic or hysteria. Lastly, it includes the development of technologies that increase the dimensioning and assessment of the disaster's magnitude in order to manage the evacuation strategy more effectively.

Advanced location systems, virtual worlds and domotics

eVACUATE will research technologies for optimising the collection of relevant data being generated in the system. As a result, it will improve the precision of locating individuals through solutions that work together with WiFi positioning, which can be fixed (as in the case of positioning platforms that use proximity sensors, closed circuit television and indoor GPS repeaters) or mobile (using devices based on NFC and RFID readers).

It will also incorporate artificial intelligence systems applied to the simulation of virtual worlds in order to decide on the best manoeuvre or decision using information from other situations stored in the system and retrieved from "on-site" operators and sensors. The analysis and numeric/geospatial operations of the data obtained will be used in tools to support decision making. SOFIA will also be established as the common platform on which to integrate developments for Smart Spaces. SOFIA is an open-source middleware service integration project, resulting from a R&D&i project in which Indra has participated actively, that is based on semantic web technology, interoperability and smart sensor networks for implementing domotics in cities, buildings and vehicles, as well as providing personalised smart services via mobile devices.

All the developments and modules will be integrated in the framework designed by Indra as part of the project in order to comprise the complete eVacuate solution and to configure the various applicable scenarios. To do so, four pilots will be developed that will assess and demonstrate the system's capabilities in various locations: the Anoeta Football Stadium (San Sebastián), a Bilbao Subway station, a terminal at Athens International Airport Eleftherios Venizelos and a cruise ship along the French coast.

Proven experience in security solutions for cities of the future

Indra holds a strong position in the development and implementation of comprehensive management systems for emergency situations and security incidents in cities. Its technology currently coordinates emergencies in cities that include Madrid, through the CISEM (Madrid Integrated Security and Emergency Centre), and Buenos Aires, through the CUCC (Single Emergency Coordination and Control Centre). Both capitals handle more than two million calls each year and involve thousands of interventions each month.



The company has also participated in rolling out the European Union's Emergency Response Centre, which was inaugurated this past 15 May and coordinates the resources and civil protection forces of 32 nations. Its solutions in this field have also been adopted by medium-sized city governments in Spain and manage emergency centres for 091, the largest police facility in Spain.

Indra

Indra is the leading consultancy technology multinational in Spain and a leader in Europe and Latin America. Innovation is the cornerstone of its business and sustainability. The company has allocated more than €550 million to R&D&i in the last three years, making it one of the leading companies in Europe in its sector in terms of investment. With sales approaching €3 billion, nearly 60% of its income is from the international market. The company employs 42,000 professionals and has customers in 128 countries.