



# LBS Augmented Reality Assistive System for Utilities Infrastructure Management through Galileo and EGNOS

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**LARA project will develop a mobile device to assist the utility management professionals on the field. The hand-held, low cost, mobile device will integrate state-of-the-art technologies in the domain of positioning and sensors (GNSS), Augmented Reality (AR) and 3D GIS geo-databases.**

**The LARA system will guide utility field workers by helping them 'see' beneath the ground, rendering the complexity of the 3D models of the underground grid such as water, gas and electricity.**

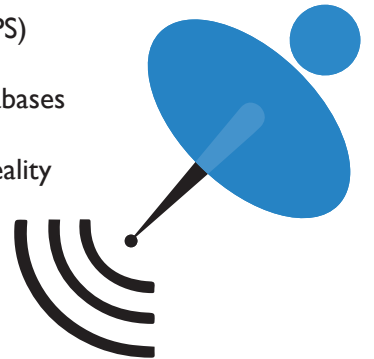
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## Objectives

- ▶ Promote innovation based on the use of European GNSS, Galileo and EGNOS, sensor technologies and LBS monitor, document and manage utility infrastructures' data with an intuitive 3D augmented visualisation and navigation/positioning technology
- ▶ Collect spatial data on the fly via a 3D GIS and geo-databases contribute in minimising the cost for utility management and maintenance industry (electricity, telecom, water supply, sewerage etc.) significantly
- ▶ Take advantages of the Galileo and EGNOS functionality
- ▶ Develop and commercialise a viable and real commercial product

## Technologies

- ▶ GNSS technology (Galileo/EGNOS/GPS)
- ▶ 3D GIS technology and geospatial databases
- ▶ Computer graphics and Augmented Reality



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## Benefits for the user

LARA is designed with a clear intention to turn the developed application into commercial product and services. The involvement of end-users (DEYAK & BCC) in the project will pragmatically guide the consortium towards marketable and competitive orientations.

In addition, private as well as public research partners will retrieve from the project a significant know-how, which they will be able to exploit in further developments. All partners have leading edge capabilities in their domains and have placed innovation as a key factor for competitiveness. In fast evolving markets such as the ones of GNSS applications, GIS and AR, LARA will contribute to keeping stakeholders at a technological forefront. The LARA technology is expected to have significant overall impact on the competitiveness of European SMEs in the underground utilities management and equipment industry and affordability of monitoring tools used by field workers.

The economic impact of LARA is considerable for the underground utility management sector. Investing in LARA product and accompanied services it will eventually lead end users to increase long-term productivity levels, achieve resource efficiency and minimize the overall cost of field excavation. Minimization of operational costs automatically leads to greater profit margins and increased competitive status within the existing or emerging markets. As an example, to maintain their assets, the utility companies alone in the UK excavate more than 1.5 million holes in the streets each year often causing damage of third party assets because of inadequate positional information; the costs of such street-works in the UK has been estimated as £1B of direct costs, with a further £4B of indirect costs incurred by road users. LARA has the potential to reduce these numbers significantly by allowing rapid and accurate location of assets.

All accidents mean higher operating costs for companies, either originating from the penalties imposed by law or indirect costs of accidents and compensations to third parties that are usually difficult to quantify. LARA technology will enable users to avoid such costs and operate with precision, safety and greater responsibility to the society.

The project leading to this application has received funding from the European GNSS Agency under the European Union's Horizon 2020 research and innovation programme under grant agreement No 641460.



[www.lara-project.eu](http://www.lara-project.eu)

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## Partners

