

Structural Health Monitoring based on GNSS

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Satellite Navigation

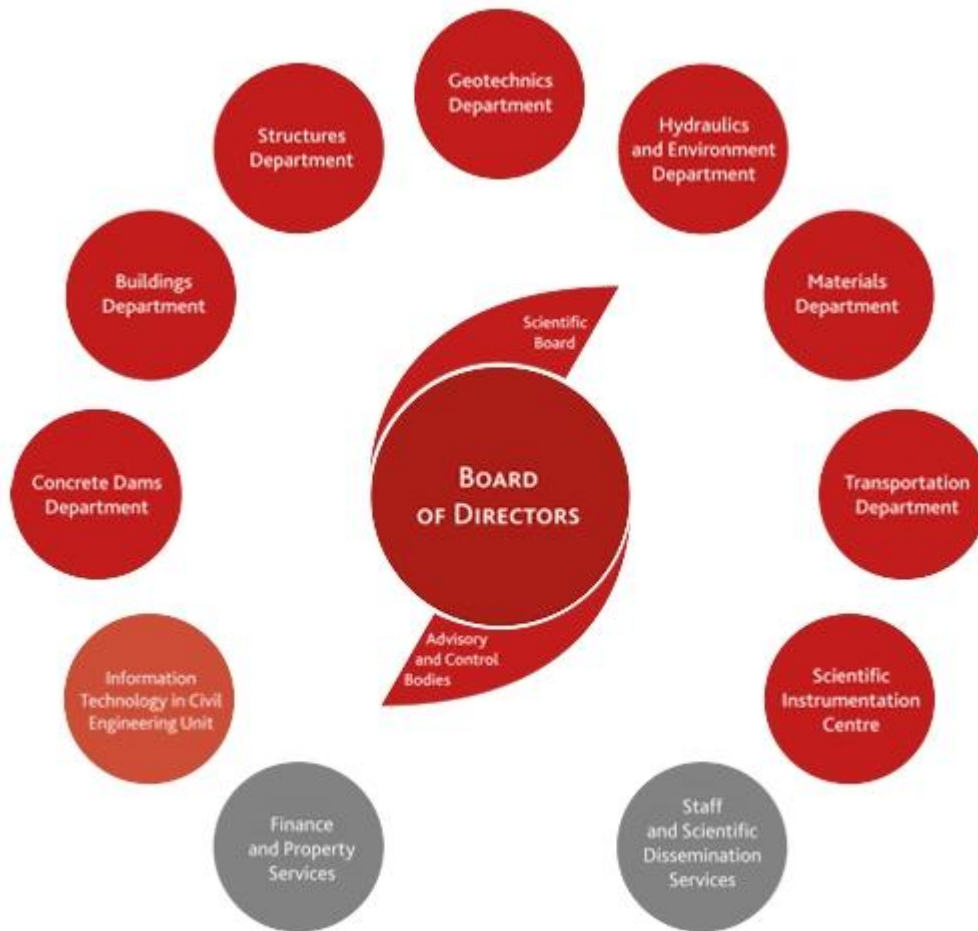
- GALILEO-1-2015: EGNSS applications
- GALILEO-2-2015: SME based EGNSS applications
- GALILEO-3-2015: EGNSS applications through international cooperation

Presentation of the organisation

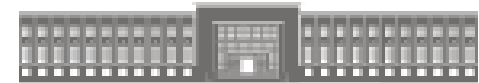
- The Laboratório Nacional de Engenharia Civil – LNEC (National Laboratory for Civil Engineering) is a state owned research and development (R&D) institution founded in 1946. (<http://www.lnec.pt/>)
- It works in the various domains of civil engineering, giving it a unique multidisciplinary perspective in this field. The main goals of the LNEC are to carry out innovative research and development and to contribute to the best practices in civil engineering.
- LNEC also plays a key role in advising the government in technical and scientific matters of civil engineering, as an unbiased and independent body.
- The Laboratory has, at present, 556 staff, of which 46% hold a university degree and 27% are researchers with a Phd or equivalent qualification. It also has about 140 science research fellows with grants awarded by LNEC.
- Around 47% of the LNEC's annual budget is funded from its own revenue through scientific and technology contracts, with the balance coming from the National Budget and other sources of income.
- LNEC is located in Lisbon, in a 22 ha [campus](#), close to Lisbon's Portela Airport.
- LNEC has extensive experience in research projects under EU Framework Programme (FP7 and H2020)



Presentation of the organisation



LABORATÓRIO NACIONAL DE ENGENHARIA CIVIL



Gabinete de Promoção dos Programa Quadro ID&I



Potential ideas and partners

- Looking for project partners who can participate in research project that the first goal is to develop a measurement system, based on GNSS and accelerometers, suitable to monitor large scale civil engineering structures and infrastructures, particularly bridges and dams. This monitoring system final objective is to measure the displacements and vibrations of some selected points of the structures. These points should be the most important ones to characterize the general behaviour (health) of the monitorized structure.
- Hardware development (low cost GNSS receiver and antennae, data communication)
- Software development (multipath mitigation, Kalman filters, data fusion, time series analysis)

