

**Designação do projeto** | SolSensors – Development of Advanced Fibre Optic Sensors to Monitor the Durability of Concrete and Reinforced Concrete Structures

**Código do projeto** | POCI-01-0145-FEDER-031220 - PTDC/ECI-EGC/31220/2017

**Objetivo principal** | Desenvolvimento de sensores óticos baseados em polímeros inovadores para a monitorização de estruturas de betão e deteção precoce da sua degradação.

**Região de intervenção** | Norte & Alentejo

**Entidade beneficiária** | INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência

**Data de aprovação** | 27-02-2018

**Data de início** | 01-05-2018

**Data de conclusão** | 2021-04-30

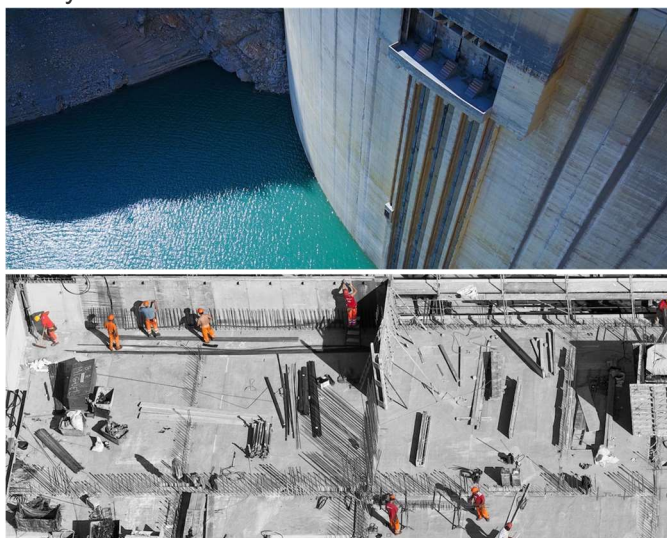
**Custo total elegível** | 236 916,55€

**Apoio financeiro da União Europeia** | FEDER: 200 316,57€

**Apoio financeiro público nacional/regional** | 36 599,98€

**The project aims:**

The development of integrated monitoring systems, for new and existing concrete or reinforced concrete (RC) structures is of extreme importance to understand their response to both structural and environmental loadings during their service life. Monitoring these structures reduces costs by allowing a more rational approach to the assessment of repair options, scheduling of inspection and maintenance strategies. SolSensors project aims to develop integrated multiplexed systems to monitor the durability of concrete and RC structures. In SolSensors project new organic-inorganic hybrid sol-gel materials will be developed and coupled to advanced fiber optic sensors to simultaneously monitor pH, moisture, chloride ions and alkali-silica reactions (ASR) in concrete. This system will allow the real-time monitoring progress of deterioration mechanisms (carbonation, ASR and corrosion of steel reinforcement) by quantifying the parameters responsible by that degradation. Furthermore, integrated systems will allow for the development/improvement of theoretical models to predict with high accuracy the service life of concrete and RC structures under the action of combined effects.



<http://www.solsensors.eu/>