

R&D PROJECT



Project Title

New technologies and processes for industrialization of construction works research.

Acronym

SDC

PROJECT CONTENT

State-of-the-art

Different studies point out that productivity in Construction sector has not grown for at least 20 years – 1%- while the world economy has grown at a rate of 2.8% and the manufacturing industry at 3.6%. If the construction sector were to achieve the same rate of productivity growth as the world economy, it could generate an annual value added of \$1.6 trillion, which is half of the world’s annual infrastructure investment needs

General objectives

The first main objective of the Project is to ensure that the production processes of any construction site are carried out daily under a controlled and pre-established standard, regardless of their circumstances and ensuring that they are carried out under the lowest possible direct and indirect costs and deadlines.

And as a second main objective, to create an advanced intelligent decision making system by identifying the determinants of success for the best preparation of competitive bids to be submitted in public or private tenders for construction works, also supported by BIG DATA Analytics and based on Artificial Neural Networks, duly selected and tested

Project tasks

- I. Basic functionality (WP 1)uncionalidad básica (WP1 1)
- II. Measurements and construction reports (WP 2)
- III. BIGDATA Analytics (WP 3)
- IV. Sustainability (WP 4)
- V. Simulations and on-site testing demonstrator (WP 5)

Project conclusions

Throughout this project, skills have been developed and information collected in the field of artificial intelligence that will be of vital importance in the future for COMSA. A project like this has served to highlight the importance of digitization and, not only that, the importance of digitizing historical data. As a result of the project, several internal initiatives have been launched aimed at both the digitization of historical data and the collection of new data aimed at creating better models in the future.The project has posed numerous challenges. Perhaps the most complicated has been becoming aware of the extent to which market volatility and cyclical changes in society impact the different elements that were expected to be predicted. In this sense, the data that is beginning to be collected now can be as relevant as the predictions that the company has been making for some time. In general, the project leaves COMSA with useful tools and the necessary push to propose a concrete roadmap for digitalization and use of artificial intelligence models.

BUSINESS AREAS

Área Infraestructuras
COMSA, S.A.U

DURATION
2019-2021

BUDGET
519.239 Euros

KEYWORDS
Processes Construction-
Sustainability-Big Data Analytics-
Artificial Neutral Networks

COORDINADOR COMSA
Joan Peset

