

Co-funded by:



PROJECT SPEC SHEET (EN)

ICANs | INTELLIGENT CUSTOMER AND ADVANCED NATURAL SYSTEMS

Project n°: 048958

Supported by: Sistema de Incentivos às Empresas - Investigação e Desenvolvimento Tecnológico - Projetos de I&D em Copromoção

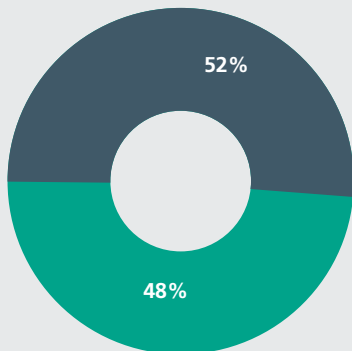
Partners: NOS Inovação (Leader); NOS Comercial; Associação Fraunhofer Portugal Research.

Start date: 08/08/2020

Conclusion date: 30/06/2023

Total eligible cost: 1.126.376,88€

EU Funding: 585.497,98€ (ERDF)



■ COPROMOTORS FUNDING
■ EU FUNDING

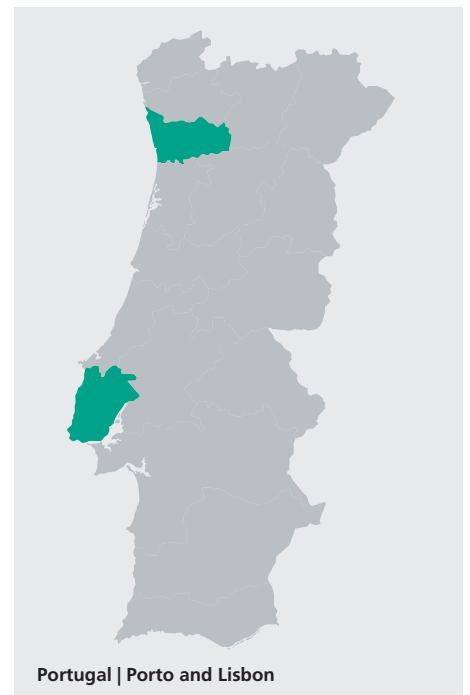
Project Summary

In the prospect of a very large consumer base whose needs are constantly evolving, the telecommunications industry faces several challenges nowadays. One of them is competitiveness, where each decision has a major impact on its placement on the market. Therefore, expert knowledge may not be enough, and decisions must be based on data analytics to ensure a more informed and effective outcome and use of resources.

The main goal of a telecom provider is to ensure the happiness of the customers with their products and services and, consequently, continuous improvement of the user experience and service quality. Integrative frameworks for data processing often lack Machine Learning capabilities, relying only on simple Business Modules or a small number of deployed models, which are not tailored for the telecommunications industry.

This project aims to construct a single flexible and intelligent analytics platform running

on a cloud environment with real-time performance. This framework will encompass predictive and autonomous capabilities to support telco service quality and enhance user experience using data from the usage and service quality from NOS devices and internal infrastructure. The proposed architecture will be benchmarked in three novel use-cases:



1. **Use Case #1:** Natural Conversation with ICANs assistant at physical NOS's stores
2. **Use Case #2:** Intelligent Software Rollouts
3. **Use Case #3:** Policy-based network slicing for IoT security supported by 5G.

In this setting Fraunhofer AICOS will develop Artificial Intelligence methods for the deployment in this platform in the areas of Natural Language Understanding (NLU), to better understand the sentiment and act accordingly when interacting with a customer; Indoor Location of devices in the network and recommend enhanced configurations for IoT users; Recommendation Engines to improve user experience by recommending content

based on User Profiling; and Security of the network by detecting anomalous behavior in the network's traffic.

The NOS business strategy is to use ICANs as a smart meta-analytics performance tool associated with the existing IP in terms of Natural Language Processing and Machine Learning to take advantage of unmet needs in AI-telecom market. One of the expected outcomes is to leverage NOS customer experience by tackling Artificial Intelligence (AI) applied in telecom for creating a NOS customer community. The goal of the project is to move quickly in order to position itself in a favorable stance by leveraging this traction with the

partner NOS Comunicações in order to completely scale the business and address the European market.

Photos, videos and other dissemination materials

