

ROSIA

REMOTE REHABILITATION SERVICE FOR ISOLATED AREAS



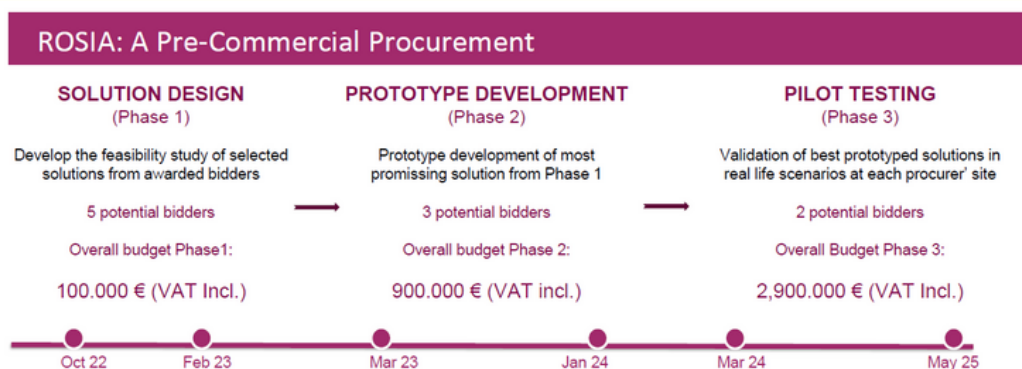
About ROSIA PCP

ROSIA project aims to design **future rehabilitation services for remote rural areas**, making sure those who live in the least populated areas, furthest from cities, have access to intelligent telerehabilitation services. These designs will take advantage of **new technologies**. They will integrate **social and health services**. They will even integrate whatever **community resources** are available in patients' villages and towns. But they will be prescribed and supervised by **rehabilitation specialists** in central **healthcare facilities**.

ROSIA is a PCP (Precommercial Procurement) Project, it means that some public administrations (procurers) found a common unsolved need and they procure together a R&D service addressing it in a competition per phases.

Project ROSIA started in January 2021 and involves 12 partners across 5 countries, and it is funded by the EU with an amount of EUR 5,5 million. ROSIA is coordinated by IACS, and the project's three public procurers are: Servicio Aragonés de Salud in Spain in Spain, Centro Hospitalar e Universitário de Coimbra in Portugal, and the National Rehabilitation Hospital in Ireland.

The ROSIA PCP execution stage is structured in three Phases:



Currently, ROSIA PCP is in Phase 2. Three contractors are developing their prototypes for the ROSIA solution ecosystem

“This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101017606”

IN THIS ISSUE

ABOUT ROSIA PCP

CONTRACTORS PARTICIPATING IN PHASE 2

- REHABILITA+
- RAISE
- REHABILIFY



About ROSIA PCP



The three procurers participating in ROSIA are doing so because they are in urgent need of reorganizing their rehabilitation services.

Rehabilitation has a significant impact on patients' lives and on their medical conditions, and therefore carries elevated opportunity costs when not implemented. Yet **rehabilitation processes are a costly and convoluted item** on the budgets of health care systems, and may exert negative side effects on patients' lives when patients are forced to travel long distances to specialist rehabilitation centres (as is the case of patients living in remote and depopulated areas).

A broad deployment of telerehabilitation services can tackle these problems successfully. The **tools are already available**: devices and Apps based on state-of-the-art technologies such as virtual reality, augmented reality, gamification, depth cameras, sensors, AI, and which have been clinically proven effective in supporting telerehabilitation.

However, telerehabilitation is a complex process:

- **For the health care system**, it implies an **internal process of transformation** towards specifically-tailored **integrated-care models**. It implies handling the transference of sensitive data and integrating a large and diverse set of digital therapeutics into their own ICT systems.
- **For the developer**, fragmented care models, lack of prescribed procedures, and the diversity of ICT health systems to integrate mean the **costs of development are prohibitive**.

In this stand-off, a PCP process, where public procurers work in direct collaboration with the research capacity of the market, is in a unique position to **unlock the situation**.

ROSIA PCP IS WILLING TO UNLOCK THE TELEREHABILITATION MARKET BY PURCHASING THE DEVELOPMENT OF A TECHNOLOGICAL INNOVATION ECOSYSTEM, ENABLING SERVICE PROVIDERS TO PROVIDE TELEREHABILITATION, AND SELF-MANAGEMENT & SELF-CARE OF REHABILITATION AT HOME, AT SCALE.

The ecosystem's design should enable the flexible implementation of a **value-based** and **integrated-care** model, enable data driven intervention and the seamless integration of third-party solutions. We propose that the **ROSIA Innovation Ecosystem** be composed of **three core elements** that the 3 buyers can share:

ROSIA OPEN CATALOGUE

A menu of evidence-based safe certified ICT solutions and services to be prescribed by a care team. All these services will allow the seamless sharing of clinical data with patients' consent.

ROSIA DEVELOPER

The development of architecture and layer for developers with open API's & governance tools to facilitate apps and services that uniformly can plug into the diverse backends of the buyer's regional infrastructures. We expect this to be defined as interoperable APIs, which will allow building up solutions based on existing modules and will aid existing research projects in becoming market solutions.

ROSIA OPEN PLATFORM

An agile open cloud-native platform to host shared services, communication, and manage e.g., Integrated Clinical Care Pathway builders, ePROM/ePROM protocol editor, data sharing, consent, login, business logic and other core shared services.



Contractors participating in ROSIA Phase 2

To monitor the progress and facilitate the dialog, this phase will facilitate a series of iterations, each ending with a monitor briefing, where the contractor presents the status of the prototype to the buyer's group and receives feedback on the current status.

Now we would like to introduce you the Contractors and their approach for ROSIA PCP during this phase:

REHABILITA+

REHABILITA+ will be developed by the Spanish large company GMV.

RAISE

RAISE will be developed by an international consortium led by the Greek Research Institute ETHNIKO and including the Spanish partners Televés, a large company, and the Research Institute Instituto de Biomecánica de Valencia, the Greek University Panepistimio Ioanninon and Vidavo, a SME, and the Portuguese Research institute INESCTEC.

REHABILIFY

Rehabilify is the proposal of a Spanish consortium led by the Research Center Fundació EURECAT in cooperation with the SME Doole Health and the Research Institute Germans Trias i Pujol

ROSIA CONTRACTORS SECTION

To learn about the contractors that have participated and are participating in ROSIA PCP during the execution phases, take a look at the web section about them.

WWW.ROSIA-PCP.EU/EXECUTIONSTAGE

REHABILITA+

What is Rehabilita+ about?

Rehabilita+ platform facilitates the telerehabilitation process for all stakeholders involved: patients, healthcare professionals, caregivers, and more. Rehabilitation is a lengthy process that often requires patients to regularly go to healthcare centres to receive proper care from specialists. For those residing in rural areas, far from the designated centres, the challenge intensifies. Rehabilita+ provides the tools to healthcare professionals to perform telerehabilitation in an effective, individualized, and multidisciplinary way. From the customization of rehabilitation plans per patient, monitoring progress and adherence to the seamless communication through video conferencing, messaging, and offline interactions. Rehabilita+ also offers tools for patients or caregivers to manage rehabilitation plans (activities, questionnaires, appointments, recommendations, wearables, etc.) and to communicate with healthcare professionals.

Rehabilita+ provides functionalities to admin users which can define configurations, settings, and different type of contents to adapt services to healthcare providers use cases and domains. Rehabilita+ additionally seeks to unlock the telerehabilitation market and facilitate that third party solution providers build their solutions on top of it. It is an open platform which provides and publishes its services to developers to facilitate their tasks, together with a set of tools from the developer portal to support the process. It also provides guidance in how to develop telerehabilitation solutions to be integrated in Rehabilita+ not only from the technical point of view but considering interoperability, quality assurance, regulatory compliance, security, and privacy.

Why are you participating in ROSIA?

What is the opportunity that you see?

GMV's e-Health solutions area has always sought to improve patients' care and healthcare professional tools to allow so. ROSIA is a project whose aim is aligned with this view, specifically in the telerehabilitation domain: to provide solutions for patients who, in long processes such as rehabilitation, find it more difficult to access healthcare resources. Why not to avoid unnecessary trips? Why not to allow a more individualized treatment and a closer follow-up? Why not to offer effective and easy to access educational and training contents to patients and caregivers? Why if we could have a digital platform which could cover all these relevant concepts that patients and healthcare professionals need for an effective telerehabilitation?

Rehabilita+ seeks to answer with a solution to all these questions, and ROSIA is the perfect context to develop, test, and validate it. The opportunity of co-creation with a group of experts from different countries and with different expertise, very representative of the potential users of the platform, together with GMV's experience of more than 20 years innovating in healthcare solutions area it is the perfect scenario for innovation, research, and development of a solution.

ROSIA CONTRACTORS SECTION

To learn about the contractors that have participated and are participating in ROSIA PCP during the execution phases, take a look at the web section about them.

WWW.ROSIA-PCP.EU/EXECUTIONSTAGE

REHABILITA+

What is the genuine added value of REHABILITA+ in addressing ROSIA challenges?

There are at least two big concepts that Rehabilita+ brings as genuine added value to address ROSIA challenges. From one side it is the capacity and flexibility to be customized according to the needs of healthcare centres, regions, or even concrete use cases. Administrators have a great capacity to configure services settings, create and load digitalized telerehabilitation plans (with questionnaires, wearable integrations, multimedia contents, etc), privacy and security settings, etc. Rehabilita+ adapts to healthcare providers and patients' preferences and not the other way around. By the other side, our solution creates a place where services, data and tools can connect and interact together to provide the necessary tools to healthcare professionals and patients for an effective telerehabilitation.

Is ROSIA a market opportunity? What is the challenge for it?

Yes, ROSIA is a market opportunity. There is an increasing concern for optimizing and improving care, together with reducing costs and time. In this sense, solutions and technologies that contribute to positively respond to this type of challenge are becoming more and more necessary. Therefore, there is an opportunity for companies to understand the needs of different stakeholders and offer solutions from a wider view.

Who are the members of REHABILITA+?

ReHabilita+

In this phase of the project, GMV is the only member of the consortium, however Inizioengage (former Ashfield engage) will participate in further phases of the project together with some other health solution provider companies as a result of our engagement strategy

ROSIA CONTRACTORS SECTION

To learn about the contractors that have participated and are participating in ROSIA PCP during the execution phases, take a look at the web section about them.

WWW.ROSIA-PCP.EU/EXECUTIONSTAGE

RAISE

What is RAISE about?

The crucial role of tele rehabilitation on health care services' quality improvement is well grounded and acknowledged. However, despite the high potential a number of inadequate factors in respect to rehabilitation particularly in rural/remote areas are still unsolved. A wide development and effective implementation of digital tools and state-of-the-art technologies such as VR, AR, AI in clinical tele rehabilitation is currently missing. In alignment with the aforementioned needs, RAISE proposes the design, operation and testing of viable care models as key elements in the content of remote health care self- management. In particular, RAISE proposes an innovative set of tools for an integrated patient pathway towards tele-rehabilitation, whose pillars are:

- an open platform available to patients, their informal caregivers and healthcare professionals for clinical supervision, shared care plan design, prescription recommendation, and social collaboration for the tele-rehabilitation period, with a user-friendly multimedia environment;
- a catalogue of devices, services and tools empowering and educating patients towards self-management with a shared care plan across different fields, such as gamified physical exercise, nutrition, speech and language therapy, and more;
- a developers' layer on which the solutions will be built, that will provide guidance to the developer for developing catalogue services and integrating with the open platform, as well as assess newly offered solutions to ensure high quality and certified services.

Why are you participating in ROSIA?

What is the opportunity that you see?

For our team, ROSIA has presented a unique opportunity to consolidate all the outcomes of our research and the results of many years of effort into a single, robust, unified system. This system has the potential to evolve into a product that will address the challenges faced by numerous patients and healthcare professionals. It is poised to play a pivotal role in shaping the next generation of e-health, ultimately enhancing the quality of life for its users.

RAISE is set to deliver an inventive and novel solution to an underserved market in the realm of tele rehabilitation mainly for patients in isolated areas. This will be accomplished by harnessing the expertise and experience our consortium has accumulated while overcoming analogous challenges and obstacles within the e-health sector.

ROSIA CONTRACTORS SECTION

To learn about the contractors that have participated and are participating in ROSIA PCP during the execution phases, take a look at the web section about them.

WWW.ROSIA-PCP.EU/EXECUTIONSTAGE

RAISE

What is the genuine added value of RAISE in addressing ROSIA challenges?

RAISE is proposing a novel ecosystem in a comprehensive approach to unblock the way towards wide adoption of tele-rehabilitation. The system builds upon integration of a wealth of hardware and software solutions for rehabilitation in a common platform, characterized by openness, standard-based interoperability, and trust stemming from a fine-granulated, risk-adaptive governance model to ensure the seamless integration to and maximum impact of all tools and services offered. RAISE targets to fulfil the gaps of interoperability and care coordination at diverse levels: a) patient level, b) provider level, c) healthcare level.

RAISE is an easily adapted and integrated solution for global rehabilitation and the stimulation of factors influencing the effectiveness and uptake of cost-effective rehabilitation methods. RAISE leverages cloud-native logic and offers the Portal Server, API, and Portal services as core components of the Open Platform for data storage, processing, and visualisation. The Developer's Layer provides an easy and efficient automated quality-evaluating CI/CD pipeline including monitoring, logging, and medical qualification. All available apps for the full tele-rehabilitation process, devices, and catalogue management tools are contained in the containerised Catalogue.

Is ROSIA a market opportunity? What is the challenge for it?

The Global Telerehabilitation Market Size is projected to reach USD 9.13 billion by 2027, exhibiting a CAGR of 13.4% during the forecast period[1] 2020-2027. In last years many innovative companies have introduced telerehabilitation solutions. The RAISE proposition should be considered as unique taking into account that there is nothing currently available on the market to address the express needs of the patients in dealing with the issue of motivation to engage in the rehabilitation/prevention process among primary users. Apart from the innovation of RAISE solution, the consortium will focus on providing the best value for money solution for the self-management of rehabilitation on the market to address the ROSIA PCP challenge. Concerning the existing market solutions, RAISE solution is by far the best value for money solution as it includes high innovative and evidence based tools.

Who are the members of RAISE?



RAISE consortium includes partners with high expertise in health domain: CERTH, TELEVÉS, IBV, UoI, VIDA VO AND INSECTEC

ROSIA CONTRACTORS SECTION

To learn about the contractors that have participated and are participating in ROSIA PCP during the execution phases, take a look at the web section about them.

WWW.ROSIA-PCP.EU/EXECUTIONSTAGE

REHABILIFY

What is REHABILIFY about?

The REHABILIFY solution offers a dual-system-based approach. On one side, a patient management center to all the involved professionals, following an integrated-care approach and incorporating a system to support decision-making. On the other hand, a patient with rehabilitation needs will benefit from an application that promotes self-management, behavioral change, and better follow-up. This platform is expected to have a positive impact on the economic sustainability of rehabilitation programs without compromising the standard of care. REHABILIFY provides patients with intelligent support through suitable recommender systems focused on the main pillars of health adapted to each use-case and a

managed digital community to provide peer support and motivation. To provide collaboration, cooperation, and continuous patients' monitoring and follow-up, professionals have access to a management system that includes decision support systems for risk stratification and care plan definition. The REHABILIFY solution will be ready for integration with third-party solutions and devices thanks to an open portal that enables and supports a unique access point for prescription of remote rehabilitation solutions.

What is the genuine added value of RAISE in addressing ROSIA challenges?

The genuine added value of REHABILIFY in addressing ROSIA challenges is Intelligent Services. These services will provide the Artificial Intelligence capabilities of the system, and it will rely on two different Decision Support Systems: Risk Stratification and Shared Care Plan. The use of data analytics and AI techniques will help provide a system that predicts the user mood, cognitive and motivational status through the different digitized questionnaires selected to value these scales and determinate the psychological status of older adults. Not only via direct data analysis, but also taking into account data trends and dynamic adjustment of the shared care plans thanks to the Decision Support and Recommender systems.

It's important to mention the added value of ROSIA Catalogue, some key aspects of which are:

- ROSIA Catalogue includes a centralized portal for third-party apps or tools.
- ROSIA Catalogue includes apps that will cover all 7 pathologies, which can provide patient guidance, gamification and recording features (data, video and live feed possibilities).
- ROSIA Catalogue includes an AI based Decision Support System for professionals and a Recommender System for patients based on data from continuous patient activity (including goal settings and goal completions) and profiling and professional prescriptions.
- ROSIA Catalogue includes the possibility of prescription of professional training content.
- ROSIA Catalogue includes a list of supported devices to be prescribed to the patient for monitoring or medical data gathering purposes.
- ROSIA catalogue is populated with technical solutions built with open access software and hardware. ROSIA Catalogue is built with documentation describing the handling of its certification and testing procedures.

ROSIA CONTRACTORS SECTION

To learn about the contractors that have participated and are participating in ROSIA PCP during the execution phases, take a look at the web section about them.

WWW.ROSIA-PCP.EU/EXECUTIONSTAGE

REHABILIFY

*Why are you participating in ROSIA?
What is the opportunity that you
see?*

We are participating in ROSIA to improve the consortium technological portfolio, as well as understand remote monitoring rehabilitation use cases, which prove very relevant in the current healthcare context.

*Is ROSIA a market opportunity? What
is the challenge for it?*

ROSIA is a market opportunity to reach remote hospitals and rehabilitation countries, as well as to meet and adapt to more rural use cases, with the main challenge being highly different requirements among multiple users (professionals, patients, and informal carers) and countries.

The variability of challenges for Healthcare System gives us the opportunity to work on the following points:

- Expand the geographical radius for telerehabilitation services by specific digital rehabilitation solutions.
- Providing a pervasive and highly adherent monitoring system for patients and professionals.
- Motivate local hospitals support for coordinated rehabilitation interventions.

Who are the members of REHABILIFY?



Fundació Eurecat, Doole Health SL and Germans Trias i Pujol Research Institute (IGTP).

ROSIA CONTRACTORS SECTION

To learn about the contractors that have participated and are participating in ROSIA PCP during the execution phases, take a look at the web section about them.

WWW.ROSIA-PCP.EU/EXECUTIONSTAGE