ROSIA
(Remote Rehabilitation Service for Isolated Areas)

ROSIA-NRH Project Team

Prof. Áine Carrol (Principal Investigator), Aisling Weyham, Dr Cara McDonagh, George Dunwoody, Joan Monahan, John Maher, Kate Traynor, Maeve Turner, Alice Whyte, Rosemarie Nolan, Sadb Ni Ghiollain, Sam Dunwoody

Introduction

Rehabilitation is a critical component of any modern healthcare system. The 'WHO Rehabilitation 2030' initiative calls for concerted global action to scale up rehabilitation. Digital Technology has the potential to transform rehabilitation by revolutionising how services are delivered. ROSIA, an EU funded PCP project, is ready to deploy a complete digital solution set for scale-up.

Pre-Commercial Procurement (PCP) is a method of procuring R & D services with the purpose of creating a new digital health and care product or solution and developing it to pilot and testing phase.

Aim

What is the issue?

Healthcare systems across Europe face the combined challenge of limited resources and an increasing demand for rehabilitation and healthcare services. The situation is intensified in remote areas, where distances to access healthcare are longer and can negatively impact rehabilitation outcomes and patient experience.

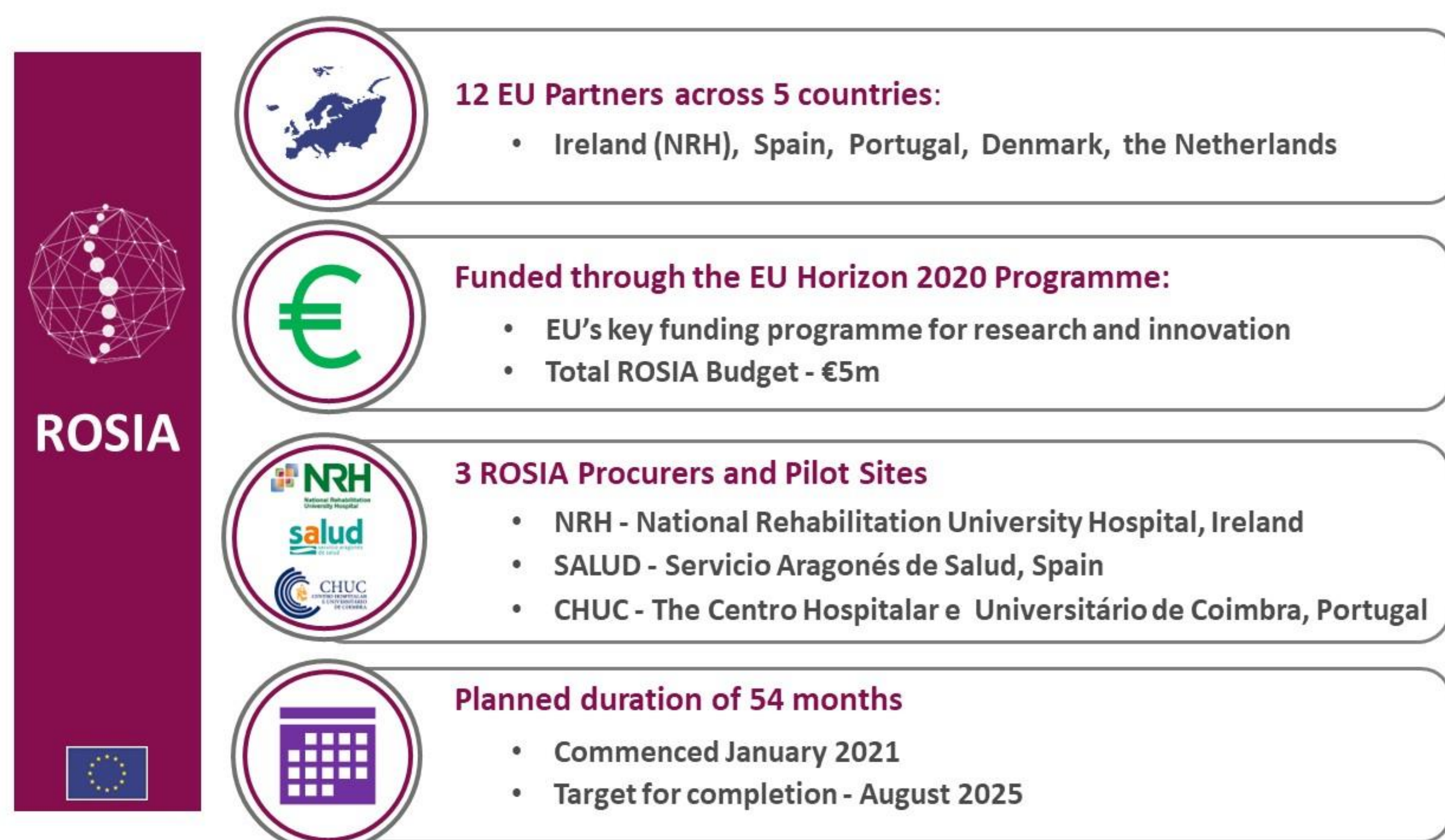**How can ROSIA be part of the solution?**

ROSIA aims to pave the way for an extensive deployment of the self-care model for long-term conditions and disabilities, by generating a scalable value-based model of Integrated care, organised around tele-rehabilitation and supported self-management at home. The system will enable clinicians to prescribe certified solutions from the ROSIA Catalogue of technology-based solutions.

Methodology

The preparatory phase State-of-the-Art (SotA) analysis for the ROSIA Project included:

- The SCaling IntegRated Care in COntext (SCIROCCO) Self-assessment Tool for Integrated Care
- Literature Reviews
- Surveys
- Telehealth Capacity Assessment
- Telehealth Readiness Assessment
- Stakeholder Needs Analysis
- Open Market Consultation

Figure 1: ROSIA at a Glance

12 EU Partners across 5 countries:
- Ireland (NRH), Spain, Portugal, Denmark, the Netherlands

Funded through the EU Horizon 2020 Programme:
- EU's key funding programme for research and innovation
- Total ROSIA Budget - €5m

3 ROSIA Procurers and Pilot Sites
- NRH - National Rehabilitation University Hospital, Ireland
- SALUD - Servicio Aragonés de Salud, Spain
- CHUC - The Centro Hospitalar e Universitário de Coimbra, Portugal

Planned duration of 54 months
- Commenced January 2021
- Target for completion - August 2025

Results

Five developers were initially selected through an Open Tender process to participate in Phase One of the project, to create an innovative digital Ecosystem. Three of these developers were subsequently selected to proceed to Phase Two, which has just been completed.

The ROSIA Innovation Ecosystem comprises three elements which include development of: an Open Platform to host shared services; Developers Tools; and the ROSIA Catalogue of certified ICT and telehealth solutions.

Applications and devices will connect to an open platform allowing the integration of community supported self-care into patients' care plans.

The ROSIA Design Process has three co-designed phases:

1. Design of ROSIA's model based on evidence informed iterative work of co-creation with all stakeholders **(complete)**

2. Prototype Development of three proposed solutions selected from Phase 1, including clinicians' and patients' input **(complete)**

3. Development and testing of the completed solution for clinical effectiveness, economic analysis and patients' personal experience. **(In Progress - target completion: March 2025)**

Conclusion

Reorganising how rehabilitation services are delivered must be a priority, given the potential to reduce disability, improve quality of life for those living with chronic conditions, and reduce costs by shortening hospital stays.

The ROSIA model will be designed to integrate seamlessly with any health service in Europe, allowing a model shift from hospital-based rehabilitation to telerehabilitation under follow-up of clinicians and self-management at home, thereby optimising quality of care, patient experience and the use of clinical resources.

ROSIA – Next Steps

Phase 3 of the project will develop and test the successful prototype(s) in the three Procurer organisations; this will include engagement with clinicians and patients from the NRH Outpatient Programmes for Spinal Cord Injury and Acquired Brain Injury.
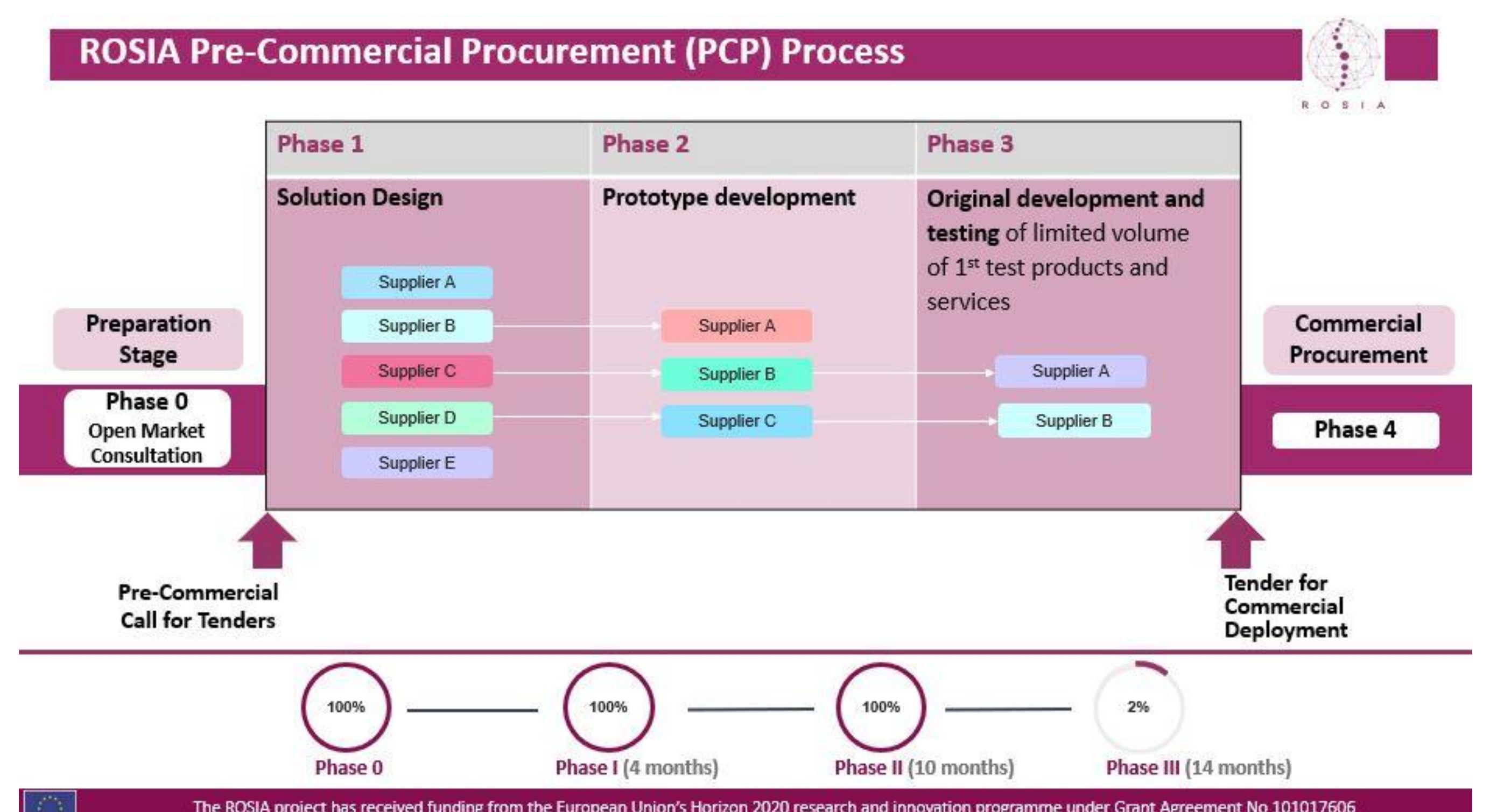

Figure 2: The PCP process