Interreg
Sudoe

EUROPEAN UNION

PROCURA

European Regional Development Fund

GREEN PAPER

**Public procurement
of innovation in social
and health care**

Foreword

The project "The Promotion of Public Procurement of Innovation policies for digital transformation and the implementation of new technologies in health and social care within the scope of active aging and personal autonomy – PROCURA" is designed to promote Public Procurement of Innovation policies to implement an integrated social and health care model within the scope of active aging and independent living.

The basic goal of this Green Paper is to initiate a debate on how Public Procurement of Innovation can be used by Public Administrations to provide the entire population with efficient, innovative public services.

Partners:

- Castile and Leon Regional Government Department of Social Services (ES) - coordinator partner
- INTRAS Foundation (ES)
- Catalonia Health Quality and Evaluation Agency - AQuAS (ES)
- Autonom'lab (FR)
- Pedro Nunes Institute– IPN (PT)
- Coimbra University Hospital Centre – CHUC (PT)

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Glossary

PMC
Preliminary Market Consultation

PPI
Public Procurement of Innovation

PCP
Pre-commercial Public Procurement

PPIT
Public Procurement of Innovative Technology

PCR
PROCURA Community of Regions

R+D
Research and Development

R+D+I
Research and Development plus Innovation

SSP
Strategic and Sustainability Plan

PROCURA
Project for the promotion of Public Procurement of Innovation policies for digital transformation and the implementation of new technologies in health and social care within the scope of active aging and personal independence.

SUDOE
The geographic region consisting of all the Spanish autonomous communities (except the Canary Islands), the south-western regions of France (Auvergne, Occitanie and Nouvelle-Aquitaine), the mainland regions of Portugal, the United Kingdom (Gibraltar) and the Principality of Andorra.
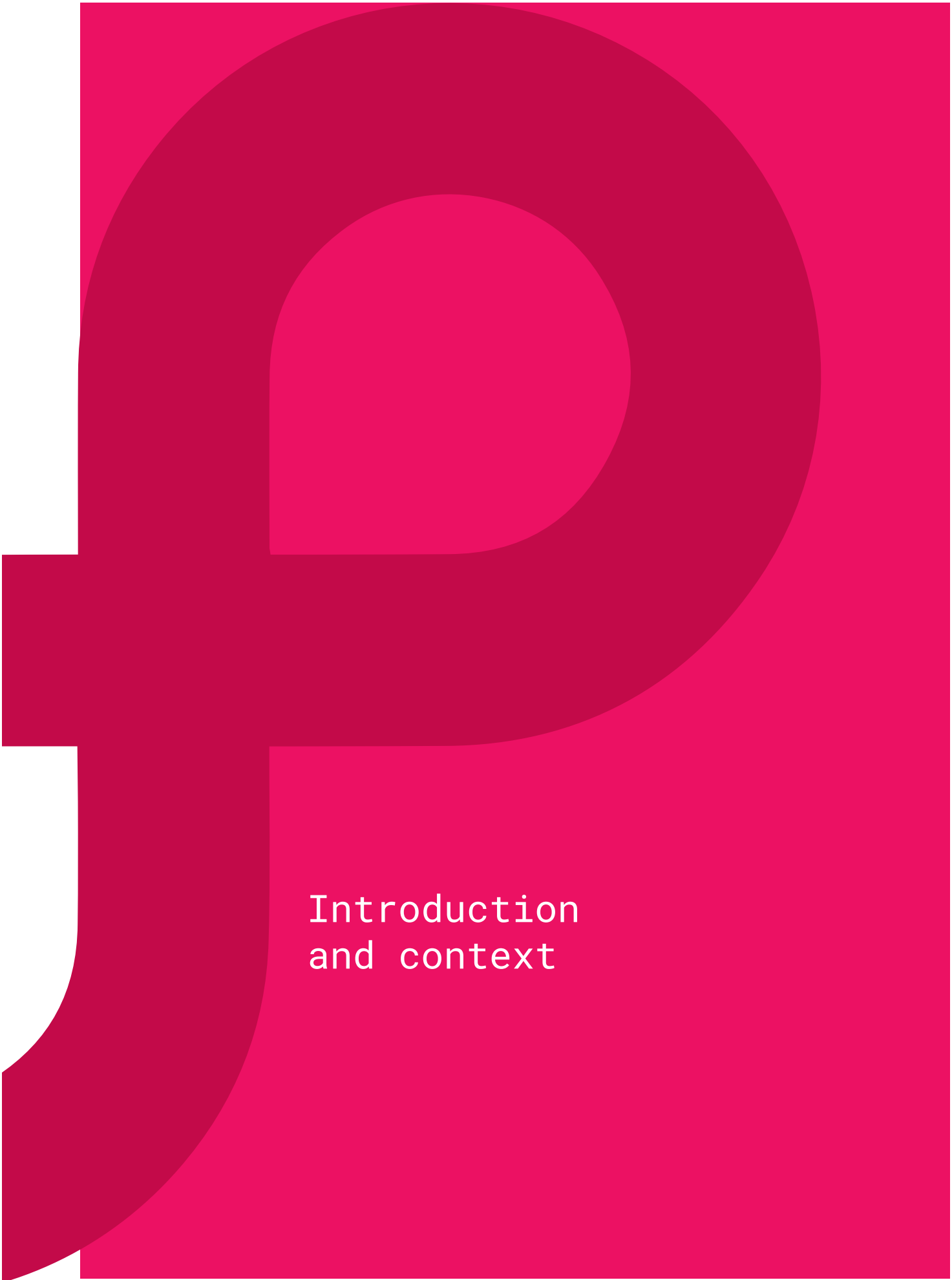
Introduction
and context

General context of the PROCURA project: Goals of the project and the Green Paper

The aging of the population and the increase in the prevalence of chronic diseases and lack of independence are serious problems for Europe.

Moreover, the social changes of recent decades and the evolution of social and health policies demand a public-run social and health services system that satisfies people´s needs with guarantees of sufficiency and sustainability, catering to their deficiencies and developing their potential, thereby enhancing their quality of life.

Hence, the issue of a model for the provision of social and health care services model has been dealt with, enabling us to move towards a system that includes all citizens´ essential and subjective rights, to be enforced by public authorities and administrations and, where applicable, by jurisdictional bodies as a maximum guarantee of the recognition, respect and protection thereof.

With regard to social and health care services, the powers of the public administrations include the promotion and fostering of activities aimed at technological research and innovation, and the collaboration and cooperation between public and private organisations in this area with the aim of helping to improve of the efficiency and quality of the services.

The goal of the project "The promotion of Public Procurement of Innovation policies for digital transformation and the implementation of new technologies in health and social care within the scope of active aging and personal independence" (hereinafter referred to as PROCURA), financed by the Interreg Sudoe Programme and headed by the Castile and Leon Department of Social Services and six partners from Spain, France and Portugal, the INTRAS Foundation, AQUAS, Autonom'Lab, the Pedro Nunes Institute and Coimbra University Hospital Centre is the promotion of Public Procurement of Innovation policies in order to implement an integrated social

and health care model within the scope **of active aging and independent living**.

The main goal of this project is to **provide citizens with efficient, innovative public services**.

Despite its excellent potential, Public Procurement of Innovation (hereinafter referred to as PPI) is underused in the SUDOE region, particularly in the field of social and health care, and as such this project and this Green Paper can shed light on and open up new perspectives on an issue of enormous interest for the future.

PROCURA has given rise to several deliverables and different **results**, in addition to **good practices**, which will be included in this Green Paper, with the aim of disseminating the knowledge and experience acquired, in addition to making a series of recommendations for future practices within the scope of Public Procurement of Innovation in social and health care.

Furthermore, there are also plans to raise a series of **debate topics** designed to reinforce ideas with regard to the participating regions and the European zone in general, as a means of enabling the advancement and promotion of public procurement in the field of social and health care, as well as the development of new instruments and political tools for this purpose.

Phases of the PROCURA project

In order to **unlock the potential of demand policies and to increase the use of the PPI instrument by Public Administrations** and with the aim of improving services within the scope of active aging and personal autonomy, **PROCURA**:
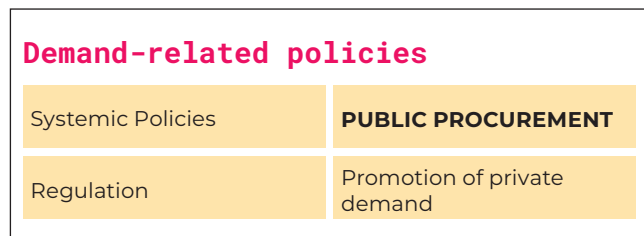
- **has created a sustainable and open Community of Regions;**
- **has developed a specialised training and knowledge transfer programme open to the agents involved in Procurement of Innovation and**
- **has developed a transnational procedure for Public Procurement of Innovation.**

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Perspectives on Public Procurement of Innovation

PPI consists of administrative activity to promote innovation geared to boosting the development of new innovative markets from the point of view of demand through the instrument of public procurement.

Innovation-boosting policies

Supply-related policies

Financial instruments	Participation in Equity Funds
	Tax Incentives
	Promotion of Research in the Public Sector
	Promotion of Training and Mobility
	Grants for Industrial R+D
Provision of services instruments	Promotion of intermediation and Information
	Work network measures

Demand-related policies

Systemic Policies	**PUBLIC PROCUREMENT**
Regulation	Promotion of private demand

The main goals of Public Procurement of Innovation are:

- The improvement of public services through the use of innovative goods and services.
- The promotion of business innovation.
- The promotion of the internationalisation of innovation using the public market as a launch or reference customer.

PPI is therefore a key instrument for both public investment and general economic development. It consists of a methodology designed to foster new opportunities within the market, boosting demand for innovative products for the first time in an incipient stage and creating new business opportunities between newly created companies and companies already established in the production sector. As such, PPI is regarded as a public policy strategy geared to the creation of synergies within the market and that stimulates investment by agents from the private sector in public administration, thereby generating a new route for job creation.

In general terms, the PPI process includes pre-contractual and contractual activities, which can be summarised as a series of activities carried out by a public entity with suppliers to meet an identified challenge or need, from the sharing of such a challenge with suppliers to development and pilot testing.

As far as the PROCURA project is concerned, PPI has led to a systematisation of innovation management procedures at a general level at the organisations participating in the project and a new way of working as a team and relating to the market.

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The PPI process can be summarised, in a general manner, by the activities illustrated in the graph below:

PPI cycle

00 - Policy design
Design of the necessary series of instruments for a comprehensive policy

01 - Preparatory tasks
Detailed design and commissioning of the project

02 - Development of the PMC
Development of the market consultation

03 - Preparation of the specifications
Drafting and processing of the specifications

04 - Evaluation and award
Evaluation and award of contracts

05 - Execution and impact
Execution of the project and the evaluation of impact

All these activities should be carried out through a systematic process consisting of three phases:

Planning

The planning of PPI is probably one of the most important stages and where the greatest cultural change affects Public Bodies purchasing with innovation in mind.

More specifically, this stage is composed of the following tasks:

- Defining the work team within the public body.
- Identifying, prioritising and planning the body´s purchasing needs.
- Preparing a document specifying the functional needs of the challenge.
- Market consultation: presentation of the challenge to the market, with the aim of obtaining preliminary ideas on potential innovative and differential solutions for the challenge in question.
- Obtaining a proposal for innovative solutions from the market.
- Conducting the technical dialogue between supply and demand.
- Generating an early demand map.

Management

■ **Management of procurement:** After concluding the technical dialogue between supply and demand and, after generating the Early Demand Map, we move on to the preparation of the Specifications, which will be based on the initial challenge and the ideas obtained and regarded as being of interest to providing a solution to this challenge at the entity. The procurement process is opened and the final offers are submitted for decision making. Once the deadline for receiving bids has passed, they are evaluated taking the selection criteria determined at the Public Entity into account. Finally, the service is contracted and the agreement is executed.

■ **Management of execution:** This phase involves the development of the innovative solution by the company, where it should be borne in mind that both suppliers of innovative solutions and public buyers need to work together in a climate of trust in order to ensure the successful execution of the project. This phase consists of the execution of the following tasks:

- The development of the innovative solution by the winning bidder
- The coordination and execution of monitoring

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Evaluation

Finally, the results obtained in a PPI project are measured and evaluated. The execution of the following activities is of paramount importance in this phase:

- The design of monitoring (scorecard) and evaluation (indicator system) mechanisms.
- The evaluation of the results obtained.
- The disclosure of the results obtained.
- The preparation of a document of lessons learned and good practices.

These phases consist of the identification of the challenge, the analysis of the bids received and the technical dialogue, the procurement and execution (joint) of the development of the solution and finally the evaluation of the results obtained.

Based on the experience of PROCURA, the identification and definition of the needs of the different players and parties involved in improving the service is essential in the social and health sector. Understanding the main challenges, motivations, expectations, evaluations, etc., particularly from a person-centered care perspective, will be the main guarantee of the success of the Innovative Public Procurement project. This identification process consists of two strategies to maximise the possibilities of the project: the competent organisation of the Preliminary Market Consultation and participatory methodologies for the design and development of the innovative solution.

Preliminary Market Consultation (PMC) and its phases

A Preliminary Market Consultation (hereinafter referred to as PMC) can be broadly defined as a procedure consisting of asking market entities about what the public body wants to buy or hire, whereby the information collected facilitates drawing up the specifications.

Hence, a Preliminary Market Consultation is an open invitation in which any individual or legal entity capable of providing innovative ideas to meet a series of challenges or needs that have been previously identified by the convening body can participate.

As such, the purpose of the Preliminary Market Consultation is to define the key elements of the tender specifications, the most noteworthy of which are the technical and functional requirements comprising the subject-matter of the agreement; the minimum solvency levels to guarantee the bidders will be able to fulfill the subject-matter of the agreement; the definition of the key variables that will guarantee the best choice; the definition of the budget and appropriate/minimum term to guarantee the subject-matter and scope of the project; and the definition of the potential management models for intellectual property rights arising from the tender.

To sum up, the Preliminary Market Consultation conducted by the public body enables us to align the most important aspects of the procurement specifications with the bids submitted.

Once the information from the Preliminary Market Consultation has been collected, the specifications containing the identified needs will be drawn up and published and, at this point, suppliers will attempt to submit the best offer (on their own or jointly) in order to achieve successful business and provide the innovative solution the convening body is looking for.

Therefore, it should be pointed out that the purpose of this type of procedure is not the acquisition of offers or, of course, the award of a contract, but rather the acquisition of ideas for a solution to meet the challenge posed prior to the tender.

Preliminary market consultation process in PROCURA

In the case of PROCURA, the general procedure established for conducting the Preliminary Market Consultation was pursuant to the following scheme:

■ **Phase 1: Planning of the PMC**

In this planning phase, PROCURA drafted a document for the announcement or invitation for the

Preliminary Market Consultation. This invitation to conduct the market consultation contained the following information:

- Introduction of the PROCURA project
- The goals of PPI
- Invitation to tender
- The purpose of the invitation to tender
- Participants at which the invitation to tender is aimed
- Presentation of bids
- Presentation deadlines
- How the consultation works
- The implementation of principles
- Data protection and confidentiality
- Exploration and intellectual property rights
- Details of the challenges to be met
- Bid form to be completed by interested companies

To this end, PROCURA created a website (in English, French, Spanish and Portuguese), https://www.procura-project.com/ to serve as support when publishing the information on the consultation and the project in general. This website was structured as follows:

- A section containing a description of the project
- A section containing a description of the project partners
- A section containing news related to the project

The PROCURA website
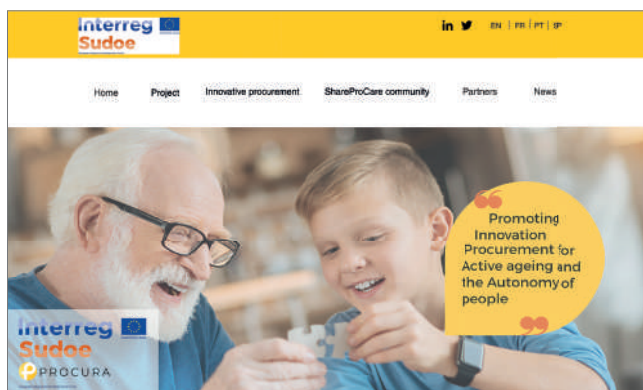
■ **Phase 2: Launch of the PMC**

Once the previous planning steps had been executed, the Preliminary Market Consultation was launched in the following manner:

- Publication of the consultation documents in the contractor's profile.

The invitation for the Preliminary Market Consultation was published in the news section of the PROCURA website, stating that the process would be open for a total of 60 days.

Publication of the PROCURA PMC invitation

■ **Phase 3: Execution of the PMC**

Once the consultation had been launched, the following issues were dealt with:

- The compilation of responses, completed forms and corresponding appendices from the participants in the consultation, and the preparation of a database with the responses received to facilitate comparison between one and the other.
- Analysis and prioritisation of the responses received.

■ **Phase 4: Analysis and closure of the PMC**

The final step in the PMC process is the analysis of all the information collected through the consultation process to enable the contracting body to conclude whether or not the corresponding tender should be launched.

The PROCURA project conducted this analysis process through the following activities:

- Analysis and evaluation of the ideas.
- Assessment of whether or not the consultation should be closed.
- Preparation of the final report on the consultation.

The information collected from the market and the subsequent analysis thereof enabled the project to validate the interest of the companies in participating in a future tender with the published specifications, whereby both the amount involved and the execution period are viable and meet the requirements of the execution framework for the project.

All this information was used to draw up a Final Consultation Report containing all the solutions collected through the analysis of the information gathered in the process.

From the perspective of PROCURA, the sound preparation and disclosure of the PMC is very important in encouraging companies to participate and thereby gain a better understanding of the state of the art and the possibilities of addressing innovation in the area of technology. This will also allow for the integration of new high-value solutions not taken into account beforehand. Moreover, in the case of the social and health sector, this provides an ideal opportunity for companies to understand and empathise with end users, be they primary, secondary or tertiary.

Applicable legal framework

Due to the fact that both coordinator of Innovative Public Procurement in PROCURA and the main buyer is the Regional Government of Castile and Leon Department of Social Services, Spanish legislation applies. Preliminary Market Consultations in Spain are regulated by Law 9/2017 of 08 November on Public Sector Contracts, which incorporates European Parliament and Council Directives 2014/23/EU and 2014/24/EU of 26 February 2014 into the Spanish legal system.

In order to determine the applicable legal framework in a transnational PPI, the purchasing strategy must be defined right at the beginning of the project. Is it a grouped and coordinated purchase by a public buyer? Is it a purchase with main public buyers acquiring individual units in accordance with their organisational or local needs? Depending on whether there is one main buyer or coordinator or several buyers, a national legislative framework or several frameworks will apply.
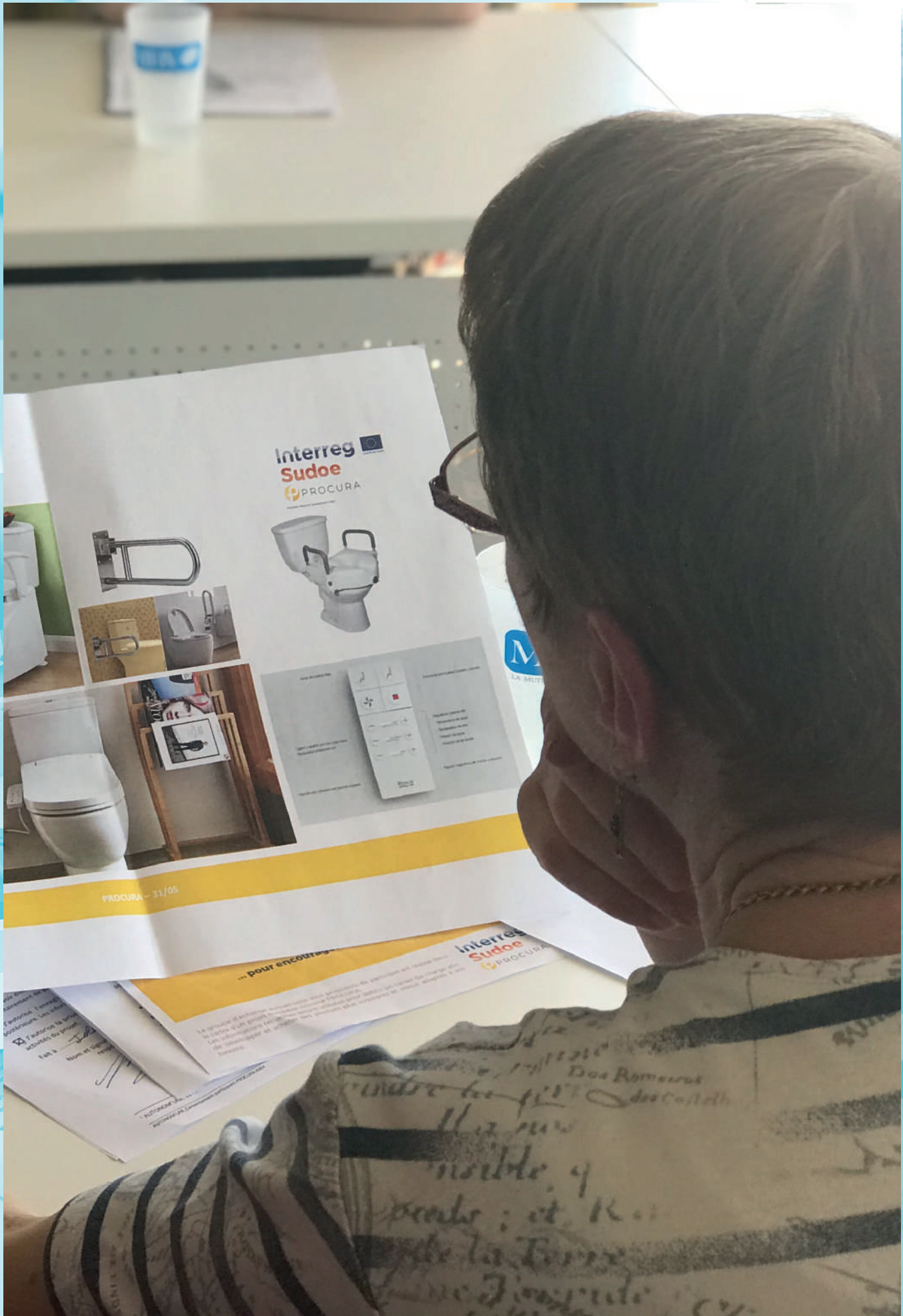
Project activities
and how they are
incorporated into
the public procurement
process conducted within
the scope of the same

PROCURA "Community of Regions" network structure

The "PROCURA Community of Regions" Network (hereinafter referred to as PCR) has played a major and decisive role due to this being a unique transnational initiative and a meeting point for players involved in the promotion of innovation and interested in promoting innovation through PPI. The network is of a predominantly collaborative nature and is a catalyst for innovation both for supply (companies and knowledge centres) and demand (public administrations)

The creation and implementation of the PCR, in addition to the definition of future initiatives to be developed to meet the challenge of creating it, justifies the need for a Strategic and Sustainability Plan (hereinafter referred to as SSP) for the PROCURA Community of Regions. The goal of this plan is to advise and provide guidelines for operations in a future scenario, which involves developing a process of analysis, evaluation and diagnosis of the situation, based on which actions can be defined to ensure an adequate response to the goals in question.

The ultimate goal of the PCR is **the promotion of the acquisition of innovation, using open innovation to stimulate research and associations with ecosystems and sharing common knowledge in the field of health and wellbeing in the elderly**.

Hence, the main goal of the Strategic and Sustainability Plan (SSP) is to advise and provide guidelines for operations in a future scenario, which involves developing a process of analysis, evaluation and diagnosis of the situation, based on which actions can be defined to ensure an adequate response to the goals in question.

The SSP will be the instrument that enables the PCR to analyse and reflect on the current reality, the challenges to be faced, how to face them, what means are available to face them and how to know if the goals have been achieved.

In this case, sustainability needs to be understood as the ability to generate income and resources in an adequate and sufficient manner and amount to guarantee coverage of the expenses incurred by the PCR in order to achieve its goals. Thus, the sustainability plan needs to provide the appropriate indications to identify the sources of income and to strengthen the capacity to generate resources, in addition to regulating the gradual incurrence of expenses in order to always ensure a healthy financial balance.

Mission of the PCR

The mission of the PCR is to become a driving force to spread a culture of innovation within the field of social and health care in the SUDOE region, promoting the public purchase of innovation while strengthening regional R+D+I ecosystems.

The partners of the PROCURA project have highlighted the fact that the PCR aims to improve the state of health and quality of life of the elderly through the development of its own, characteristic methodology designed to help promote innovation through the public purchase of innovation.

The key elements of this mission are:

• The promotion of the public-private innovation process in order to establish a community of knowledge.
• The integration of health and social services by promoting the innovation system through the public procurement of innovation.
• The acquisition of mutual knowledge and training in PPI with the aim of creating a tool that can be used to improve health and well-being.

Vision of the PCR

The vision of the PCR consists of the creation of a reference network in social and health care innovation, which significantly increases the relations between public institutions (buyers) and innovative companies dedicated to the development of social and health care products and services for the elderly and people dependent on others.

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The PCR should allow for the generation of new business models, whereby public buyers and R+D+I service providers jointly develop market opportunities.

The vision is based on:

- Facilitating the existence of proactive public administrations and leading ecosystems in the SUDOE region involved in the joint creation of market opportunities to meet the social challenges posed by aging.
- Responding to future challenges in the care of the elderly and chronic patients, creating a reference network in social and health care innovation and promoting innovation in the care of people.
- Significantly increasing the relations between public buyers and companies dedicated to the development of health care products and services, especially small and medium-sized entities.
- Enabling mutual learning from different contexts.
- Promoting workshops and meetings with public buyers and companies.
- Promoting new business models to support the sustainability and efficiency of the social and health care systems.
- Fostering innovation in the public sector.

Values of the PCR

The PROCURA joint-venture has established a list of values for the PCR, the most noteworthy of which are the following:

- Quality: both in the demand for innovative solutions and in the execution and development of PPI processes.
- Open innovation and mutual learning.
- Competitive technology surveillance.
- A perspective of person-centered care and respect for ethical principles (individual care, dignity, independence).
- Recognition of the diversity of citizens and users and their empowerment and right to participate.
- Cross-cutting principles: ethics, environment, sustainability and equality.

Specific goals of the SSP

The goals of the SSP are aligned with the mission, vision and values established by the PROCURA joint-venture. The PROCURA joint-venture used SMART methodology in the internal discussion process aimed at reaching a consensus on the goals of the PCR.

■ **SG1: The promotion of innovative solutions.**

The PCR will address the challenge of promoting innovative solutions in the field of social and health care, from different perspectives in accordance with the scope in relation to geographic location, needs, technology, uses.

Thus, the division by scope would be regarded as Strategic Axes and the execution thereof would comprise the different Strategic Actions.

The partners of the PCR will address the common task of promoting the expansion of existing innovation through acquisitions (first buyer and number of patients / users using it), but based on specific actions addressing these different aspects.

■ **SG2: Enhancement of the network.**

The PCR will both support the use of innovative acquisitions and define models of governance and legal means for extending the network through the definition of clear strategic planning.

■ **SG3: collaboration between social and health care innovation ecosystems.**

The PCR will define models of governance and legal means for extending the network and the collaboration of the different innovation systems within the network´s field of operations.

■ **SG4: The creation and promotion of the PROCURA social and health care model.**

The PCR has drawn up a model based on the preeminent needs, expectations and desires of the people served, as well as on the management of shared processes in the field of social and health care.

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The purpose of the PCR is to create an open and sustainable community, to group the demand and promote the Public Procurement of Innovation. The goal is to transform the relations between public buyers and companies, increasing the accessibility and proactivity of Public Procurement activities.

Furthermore, the process intends to include the principles of responsible innovation and equal opportunities and non-discrimination. In addition, the PCR will coordinate innovative purchasing activities and group demand.

Finally, the mission of the PCR will also be to associate regional players, aware of the needs of a dependent aging population, with innovation ecosystems capable of providing these needs with advanced innovation and, finally, with experts in the Public Procurement of Innovation. The PCR will seek support for sustainability beyond the conclusion of the project through its members, investors, politicians, initiative promoters and project proposals.

The PCR is the first network to use Public Procurement of Innovation as the main tool in the use of an innovative participatory and open approach, regarding users from a global perspective. The ideal conditions are also established for the development of synergies between the sectors of the social and health care field, as well as between the players in the innovation ecosystem.

The innovative methodological formula of PROCURA: the monitoring of technology, WTO and the co-creation process

The methodology used throughout the PROCURA project has been based on a **process of participatory design and co-creation**, the implementation of a **competitive monitoring system** to detect technologies and methods of interest to the project, in addition to a preliminary and open to the market consultation process. All this comprises the innovative elements of the Community of Regions project itself and is a benchmark as a paradigm of innovation.

The methodology created based on these three pillars has managed to reduce barriers, facilitate the process of connection between the supply and demand of technology and develop an updated state-of-the-art for the implementation of innovative solutions and technologies in the field of eHealth within the scope of social and health care.

Co-creating with the different social agents, participants, professionals and other interested parties guarantees fewer failures in the implementation of new technologies, a smoother adaptation to the needs and desires of end users and supports a broader implementation of the innovative solutions themselves. This makes it possible to foster the active participation of end users of technologies in decision-making as a means of achieving greater adhesion and reducing the number of potential problems arising from decisions made in any phase of the PPI process.

Co-creation Methodologies

In a world marked by rapid change, the search for solutions to social and environmental challenges has become more complex, establishing new paradigms for the democratisation of innovation that surpass approaches driven solely by professionals and specialists. These paradigms focus on establishing close and active ties with the community. The openness, flexibility, accessibility and empowerment of the people

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participating in the co-creation process are some of the characteristics of these user-focused and user-driven approaches.

This change in the relationship between citizens/users and researchers, developers and companies involved in co-creation isn´t new, and isn´t even recent, and is preceded by a large number of concepts, methodologies, guidance, approaches and frameworks such as user-focused design and user-driven approaches that have been in existence for thirty years. These publications illustrate that the use of **co-creation methodologies** has major benefits for the success of innovation and also involves challenges with regard to coordination between the different stakeholders.

The benefits include the fact that the participation of real users entails aspects of interest such as low-cost innovation, greater acceptance by users, improved management of customer relations, productivity and increased efficiency. This is essentially due to the fact that co-creation allows for the design of products and services with the users themselves, instead of adopting the decisions of the entire process independently of their opinion, thereby reducing the risk of technological failure and increasing the adoption of the products and services by end users. This is the reason why more and more R+D projects are now developing solutions more effectively and efficiently due to co-creation.

Although co-creation is still in an initial phase in terms of scientific evidence on its scope and its impact on project processes, PROCURA has implemented several methods that have helped improve the decision-making process and the interrelations between different stakeholders through participatory design:

The methodologies used in PROCURA include those described below:

■ **Design thinking:** This methodology is geared to the generation of solutions within a proposed framework. It is divided into a series of phases to which you can return iteratively. The only condition is that each phase must be executed at least once. The most important characteristic of Design Thinking is that it is fully user-oriented, and as such is fully compatible with the foundations on which the PROCURA project is based.

Some of the most noteworthy phases of this methodology are empathising, defining, devising, prototyping and testing. These phases help the design team to create practical and creative ideas to solve real problems of a group of people.

■ **Lean Startup:** The Lean Startup methodology is aimed at companies to create and manage specific products for their customers in the quickest possible manner. This methodology can be transferred to projects and networks with similar goals. The first step in the Lean Startup methodology is to identify and understand the problem to be solved using the design thinking approach and then to develop a minimum viable product (MVP). The learning process begins once the MVP exists and is shown to end users. Once the MVP has been established, individual changes can be defined to improve it.

■ **Agile Method:** This technique consists of a management and development model for projects that need speed and flexibility. It uses iterative work sequences and provides a framework in which value is optimised throughout the development process.

■ **Participatory design:** This is regarded as one of the most important requirements of good design, as it is based on the active participation of stakeholders in the process. In participatory design, stakeholders become participants and co-designers in the design process and not just passive recipients of the results of the project.

■ **Experience-based design:** Many local initiatives have been established in the health and social sector in recent years, involving users in consultations and decision-making in a collaborative environment. In Europe there are examples of countries that have decided to use this methodology. For example, the United Kingdom is a highly active country in supporting the creation of these groups, with different levels of participation, however, public and patient participation has not been established for the promotion of real co-creation activities. As such, a new concept

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has recently begun to be implemented in different EU research projects with the idea of transferring them to public governance, experience-based design through the establishment of **Experts by Experience Groups (EEG)**. The Intras Foundation, one of the partners of the PROCURA project, has established the first EEG in Spain and it is hoped that results in the near future will support this practice of joint participation.

State of the art of PPI

There follows a summary of the state of the art in the implementation of co-creation methodologies in PPI and Pre-Commercial Procurement (PCP) activities:

- **Traditional public procurement cycle:** There are different traditional models for public procurement of innovation processes, however they do not include specific participatory or co-creation approaches with users in a systematic manner.

- **Co-creation approaches in PPI:** The public-private partnership (PPP) has been one of the most popular models for the reorganisation of public procurement, by giving private sector providers greater responsibility in the procurement process. Known common benefits for the implementation of PPP practices include improvements in cost-effectiveness, quality, efficiency, risk assessment and transparency throughout the procurement process. In addition to enhancing the performance of public procurement, cooperation is regarded as an excellent platform for the discovery of new innovative solutions and market potential.

Although end-user participation has been acknowledged as having a positive effect on innovation, few studies have been conducted on the role of users in processes involving the public procurement of innovation. These studies show that the most significant advantage of the active participation of end users is greater ease of use of the public service provided. However, the need to continue to develop the "participatory culture" and the tools for interaction with users, both in processes involving the buyer and those involving the supplier is evident.

The PROCURA co-creation framework

The use of the collaborative design approach, which combines the best practices of the aforementioned different methodologies, enables the PROCURA project partners and, in general, the PROCURA Community of Regions (PCR) to tackle complex systemic problems, while complying with the procurement guidelines issued by the European Commission (Guidance on Public Procurement for Practitioners, 2018).

The methodology proposed in PROCURA has two main approaches:

- **Participatory design and co-creation in the governance and community participation model.** This approach facilitates collaboration and helps to adapt ideas and innovative solutions to specific needs. To this end, all the different stakeholders need to be involved in the process for the creation and development of the innovative solution that are likely to be affected, to varying degrees, by this innovative solution. It involves giving beneficiaries and users more opportunities to make themselves heard, state their opinions and transform them into innovative solutions.

- **Participatory design and the implementation of co-creation in PPI procedures.** One way of implementing participation and co-creation at the regional level in the procurement process is the Experts by Experience Groups or Groups of Local Stakeholders of Interest. PROCURA has established a strategy that takes all the relevant local stakeholders in the PPI process into account:
  - **1.** Public buyers.
  - **2.** Agents in charge of the supply chain (companies, knowledge centres, etc.).
  - **3.** End users that represent the most important level of acceptance of the innovation.

- **Combined methodology** to promote participation in the PROCURA PPI process. **Design Thinking** has helped the joint-venture to explore the problem; the **Lean Startup** approach has ensured creation in the correct manner while **agile development**

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The methodology proposed in PROCURA has two main approaches:

- **Participatory design and co-creation in the governance and community participation model.** This approach facilitates collaboration and helps to adapt ideas and innovative solutions to specific needs. To this end, all the different stakeholders need to be involved in the process for the creation and development of the innovative solution that are likely to be affected, to varying degrees, by this innovative solution. It involves giving beneficiaries and users more opportunities to make themselves heard, state their opinions and transform them into innovative solutions.

- **Participatory design and the implementation of co-creation in PPI procedures.** One way of implementing participation and co-creation at the regional level in the procurement process is the Experts by Experience Groups or Groups of Local Stakeholders of Interest. PROCURA has established a strategy that takes all the relevant local stakeholders in the PPI process into account:
  - **1.** Public buyers.
  - **2.** Agents in charge of the supply chain (companies, knowledge centres, etc.).
  - **3.** End users that represent the most important level of acceptance of the innovation.

- **Combined methodology** to promote participation in the PROCURA PPI process. **Design Thinking** has helped the joint-venture to explore the problem; the **Lean Startup** approach has ensured creation in the correct manner while **agile development**

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has recently begun to be implemented in different EU research projects with the idea of transferring them to public governance, experience-based design through the establishment of **Experts by Experience Groups (EEG)**. The Intras Foundation, one of the partners of the PROCURA project, has established the first EEG in Spain and it is hoped that results in the near future will support this practice of joint participation.

State of the art of PPI

There follows a summary of the state of the art in the implementation of co-creation methodologies in PPI and Pre-Commercial Procurement (PCP) activities:

- **Traditional public procurement cycle:** There are different traditional models for public procurement of innovation processes, however they do not include specific participatory or co-creation approaches with users in a systematic manner.

- **Co-creation approaches in PPI:** The public-private partnership (PPP) has been one of the most popular models for the reorganisation of public procurement, by giving private sector providers greater responsibility in the procurement process. Known common benefits for the implementation of PPP practices include improvements in cost-effectiveness, quality, efficiency, risk assessment and transparency throughout the procurement process. In addition to enhancing the performance of public procurement, cooperation is regarded as an excellent platform for the discovery of new innovative solutions and market potential.

Although end-user participation has been acknowledged as having a positive effect on innovation, few studies have been conducted on the role of users in processes involving the public procurement of innovation. These studies show that the most significant advantage of the active participation of end users is greater ease of use of the public service provided. However, the need to continue to develop the "participatory culture" and the tools for interaction with users, both in processes involving the buyer and those involving the supplier is evident.

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has improved collaboration and communication between buyers, technical developers and content creators to create in the correct manner, avoiding (to some extent) the waste of resources.

Co-creation is at the very core of the PROCURA project. It is implemented in two essential phases:

- **a / The selection and definition of the need and the challenge to be addressed**
- **B / The design, development and co-production of the innovative solutions selected (see p. 23)**

With regard to the challenge of defining the need, PROCURA is one of the first European projects to introduce co-creation with the different players from the time the project was conceived.

- First of all, we worked with the professionals using the different files containing the existing needs in the area of social and health care and the promotion of active and healthy aging (based on a total of 6 needs), which were discussed at different meetings and workshops in order to improve and define files with greater details with the aim of improving the service with regard to innovation.

- In turn, different co-creation sessions were held at the project´s 3 Living Labs: the INTRAS Foundation, Autonom'Lab and the Pedro Nunes Institute – Coimbra University Hospital Centre, involving 24 elderly people, 16 direct health care professionals and 3 caregivers.

As such, the fundamental result of the co-creation activities in defining the project´s needs was obtaining relevant and meaningful information on which to focus the goal of innovative public procurement, meeting the first 3 phases of the Design Thinking process: *Empathising, Defining and Planning.* **This resulted in the technologies comprising the subject-matter of the public procurement procedure:**

- **1.** The development of a non-marketable prototype of an intelligent walker, capable of approaching the user's position and preventing falls.

- **2.** The development of a modular solution featuring the necessary technical aids to enable fragile elderly people to carry out toilet-related tasks independently and with no risks.

Monitoring and competitive intelligence system

The use of **monitoring and competitive intelligence** can be a key part of R+D+I and the framework of any project. It has been of great assistance in PROCURA in the development of the Strategic Community of Regions Plan and to anticipate trends in the area of technology and innovation in order to guide decision-making on the technological solutions to be developed.

Competitive Intelligence methodology is based on the search, analysis and dissemination of information designed to help decision-making. In the case of the PROCURA project, INNGUMA software has made it possible to implement this methodology, facilitating the tasks of gathering and filtering information. The main phases of this methodology are:

- **Key monitoring factors:** these external factors can affect the competitive results of the project. It is essential to be familiar with the main stakeholders, players, trends, technology experts, etc., and be able to differentiate between relevant and trivial information for the project. It is also important to review these factors from time to time and to redefine them, if necessary, adapting them to changes in technology and the innovation environment.

- **The definition of sources of information, updating and regular review:** reviewing sources of information on a regular basis is of paramount importance, as they are constantly changing, as technology does. Sources need to be reviewed whenever there is a change in key monitoring factors.

- **The filtering of sources of information:** after reviewing sources of information, add new interesting sources and remove any sources that add no value. The information should be filtered to limit the amount received and to ensure it is not excessive.

- **The search for information:** this part is the core of Competitive Intelligence methodology. Reviewing the information received and selecting what is most important is a time-consuming task, but this is the key to being successful at work.

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- **The analysis and assessment of the information:** once the information of interest has been identified, it needs to be thoroughly analysed in order to separate the interesting parts from the irrelevant parts and to adapt it to the context of the project to make it easier to understand.

- D**issemination:** this is the final step of the methodology. The final goal of Competitive Intelligence is to generate an appropriate context for decision-making and this knowledge needs to be shared with the people involved in making those decisions.

As already mentioned, competitive monitoring is the business practice that brings together the concepts and techniques that enable us to study the environment of an organisation or a project.

Therefore, the evaluation of the future status of the project environment is one of the main aspects to be addressed in the implementation of Competitive Intelligence. The organisation's environment is one of the keys to success to be taken into account in the definition of strategies.

Macro-factors influencing the competitive environment include the economic, ecological, social-cultural, political, legal and technological challenges a project faces. Competitive intelligence focuses on turning this external information into the vision required for making strategic and tactical decisions.

In the case of PROCURA, the technological solutions included in the analysis of technology monitoring were those selected in the initial co-creation sessions, more specifically, an **intelligent walker** capable of approaching the user's position and preventing falls through a braking system and a toilet that helps the user to stand up after being seated, in addition to washing and drying the user after use. This analysis led to a better understanding of the technological environment of these solutions, the state of the art, existing patents and ongoing projects, commercial products, market developments, desirable functions, etc.

Hence, PROCURA has shown that the monitoring and analysis of these external conditions through monitoring can be of great help to the strategic execution of the project. Important results can be obtained from this monitoring, in particular an improvement in the understanding and interpretation of the future environment of the project, of the existing and future competition, of the lines of work in the sector, etc. All this reduces risks, improves the quality of strategic and tactical decisions and strengthens the positioning of project results.

ShareProCare online tool

An online tool called ShareProCare has been developed within the framework of the PROCURA project and is available on the project website: https://www.procura-project.com/

ShareProCare is an on-line community of social and health innovation with the aim of fostering relations between public institutions and innovative companies dedicated to the development of products and services for the elderly or people in a situation of dependency. This community helps the PCR to create an innovation ecosystem designed to bring together interested innovative players with the common goal of generating a positive impact on the elderly. As such, it should be pointed out that the PCR is **the first network to use Public Procurement of Innovation as the main tool with an innovative, participatory and open approach**, regarding the user from a global perspective. It establishes the ideal conditions for the development of synergies between the different areas of the social and health care sector, as well as between the players in the innovation ecosystem.

All members of the CRP have access to the SharePro-Care platform, which serves as a single meeting point with unique access.

The **strategic goals** of the ShareProCare platform are:

- **To enhance the value of the network:** through forums, events, networks, etc.
- **Collaboration between social and health care innovation ecosystems:** thematic working groups, transnational collaboration in R+D+I, etc.
- **To promote innovative solutions:** in accordance with the region, needs, technologies, uses, etc.
- **The creation and promotion of the SharePro-Care social and health care system:** the definition and analysis of the social and health care system, changes in organisational culture ...

Any public buyer, innovation company, different innovation players and end-user organisations can be a member of this platform.

The ShareProCare digital platform is available at https://www.shareprocare.eu

The platform consists of several features:

- **Community:** this section of the digital platform contains a brief presentation of the PROCURA project and the creation of the PROCURA Community of Regions (PCR).
- **Needs:** public buyers, social and health care workers, etc., share their needs in this section.
- **Solutions:** existing solutions that may be of interest to other partners of the platform are shared in this section.
- **Resources:** case studies, web conferences, guides, legislative frameworks, etc., are available to members. There is a series of filters by theme, category... that help to focus the search.
- **News:** this section enables partners to access different news items related to the project and PPI.
- **Forum:** partners of the platform have access to a forum in which to exchange views, ask questions and clarify doubts in relation to the PPI.
- **Contact**

View of the ShareProCare online tool
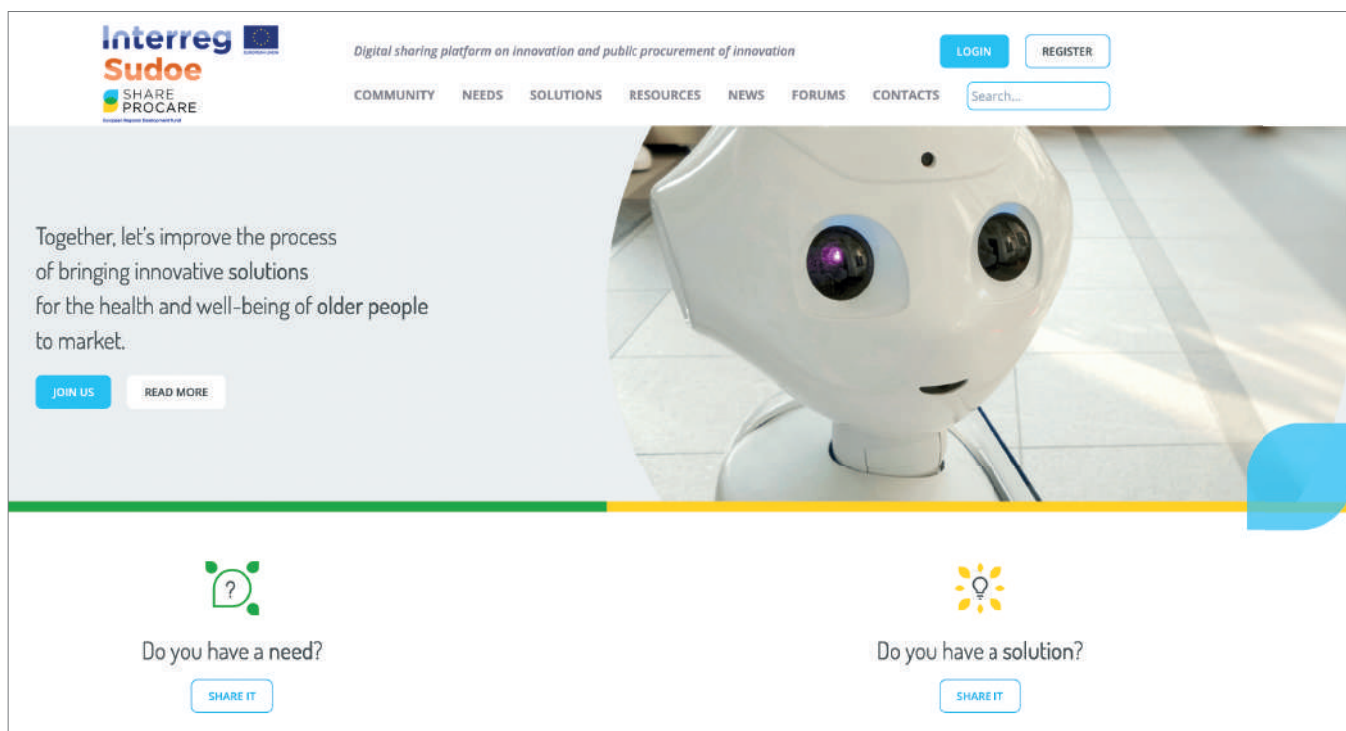
Training: the identification of new knowledge

One of the specific goals of PROCURA is to improve the capacities of the players involved in PPI in the SUDOE region. This is done by **providing opportunities for training and the transfer of knowledge** to public authorities, innovation and knowledge generation centres and companies (mainly SMEs). The training and transfer of knowledge lead to the definition of the appropriate channels to break down the barriers faced by PPI, which arise from ignorance and resistance to change, thereby broadening the understanding of the interested parties and enhancing their ability to perform within their field in a successful manner.

To help in this task, PROCURA has developed a Training and Transfer of Knowledge Plan in which all the project´s partners participated. This plan establishes PROCURA training activities based on the needs identified by all the partners through a preliminary Regional and Transnational Diagnosis of Public Health.

The training activities were designed in three different formats, the goals of which are:

- The promotion of creative capacities for innovation and co-creation.
- Knowledge of the capacities of regional value chains.
- Highly specialised training in PPI.

Based on the aforementioned analysis of needs, the training activities encompassed the following areas of action:

- Raising the awareness of policy makers
- Tools for those entrusted with managing public procurement
- Addressing competitive dialogue in a successful manner
- The successful preparation of PPI

The methodology used in the sessions highlighted the commitment of the people who can make use of or benefit from the tools presented in each activity. The sessions were based on practical and real cases the topics of which are adapted to the local innovation ecosystem.

The training activities carried out in PROCURA are detailed below:

■ **Co-creative inter-regional seminars - "PROCURA IN THE COMMUNITY":**

Interregional seminars are geared to the partners of the project, expert PPI participants and the community. The main goals of these seminars is to create spaces for citizen participation, focusing on topics such as the co-creation of innovation, the patient experience, person-centered care, their empowerment, and the promotion of critical thinking and creativity.

■ **PROCURA Learning Itineraries:**

The goal of these itineraries is to gain a better understanding of the situation of the players involved in the local innovation ecosystem, through the presentation of specific cases and experiences in healthcare environments. These training activities include workshops and study visits to important places in the partners' innovation ecosystems.

■ **Case Studies:**

The goal of case studies is enable professionals close to the project´s partners and innovation companies/agents to share relevant experiences in the field of PPI in order to establish a debate and a possible transfer to other environments.

■ **Expert forum:**

The experts that have participated in the different aforementioned activities have kept in touch through various means (e-mail, videoconferences, etc.) to advise partners and participants, answer their questions, etc.

Co-design, co-creation and co-production sessions. Adaptation of participatory and testing workshops during the COVID-19 pandemic

Co-design, co-creation and co-production sessions

The co-creation and testing methodology used in PROCURA entails an iterative cycle in which the people receiving the technology are exposed to a "visual" or "tangible" (which represents the innovative concept, a technology module or prototype) on which they are required to conduct several assessments of its usability, acceptance, accessibility, usefulness, design, affordability, hedonistic assessment (related to liking or rejection, aesthetics, etc.), in order to provide continuous guidance on technological developments, their improvement and commissioning at the end user. As mentioned previously, this methodology enables us to mitigate the potential risk of technology failure due to a lack of acceptance or use by the client or user.

These evaluations are put into practice using participatory techniques and Design-Thinking, creating reflection situations for people that are motivating, interactive and encourage involvement in the task and the work group.

Each Living Lab (INTRAS Foundation, Autonom'Lab and Pedro Nunes Institute - Coimbra University Hospital Centre) decided to use their techniques in accordance with their organisational context and with the state of the pandemic. This was based on a common scheme consisting of:

- **1.** The company awarded the contract delivers a "visual" or "tangible" and its user manual. It also contains a number of issues on which feedback from the elderly is required.
- **2.** The coordinator of the co-creation activities, the INTRAS Foundation, delivers the initial tools to the Living Labs to design the sessions: informed consent form, instructions for the facilitator, a slideshow with an example of the session design based on the "PERSONA" project technique, answer sheets and a record of the analysis.
- **3.** The Living Labs prepare the co-creation sessions in accordance with their respective organisational contexts and national or local regulatory frameworks.
- **4.** The Living Labs return the results of the sessions to the company, which analyses them and implements improvements in the next prototype or concept.

3 co-creation cycles are carried out to cover the design, prototype construction and co-production phases, thereby meeting the most important milestones in the creation of an innovative solution.

- **Phase 1:** The evaluation of the design of the two prototypes (ANDIN, the intelligent walker and INOTEC, the assisted toilet).
- **Phase 2:** The first co-creation session, on the provisional prototype.
- **Phase 3:** The second co-creation session, focused on the co-creation of the final prototype.

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With regard to the measurement system, it should be pointed out that the use of standardised questionnaires and open surveys which, in general, were implemented homogeneously at the three Living Labs in the three countries. These instruments are the following:

1. **Common documents**
   - Informed consent
   - Satisfaction survey

2. **User and healthcare professional questionnaire session 1**
   - Ease of handling
   - Solution of the problem by the product
   - Safety
   - Aesthetics
   - Suitability for use and adaptation to the environment

3. **Healthcare professional questionnaire sessions 2 and 3**
   - Product quality indicators in accordance with the support professional or technician

4. **User questionnaire 2 and 3**
   - Previous experience with walkers
   - User satisfaction
   - Indicators on effectiveness/usefulness of product specifications
   - Impact of product use on quality of life
   - Product quality indicators in accordance with the user

5. **User personal data questionnaire session 1**
   - General data
   - Dependence on basic activities of daily living, functional independence measure - FIM

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The co-creation cycles have provided multiple insights with regard to the technology, as illustrated in the diagram below, which shows the results of the first co-creation session:

Results of the first co-creation session

Adaptation of the pilot project during the pandemic

The situation arising from COVID-19 has affected every area of our lives, but especially the elderly and vulnerable. The restrictive and limiting measures of social contact have also had an impact on research projects involving people. PROCURA, like many R+D+I projects, has had to invent new ways of working with developers of technology and the elderly in order to ensure their active participation in co-creation sessions. Due to the differences between countries, both with regard to the evolution of the pandemic and the measures imposed to deal with it, PROCURA decided to let each Living Lab create its strategy in accordance with the regulations of the country and region in question and they all developed safety and disinfection protocols in accordance with these restrictions and pursuant to the general protocols of the institutions hosting these Living Labs.

Moreover, the sessions were adapted to ensure the health of the participants, and these measures included the use of a mask, personal hygiene materials in every room, the constant disinfection of the items used and contact surfaces, and gloves were provided to every participant. The sessions were held in ventilated rooms of a size in accordance with the maximum capacity of people at the sessions and with enough space to ensure social distancing.

With regard to the strategy for the implementation of the sessions:

- **1.** The INTRAS Foundation decided to enhance the levels of care for people attending the neuropsychology clinic. The co-creation sessions were part of the activities conducted within the framework of the clinic, and were designed in a way that represented an opportunity for the cognitive and social stimulation of the elderly and relief from their perceived loneliness.
- **2.** Autonom'Lab chose to collaborate with social institutions working with the elderly and, through a facilitator, to carry out an activity focused on an innovative experience in which the elderly had the chance to test technological devices.
- **3.** The Pedro Nunes Institute and the Coimbra University Hospital Centre were involved in the challenge of co-creating innovation at the aforementioned hospital, which had been converted into a COVID hospital. There were countless difficulties, however the healthcare professionals conducted the activities in a remarkable manner.

Finally, we should highlight one of the greatest difficulties PROCURA had to deal with and which was the fear of both the elderly participants and healthcare professionals. To this end, it was decided to carry out the activities in the most appropriate de-escalation phases when there were a greater number of potential candidates (to ensure the elderly participated in greater numbers and to offset losses due to people refusing to participate). Reinforcing the visibility and information on the products and providing a comprehensive explanation of the safety measures were also of paramount importance. Furthermore, there was a significant reflection on the fact that carrying out safe, stimulating activities also helps to uphold levels of health and prevents the elderly from suffering from a worsening condition and the consequences of loneliness.

Other good practices
(related to PPI
in similar areas)

The following examples illustrate bases of collaborative procurement:

■ **PPE-eHealth Project (2016):** The purpose of the PPE-eHealth project was to transform the eHealth solutions market through dialogue and the procurement of innovation. The project created a network of contract-awarding organisations encompassing the different opportunities electronic health could provide and with experience in the procurement of innovation and the ability to promote new approaches in collaborative procurement.

■ **P4ITS (2016):** P4ITS was a thematic network that brought together awarding entities with experience in the deployment of cooperative intelligent transport systems and services through PPI.

■ **IMAILE (2018):** This was the first European pre-commercial procurement project in the field of education and learning through technology. A dialogue between supply and demand was established focused on the real needs of schools, teachers and students.

■ **Association for Innovation:** Procurement through Co-Design (2018): Healthcare providers dealing with complex problems, requiring new procurement approaches to acquire innovative solutions capable of responding to the problems and opportunities identified. The Partnership for the Procurement of Innovation through Co-Design Programme was created to support complex problems in which it is hard to identify all the root causes. The initiative involves suppliers and end users getting together in order to study the issue, experiment with ideas and test impacting solutions.

■ **HAPPI (2016):** The Happi project established a long-term collaboration between healthcare purchasing organisations across Europe to identify "aging well" and innovative healthcare products, services and solutions and to define procurement contracts for the benefit of healthcare organisations.

■ **EU-PCP STARS (2017):** A joint-venture of five leading European hospitals used the European Commission's Pre-Commercial Procurement (PCP)

scheme to challenge and stimulate European industry to design, develop and test a tool to support patients awaiting surgery, with the aim of reducing stress and anxiety, in addition to improving the patient's health through the process. Solutions needed to consist of a combination of the experience of caregivers and the empowerment of patients to actively influence the process by expressing their emotional state and needs.

Examples of Good Practices in the area of the Public Procurement of Innovation:

■ **Basque Department of Health, Osakidetza**

The Basque Country Department of Health, through Kronikbasque, carried out three procedures in the area of Public Procurement of Innovative Technology.

These three pilot processes are related to chronicity and aging, more specifically to home care for chronic patients, care for mobile chronic patients and raising the awareness and engaging healthcare professionals and citizens with regard to strategies for chronicity.

There has been cooperation at different levels for the execution of these projects: on the one hand, between the public administration and the provider, and on the other, several public administrations share the co-development of the product (the Basque Country Government, the Basque Country Department of Health…) and, finally, several companies have worked together to develop and implement long-term sustainable solutions.

The products or services obtained as a result of this PPI are marketed by the companies awarded the process in exchange for royalties to the public administration, or by the administration itself through Bioef (Basque Country Foundation for Innovation and Health Research), a function that had to comply with the intellectual property of the R+D+I proposed in the tenders.

■ **Erasmus University Medical Centre, the Netherlands**

The installation of a robotic bed cleaning system.

This project involved the creation of a work team to determine the basic requirements for results before conducting the market consultation. The procurement process went ahead once the market consultation designed to illustrate the hospital's needs and the potential demand had been concluded.

The competitive dialogue procedure was chosen in this case. The Erasmus University Medical Centre establishes criteria for the new bed cleaning system, one of which is the respective carbon footprint. The operators that passed the pre-qualification phase were invited to participate in the first round of competitive dialogue in which the number of operators was reduced to two, who were finally invited to submit a bid.

Of these last two operators, the bid submitted by IMS Medical, whose innovative solution consisted of the adaptation of automotive sector technology to the field of healthcare, more specifically to bed cleaning.

■ **Galician Department of Health, Sergas**

Programmes: "Hospital 2050" and "Health Innovation".

Sergas, within the framework of its health innovation projects "Hospital 2050" and "Health Innovation", launched an open tender for proposals for innovative solutions.

An early demand map was used to conduct this tender, thereby enabling the Administration to anticipate the needs of the market.

Sergas studied the proposals submitted and used them in the process to develop and execute subprojects, both in the definition and scope thereof.

Once the criteria had been defined, in other words, when the technical specifications has been defined to the necessary degree of precision, and the proposals had been selected, the procurement process went ahead, in which innovation and the use of high technology were regarded as positive aspects.

Other examples of good practices identified within the PROCURA project are set forth below:

■ **The PROCURA project Castile and Leon Department of Social Services Social and Health Care Model**

The proposal for a social and health care model drawn up by the Castile and Leon Department of Social Services is presented as an example of good practices.

First of all, the term social and health care can be defined as integrated health and social care. It could be said that social and health care is an area that combines two aspects: health and social needs.

Due to the traditional organisation and set up of social and health care systems, there is a high risk of fragmentation in the care of people requiring the services of both systems, either simultaneously or sequentially. Coordination between the areas of social and health care is one of the biggest challenges, as comprehensive care need to be provided to the elderly, chronic patients, people with limited personal autonomy or who require comprehensive professional care.

The main cause of this fragmentation is a lack of organisational development in these systems, which operate under a paradigm of health care and benefits. Efforts up to now have focused on the development, at a strategic level, of standards, plans and coordination structures.

It is therefore necessary to make efforts to establish joint agreements and commitments from a social and health care perspective, designed to facilitate the implementation of actions involving the direct provision of services to citizens. These agreements need to be based on shared and integrated care processes and on a comprehensive analysis of citizens´ real needs.

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Above all, the PROCURA social and health care model must identify the needs for action and those in need of care. The following social and health care needs and profiles have been identified:

- People with chronic diseases (mainly over 65 years old) and in a situation of disability and/or dependency on their caregivers/relatives.
- Minors with early health care needs and developmental disorders.
- The provision of pharmaceutical care at public nursing homes.
- People with mental diseases.
- Drug addicts.
- Victims of situations of violence: minors, elderly or victims of gender violence.
- People in a situation or risk of social exclusion with health care needs (homeless people, people with low levels of social integration …)
- The promotion of autonomy, the elimination of barriers in the home and the provision of support products.
- In general, users and recipients of social benefits in need of the integrated monitoring of their health and social situation.

The principles and common elements related to social and health care included in the PROCURA project are set forth below:

- Proactive guidance and prevention of situations of need: processes are developed geared to preventing situations of need, not of a general nature, but geared to specific profiles and people.
- Integrated health care processes: care processes (social and health) are to be shared and each party needs to focus on developing services and care in their field of expertise.
- The implementation of a shared information system: feedback of information on the professional activities conducted.
- The integration of social and health data: professionals from both systems need to be in possession of the existing information in order to create a joint history on the user.
- Accessibility and referral criteria between systems.
- A person-centered approach: care plans and life project. Integrated person-centered care needs to take the needs and desires of the person and their family into account, in addition to the series of contextual factors involved in the care and must always provide a service or care in a consensual manner between the systems and, most importantly of all, with the citizen.
- A referral healthcare professional.
- A case manager (specialised).
- Shared follow-up.
- Continuity of health care.

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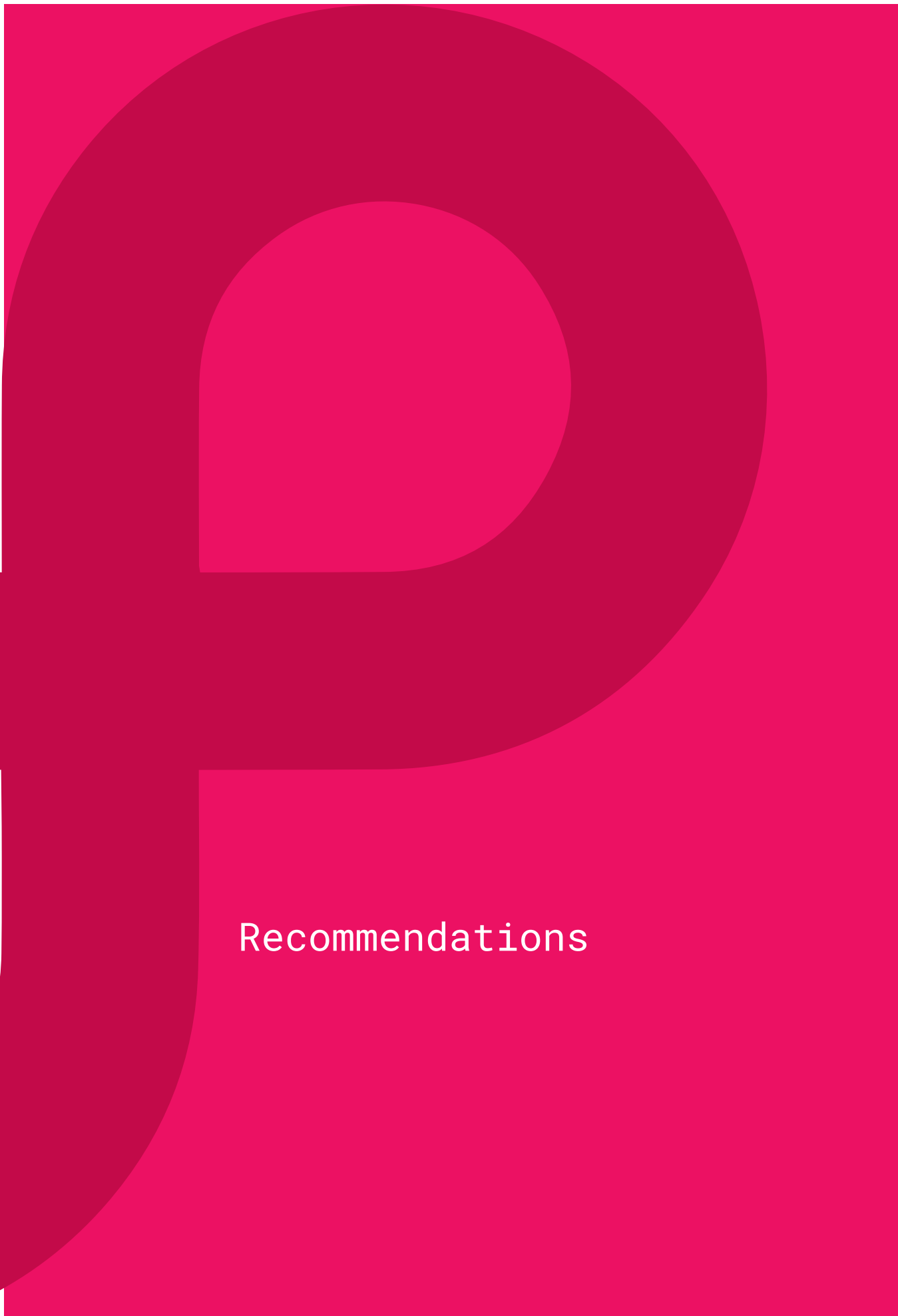
Recommendations

The purpose of this Green Paper is to propose improvements in the identification of the needs of public bodies capable of giving rise to innovative services, in the identification of existing opportunities at the European level in the social and economic sphere and in the promotion of our companies´ capacities.

The following general recommendations should be borne in mind:

- The promotion of transnational collaboration to increase the participation of all the social agents involved in procurement activities, striving for a compromise between administrations, companies, innovation ecosystems and citizens in order to support opportunities for the acquisition of innovation in the SUDOE region.

- The implementation of a methodology throughout the PPI process that attempts to involve all the different stakeholders, to mitigate potential failures in the development and implementation of technological innovation at end users, in addition to reducing expenses, connecting the demand and supply of social and health care technologies and improving the decision-making process.

- The preparation of a Strategic and Sustainability Plan to serve as a framework for orientation and to establish a series of guidelines. It should be taken into account that the plan needs to be flexible in order to ensure it is proactive in the face of potential unforeseen circumstances. During the execution of the PROCURA project, the crisis arising from the COVID-19 pandemic has led to the project activities being readapted to the social and health care measures implemented by the authorities.

- Fundamental and evidence-based decision making through piloting.

Recommendations for the PPI process (especially the Preliminary Market Consultation procedure):

- **The evaluation of the capacity of partners to act as buyers.** We recommend defining a single buyer in order to facilitate and simplify the transnational PPI process.

- **The identification of potentially interested market operators.** Identify suppliers and contractors with sufficient capacity to develop the required products and/or services. This should be done from the initial phases of the project as the identification of companies with innovation potential is one of the key elements in ensuring the successful implementation of any PPI model.

- **The professionalisation of teams.** When creating a team or those in charge of the PPI process, we need to ensure that all the team´s profiles are covered from a multidisciplinary perspective (technical area, project management, innovation, legal and procurement). Moreover, the active participation of the work team needs to be ensured throughout the procedure (avoiding the unnecessary replacement of personnel), which will help to define with greater clarity and precision the requirements and functional specifications to be included in the tender document. The participating organisations need to train professionals from the different sectors and fields involved in the PPI process and facilitate cooperation mechanisms, establishing management processes with all the players involved to ensure the innovation process is managed in the correct manner. These units will support the fulfillment of the project´s goals related to the PPI. The ultimate goal of this unit should be to ensure the quality of public services through the implementation of procedures that certify the acquisition of innovative goods and services.

- **The control of the critical variables of the PMC.** The critical elements of technical dialogues and preliminary market consultations must be controlled. In general, we suggest conducting a PMC process

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consisting of following: the total time of the process, the number of meetings with the interested parties, the documents and information to be requested from the economic operators, the methodology used to execute the PMC process, the participants´ response time, the principles of confidentiality and transparency in force throughout the process and the definition of the characteristics of the solutions to ensure they are not seen as bids by the candidates, but as proposed solutions.

- **Training for companies.** Part of the activities to be executed under the project should be to generate mechanisms to reinforce the training and qualification of companies in critical issues in the execution of PPI. We recommend the compilation of a "PPI Provider Manual" shared with every organisation involved in working together with companies in the integral PPI process. This manual should feature key processes such as: "The induction of demand, the identification of opportunities, the preparation of tenders (in particular issues related to how to respond to a PPI tender, how to develop functional specifications, how to prepare propositions of value - technical proposals, economic proposals and proposed distribution of intellectual property, etc.), recommendations on the management of the Procurement Process by milestone, etc.

- **Ensure that the objective questions of the PMC are answered.** In the case of PROCURA, the PMC served to confirm that the time foreseen for the development of the solutions to the anticipated needs was feasible, as well as the costs associated with the development of these solutions. In addition, it was confirmed that the technical specifications were feasible and that the economic operators were interested in participating in a future tender. Nevertheless, it should be recalled that the PMC needs to respond to a number of critical issues before a body can decide to proceed with the following phases of the PPI.

Recommendations on the field of training

It is essential that the following recommendations and considerations are taken into account in the section dedicated to training:

- To detect, as accurately as possible, real training needs through questionnaires given to different experts.

- To involve the ideal participants in these training activities. The delivery of materials and resources to the profiles selected for future training.

- To align institutional management priorities with the promotion of PPI and encourage participants to prepare for training by analysing the potential implementation of PPI in their environment.

- The transfer of knowledge for the identification of opportunities in the implementation of the methodology and for the discussion of doubts.

Recommendations on the methodology used

Pursuant to the **SCRUM** methodology, we recommended working with an iterative and incremental framework, or in other words a transparent cyclical process of planning, implementation, testing and evaluation.

"*SCRUM is a process in which a series of good practices are applied on a regular basis to work jointly, as a team, and to obtain the best possible results from a project. These practices are based on each other and they are selected pursuant to a study of how highly productive teams work.*

SCRUM involves partial and regular deliveries of the end product, prioritised by the benefit they bring to the recipient of the project. This is why SCRUM is particularly recommended for projects in complex environments, where immediate results need to be obtained, where requirements are changing or poorly defined, and where innovation, competitiveness, flexibility and productivity are essential.

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One of the main challenges faced by PROCURA is "double recognition". On the one hand, primary users could change their mind in relation to what they want or need and, on the other, unpredictable challenges may arise." [1]

Finally, the users´ requirements and needs were set forth in a technical specification report, updated throughout the project life cycle and after each interaction with the stakeholders in order to gather the most valuable requirements (both from the perspective of end users and researchers) and to maximise acceptance levels beyond the project life cycle.

The implementation of co-creation methodologies, empowering end users and facilitating the adoption of the technology, preventing technological failure due to a lack of acceptance by people, ensures the economic and social sustainability of the procedure set forth in PROCURA.

Another of the major challenges PROCURA could face is the lack of participation of interested parties, including end users. Furthermore, it may be difficult for stakeholders to see the impact on their daily work activities and on their organisations. To avoid this, we recommend close-knit networks, the provision of plenty of information (and constant recaps, positive reinforcement), investing in a strategy geared to the promotion of stakeholder engagement in a local collaborative effort, etc.

The use of this participatory and co-creation methodology raises expectations due to its ability to promote discussions and shared decision-making, which entails increasing the perception of the usefulness and final acceptance of the innovative product or service.

(1) Source: https://proyectosagiles.org/que-es-scrum/
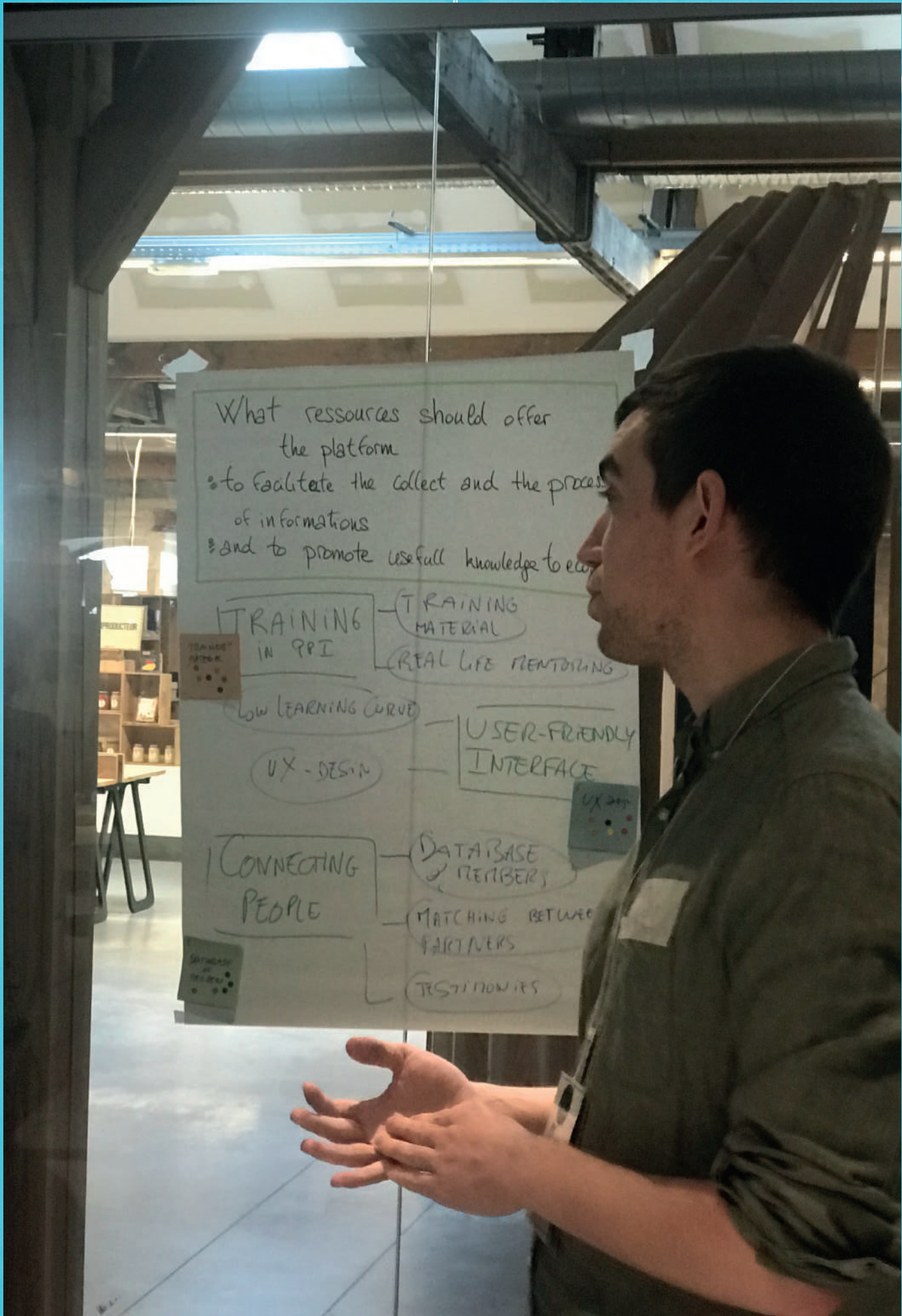
Questions to promote
a european debate
to enhance public
procurement in the field
of social and health care

Based on the experience of the Procura Community of Regions and referred to in this document, how can we continue to develop this initiative and its connection with other similar stable networks designed to promote and enable the implementation of the culture of smart grouped purchasing in the social and health sector, and, more specifically, in promoting the independent life of the elderly?

Are the relations between purchasing public administrations and regional innovation ecosystems sufficient to ensure the latter are capable of providing the former with the necessary knowledge to enable them to come up with innovative solutions to meet their present and future needs? And, moreover, do these administrations manage to successfully convey their unmet needs or with regard to the improvement of the services in order to provide opportunities that drive the innovation of the companies and entities in these ecosystems?

How are innovation needs with regard to the improvement of public services disclosed at purchasing organisations? Are there any specific "bottom-up" channels to disclose them?

Are employees or teams sufficiently incentivised to identify innovation opportunities and undertake innovative projects (including innovative public procurement initiatives)?

What human resources or specialised units do purchasing public administrations possess to implement an innovative public procurement procedure at an organisation? What profiles are required to turn the demand for innovation or need into a series of functional specifications in the preparation of the tender documents? Are these units connected to teams involved in the promotion of projects and the identification of financing opportunities? In brief, do the administrations believe they are prepared to face the challenge posed by a public procurement procedure?

Should public administrations in charge of social and health care services have specific strategic plans to promote innovation and the Public Procurement of Innovation in these times of radical changes in health care systems as a result of the situation arising from Covid-19? Is innovation taken into account as a crucial axis for the promotion of the aforementioned changes and, in particular, with regard to digital and technological transformation?

Is there a need for more specialised training on the different aspects involved in the public procurement of innovation, including the promotion of innovation at organisations? In this sense, does the ShareProCare platform have the potential to serve as a single point of access to knowledge, bring together training materials, massive open online courses (MOOC), specialised on-demand courses, etc.?

The situation arising from Covid-19 leaves us with the need to digitally "connect" people and services through new communication and digitalisation technologies. Can the ShareProCare platform serve as a "matchmaking" point for companies and public buyers that connects and brings the demand for innovative solutions for public services and the supply of technology closer together in order to increase public procurement initiatives and R+D+I projects?

Do buyers and companies understand the fundamental role played by future users of technology, health care professionals and other professional profiles in the process of identifying and defining needs? Is co-creation with people and end users today a well-known procedure used by suppliers of technology (knowledge enterprises and centres) and demand entities (purchasing administrations) to obtain relevant knowledge for all the phases of an innovation project?

Are supply and demand employees aware of the ethical implications of co-creating with people and end users, such as obtaining a favourable opinion from health care ethics committees, the recognition of users as "co-researchers", the compensation of their role if not in an economic manner, with intangible values to ensure an authentic win-win relationship?

Are contractors or future contractors used to using agile development methodologies that enable them to validate or co-create MVPs (minimum viable product) with end users? Does the inclusion of co-creation procedures involve a big increase in the price of the contract? Is the cost-benefit ratio of using these procedures known?

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APPENDIX
Analysis and complementarity of European Funds

In order to continue working on PPI in the social and health care sector, as has been done within the framework of the PROCURA project, a series of national and European funds that would enable the development of similar projects are outlined below.

HORIZON EUROPE

Horizon Europe is a key European Union funding programme for research and innovation. The budget for the 2021 - 2027 programme is 95.5 billion euros.

Horizon Europe is committed to the United Nations Sustainable Development Goals, addresses issues related to climate change and promotes competitiveness and growth in the EU.

The programme facilitates collaboration and reinforces the impact of research and innovation on the development, support and implementation of EU policies, while addressing global challenges. It also fosters the creation and enhanced dissemination of excellent knowledge and technologies.

It creates jobs, actively participates in the EU talent pool, fosters economic growth, promotes industrial competitiveness and optimises the impact of investment in a strengthened European Research Area. Legal entities from the EU and associated countries can participate. Horizon Europe is based on three strategic pillars:

- **Pillar I:** Excellent Science
- **Pillar II:** Global challenges and European industrial competitiveness
  Clusters:
  - Health.
  - Culture, Creativity and Inclusive Society.
  - Civil safety for society.
  - Digital, Industry and Space.
  - Climate, Energy and Mobility.
  - Food, Bioeconomy, Natural Resources, Agriculture and Environment.
- **Pillar III:** Innovative Europe.

It also features a section dedicated to increasing participation and strengthening the European Research Area.

Website:
https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

INTERREG: European Territorial Cooperation

European Territorial Cooperation (ETC), better known as Interreg, is one of the two goals of the cohesion policy and provides a framework for the implementation of joint activities and policy exchanges between national, regional and local agents from different member States.

The overall goal of ETC is the promotion of the harmonious economic, social and territorial development of the Union as a whole.

Interreg is based on three lines of cooperation:
- Cross-border (Interreg A).
- Trans-national (Interreg B).
- Inter-regional (Interreg C).

The project currently in force is for the period 2014 – 2020, Interreg V. This period is based on 11 investment priorities laid down in the ERDF Regulation contributing to the delivery of the Europe 2020 strategy for smart, sustainable and inclusive growth. At least 80% of the budget for each cooperation programme must focus on a maximum of 4 thematic goals from among the eleven EU priorities:

- Research and innovation
- Information and communication technologies
- Competitiveness of SMEs.
- Low carbon economy
- Fight against climate change
- The environment and resource efficiency
- Employment and mobility
- Social inclusion
- Training and improvement in education
- Improvement of Public Administrations

The fifth Interreg programme period has a budget of EUR 10.1 billion invested in over 100 cooperation programmes between regions and territorial, social and economic partners. This budget also includes the ERDF allocation for Member States to participate in EU external border cooperation programmes supported by other instruments (Instrument for Pre-Accession and European Neighbourhood Instrument).

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We should highlight the following data from within the three existing lines of cooperation:

- **Interreg V-A:** executed across the 38 inner borders of the EU. 60 programmes financed. The contribution from ERDF amounts to 6.6 billion euros.
- **Interreg IV-B**: covering larger areas of co-operation such as the Baltic Sea, Alpine and Mediterranean regions, in addition to a number of countries from outside the EU. 15 programmes financed. The contribution from ERDF amounts to 2.1 billion euros.
- **Interreg VC:** The inter-regional cooperation program, INTERREG Europe, and three networking programmes (Urbact III, Interact III and ESPON) covering all the EU Member States plus Norway and Switzerland and, in the case of URBACT, Iceland and Liechtenstein too. They provide a framework for the exchange of experiences between regional and local organisations in different countries. 4 programmes financed. ERDF contribution: 500 million euros.

INTERREG EUROPE

Interreg Europe helps regional and local governments across Europe to develop and deliver better policies by creating an environment and opportunities for sharing solutions and learning policies. The goal of the programme is to ensure that government efforts with regard to investment, innovation and implementation lead to an integrated and sustainable impact for people.

Interreg Europe offers Inter-regional Cooperation Projects with funding of 85% of the project´s activities.

Depending on the number of partners in each project, Interreg Europe finances projects of 1 to 2 million euros.

Website:

interregeurope.eu

INTERREG SUDOE

The **Interreg Sudoe Programme** is part of the European goal of territorial cooperation (Interreg), financed through the Regional Development Fund (ERDF). The current programme period is from 2014 to 2020.

The Interreg Sudoe Programme is one of the 15 programmes for the Interreg B 2014-2020 period dedicated to transnational cooperation. Furthermore, as mentioned previously, there are another 60 programmes financed through Interreg A, linked to cross-border cooperation, and 4 programmes financed by Interreg C on interregional cooperation.

The Interreg Sudoe Programme supports regional development in south-western Europe, financing transnational projects through the ERDF Fund. Furthermore, it promotes transnational cooperation to deal with problems common to the regions in this area, such as low investment in research and development, the poor competitiveness of small and medium-sized companies and exposure to climate change and environmental risks.

Interreg Sudoe (short for Interreg V-B south-western Europe Cooperation Programme) was approved by the European Commission on 18 June 2015, with a budget of 141 million euros.

The approved projects are the result of joint-ventures made up of public and/or private partners from regions in different countries in southwestern Europe. The eligible regions are all the Spanish autonomous communities (except the Canary Islands), the regions of south-western France (Auvergne, Occitanie and Nouvelle-Aquitaine), the mainland regions of Portugal, the United Kingdom (Gibraltar) and the Principality of Andorra. The Sudoe Programme is divided into five priority axes:

- Research and innovation
- Competitiveness of SMEs
- Low carbon economy
- Fight against climate change
- Environment and resource efficiency

Website:

interreg-sudoe.eu

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INTERREG POCTEP

The Interreg V-A Spain-Portugal Programme (POCTEP) promotes cross-border cooperation projects with the support of the EU.

The acronym POCTEP stands for "Operational Programme for Cross-Border Cooperation Spain-Portugal", an acronym for the name of the programme in the 2007-2013 period, which was subsequently renamed "Interreg Cooperation Programme Spain-Portugal" in the 2014-2020 period.

The Spain-Portugal Cross-Border Region is composed of 36 NUTS III belonging to both countries, ensuring the coherence and continuity of the areas established in the previous programming period:

- **Spain:** Ourense, Pontevedra, Zamora, Salamanca, Caceres, Badajoz, Huelva, A Coruña, Lugo, Avila, Leon, Valladolid, Cadiz, Cordoba and Seville.
- **Portugal:** Alto Minho, Cavado, Terras Tras-os-Montes, Douro, Beiras e Serra de Estela, Beira Baixa, Upper Alentejo, Central Alentejo, Lower Alentejo, Algarve, Ave, Alto Tamega, Tamega e Sousa, the Greater Porto Region, Viseu Dão-Lafões, the Coimbra Region, Medio Tejo, the Aveiro Region, the Leiria Region, the West and Coastal Alentejo.

The region is split into 6 areas of cooperation:

- 1. Galicia / Northern Portugal.
- 2. Northern Portugal / Castile and Leon.
- 3. Castile and Leon / Central Portugal.
- 4. Central Portugal / Extremadura / Alentejo.
- 5. Alentejo / Algarve / Andalusia.
- 6. Multi-regional.

POCTEP 2014-2020 operates with five major thematic goals:

- Promote research, technological development and innovation:
  - To improve the scientific excellence of the Cross-border Cooperation Area and in lines of research with the potential to be competitive on an international basis.
  - To improve the participation of the business sector in innovation processes and in R+D+I activities closest to the market (technology development, product trials, innovation) capable of being exploited commercially.

- To improve the competitiveness of small and medium-sized companies, more specifically:
  - To improve the necessary and favourable conditions for the appearance of new business initiatives, guaranteeing the sustainability and promoting the growth thereof.
  - To promote competitiveness in sectors in which the Cooperation Area enjoys competitive advantages.

- To promote adaptation to climate change in all sectors, and in particular, to promote greater regional resilience to natural cross-border risks.

- To protect and promote the environment and resource efficiency, more specifically:
  - To protect and enhance cultural and natural heritage as an economic foundation for the cross-border region.
  - To improve the protection and sustainable management of natural spaces.
  - To reinforce sustainable local development along the entire Spanish-Portuguese border.
  - To increase levels of efficiency in the use of natural resources in order to contribute to the development of the green economy in the area of cooperation.

- To improve the institutional capacity and efficiency of public administrations, consolidating new strategies for dialogue and interrelations to enable the launch of new initiatives between the different players operating on the border.

POCTEP conducts activities geared to **research, development and innovation**, such as:

- Research and innovation, including networking.
- Technology transfer and university-business cooperation, especially for the benefit of SMEs.
- Research and innovation processes at SMEs.

This also includes activities related to **business development** and the **promotion of quality employment**:

- The promotion of entrepreneurship and an entrepreneurial spirit at SMEs.
- Business development at SMEs, support for mentor networks and support for entrepreneurship and incubation.

- Self-employment, entrepreneurship and business creation, including entrepreneurial micro-enterprises and SMEs.
- The promotion of internationalisation.
- The mobility of workers, companies and entrepreneurs.

Moreover, in terms of the **environment and energy and ecological infrastructure**, POCTEP implements measures of:

- Adaptation to climate change and risk prevention and management.
- The development and promotion of the tourist potential of natural spaces.
- The protection and promotion of cultural assets and natural heritage.
- The treatment of domestic waste.
- The management and conservation of drinking water.
- Integrated pollution prevention and control.

Finally, the Programme provides for other types of activities related to improving the institutional capacity of administrations and public services through cross-border cooperation.

Universities, institutes of higher education, technology centres, research institutes, science and technology parks, public administrations, companies, regional development agencies, economic development and promotion foundations, chambers of commerce, companies, groups of companies, business associations, civil protection services, hydrographic confederations, nature parks and associations for the defence and management of natural heritage, civil society associations and organisations.

Website:

https://poctep.eu

INTERREG POCTEFA

POCTEFA 2014-2020 is the acronym for the INTERREG V-A Spain-France-Andorra Programme. This is a European regional cooperation programme created to promote the sustainable development of the border areas between the three countries.

POCTEFA 2014-2020 is the fifth generation of community financial support aimed at strengthening the economic and social integration of this area. POCTEFA co-finances cross-border cooperation projects designed and managed by players from both sides of the Pyrenees and the coastal areas that participate in the Programme, preserving the intelligent, sustainable and inclusive development of the region.

The programme promotes the sustainable development of the border regions of Spain, France and Andorra through cross-border cooperation. It helps to reduce the differences in the development of the region and to join forces in order to ensure the sustainable development and cohesion of the regions involved in the programme. In brief, the programme, thanks to European funds, helps to improve the quality of life of the inhabitants of the area.

The Programme is aimed at public and private sector players in the area of cooperation. The beneficiaries of this programme include public bodies, companies, development agencies, groups, associations, foundations, chambers of commerce and educational centres, among other types of entities and groups.

As with other Interreg programmes, POCTEFA is split into five strategic axes with different investment priorities:

- Axis 1: The promotion of innovation and competitiveness
- Axis 2: The promotion of adaptation to climate change and risk prevention and management
- Axis 3: The promotion of the protection, enhancement and sustainable use of local resources
- Axis 4: The promotion of the mobility of assets and people
- Axis 5: The reinforcement of skills and inclusion in the regions

The INTERREG V-A Spain-France-Andorra Programme was approved by the European Commission on 19 May 2015 with a total budget of 189.3 million euros provided by the European Regional Development Fund (ERDF).

The projects programmed in each of the axes may receive ERDF financing of up to 65% of the total budget for each project.

The percentage of ERDF financing may vary in cases where the possibility of receiving State aid exists.

The area eligible for POCTEFA 2014-2020 includes all the departments and provinces close to the French-Spanish border and the territory of Andorra. It covers an area of 115,583 km² with a population of 15 million inhabitants.

More specifically, this area of cooperation comprises the following areas:

- **Spain:** Bizkaia/Vizcaya, Gipuzkoa/Guipuzcoa, Araba /Alava, Navarra, La Rioja, Huesca, Zaragoza, Lleida, Girona, Barcelona and Tarragona.
- **France:** Pyrénées-Atlantiques, Ariège, Haute-Garonne, Hautes Pyrénées, Pyrénées- Orientales.
- **Andorra:** the entire country.

EUROPEAN EMPLOYMENT AND SOCIAL INNOVATION PROGRAMME (EaSI)

The EU Programme for Employment and Social Innovation (EaSI) is a financial instrument at EU level, the main goals of which are to promote a high level of quality and sustainable employment, to combat social exclusion and poverty, to provide appropriate social protection and to improve working conditions.

EaSI will become part of the European Social Fund Plus (ESF +) in the period 2021-2027. EaSI is managed by the European Commission and is based on three axes:

- PROGRESS axis: the modernisation of employment and social policies.
- EURES axis: professional mobility.
- Microfinance and social entrepreneurship axis: access to microfinance and social entrepreneurship.

The main goals of the EaSI programme are:

- To strengthen the understanding and assimilation of the EU´s goals, in addition to the coordination of activities at national and European level in the areas of employment, social affairs and inclusion.
- To support the development of social protection systems and labour market policies.
- To modernise EU legislation and to ensure it is implemented in an effective manner.
- To promote geographic mobility and to increase employment opportunities through the development of an open labour market.
- To increase the availability and accessibility of microfinance for vulnerable groups and micro-enterprises, in addition to social enterprises.

CDTI BILATERAL COOPERATION PROJECTS

CDTI is the General State Administration body designed to support knowledge-based innovation, advising and providing public aid for innovation through subsidies or partially reimbursable aid.

CDTI also internationalises Spanish companies´ and entities´ R+D and innovation business projects and manages Spanish participation in international R+D organisations, such as Horizonte2020 and Eureka, and in the Science and Space industries. Furthermore, it supports and facilitates the capitalisation of technology companies through the Innvierte Sustainable Economy initiative.

The Department of Foreign Technological Action launches its annual tender within the framework of CDTI international technological collaboration, usually with two cut-off dates for the submission of bids (April and September).

The projects are executed by international joint-ventures, with the participation of one or more Spanish companies and one or more foreign partners from the following countries:

Saudi Arabia, Algeria, Argentina, Australia, Bangladesh, Brazil, Cape Verde, Cambodia, Qatar, Chile, China, Colombia, South Korea, Ivory Coast, Costa Rica, Cuba, UAE, USA, Ecuador, Egypt, the Philippines, Ghana, Guatemala, India, Indonesia, Iran, Japan, Jordan, Kuwait, Sri Lanka, Laos, Lebanon, Malaysia,

Morocco, Mauritania, Myanmar, Mexico, Oman, Peru, the Dominican Republic, Russia, Senegal, Singapore, Thailand, Taiwan, Tunisia, Uruguay and Vietnam.

The Spanish participant can request Partially Refundable Aid pursuant to the conditions of CDTI International Technological Cooperation projects. Aid of up to 85% of the approved budget, with a minimum fundable estimate of € 175,000.

These projects last from 12 to 36 months.

There are two types of support in accordance with the activity carried out in the project:

- **CDTI R+D projects:** Aid for R+D projects developed by companies and aimed at the creation and significant improvement of production processes, products and services.
- **CDTI Direct Innovation Line:** support for applied projects with medium/low technological risks and short investment recovery periods, designed to improve a company's competitiveness through the incorporation of emerging technologies in the sector. The acquisition of new fixed assets is promoted, which represents a major technological leap for the company executing the project. Aid is subject to a minimum regime.

Website:
cdti.es

CDTI INTERNATIONAL TECHNOLOGY COOPERATION PROGRAMMES (PCTI)

CDTI also has an International Technology Cooperation Programme that enables Spanish companies to strengthen their technological capabilities, while increasing the impact of their products, processes and services in global markets.

The Department of Foreign Technological Action presents its annual tender plan for 2021 within the framework of CDTI international technological collaboration.

This plan comprises 28 international tenders grouped in accordance with their cut-off dates at three times of the year: the months of January, April and September, as a means of simplifying the management thereof and planning for applicants. In addition, the tenders for the 7 Eureka, EUROSTARS, UNILATERAL

clusters, the multilateral tender for PRIMA and other programmes operating with open tenders throughout the year are included.

Website:
cdti.es

PORTUGAL
AGÊNCIA NACIONAL DE INNOVAÇÂO

The purpose of **Agência Nacional de Inovação - ANI (National Innovation Agency)** is to develop activities aimed at supporting technological and business innovation in Portugal, contributing to the consolidation of the National Innovation System (SNI) and the strengthening of the competitiveness of the national economy in global markets.

ANI is entrusted with following the guidelines of a technology and business innovation strategy for Portugal, 2018-2030 (in accordance with RCM 25/2018), more specifically:

- the promotion of private investment in research and development (R+D)
- the promotion of collaboration between entities from the scientific and technological system and the business community, and
- the reinforcement of the participation of companies and entities from the national scientific and technological system in international networks and programmes with a view to promoting their capacities and competencies and the results of the promotion of innovation policy.

ANI is also entrusted with the dissemination, both at home and abroad, in collaboration with other entities, of successful cases of innovation in Portugal, thereby helping to associate Portugal with an image of an innovative country and to justify growing investments through returns to the economy and the well-being and quality of life of the population.

The capital of the National Innovation Agency is provided in equal parts by the Ministry of Science, Technology and Higher Education, through FCT - Foundation for Science and Technology (50%), and by the Ministry of Economy, through IAPMEI – Agency for Competitiveness and Innovation (50%).

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As part of its repositioning process, ANI is implementing an ambitious project designed to streamline and modernise its operations, boosting internal efficiency and, above all, enhancing its relations with the different stakeholders.

This redevelopment and positioning process included ANI creating the Collective Action Support System - Transfer of Scientific and Technological knowledge (SIAC). The main goal of this project is to promote the transfer of scientific and technological knowledge to the business sector, through networks and activities designed to assess the results of research and the economic exploitation thereof in markets and by companies. The aim is to use a series of coordinated and coherent initiatives to create new instruments and procedures to achieve this transfer and improvement.

Website:
ani.pt

FRANCE
AGENCE FRANÇAISE DE DÉVELOPPEMENT

The **Agence Française de Développement - ADF (French Development Agency)** finances, accompanies and streamlines research, development and innovation projects in different fields of action.

The AFD is a public body involved in the implementation of French policy on development and international solidarity. Development is one of the three pillars of the country's foreign policy, together with diplomacy and defence.

To contribute to economic, social and environmental progress, AFD grants loans and subsidies, provides consulting and technical advisory services, etc. These services are aimed at states, local entities, companies, foundations and NGOs. They allow for the execution of projects in different sectors such as climate, energy, education, digital, sports, biodiversity, urban planning, health, training…

The AFD group comprises AFD itself and their subsidiary Proparco, dedicated to financing of players in the private sector. Thanks to a network of 85 agencies around the world, the AFD group currently finances and monitors more than 4,000 development projects and programmes. The group's contributions totaled 12.1 billion euros in 2020.

Website:
afd.fr

BPIFRANCE

Bpifrance is Banque Publique d'Investissement, an integrated model designed to support innovation that is still atypical in Europe, as the integration within the same structure of the role of operators assigning aid to business innovation and the role of public development banking in the form of loans and capital investments is found in few countries.

Some European countries operate as an innovation agency, venture capital investor and promoter of exports (Finland, Ireland, Norway), but in smaller areas than that of Bpifrance (for example, in Finland the merger of Tekes and Finpro combines innovation, financing and support missions, but without the investment in venture capital that is part of another structure - TESI). On the other hand, many countries (Italy, Greece, etc.) manage innovation aid directly at ministerial level or by delegating management to different operators by programme, without any agency dedicated to innovation. In Germany, the ZIM (Zentrale Innovationsprogramm Mittelstand) programme for financing SMEs, which depends on the Federal Ministry of Economy and Energy, has three components managed by different operators, and the bank KfD carries out a mission of financing funds without any supporting companies or export insurance components. Germany didn´t use to have an innovation agency, but has just created a federal agency for funding disruptive innovation known as SPRIND.

Other examples of agencies that promote innovation are found in Sweden (Vinnova), the United Kingdom (Innovate UK) and Switzerland (Innosuisse). These entities are entrusted with support, but do not have a financing or venture capital investment function, this being entrusted to other institutions. Unlike public development banks, innovation agencies usually operate through grants and rarely with loans.

Bpifrance holds multilateral relations with European innovation agencies through the TAFTIE network (European Association of the main national innovation agencies): 29 organisations from 27 European countries exchange good practices on national innovation programmes. They launch tenders for joint projects and each agency is in charge of aid to companies in their country.

Moreover, Bpifrance has developed a range of products aimed at promoting the different phases of a company, such as the creation, development and growth of innovative organisations. Structural aid is provided to support and strengthen an ecosystem favourable to innovation, in addition to targeted investments to support the development and structuring of sectors regarded as strategic for the State:

- 1. Structural aid:
  - a. Financial aid in the form of grants, recoverable advances and loans.
  - b. Mechanisms to support innovation and non-financial aid.

- 2. Investments geared to supporting the development and structuring of sectors regarded as strategic for the State.
  - a. Collaborative projects and the reinforcement of sectors.

Furthermore, there are also other forms of aid that are combined in turn with other public aid

- 3. Tax and social aid
- 4. Regional aid
- 5. Ademe aid
- 6. BPI investment

Website:
bpifrance.fr

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