RURACTIVE OPEN CALL - CHALLENGE 8

Title of the challenge	**Digital Healthcare for Dispersed Rural Population**
Dynamo (pilot location)	Diputación de Zamora, Spain
RDD (Rural Development Driver) *addressed by the challenge*	Local services, health and wellbeing
Overall context description and specific context to be addressed by the challenge	The rural areas of the province of Zamora, such as the association of municipalities of *Mancomunidad Tierras de Campos-Pan-Lampreana*, are facing a notable ageing of the population and a depopulation trend. Of the 24 municipalities that make up this association, only one has more than 1,000 inhabitants. This reality has meant that the current public health system cannot efficiently cover all the towns in the *Mancomunidad* and the province in general. Some of the municipalities suffer not only from geographical isolation, but also from health isolation, as diagnosis and treatment times are delayed due to limited accessibility to health professionals and poor public transport coverage to the city of Zamora. This challenge seeks to address these problems through implementing innovative digital solutions. By establishing telemedicine infrastructure and developing mobile health applications, it aims to provide real-time medical care, overcoming geographical barriers and improving healthcare responsiveness, especially for the elderly and dispersed people in these areas. In addition, possible internet accessibility problems in some locations need to be addressed when implementing such solutions.
Scope of the Challenge	The objective is to establish or improve the digital health care infrastructure and mobile health solutions in the rural areas of the Mancomunidad Tierras de Campos-Pan-Lampreana community, with a special focus on the elderly population. This challenge seeks to implement immediate and efficient healthcare solutions aimed at improving remote diagnosis, patient monitoring and interaction between patients' caregivers and families, ensuring that they receive the care

	they need regardless of their location, while integrating gender considerations to address the specific needs and vulnerabilities of different population groups.
Solution requirements	The solution may contain one or more of the following technologies: • **Secure telemedicine platforms:** systems that enable real-time diagnostic tests and consultations with private doctors or authorised health professionals, with a focus on privacy and security of personal data. • **Mobile health applications:** applications that allow users to enter their own health data, receive medication reminders and schedule virtual consultations with independent professionals, facilitating self-management of health in rural areas. • **Remote patient monitoring:** IoT sensors to track vital signs (blood pressure, heart rate, etc.) and send the data securely to family members or informal caregivers, who can intervene quickly in case of emergencies. • **AI-assisted diagnosis:** Artificial intelligence tools that support informal caregivers in diagnosing common conditions, providing a first line of response before resorting to specialised medical care. In any use of these technologies, connectivity in territories with connectivity problems will be ensured through remote satellite connection options. Also, it would be useful if the solution integrates or is supported by a digital training platform to educate family or informal caregivers in the use of telemedicine technologies and in the care of older people, in order to strengthen local capacities to provide continuous support to older people. Low emission and climate adaptive solutions will be preferred. Gender considerations should be integrated into the solution to ensure inclusivity and address the specific needs of different population groups. For instance, the solution should consider gender-specific health challenges, promote equitable access to digital health tools, and involve women and caregivers in training and decision-making processes.
Specific objectives and expected outcomes	• **Improved access to healthcare:** the solutions will enable rural populations to access medical consultations in real time, improving care and reducing waiting times. • **Community-based models of care:** encouraging family and caregiver-led care, using remote monitoring technologies and training.

	• **Strengthening digital infrastructure:** technologies will be implemented to overcome geographical barriers, facilitating communication between patients and doctors. • **Improved real-time healthcare response:** solutions will provide faster interventions in medical emergencies through remote monitoring and AI. • **Empowering informal caregivers:** train local caregivers in the use of digital tools, improving the care of older people.
Available resources	• **Local infrastructure:** most municipalities have premises equipped with internet (not always high speed) and audio-visual facilities that can serve as a basis for implementing digital solutions. • **Public data and results of previous projects:** availability of population data and results of previous IoT monitoring projects of Diputación de Zamora. • **Local technical support and collaboration:** possibility to involve informal caregivers and local technical staff in the use and maintenance of the implemented solutions.