Smart and healthy living at home

A mix of advanced ICT ranging from biophotonics to robotics, from artificial intelligence to big data and from IoT to smart wearables can address these challenges. A platform for smart living at home should integrate these technologies in an intelligent manner.

The pilots should build on open platforms, standardised ontologies, APIs and results from IoT-based smart living environments, service robotics and smart wearable & portable systems and clearly go beyond current state of the art in terms of scale, the capabilities for personalisation, adaptation, and user acceptance.

Pilots in the selected areas should clearly cover the supply and demand sides. For further expanding with other users, developers of additional applications, replication of the pilot through new sites, and complementary assessment of the acceptability of the use cases where appropriate, the actions in this topic may involve financial support to third parties as outlined in the chapeau 'Platforms and Pilots'.

A clear methodology and impact indicators for socio-economic impact assessment from using the platform should be included, where possible using the MAFEIP[[See www.mafeip.eu]] framework. The number of users involved and duration of pilot services should be sufficient to ensure significance in impact analysis, with a minimum of 4 pilot sites in 4 countries.

The proposed pilots should also demonstrate feasibility of integration with other relevant application domains such as energy, transport, or smart cities, including interoperability, along with data security and integrity, and models for data sharing and valorisation are to be developed in order to create incentives for data aggregation across different platforms and application areas. Regulatory aspects and legal aspects of data ownership should be addressed. Relevant ethics and gender issues should be taken into account.
Proposals should address one of the two following areas:

Intelligent and personalised digital solutions for sustaining and extending healthy and independent living

The objective is to develop and deploy innovative and user-led digital solutions capable of supporting and extending healthy and independent living for older individuals who are facing permanently or temporarily reduced functionality and capabilities.

Innovative ways for ensuring user-friendly and accessible interface design and new intuitive ways of citizen interaction and trust creation are needed. Special emphasis should be given to viable concepts that ensure security and privacy by design, data protection, safety, security and trust in the resulting system and service delivery inside and outside the home.

Personalised early risk detection and intervention

The objective is to develop and deploy innovative and user-led solutions building on big data for personalised risk detection, advanced health monitoring and early interventions for people facing increased health and social risks. Proposals should design and demonstrate innovative personalised treatments and therapies based on early detection and risk avoidance. Because of the personal and sensitive nature of health data, special attention needs to be paid to trust, privacy and data protection.

For this topic, the four activities and impact criteria described in the chapeau 'Platforms and Pilots' have to be applied. Pilot projects are expected to contribute to the consolidation and coherence work that will be implemented by the CSA supporting the activities defined under ""DT-ICT-13-2019: Digital Platforms/Pilots Horizontal Activities"". This requires that they contribute to clustering their results of horizontal nature (interoperability approach, standards, security and privacy approaches, business validation and sustainability, methodologies, metrics, etc.).

The Commission considers that proposals requesting a contribution from the EU between 15 and 20 EUR million for Innovation Actions would allow the areas to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts. At least one proposal should be funded for each of the above-mentioned areas.

Citizens in a rapidly ageing European population are at greater risk of cognitive impairment, frailty and multiple chronic health conditions with considerable negative consequences for their independence, quality of life and for the sustainability of health and care systems. The challenge is to foster large-scale deployment of integrated digital solutions which will bring improved quality of life to citizens while demonstrating significant efficiency gains in health and care delivery across Europe.
• Emergence of European-led platform for smart and healthy and independent living at home;
• Increased competitiveness of the European ICT industry in the domain, through enhanced interoperability, best practices for viable business and financing models and scalable markets;
• Demonstrate links and build synergies with Member States' and regional initiatives in this area;
• Improved and evidence-based efficiency of health and care systems with demonstrated added-value of underlying technologies;
• Improved quality of life and health status for involved users and carers, with demonstrated added-value of underlying technologies;
• User accepted, validated innovative solutions addressing accessibility, privacy, security, vulnerability, liability, and trust in connected data spaces.

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