

SHAPES

Smart and Healthy Ageing through People Engaging in Supportive Systems

Project Summary and Key Outcomes

SHAPES was a large-scale **EU-funded Innovation Action** designed to support **healthy and independent living for older adults** through the development and evaluation of an integrated digital ecosystem.

The project brought together a range of **digital solutions, connected medical devices and analytics tools**, enabling older individuals—particularly those living with chronic conditions—to **self-monitor health, manage medicines, and engage with supportive care systems in their own homes**.

A core component of SHAPES was a **Pan-European pilot campaign**, where technologies were co-designed, tested, and evaluated across multiple use cases and phases, including design, prototype testing, real-world demonstrations, and large-scale pilot deployment.

The pilot programme demonstrated both the **potential and practical challenges** of implementing digital health solutions at scale across diverse European settings.

Key outcomes included:

- **Development and testing of an integrated digital ecosystem** combining mobile applications, connected devices (e.g. blood pressure monitors, pulse oximeters), and analytics tools to support remote monitoring and self-management
- **Implementation of a structured, multi-phase pilot programme** (design, testing, demonstration, large-scale deployment) across multiple European sites and use cases
- **Evidence of feasibility for remote monitoring and self-management**, with participants successfully recording and transmitting health data and engaging with digital tools in home environments
- **Strong user engagement and usability in some pilot settings**, particularly where participants were digitally confident, with high usability scores and regular app usage reported
- **Validation of predictive analytics capability**, including the ability to generate risk scores for health deterioration (e.g. heart failure decompensation) using real-world data
- **Strengthened collaboration between healthcare providers, researchers, technology developers and community partners**, supporting co-design and evaluation of solutions
- **Evidence of variability in outcomes across sites**, with differences in usability, engagement and success linked to context, technology setup and participant characteristics

Key challenges identified:

- **Recruitment and accessibility barriers**, particularly relating to digital literacy, device access, health status and confidence in using technology, which significantly limited participation in some settings
- **Technical integration challenges**, including interoperability issues between digital solutions, device connectivity problems, and usability complexities associated with multi-component systems
- **Variability in user experience**, with high usability in some pilot sites but lower usability and acceptance in others, highlighting the importance of local context and support
- **Complexity in embedding digital solutions into routine care**, including questions around responsibility for monitoring data, workforce capacity and integration with existing care pathways
- **Operational and resource requirements**, including the need for training, technical support, and sustained funding to enable effective large-scale deployment
- **Challenges in scaling and standardisation**, driven by differences in infrastructure, user needs and system readiness across participating regions

Overall conclusion

The SHAPES project demonstrated that **integrated digital health ecosystems can support remote monitoring, self-management and independent living for older adults**, particularly in digitally confident populations.

However, the findings also highlight that **successful implementation at scale requires addressing significant challenges**, including digital inclusion, usability, technical integration, and alignment with health and care systems.

Funder

The SHAPES project was funded by the **European Union's Horizon 2020 research and innovation programme**, under **Grant Agreement No. 857159**.

Number of Partners

The SHAPES consortium consisted of a large multidisciplinary partnership including **healthcare organisations, research institutions, technology providers and community partners** working collaboratively across Europe.

Grant Duration

SHAPES ran from **1 November 2019** with activities continuing through **2023**, including extended pilot delivery and reporting phases.

- **Start date:** 1 November 2019
- **Duration:** Originally planned as 48 months, with extensions to support pilot completion