

in4aha

Helping people enjoy life longer



PROJECT FACTS

Scope:	Innovation strategy tools, models and frameworks
Funding:	1.9M EUR
Partners:	10
Timeline:	2021-2023
Deliverables:	Model for scaling innovation Practical tools for design and evaluation
Impact:	Enables existing active ageing ecosystems to scale innovation faster, makes it easier to replicate aha innovation across the continent.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101017603

<http://ec.europa.eu/digital-single-market/ehealth>

People grow old, products stay the same

Age brings wisdom but takes away flexibility. Having access to doctors also becomes more important. But most people need more than medical services delivered better. Next to medical innovation, they want ergonomic fit and choice in whatever they do or wherever they go.

This is a challenge for SMEs and active healthy ageing innovation partnerships and ecosystems across Europe. Why?

Because most are plugged into supply chains of multinationals for example in automotive and various forms of manufacturing. They innovate within their niche. Moving out of that value chain with new products and a new brand, targeting an emerging market is a novel experience they lack practice and tools for. It's not who they are. It is equally difficult for startups or small businesses to imagine and execute a growth phase in a new industry such as active healthy ageing, still emerging, taking shape both in terms of consumer preference and incentives.

This is where IN4AHA comes in. Aggregating best existing practices, helpful for all who seek to start with innovative products as well as useful for all existing SMEs and smaller businesses, covering everything from a market overview, design frameworks, innovation strategies and assessment frameworks.

Current priorities in supporting the demographic shift towards higher age.



**FOCUS ON
DIGITAL
HEALTH**

**FOCUS ON ACTIVE HEALTHY AGEING
OUTSIDE HEALTH**

13 key resources for AHA market

For understanding market dynamics, developing products, investing and scaling up. The impact of IN4AHA surpasses its key output - the innovation scaleup model. Providing insights, planning recommendations and practical tools.

**GET ACCESS
TO FULL IN4AHA
PROJECT OUTPUTS**

PRINCIPLES & INSIGHT

**MARKET INVESTMENT
READYNESS ASSESMENT**

DESIGN PRINCIPLES

**ACCESSIBILITY AND
ADOPTION OF PRODUCTS**

**EVALUATION &
ASSESSMENT MAPPING**

PLANS

**LONG TERM AHA MARKET
INVESTMENT PLAN**

**POLICY
RECOMMENDATIONS**

**PUBLIC PRIVATE COLLABORATION
RECOMMENDATIONS**

TOOLS

**LIVING LAB
TESTING**

**INNOVATION
SCALE-UP PLAYBOOK**

**PARTICIPATORY DESIGN
PRINCIPLES**

**SCALE-UP
MODEL**

**DATA GOVERNANCE
GUIDEBOOK**

**EVALUATION
TOOLBOX**

The wide use of digital tools for citizen empowerment and person-centred care depend on the contribution of local and regional ecosystems, stakeholder groups, and organisations, including industry, civil society, academia, and public administration. **IN4AHA supports this empowerment with market insight, action principles, specific plans and proven tools.**

in4aha



**INNOVATION
SCALE-UP
MODEL**

Innovation is simple to say, hard to scale

There is a lack of research on the current investment landscape of the active and healthy ageing (AHA) market, including on the barriers to entry present in this sector. **IN4AHA identifies five key gaps and proposes potential solutions to mitigate them:**



Things that can be solved top down with digital platforms, data management, mandates, standards and complex authorization are already done well. Large tickets for big institutions. What about the bottom up? That's a different story.

Based on the analysis, a review of available options for entrepreneurs to finance the development and scale-up phases of their AHA businesses were identified, including different private, public, and blended sources.

For each instrument, the analyses summarised the main information allowing AHA innovators to assess the relevance of the instrument depending on their development status and investment needs.

Based on the information provided, **a separate checklist for funding innovation was also developed** (added as a stand-alone tool in the Annex 3).

While it is evident that the availability of instruments is not uniform, special emphasis was placed on understanding the main drivers and reasons behind the situation so that the Investment strategy can be built to prioritize interventions to create the impact.

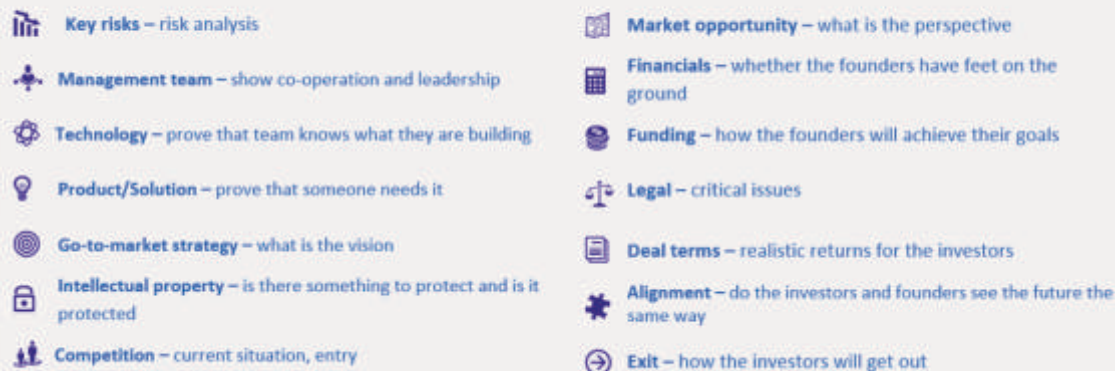
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Market growth & the funding **checklist**

As the investment landscape for AHA is developing and more generalist private investors are looking to invest in AHA-related companies, the sector specific criteria for start-ups are quickly starting to disappear and AHA solutions are more and more being viewed as being part of the mainstream tech sectors. IN4AHA tools help innovators understand funding options and diligence elements they must master.

DD focus areas: what investors want to know and verify



Focus areas can vary from investor to investor

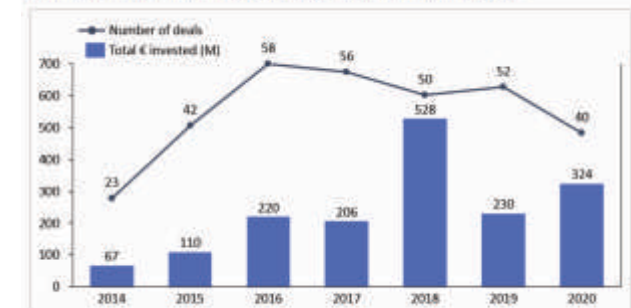
Early-stage companies by their nature have little information to analyse and therefore Due Diligence might be centered around some key topics like:

- Team
- Market potential
- Contracts and agreements and legal risks
- Intellectual property (depending on the business)

Table 33. Key takeaways regarding AHA sector from conducted interviews.

Aspect	Discussion
Market complexity	AHA market in the EU was widely deemed to be a difficult market to navigate in, not only for start-ups but also investors and facilitators, as it is still an emerging one, especially compared to the US market.
Fragmentation	The current EU market was also seen as being highly fragmented with several limitations preventing its rapid growth, mainly highlighting complex and individually regulated healthcare systems, inaccessibility of necessary data, and lack of Europe-wide support.
Slow development	It was also deemed a slow market in terms of the speed of adoption of innovative solutions, as well as in generating return on investment, those two aspects were seen as being highly interdependent.
Target segment specifics	Older population has increased price sensitivity, conservatism in decision-making, and lack of trust in innovative solutions, especially technology-based ones, if compared to other segments.

Figure 5. Number of investments into AHA innovations over the last several years.

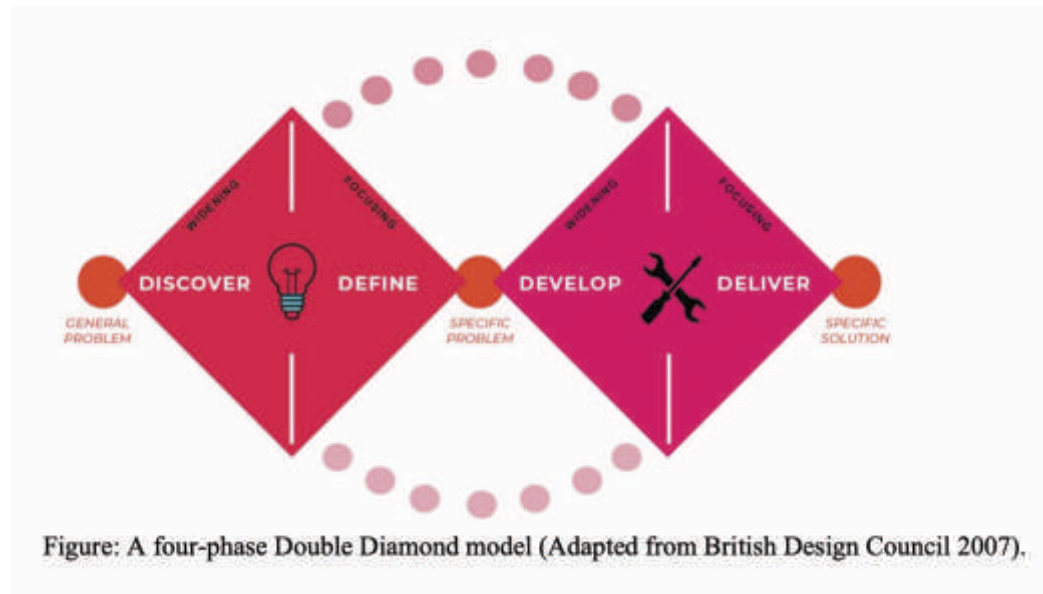


Source: Crunchbase, 2020.⁴³

The amount of investment into AHA innovations globally has significantly grown over the last decade. It is likely that the interest towards AHA business ideas is not going to slow down, especially considering the increase of the target segment of older adults and the pressure it places on the business sector to bring forward innovative products and services.

Common **design** practices & principles

Most focus goes into digital health solutions, biometric monitoring, pharmaceuticals, rehabilitation. That's where the need and cashflow is. Preemptive products and services are limited in scope.



The IN-4-AHA approach is to use participatory design for the engagement of business environment actors and enablers for innovation scale-up model creation and roadmap-building. The report will be an input into the practical innovation scale-up model and a roadmap to guide the practical activities related to the scale-up of the innovations that will be created by the end of the project as the main outcome.

READ PARTICIPATORY DESIGN GUIDELINES

Work Package: WP3. Participatory Design of IN-4-AHA
Deliverable: D3.1
Dissemination level: Public
Version: Version number 2.0, December 28, 2021

PARTICIPATORY DESIGN

For the needs of the innovation scale-up process in the health and care sector.



Authors

In preparation of this report, Foundation Tallinn Science Park Tehnopol and nine other IN-4-AHA consortium partners worked closely with two experts with practical experience in the field – UX expert **Helen Kokk** (<https://www.linkedin.com/in/helen-kokk-bb580434/>) and **Tõnu Esko, PhD**. (Professor of Human Genomics, University of Tartu, Head and Chief Business Officer, Estonian Biobank Connoation Center/Vice Director of Institute of Genomics, University of Tartu/Co-founder of UniTartu Ventures and Estonian Biobank Data Accelerator) (<https://www.linkedin.com/in/tõnu-esko-24511524/>).

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Common **design** practices & principles

IN4AHA created a tool for measuring person-centred attention present in technological innovations from the user experience. It provides information that guides technology developers to focus on the real needs and expectations of the end-user in order to achieve more successful and scalable

Table 9. Case studies' key success factors

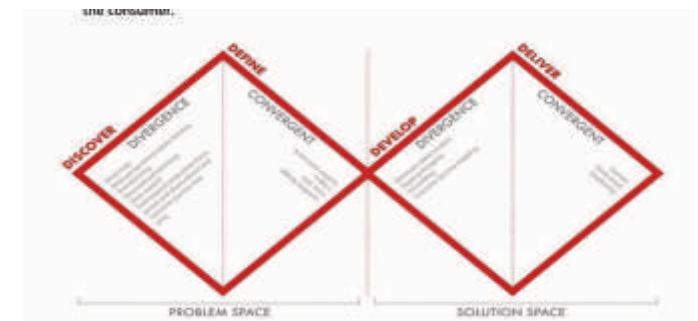
Common key factors in the case studies
<ul style="list-style-type: none"> • The use of the technological solution should be as easy, simple. In addition, as understandable as possible for a wider adoption of the technological solution. • The technological solution should be as intuitive as possible. • The technological solution must bring about well-being and security for the end-users. • The technological solution should present customisation options for end-users. • Automation and digitisation of technological processes benefit end-users • For optimal participatory design, all stakeholders in the elderly care ecosystem (elderly family members, caregivers, health professionals and service providers) must be taken into account. • Designs with a more person-centred approach have higher adoption and satisfaction among users.

The main barriers identified in the user experience are related to technical problems and interoperability issues between devices.

PERSON CENTERED DESIGN TOOL

Helping innovators find the best user experience, through a design thinking process.

AVAILABLE AT innovation4ageing.tehnapol.ee



The Xamk team from Finland has conducted a review of the tool and concluded that the indicators and questionnaires fit perfectly in their test environment and that the tool as a whole would be useful in their testing processes.

Long term AHA market **investment plan**

The digital health market itself must be divided into two. On the one hand, there are the solutions not classified as medical devices in the eyes of the law. The report explains the development paths and related financing implications (innovator investment strategy) for both categories.

A deep dive into the development model of medical device digital health solutions is then presented. The structure of the model is borrowed from the Consortia for Improving Medicine with Innovation & Technology (CIMIT) model originally developed by various healthcare stakeholders to “find, fund, and facilitate” healthcare innovation.

SOURCE OF FINANCING	NATURE		DEVELOPMENT PHASE				EXAMPLES
	Public	Private	Ideation	Development	Market Entry	Adoption	
Own capital		✓	✓	✓			
FFF		✓	✓				
Incubators	✓	✓	✓				Terikko Health Hub , EIT Health Bootcamp
Accelerators	✓	✓		✓	✓		G4A , Open Accelerator , Accelerace , i&I Prague , EIC Accelerator
Angel investors		✓		✓			
Venture Capital		✓		✓	✓		Credo Ventures , iBioNext , EarlyBird , Atomico
Public Grants/Programs	✓			✓	✓		EIC Pathfinder , Horizon Europe , EIC Transition , Investor Network programme , Innovation Procurement
In-kind investors	✓	✓		✓	✓		Cambridge Enterprise , UniTartu Ventures , clinical partners
Specialized funds		✓			✓	✓	Capricorn Partners
Corporate funds		✓			✓	✓	Orange Ventures
Family offices		✓			✓	✓	MAIYCC
Investment firms		✓			✓	✓	Farallon Capital , Red River West , Tiger Global Management
Private Equity		✓				✓	Five Arrows , TA Associates
IPO		✓				✓	Conducted via investment banks
Debt issuance		✓				✓	Conducted via investment banks or commercial banks

INNOVATOR CHEAT SHEET

AVAILABLE AT innovation4ageing.tehnopol.ee

Figure 8. Innovator Cheat Sheet: Roadmap of Insights for Digital Health Innovator in the AHA Market



The development roadmap is quite complicated for a digital health medical device but there are many different channels of financing available to make it happen. They are condensed the most important insights in the “Innovator Cheat Sheet”. In general, the innovator will be successful if they are solving a severe enough problem, commit to development, are relentless in getting feedback, are strategic in monetisation channels and attentive to regulatory and clinical requirements of their development.

Innovation & **scale-up** playbook

Health and care systems are facing major challenges as the world's population ages rapidly. At the same time, digitalisation offers enormous opportunities to overcome these challenges and creates great business potential for the development of scalable Active and Healthy Ageing (AHA) innovations.

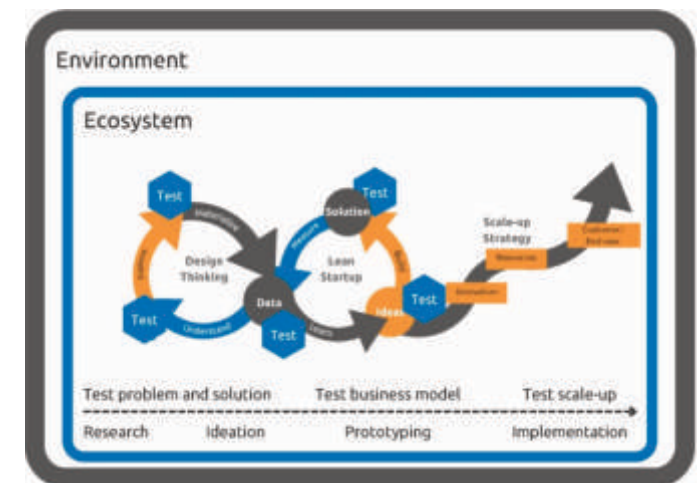
Creating scalable innovations and profitable business in the AHA field requires multidisciplinary collaboration of a wide range of stakeholders. One of the environments bringing stakeholders together is found in living labs, which can play an important role in assessing the relevance of innovations for the end-users. The playbook offers guidance on how to test innovative AHA solutions in living labs and how to scale them up. Guidance is provided to start-ups but also for all parties interested in living lab testing and scaling up AHA innovations. The playbook includes tips and practical tools for self-assessment.

LIVING LAB TESTING

There are various types of needs and older generations are increasingly used to embracing technology, but still, you must fulfil the criteria of a good business to get funding. To make your innovation scalable you must never be biased by your own environment. However, you must be aware of cultural and legislative differences in different countries. A good way of doing this is through living lab testing.

[See IN4AHA videos on How to test and scale-up innovations.](#)

GET ACCESS TO ONLINE SCALE-UP PLAYBOOK



INTEGRATING THE APPROACHES OF DESIGN THINKING, LEAN STARTUP, SCALING UP AND ECOSYSTEMS. ADAPTED FROM GIBBONS (2016); ZURKUHN ET AL. (2019); MUELLER AND THORING (2012); OJASALO AND OJASALO (2018); PAAKKINEN (2021); CIMIT; RIES (2011); BORTOLINI ET AL. (2021); WHO (2010); GABRIEL (2014).





STRATEGY

LEARN



PLAN



PILOT



PREPARE



RAMP-UP



STAKEHOLDERS

Interactive and downloadable questionnaires guide you through the scale-up model phases.

Visit innovation4ageing.tehnopol.ee to get access today



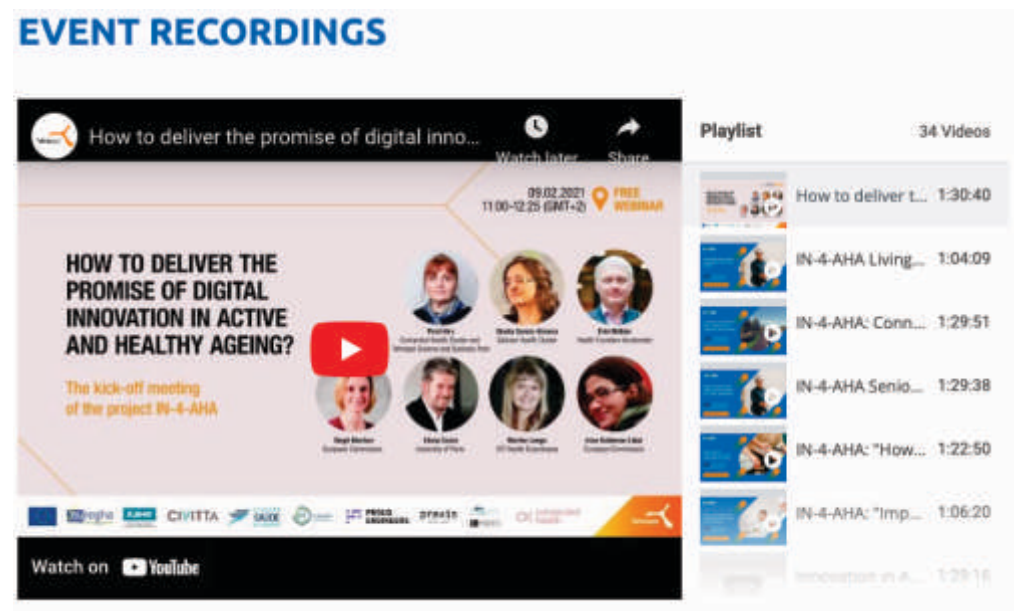
The Innovation for Active and Healthy Ageing “Data Protection Policy” gives a general understanding of how personal data is processed throughout the project.

[Download Data Protection Policy →](#)

This document meets the requirements of the EU’s General Data Protection Regulation (GDPR).

Interactive tool & videos

Host of resources to help you get innovation off the ground.



FURTHER RESOURCES Links to more resources can be found in the [complete version of the playbook](#).

Living Lab test tools for start-ups and SMEs

- Tool 1 – Preparation for Living Lab tests: Goals
- Tool 2 – Preparation for living lab tests: solution, prerequisites and testing needs
- Tool 3 – Estimation of values of person-centred care (PCC)
- Tool 4 – Tool for Technology Readiness Level (TRL) Assessment

Scale-up tools for start-ups and SMEs

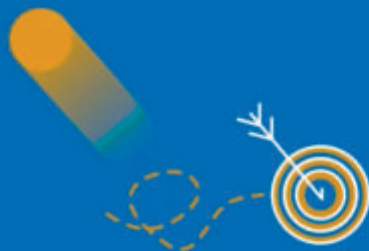
- Tool 5 – Key points of a business model (Lean Canvas)
- Tool 6 – Evaluation of scalability of an innovation
- Tool 7 – Enhancement of scalability of an innovation
- Tool 8 – Questions to consider when scaling up: Why, what, and how?

How to use the tools?

By clicking on the various tools links above, you will be able to download or print fillable PDF files.



Innovation
scale-up model



Implementation
roadmap



Impact
evaluation
toolkit



Long-term
investment
strategy

The objective of IN-4-AHA is to facilitate the scalability of innovative solutions in active and healthy ageing across EU. Testing opportunities and business coaching for innovative and scalable solutions. T

User-centred cross-border testing of selected innovations was be done in e-environments and physical spaces in Finland and Spain.

EMPOWERING INNOVATION FOR ACTIVE AND HEALTHY AGEING

in4aha

innovation4ageing.eu

PORTO

XAMK

Tehnopol

CLUSTER

CLUSTER

euregha

PROUD
ENGINEERS

CIVITTA

CLUSTER
SACCO DE
GALICIA

praxis



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<https://digital-strategy.ec.europa.eu/en/policies/rep-aha>

ONEPAGER in4aha

Today if you are looking for revenue growth with innovation, the market of products and services enabling an active healthy ageing is underserved, with demand picking up due to shifting demographics.

But designing and evaluating products is tricky, incentives are hard to track and access to private funding varies. IN4AHA identifies key gaps in developing, testing and scaling potential solutions to the European market and provides tools, models and policy recommendations.

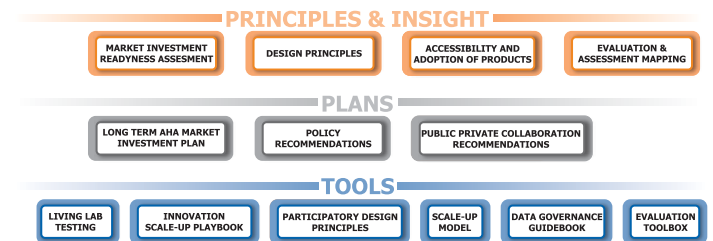
For startups and SMEs, the IN-4-AHA project provides a scale-up model that is validated by stakeholders and complemented by a clear implementation roadmap, an innovation impact evaluation toolkit and a strategy for long-term investments.



This includes principles and market insight, long term investment plans and policy recommendations as well as specific strategic and tactical tools.

Visit innovation4ageing.tehnopol.ee today and learn how you can apply IN4AHA resources to design, validate and scale new products and services an active healthy ageing customers.

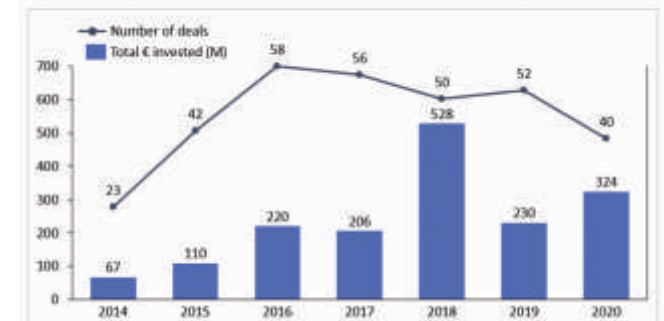
ACCESS THE ENTIRE IN4AHA PLANNING AND PRODUCT SCALING TOOLS FOR SMEs and STARTUPS



Besides coordinating and supporting the further scale-up of mechanisms provided by European Union institutions working towards a more efficient uptake of innovation cycle in active and healthy ageing, the IN-4-AHA project will also connect new supply and demand actors.

Venture investments in AHA products are rising. Learn how to get funded.

Figure 5. Number of investments into AHA innovations over the last several years.



Source: Crunchbase, 2020.²³