



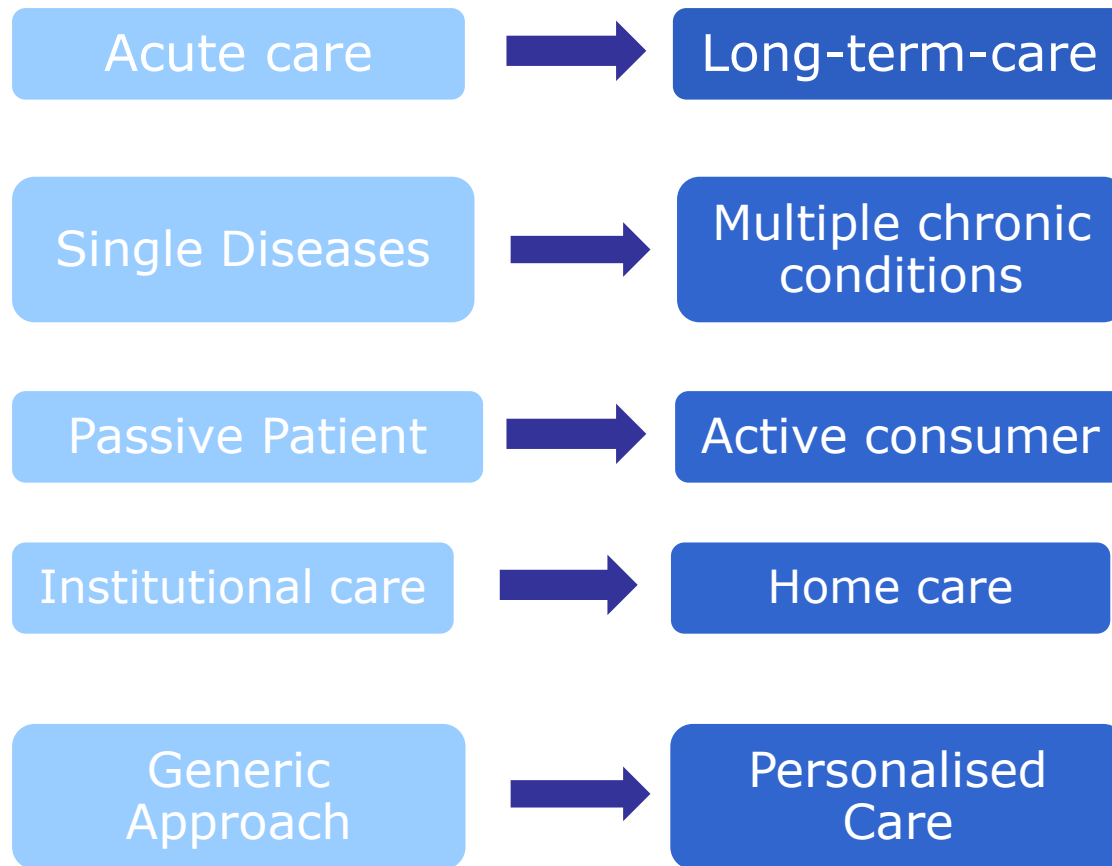
**Internet of Things  
Horizon 2020 call:  
DT-TDS-01-2019:  
Smart and healthy living at home**



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# Transformation of Health and Care

## Multiple Dimensions





European  
Commission



**Prevention and  
early risk detection**



**New therapies and  
diagnostics**



**Personalised  
Medicine**



**New health and  
care models**

# Data-driven innovation

*High-performance computing*

*Advanced Data-Analytics*

*Artificial Intelligence*

*4G/5G*

*Cloud computing*

*Internet of Things (IoT)*

*mHealth*

*Wearables*

*Telehealth*



# TRANSFORMATION OF HEALTH AND CARE IN THE DIGITAL SINGLE MARKET - Harnessing the potential of data to empower citizens and build a healthier society

## European health challenges

- ⊗ Ageing population and chronic diseases putting pressure on health budgets
- ⊗ Unequal quality and access to healthcare services
- ⊗ Shortage of health professionals

## Potential of digital applications and data to improve health

- 🍃 Efficient and integrated healthcare systems
- 🍃 Personalised health research, diagnosis and treatment
- 🍃 Prevention and citizen-centred health services

## What EU citizens expect...

- 90% agree** To access their own health data (requiring interoperable and quality health data)
- 80% agree** To share their health data (if privacy and security are ensured)
- 80% agree** To provide feedback on quality of treatments

## Support European Commission:

**1** Secure access and exchange of health data 

**Ambition:**  
Citizens securely access their health data and health providers (doctors, pharmacies...) can exchange them across the EU.

**Actions:**

- eHealth Digital Service Infrastructure will deliver initial cross-border services (patient summaries and ePrescriptions) and cooperation between participating countries will be strengthened.
- Proposals to extend scope of eHealth cross-border services to additional cases, e.g. full electronic health records.
- Recommended exchange format for interoperability of existing electronic health records in Europe.



Updated 2019/04/2019

**2** Health data pooled for research and personalised medicine 

**Ambition:**  
Shared health resources (data, infrastructure, expertise...) allowing targeted and faster research, diagnosis and treatment.

**Actions:**

- Voluntary collaboration mechanisms for health research and clinical practice (starting with "one million genomes by 2022" target).
- Specifications for secure access and exchange of health data.
- Pilot actions on rare diseases, infectious diseases and impact data.

**3** Digital tools and data for citizen empowerment and person-centred healthcare 

**Ambition:**  
Citizens can monitor their health, adapt their lifestyle and interact with their doctors and carers (receiving and providing feedback).

**Actions:**

- Facilitate supply of innovative digital-based solutions for health, also by SMEs, with common principles and certification.
- Support demand uptake of innovative digital-based solutions for health, notably by healthcare authorities and providers, with exchange of practices and technical assistance.
- Mobilise more efficiently public funding for innovative digital-based solutions for health, including EU funding.



# DT-TDS-01-2019: Smart and healthy living at home

## Challenge

- Citizens 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;
- 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.

## Scope

- Platform for smart living should integrate a mix of advanced ICT ranging from biophotonics to robotics, from artificial intelligence to big data and from IoT to smart wearables
- Pilots to build on open platforms, standardised ontologies, APIs and results from IoT-based smart living environments, service robotics and smart wearable & portable systems
- Go beyond current state of the art in terms of scale, the capabilities for personalisation, adaptation, and user acceptance

# DT-TDS-01-2019: Smart and healthy living at home

One of two Areas can be addressed:

1. Intelligent and personalised digital solutions for sustaining and extending healthy and independent living
  - support to older individuals at risk of temporary or permanently reduced functionality and capabilities
2. Personalised early risk detection and intervention
  - Innovative solutions for prevention and treatments based on early risk detection for people facing increased health and social risks
  - Cover the supply and demand sides
  - Clear methodology and impact indicators for socio-economic impact assessment from using the platform, where possible using the MAFEIP framework
  - Demonstrate feasibility of integration with other relevant application domains such as energy, transport, or smart cities, including interoperability, along with data security and integrity
  - Minimum of 4 pilot sites in 4 countries.

# DT-TDS-01-2019: Smart and healthy living at home

## **Impact**

- 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.

# DT-TDS-01-2019: Smart and healthy living at home

## Deadline and budgets

- Submission Deadline: 14 November 2018
- Innovation Action
- Budget: 60M € (expected contribution up to 15-20M € per proposal)



## H2020 Some relevant links

Digital Transformation in Health and Care Communication

<https://ec.europa.eu/digital-single-market/en/news/communication-enabling-digital-transformation-health-and-care-digital-single-market-empowering>

European Innovation Partnership on Active and Healthy Ageing (EIP on AHA):

[https://ec.europa.eu/eip/ageing/home\\_en](https://ec.europa.eu/eip/ageing/home_en)

General Data Protection Regulation: <http://eur-lex.europa.eu/eli/reg/2016/679/oj>

The CEF eHealth initiative:

<https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/CEF+Digital+Home>

The eHealth Network activities:

[https://ec.europa.eu/health/ehealth/policy/network\\_en](https://ec.europa.eu/health/ehealth/policy/network_en)



## H2020 Some relevant links

- Horizon2020 web site  
<http://ec.europa.eu/programmes/horizon2020>
- Participants portal  
<http://ec.europa.eu/research/participants/portal>
- H2020 Helpdesk, including FAQ  
<http://ec.europa.eu/research/index.cfm?pg=enquiries>
- H2020 SC1 Work Programme  
[http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-health\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-health_en.pdf)
- SC1 Info Day: 8 December, Brussels  
<http://ec.europa.eu/research/index.cfm?pg=events&eventcode=60956678-FA2F-4FE0-77E88D89843C91BE>