



#InvestEUresearch



Horizon 2020 Work Programme for Research & Innovation 2018-2020

SC1 'Health, demographic change
and well-being'
Calls 'Digital Transformation of Health
And Care' and 'Trusted Digital Solutions
and Cybersecurity in Health and Care'

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Digital Single Market Strategy Mid-term Review



- **Digital health and care transformation was included as part of the *Digital Single Market mid-term review* (adopted 10 May 2017).** The DSM proposal aims to ensure that the digitisation in health and care will benefit EU citizens (providing them with better treatment, prevention and early diagnosis of diseases) and deliver more sustainable health and care systems across the Union.

Digital Single Market Strategy

Mid-term Review

Digital Transformation of health and care (3 pillars)

- ***Citizen's secure access to and use of health data***
- ***Advancing research, disease prevention and personalised medicine***
- ***Citizen empowerment and patient-centred care***

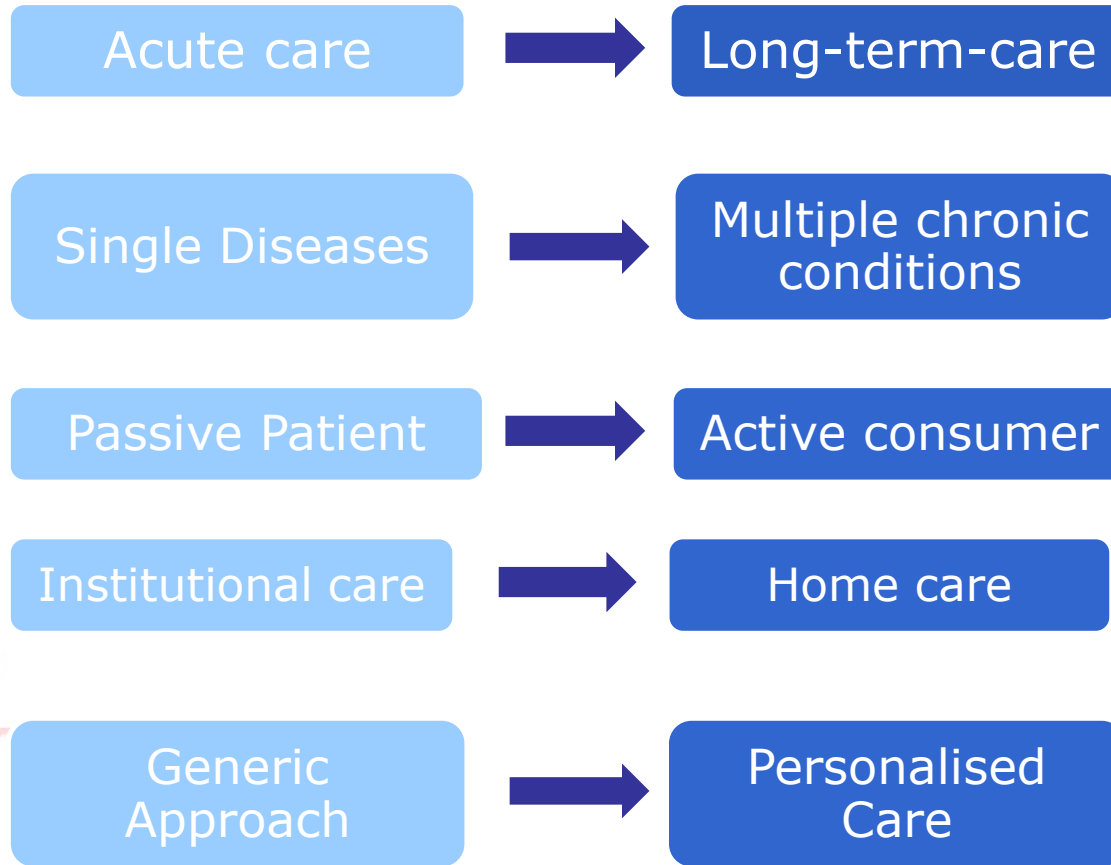
The Commission will adopt a Communication in 2017 addressing the need and scope for further measures in the area of digital health and care, in line with legislation on the protection of personal data, patient rights and electronic identification, in particular as regards:

- *citizens' secure access to electronic health records and the possibility to share it across borders and the use of e-prescriptions.*
- *supporting data infrastructure, to advance research, disease prevention and personalised health and care in key areas including rare, infectious and complex diseases.*
- *facilitating feedback and interaction between patients and healthcare providers, to support prevention and citizen empowerment as well as quality and patient-centred care, focussing on chronic diseases and on a better understanding of the outcomes of healthcare systems.*



Transformation of Health and Care

Multiple Dimensions





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



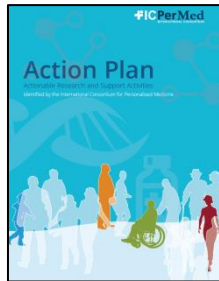
European Commission

Digital Single Market Strategy

Mid-term Review

- **We want to foster EU Commission actions, with strong EU added-value, to stimulate Member States** to cooperate further on the three DSM mid-term review priorities for health for the benefit of citizens
- Through:
 - **Funding** (Connecting Europe Facility, Horizon 2020, Health Programme, Investment Plan - European Fund for Strategic Investments, Structural funds);
 - **Legal implementation and coordination**
 - Directive on patients' rights in cross-border healthcare
 - General Data Protection Regulation
 - Directive on Security of Network and Information Systems (NIS Directive)
 - Regulation on electronic identification and trust services for electronic transactions in the internal market (eIDAS);
 - **Cooperation mechanisms** (e.g. eHealth Network, European Innovation Partnership on Active and Healthy Ageing)

Health collaborative research – 7 priorities for 2018–2020



Personalised medicine



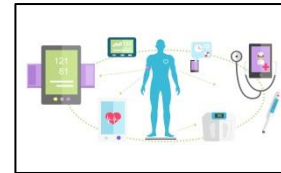
Decoding the role of
the environment for
health and
well-being



Infectious diseases and
improving global health



Innovative health
and care industry



Innovative health, and
care systems –
Integration of care



Digital transformation in
Health and Care



Trusted Big Data
solutions and
Cybersecurity for
Health and Care

7 priorities implemented via SC1 Work Programme 2018–2020 through 3 Calls for proposals

Call 'Better Health and care, economic growth and sustainable health systems'

5 main priorities & 32 topics

Call 'Digital transformation in Health and Care'

13 topics

Call 'Trusted digital solutions and Cybersecurity in Health and Care'

3 topics

Other Actions 2018–2019

7 items

*approx.
€ 2 billion*



CALL– Digital transformation in Health and Care

- Better access to healthcare and sustainability of health and care systems
- To empower the participation of citizens and facilitate the transformation of health and care services to more digitised, person-centred and community-based care models
- eHealth and mHealth
- ICT for Active and Healthy Ageing

IMPACT: to maximise the potential of the digital economy in the health and care sectors

POLICY DRIVERS:



Connected Digital Single Market



European Cloud Initiative



European Free Flow of Data initiative



Silver Economy initiative

CALL– Digital transformation in Health and Care

Digital transformation in Health and Care in Work Programme 2018–2020 (I)

- **DTH-03-2018: Adaptive smart working and living environments supporting active and healthy ageing**
- **DTH-07-2018: Exploiting the full potential of in-silico medicine research for personalised diagnostics and therapies in cloud-based environments**
- **DTH-08-2018: Prototyping a European interoperable Electronic Health Record (EHR) exchange**
- *DTH-01-2019: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment*
- *DTH-05-2019: Large scale implementation of digital innovation for health and care in an ageing society*
- *DTH-09-2019: Scaling up the univocal Identification of Medicinal Products*
- **DTH-10-2019-2020: Digital health and care services**
- *DTH-11-2019: Large Scale pilots of personalised & outcome based integrated care*

Digital transformation in Health and Care in Work Programme 2018–2019 (II)

Coordination and support actions

- **HCC-01-2018: Supporting investment in smart living environments for ageing well through certification**
- **HCC-03-2018: Support to further development of international cooperation in digital transformation of health and care**
- **HCC-04-2018: Digital health and care services – support for strategy and (early) adoption**
- **HCC-05-2018: Support to a Digital Health and Care Innovation initiative in the context of Digital Single Market strategy**
- *HCC-02-2019: Support for the large scale uptake of open service platforms in the Active and Healthy Ageing domain*

CALL– Digital transformation in Health and Care

SC1-DTH-03-2018: Adaptive smart working and living environments supporting AHA

Challenge:

- Demographic change and ageing create new challenges for age-friendly living and working environments such as a shrinking workforce and more workers with functional impairments, chronic conditions and care duties
- Digital solutions can support older individuals in being and staying actively involved in professional life for longer by designing fit for purpose working environments and by enabling flexible management of job

Scope:

- Develop and validate digitally enabled adaptive services and solutions leading to smart working and living environments for older adults
- Support older adults to remain actively involved in professional life, helping them to sustain and renew their work and personal life related skills and support independent active and healthy lifestyles while taking into account reduced capabilities due to age-related health risks and conditions

CALL– Digital transformation in Health and Care

SC1-DTH-03-2018: Adaptive smart working and living environments supporting AHA

- Unobtrusive and addressing the needs of employees in specific and various sectors and workplaces
- Build on active user engagement and aimed at realistic and verifiable benefits for flexible and sustainable job longevity measures
- Validation should take place in real settings (at workplaces and at home as required)
- Inclusion of the necessary stakeholders to validate all relevant issues
- Attention theft and impeding physical activity by ICT should be avoided

Impact:

Proposals should present methodologies and metrics as appropriate for measuring progress with significance towards the expected impact in:

- Independent living, and quality of life of older persons compared to current state of the art, enabling older persons to stay actively involved in work life for longer or return to work after severe disease

CALL– Digital transformation in Health and Care

SC1-DTH-03-2018: Adaptive smart working and living environments supporting AHA

- Enhanced health and safety working conditions and quality of life of older persons at work compared to the current situation, enabling older persons to be able to contribute at an appropriate level for a longer period of time
- Evidence of user-centred design and innovation, new intuitive ways of human-computer interaction, and user acceptance;
- Potential cost-effectiveness due to enhanced self-care, life-style, age-friendly and skills conducive work environments and socio-economic benefits
- Competitive advantage for European industry through flexible and sustainable work arrangements for an ageing workforce
- Global leadership in ICT based innovation for active and healthy ageing including the occupational environment.

Deadline and budgets:

- Submission Deadline: 24 April 2018
- Research and Innovation Action
- Budget: 25M € (expected contribution 4-6M € per proposals)

CALL– Digital transformation in Health and Care

SC1-DTH-07-2018: Exploiting the full potential of in-silico medicine research for personalised diagnostics and therapies in cloud-based environments

Challenge:

- Progress in Computer Modelling & Simulation for Disease Management: validation and trust.
- Access to high quality Big Data & High Performance Computing, shared data, infrastructures and services in open cloud-based environments. Environment for increasing collaboration.

Scope:

- Development and validation of new software tools & devices for diagnosis or treatment based on computer modelling and simulation
- Enable decision making in complex situations & more precise and personalized disease management in NCDs.
- Computer-based decision making can apply to the choice of drugs, devices or other biomedical products, procedures, interventions, in vitro and in vivo diagnostics methods and tools, or combined diagnostics and treatments

CALL– Digital transformation in Health and Care

SC1-DTH-07-2018: Exploiting the full potential of in-silico medicine research for personalised diagnostics and therapies in cloud-based environments

- Usage of shared infrastructure and e-infrastructure.
- Linking where possible with the European initiatives that manage databases relevant for personal health* as well as with Centres of Excellences for computing applications in the area of biomedicine and bio-molecular research as appropriate
- Build on and contribute to reusable data & computer models.

Impact:

The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas

- Better translation of Big & Multi-disciplinary Data into predictors for personalised decision making.
- New digitised trusted diagnostic tools, treatments and clinical workflows and improved disease management

CALL– Digital transformation in Health and Care

SC1-DTH-07-2018: Exploiting the full potential of in-silico medicine research for personalised diagnostics and therapies in cloud-based environments

- Links between European research infrastructure projects & networks operating in related domains and contribution to the emergence of a European Data Infrastructure.
- Impact on improving data quality, the interoperability and standards

Deadline and budgets

- Submission Deadline: 24 April 2018
- Research and Innovation Action
- Budget: 35M € (expected contribution 10-15M € per proposals)



CALL– Digital transformation in Health and Care

SC1-DTH-08-2018: Prototyping a European interoperable Electronic Health Record (EHR) exchange

Challenge:

- Large amounts of valuable health data are generated and collected during and between citizens' medical examinations across Europe.
- However, opportunities to reuse these data for research and better healthcare are often missed because health data continue to be confined in data silos, often not matching semantic standards, quality needs and safe data exchange techniques.
- Effort must be invested in standardisation and harmonisation, privacy and security and communication to allow citizen/patient empowerment, advance medical science and improve health for everyone

Scope:

- Developing and testing an extensible, secure and interoperable platform in compliance with the General Data Protection Regulation and the Network and Information Systems directive
- Development of a European prototype implementation with embedded security

CALL– Digital transformation in Health and Care

SC1-DTH-08-2018: Prototyping a European interoperable Electronic Health Record (EHR) exchange

- Prototype should be
 - (i) citizen-centered implementation of a platform that can be integrated in a federated platform structure, easy-to-use and secure, constantly accessible and portable within any other Member States of the EU
 - (ii) a data-driven platform to help the scientific community to benefit from user generated data (health, care, and health-related) going beyond the currently established level of implementation
- Providing a harmonised/standardised and interoperable platform with demonstrated relevant functionalities at the different user levels including, but not limited to:
 - Ingest appropriate and relevant data and information sets in real time or in batch mode, including multilingual text and binary data;
 - Expandable to new fields and datasets, extensible so as to be able to integrate subsequent types of data;
 - Ensure the translations, mappings of source information towards the clinical/database models while using appropriate standards and semantic services;
 - Ensure scalability and performance of the services, such as in a cloud-based platform;
 - [...] see full text of the WP

CALL– Digital transformation in Health and Care

SC1-DTH-08-2018: Prototyping a European interoperable Electronic Health Record (EHR) exchange

- Large scale testing and validation in a set of use cases with demonstrated relevance for citizens' health and with involvement of citizens, hospitals, medical doctors, pharmacies and health professionals across Europe.
- Health authorities should be involved in the relevant parts of the proposed work
- Prototype focus:
 - Citizens' health data generated by the citizens themselves, healthcare professionals or sourced from relevant healthcare organisations.
 - Include relevant components to enable further medical purposes and health research.
 - extensible so as to be able to integrate subsequent types of data such as quantified-self data or Omics data.
- Consortium should cover a wide range of relevant stakeholders with multi-disciplinary expertise in technology, health and care, legal aspects, interoperability and user engagement
- The design of the prototype should be user driven as to ensure the early buy-in of final users (from citizens to healthcare professionals and scientists). Demonstrate tested and validated functionality in exchange of realistic and fit for the purpose EHR datasets exchange

CALL– Digital transformation in Health and Care

SC1-DTH-08-2018: Prototyping a European interoperable Electronic Health Record (EHR) exchange

Impact: The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas:

- Interoperable and secure electronic health data use across Europe for citizens and for promoting health,
- Improved health services and health conditions, enhanced quality and safety;
- Improved efficiency in terms of health economics such as on timeliness of intervention or measures taken, preventive actions/recommendations;
- Extended healthcare continuum across borders, actors and confinements;
- Improved collection and re-use of data and information sets for citizens' health and related research;
- Open, extensible and harmonisation-based EHR solution for app developers;
- Easy and safe for citizens to donate their health data for research;
- Contribution to the creation of the digital single market providing a scalable, extensible interoperable platform;
- Support integration with services under the Connecting Europe Facility.

Deadline and budgets

- Submission Deadline: 24 April 2018
- Research and Innovation Action
- Budget: 30M € (expected contribution 6-10M € per proposals)



CALL– Digital transformation in Health and Care

SC1-DTH-10-2019-2020: Digital health and care services

Challenge

- Digital solutions for health and care services can relieve the pressure on governments to provide more cost-effective health and care systems by improving utilisation of healthcare and health outcomes
- Need to network, lead and facilitate health systems research, innovation and digitisation in view of addressing key areas of interventions in health and care services including health promotion and disease prevention.

Scope

- Support the health and care service provider to procure industrial R&D services
- Key areas that could be addressed: patient empowerment, self-management, patient safety, patient involvement, chronic disease management, diagnosing, hospital and home care logistics, skills and independent living
- These challenges could be addressed by applicable ICT domains e.g., telemedicine, mHealth, IoT, shared open source IT-based platforms, etc. as will be defined in the market consultation process.

CALL– Digital transformation in Health and Care

SC1-DTH-10-2019-2020: Digital health and care services

- Driven by clearly identified user needs and demonstrate strong commitment of end-users
- As applicable contribute to the use of interoperable solutions based on open platforms
- Compliance with ethical standards and privacy protection
- Identify the implications for training (including aspects of organisational, digital health literacy and new collaborative innovation principles and practises), management, and retention of healthcare staff

Impact

The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas

- Evidences in Key Performance Areas i.e., quality in health and care, sustainability of the delivery system and economic value
- Improved user and market engagement
- Strengthened procurement community

CALL– Digital transformation in Health and Care

SC1-DTH-10-2019-2020: Digital health and care services

- Evidence of a healthy innovation ecosystem
- Evidence of benefits of disruptive technologies
- Increased opportunities for solution uptake across wider international procurement markets by aiming at interoperable solutions

Deadline and budgets

- Submission Deadline: 14 November 2018
- Pre-Commercial Procurement
- Budget: 22M € (expected contribution 5-6M € per proposals)

CALL– Digital transformation in Health and Care

SC1-HCC-01-2018 Supporting investment in smart living environments for ageing well through certification

Challenge:

- Building stock in Europe today not fit to support a shift from institutional care to the home-based independent living model for the ageing population
- Need to stimulate the emergence of "age-friendly home" conversions for independent living and remote health monitoring, by providing a sound basis for safe investment decisions for procurers, public authorities, industry and citizens:
- Investment (both public and private) barriers: unclear RoI; defining elements of sustainable age-friendly living environments, choice of measures
- Aim: European reference framework for age-friendly housing
- Build on the ongoing work in the emerging stakeholder-driven Reference Framework for Age-Friendly Housing and the smart living environments for ageing well as demonstrated in the Large-Scale Pilot on Internet of Things

CALL– Digital transformation in Health and Care

SC1-HCC-01-2018 Supporting investment in smart living environments for ageing well through certification

Scope

- Consolidate knowledge from related projects and initiatives
- Develop the scheme and agree with relevant stakeholders -relevant R&I projects, national initiatives- and others -national schemes, procurers, civil society representatives...- on adoption
- Overview of relevant standards and existing certification / labelling schemes
- Development and validation of a full concept of a European certification scheme
- Quality and risk management concept for sustainability and further development
- Support Leadership in IoT, particularly in the field of smart living environments.

CALL– Digital transformation in Health and Care

SC1-HCC-01-2018 Supporting investment in smart living environments for ageing well through certification

Impact:

The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas:

- Agreement on scheme for European certification
- Adequate basis for investment decisions in smart living environments for ageing well (both private and public) based on expected returns;
- Proof of increased investment into building stock fit for the longevity challenge

Deadline and budgets

- Submission Deadline: 24 April 2018
- Coordination and Support Action
- Budget: 1M € (expected contribution up to 1M € per proposals)

CALL– Digital transformation in Health and Care

SC1-HCC-03-2018 Support to further development of international cooperation in digital transformation of health and care

Challenge:

- Citizens in ageing populations wish to stay in their homes for as long as possible. They're at risk of age related impairments such as poor health, cognitive impairment, frailty and social exclusion
- Increasing global interest in cooperation on research and innovation addressing this issue with digital solutions and services
- Necessary to identify the future areas for international cooperation which have the highest potential as well as support the identification and networking of the potential funding organisations which can promote future cooperation.
- In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is encouraged, in particular with the US, Canada, Japan, South Korea and China.

CALL– Digital transformation in Health and Care

SC1-HCC-03-2018 Support to further development of international cooperation in digital transformation of health and care

Scope:

- Develop and deliver a roadmap for international cooperation with key relevant research and innovation areas in digital solutions and services for active and healthy ageing
- Selection of topics and potential funding schemes
- Based on a clear methodology taking also into account the European added value and relevant existing and emerging initiatives which can form the basis for such a cooperation
- Relevant stakeholders are engaged during the process through regional and international workshops and a set of communication and dissemination actions

Impact

The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas:

CALL– Digital transformation in Health and Care

SC1-HCC-03-2018 Support to further development of international cooperation in digital transformation of health and care

- Increased awareness of relevant research and innovation initiatives by European and International stakeholders;
- Increased international cooperation in research and innovation on ICT for active and healthy ageing through a roadmap of priority areas and potential funding schemes;
- Increased networking of European and international stakeholders interested in international cooperation in the field;
- Improve competitiveness of European industry by opening up international open innovation possibilities and gaining access to future markets.

Deadline and budgets

- Submission Deadline: 24 April 2018
- Coordination and Support Action
- Budget: 2M € (expected contribution up to 2M € per proposals)

CALL– Digital transformation in Health and Care

SC1-HCC-03-2018 Support to further development of international cooperation in digital transformation of health and care

Eligibility and admissibility conditions

- Proposals shall include at least one participant from the country or region targeted by the action which can demonstrate the necessary knowledge and can help mobilise the relevant international funding bodies
- The work should also support the ongoing G7 work on innovation and demographic change.

CALL– Digital transformation in Health and Care

SC1-HCC-04-2018: Digital health and care services – support for strategy and (early) adoption

Challenge

- Health and care service providers and users are increasingly facing complex decisions when exploring and investing in new health and care solutions
- Need for support cross-border cooperation in preparation of procurement of research and innovative digital solutions and balance innovation risks with improved outcomes
- Needed for implementing high quality policies, strategies and practises in a concerted manner and providing more confidence

Scope

- Create favourable framework conditions for cross-border Communities of Practice (CoP)
- Improve the maturity of the new products emerging from Europe's leading Health ICT SMEs

CALL– Digital transformation in Health and Care

SC1-HCC-04-2018: Digital health and care services – support for strategy and (early) adoption

- Assist the health & care research and innovation ecosystems in taking investment decisions on future procurement of research and innovation
- Support for management of risk and diverging expectations in innovation chain
- Approaches addressing consumer health should be interlinked in those cases where the institutional health and care services are expected to contribute
- Assistance for preparing for a cross-border innovation procurement
- Co-ordinate the development of a multi-collaborative growth policy & strategy of the European health & care procurers and other demand side actors
- Tailored assistance for procurers, regions, cities, national authorities and users to foster sustainable adoption
- Activities that investigate the feasibility and facilitate the concrete preparation of a cross-border PCP for at least one shared common user and procurement need

CALL– Digital transformation in Health and Care

SC1-HCC-04-2018: Digital health and care services – support for strategy and (early) adoption

Impact

The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas

- Concerted approach and solutions to the challenges faced by the health ecosystems as perceived by service providers and users in several countries
- Well addressed unmet needs, reduced fragmentation
- Evidences of support and collaboration with consortia developing unmet needs for innovation procurement and implementation aspects beyond the innovation procurement procedures
- Concrete preparation of a cross-border PCP for at least one shared common procurement need

Deadline and budgets

- Submission Deadline: 24 April 2018
- Coordination and Support Action
- Budget: 3M € (expected contribution up to 3M € per proposal)

CALL– Digital transformation in Health and Care

SC1-HCC-05-2018 Support to a Digital Health and Care Innovation initiative in the context of Digital Single Market strategy

Challenge

- DSM Review identified three priorities on digital transformation of health and care (DTHC): citizens' access to their data; data infrastructure; interaction between citizens and healthcare providers for better health management
- Aligning the efforts of many relevant players across Europe, namely their efforts on research and innovation as well as efforts on deployment, political coordination and stakeholder awareness and mobilisation
- Already existing European coordinated action, supported through various frameworks such as EIP on AHA, eHealth Network and eHealth stakeholders group

CALL– Digital transformation in Health and Care

SC1-HCC-05-2018 Support to a Digital Health and Care Innovation initiative in the context of Digital Single Market strategy

Scope

- Support to deliver third DTHC DSM priority -a user-centred integrated care- by supporting and extrapolating the lessons particularly impactful, successful and replicable from practical experiences across Europe.
 - Focus in large scale deployment of digital solutions for chronic diseases and integrated care and patient-centred care.
- Collaboration platforms on key aspects of the three DTHC priorities of the DSM, by identify relevant stakeholders and initiatives across Europe and engage them to collaborate in three areas:
 - Citizens' access and management of data relevant to their health and wellbeing
 - Aggregated demand for infrastructure capacity to handle health data by researchers, developers of products and services and other players involved in the secondary use of data
 - Interaction between citizens and healthcare providers
- Vision of EU coordination and support on DTHC beyond 2020

CALL– Digital transformation in Health and Care

SC1-HCC-05-2018 Support to a Digital Health and Care Innovation initiative in the context of Digital Single Market strategy

Impact

The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas

- Effective support to and engagement of stakeholders active on the third DTHC priority of the DSM, resulting in tangible impact from the beginning of the action and sustainably throughout its duration
- Functional collaboration platforms on key aspects of the three DTHC priorities of the DSM and instrumental contribution to the implementation of EU policy on DTHC in the context of the DSM
- Actionable strategic vision for EU policy on DTHC beyond 2020, including appropriate mobilisation of EU instruments

Deadline and budgets

- Submission Deadline: 24 April 2018
- Coordination and Support Action
- Budget: 4M € (expected contribution up to 4M € per proposals)

CALL– Trusted digital solutions and Cybersecurity in Health and Care

- Multidisciplinary technologies and solutions in health and care with a focus on cybersecurity
- Secure and user-driven ICT-based solutions in early risk detection and interventions
- Aggregation of a variety of new and existing data sources

FOCUS AREAS

- Digitising and transforming European industry and services
- Boosting the effectiveness of the Security Union

POLICY DRIVERS :



Connected Digital Single Market



Big Data in healthcare



European Data Protection Regulation



Trusted digital solutions and Cybersecurity in Health and Care in Work Programme 2018–2019

- **SU-TDS-02-2018: Toolkit for assessing and reducing cyber risks in hospitals and care centres to protect privacy/data/infrastructures**
- **SU-TDS-03-2018: Raising awareness and developing training schemes on cybersecurity in hospitals**
- DT-TDS-01-2019: Smart and healthy living at home



CALL– Trusted digital solutions and Cybersecurity in Health and Care

SU-TDS-02-2018 Toolkit for assessing and reducing cyber risks in hospitals and care centres to protect privacy/data/infrastructures

Challenge

- Digital technologies offer new opportunities to transform healthcare systems and delivery. ICT infrastructures and data have become critical for the functioning of the hospitals and care systems.
- However, due to increasing connectivity, the exposure to risks of cyber-crime is constantly increasing.
- Cyberattacks are a potential danger to the safety of patients and to the privacy of sensitive health data

Scope

- Development and implementation of innovative methods, tools, guidelines or best practices
- Addressing the need for cybersecurity in hospitals including remote care and homecare settings, such as:
 - identification/authentication systems within hospitals taking into account cross-border requirements and usability;
 - assessing risks and vulnerabilities of hospitals w.r.t cyberattacks;
 - innovative cybersecurity measures;

CALL– Trusted digital solutions and Cybersecurity in Health and Care

SU-TDS-02-2018 Toolkit for assessing and reducing cyber risks in hospitals and care centres to protect privacy/data/infrastructures

- addressing cybersecurity in the whole lifecycle of a medical device including hardware with embedded software, e.g. pacemakers;
- Proposals under this topic may be subject to security scrutiny if they could potentially lead to security-sensitive results that should be classified

Impact

The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas

- Improved security of Health and Care services, data and infrastructures;
- Less risk of data privacy breaches caused by cyberattacks;
- Increased patient trust and safety.

Deadline and budgets

- Submission Deadline: 24 April 2018
- Research and Innovation Action
- Budget: 35M € (expected contribution up to 3-5M € per proposals)

CALL– Trusted digital solutions and Cybersecurity in Health and Care

SU-TDS-03-2018 Raising awareness and developing training schemes on cybersecurity in hospitals

Challenge

- ICT infrastructures & data have become critical for the functioning of the hospitals and care systems.
- Due to increasing connectivity, the exposure to risks of cyber-crime is constantly increasing.
- Cyberattacks are a potential danger to the safety of patients and privacy of sensitive health data.
- Some cybersecurity threats are caused by human errors or ignorance.

Scope

- Awareness raising of staff working in healthcare settings on security and data privacy is important to reduce cybersecurity vulnerabilities and exposure.
- Training of IT staff working in healthcare settings is of high priority in order to enforce the knowledge on information security processes and data protection procedures.

CALL– Trusted digital solutions and Cybersecurity in Health and Care

SU-TDS-03-2018 Raising awareness and developing training schemes on cybersecurity in hospitals

- This may include proactive managerial and technological strategies to reduce vulnerabilities e.g. best practices to minimize the potential for becoming a victim of phishing and ransomware or strategies to respond to attacks.
- Appropriate training on the permitted use of patient health data/ information according to the requirements of relevant data protection law(s) is also a priority.
- Proposals under this topic may be subject to security scrutiny if they could potentially lead to security-sensitive results that should be classified

Impact

The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas

- Less human errors causing cybersecurity threats;
- Less risk of data privacy breaches;

CALL– Trusted digital solutions and Cybersecurity in Health and Care

SU-TDS-03-2018 Raising awareness and developing training schemes on cybersecurity in hospitals

- Reduced cybersecurity vulnerability of Health and Care services, data and infrastructures;
- Increased patient trust and safety.

Deadline and budgets

- Submission Deadline: 24 April 2018
- Coordination and Support Action
- Budget: 1M € (expected contribution up to 1M € per proposal)

CALL– Trusted digital solutions and Cybersecurity in Health and Care

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

CALL– Trusted digital solutions and Cybersecurity in Health and Care

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.

CALL– Trusted digital solutions and Cybersecurity in Health and Care

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

Impact

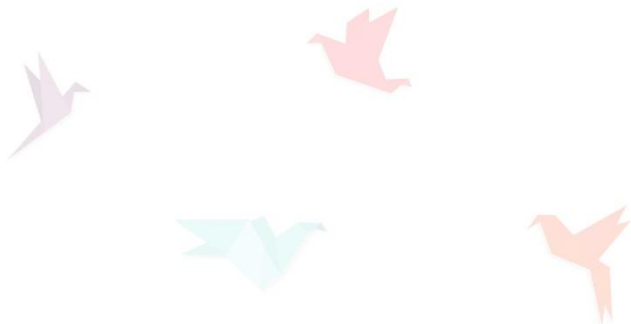
- Emergence of European-led platform for smart and healthy and independent living at home;
- Increased competitiveness of the European ICT industry in the domain, through enhanced interoperability, best practices for viable business and financing models and scalable markets;
- Demonstrate links and build 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.

CALL– Trusted digital solutions and Cybersecurity in Health and Care

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)



Key Performance Indicators

- Need to define ways **to measure progress towards the expected impacts**
 - For those where proposals are requested to provide appropriate indicators to measure its progress, it is not enough to describe a potential contribution on the impacts specified
 - Proposals need to provide indicators to measure their progress towards such impact compared to a specific baseline
- Key Performance Indicators should be:
 - **Measurable**
It is highly recommendable that proposers specify how they plan to measure it
 - **Appropriate** for the specific proposal and specific expected impact addressed
 - **Clearly described**

Digital Innovation Hub - help industry with digital transformation

"Ensure that every business in Europe, whatever its sector of activity, wherever located and whatever its size, can take full advantage of digital innovations and competences"

A one-stop-shop providing services to companies in the region through a multi-partner cooperation:

- **Access to Specialist Expertise and Infrastructure**
- **Brokering/matchmaking**
- **Awareness Creation around Digital Technologies**
- **Innovation Scouting**
- **Digital Maturity Assessment.**
- **Visioning and Strategy Development for Businesses:**
- **Mentoring, Training**
- **Access to Funding and Investor Readiness Services**



Digital Innovation Hub - help industry with digital transformation

DT-ICT-02-2018: Robotics - Digital Innovation Hubs (DIH)

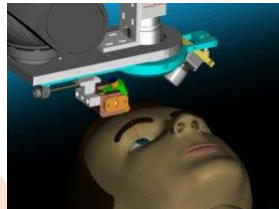
BUDGET: 66M€ - CALL DEADLINE: April 17 - 2018

Innovation Action – 64M€

- → 4 projects expected to be funded
- → 1 per Prioritised Application Area – **16M€/each**
- → 1 of the priority areas: **Healthcare**

H2020 funding

- Set up a pan-European network of Digital Innovation Hubs
- Cross-border experiments, assistance in the creation of hubs



DO NOT MISS

**BROKERAGE EVENT
ROBOTICS - DIHs
DECEMBER 6 2017
BRUSSELS**

<https://www.eu-robotics.net/sparc/>

**PLEASE MOBILISE YOUR "DIHs"
THANK YOU**

Cecile.Huet@ec.europa.eu

The logo graphic for SPARC consists of several overlapping, semi-transparent triangles in various colors (blue, yellow, orange, red, green) that form a stylized, abstract shape resembling a star or a cluster of points.

SPARC
The Partnership for
Robotics in Europe

H2020 Some relevant links

Digital Single Market Mid-term review: http://eur-lex.europa.eu/content/news/digital_market.html

Public consultation on the Transformation of Health and Care in the Digital Single Market: https://ec.europa.eu/info/consultations/public-consultation-transformation-health-and-care-digital-single-market_en

European Innovation Partnership on Active and Healthy Ageing (EIP on AHA): https://ec.europa.eu/eip/ageing/home_en

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

Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union: <http://eur-lex.europa.eu/eli/dir/2016/1148/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



H2020 Some relevant links

Final report Neighbourhoods of the Future Roadshow:

<https://ec.europa.eu/digital-single-market/en/news/final-report-recommendations-european-reference-framework-age-friendly-housing>

Stakeholder commitment: <https://ec.europa.eu/digital-single-market/en/news/together-smart-age-friendly-homes-and-neighbourhoods-shaping-european-reference-framework>

Large-Scale Pilot Iot: [Activating Innovative IoT Smart living environments for ageing well](#)

Communication 'Resilience, Deterrence and Defence: Building strong cybersecurity for the EU': <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=JOIN:2017:450:FIN>

Commission Recommendation on Coordinated Response to Large Scale Cybersecurity Incidents and Crises:

<https://ec.europa.eu/transparency/regdoc/rep/3/2017/EN/C-2017-6100-F1-EN-MAIN-PART-1.PDF>

Commissioner King's speech at the EU Cybersecurity Conference, 15 September 2017, in Tallinn, Estonia:

https://ec.europa.eu/commission/commissioners/2014-2019/king/announcements/commissioner-kings-speech-eu-cybersecurity-conference-digital-single-market-common-digital-security_en



H2020 Some relevant links

Communication 'Resilience, Deterrence and Defence: Building strong cybersecurity for the EU'

Commission Recommendation on Coordinated Response to Large Scale Cybersecurity Incidents and Crises

Commissioner King's speech at the EU Cybersecurity Conference, 15 September 2017, in Tallinn, Estonia



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

Thank you!

CNECT-H3-H2020-TOPICS@ec.europa.eu

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