Digital Transformation of Health and Care - Topics 2019

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H2020-SC1-DTH-2018-2020

• Horizon 2020

• Societal Challenge 1:
  Health, demographic change and wellbeing

• Call – Digital transformation in Health and Care
Digital Transformation of Health and Care

Give citizens better access to their health data, everywhere in the EU.

Use digital services for citizen empowerment and person-centred care.

Connect and share health data for research, faster diagnosis and better health outcomes.
Digital Health and Care

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

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.

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.

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
Data-driven health and care innovation

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
Cloud computing
Internet of Things (IoT)
Wearables
mHealth
Telehealth
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

Work Programme 2018–2020

- **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-11-2019**: Large Scale pilots of personalised & outcome based integrated care

Coordination and support actions

- **HCC-02-2019**: Support for the large scale uptake of open service platforms in the Active and Healthy Ageing domain
SC1-DTH-01-2019

Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment

Carola Carstens

Disclaimer: The official work programme text is the only legally binding source of information on this topic.
**SC1-DTH-01-2019**

**TOPIC:** Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment

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<td>Publication date:</td>
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<td>Types of action:</td>
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**Deadline:** 24 April 2019 17:00:00

**Time Zone:** (Brussels time)

SC1-DTH-01-2019: Challenge

- Often rather aggressive cancer treatment and psychological stress can cause physical and psychological problems that may cause long-term aftercure consequences and affect the quality of life of a patient.
- Therefore, the importance of addressing and, if possible, preventing long-term effects of cancer treatment is growing.

- Use of big data can bring valuable information for monitoring health status and quality of life after the cancer treatment, in addition to patient-reported outcomes such as functional status, symptoms intensity and frequency, multiple domains of well-being and overall satisfaction with life.
- Big data can provide new opportunities to define statistical and clinical significance, but present also challenges as it requires specific analytical approaches.
SC1-DTH-01-2019: Scope I

Proposals should focus and deliver on how to better acquire, manage, share, model, process and exploit big data using, if appropriate, high performance computing to effectively monitor health status of individual patients, provide overall actionable insights at the point of care and improve quality of life after the cancer treatment.

Relevant solutions include for example systems for determining and monitoring (taking also in account gender differences) the combined effects of cancer treatment, environment, lifestyle and genetics on the quality of life, enabling early identification of effects that can cause development of new medical conditions and/or impair the quality of life.
Information can be collected from traditional sources of health data (cohorts, comprehensive electronic health records or clinical registries, incl. genetic data, validated biomarkers for remission), from new sources of health data (mobile health apps and wearables) and from sources that are usually created for other purposes such as environmental data.

The Commission considers that proposals requesting a contribution from the EU of between EUR 3 and 5 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts. Participation of SMEs is encouraged.
SC1-DTH-01-2019: Scope III

Proposals preferably address relevant health economic issues, use patient reported outcome and experience measures (PROMs and PREMs) and take into account the relevant social aspects of health status and quality of life after cancer treatment. Integrated solutions should include suitable approaches towards security and privacy issues.

It is important to assure ethical aspects of data, confidentiality, and anonymity of data transfer and engagement of those who collect / code such data in its analysis and interpretation, in order to avoid misinterpretation and inappropriate conclusions by using proper annotation methodologies of the data. Involvement of those who work within healthcare systems, patients, family and relatives, and the general public is needed.
SC1-DTH-01-2019: Expected Impact I

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

• Mapped comprehensive big data in a reachable and manageable way by applying principles for sharing and reusability, creating a network of knowledge by linking translation tools, heterogeneous data sources and biomedical texts for monitoring health status and quality of life after the cancer treatment;

• Emerging data driven analytics and advanced simulation methods to study causal mechanisms and improve forecasts of ill-health, identification of disease trajectories and relapse;

• Better and faster means of high quality response to prevent or timely address development of new medical conditions and/or improve the quality of life;

• Better knowledge for improved patient counselling as well as to improve follow-up of patients;
The proposal should provide appropriate indicators to measure its progress and specific impact in the following areas:

• Novel information on health maintenance, onset and course of medical conditions with a view to optimise prevention and treatment;

• Evidence base for the development of policy strategies for prevention, early diagnosis, therapies as well as addressing health inequalities, support to patient registries at national level;

• Improved quality of life after cancer treatment, strengthening personal confidence and enhancing employability;

• Preventative strategies are established which have a real effect of reducing the occurrence of health disorders and co-morbidities associated with cancer treatment.
SC1-DTH-01-2019: Evaluation Criteria

Thresholds

- The thresholds for each criterion will be:
  - Excellence: 4
  - Impact: 4
  - Implementation: 3

- The cumulative threshold will be 12
SC1-DTH-01-2019: Further Information

For further information on
• **Topic SC1-DTH-01-2019**
• **Conditions for the Call – Digital transformation in Health and Care**, please refer to

  • *[Horizon 2020 Work Programme 2018-2020 Health, demographic change and wellbeing](http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html)* and


Contact for SC1-DTH-01-2019: **CNECT-H3-H2020-TOPICS@ec.europa.eu**
EU support for Innovation Procurement:

Large scale implementation of digital innovation for health and care in an ageing society
The challenge

- Ageing population increasing **demand-side** pressures on EU public health & social care providers as well as long-term sustainability of existing models for delivering care services.

- **Limited large-scale, cross-border** deployment of digital health and care solutions & innovation.

- Lack of collaborative efforts (**engaging demand & supply**) in public purchasing of innovative ICT-based solutions for active and healthy ageing.

- Not effective aggregation of demand, cost reduction, risk sharing.
The ambition

Scope

• **Specify, purchase and deploy** ICT based solutions for active and healthy ageing in the health and care field.
• Target **large-scale deployment** of digital health and care solutions across different regions in Europe.
• Contribute to the **Scaling-Up Strategy of EIP AHA** and Reference Sites.
• Engage **public and/or private procurers** that have responsibilities and budget control in the relevant area of care or supply of services.

Expected impact

• **Growing awareness** on the successful use of public procurement to boost ICT innovation applied to active and healthy ageing, ultimately benefiting the growing ageing population across Europe.
• Contribution with data and experiences to **addressing potential barriers** (regulatory and other) to procurement of innovative solutions for active and healthy ageing.
• Support forward-looking, concerted **public-sector investment strategies**
SC1-DTH-05- 2019: The Call

Type of action: **PPI – Public Procurement of Innovative Solutions**

Opening: 16/10/2018  
**Deadline: 24/04/2019**

Total budget: €10 M

**Indicative** EU contribution/proposal: €2-5 M

**Funding rate** for PPI actions is limited to 35% of the total eligible costs to leverage co-financing from the procurers in this specific case.

*US legal entities allowed to receive funding.

*Members of consortium are required to conclude a consortium agreement, in principle prior to the signature of the grant agreement.
The requirements

- Have clearly identified their **procurement needs** (taking into account users, care providers)

- Support sustainable deployment of new or improved **person-centred and outcome-based services**

- Be based on a complete set of **common specs** for end to end services

- Ensure sustainability of solutions **beyond project lifespan**

- Contribute to the creation of **scalable markets across Europe**

- Contribute to **national strategies** on Innovation Procurement as well as **interoperability & standardization** initiatives

- Safeguard **H2020 principles**: ethics, privacy, gender dimension
PPI: The instrument

- Solutions are close to the market and would be provided if clear, sufficient demand expressed by the market. Can be on the market in small quantity (not widely commercially available yet) but not meeting requirements for large scale deployment yet.

- Incremental/non-R&D innovation can deliver required quality/price (product adaptation, integration, scaling up production, service innovation): no need to procure R&D.

- PPI to act as launching customer / early adopter / first buyer of innovative commercial end-solutions newly arriving on the market
SC1-DTH-05- 2019: Reference documents

MUST


• **PPI actions under this WP:**

RECOMMENDED

• European Scaling-up Strategy in active & healthy ageing:

• Methodology (EIP AHA) for measuring the impact of outcome-based practices:
  [www.mafeip.eu](http://www.mafeip.eu)

• Principles of green public procurement:
PCP/PPI library: general reference documents


Topic: SC1-DTH-09-2019
Scaling up the univocal Identification of Medicinal Products

Dr. Reza RAZAVI

Disclaimer: The official work programme text is the only legally binding source of information on this topic.
SC1-DTH-09-2019

**Budget:** 19M€
**Indicative contribution range per proposal:** 5-8 M€/proposal

See topic website on Research & Innovation Participant Portal:
**SC1-DTH-09-2019: Challenge**

- Across the European Union, medicinal products display differences in names, variations in strength or their package size.

- The unavailability of a specific product may also necessitate substitution in many instances, if a patient is to be timely served in a pharmacy.

- Moreover, due to differences in marketing authorisation procedures, not every medicinal product is available in each Member State, and

- It is not unusual that the same product may have different names across Member States or the same name may identify a different product in another Member State.
SC1-DTH-09-2019: Scope

- Foster the use and dissemination of the ISO IDMP (identification of medicinal products) standards set to support the cross-border mobility of European patients by offering safer eDispensations across borders

- Support the standards implementation in national sources (and its possible linkage to a central EMA database) to allow the identification of locally available equivalent medicinal products and ensuring EU SPOR data can be safely used by the ePrescription/eDispensing systems

- Support integration with existing cross-border ePrescription services
SC1-DTH-01-2019: Expected Impact

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

- Improved quality of care resulting in enhanced patient safety; Extend the healthcare service provision continuum across borders for patients

- Better address adverse events/effects and safety issues by enhanced development of standard vocabulary

- Better health data access across Europe for patients and healthcare providers
SC1-DTH-09-2019: Evaluation Criteria Thresholds

- The thresholds for each criterion will be
  - Excellence: 3
  - Impact: 3
  - Implementation: 3

- The cumulative threshold will be 10

The criteria, scoring and threshold are more extensively described in General Annex H of the work programme.
SC1-DTH-09-2019: Further Information

For further information on
• Topic SC1-DTH-09-2019, and
• Conditions for the Call – Digital transformation in Health and Care,
please refer to
• Horizon 2020 Work Programme 2018-2020 Health, demographic change and wellbeing and


Contact for SC1-DTH-09-2019: CNECT-H3-H2020-TOPICS@ec.europa.eu
Large Scale pilots of personalised & outcome based integrated care

- Innovation Action
- Open: 16/10/2018
- Close: 24/04/2019
- Budget: 20 M€ (4-6 M€ proposals)

Topic coordinator: Jose A. Valverde
CNECT-H3-H2020-TOPICS@ec.europa.eu
Study 2017-18, European purchasers

0-3% budget dedicated to solutions integrating digital technology

Main Barriers:

- Difficulty to identify the solutions available on the market (and get reliable info about them)

- Solutions with limited scope and difficult to integrate into existing information systems

- Lack of interoperability

- Lack of openness (proprietary solutions)
3.2.1.2. Areas of intervention of the identified procurements

- Integrated care & chronic disease management: 61%
- ICT solutions for independent living: 50%
- Medicines adherence: 39%
- Age-friendly environments: 33%
- Falls prevention: 22%
- Frailty and functional decline: 22%
- Other: 17%
Digital solutions for Integrated care: secure, scalable & robust

- **Personalised** delivery of health and social care
- Promoting shift towards **outcome-based** delivery of Integrated Care
- **Realistic** operational, organisational and financial setting
- **Trust** of users and policy-makers regarding **data** (access, protection & sharing)
- **Digital Solutions**: replicable, flexible. Potentially sustainable, large scale, offering opportunities for job creation and further business
Large-scale pilots for deployment of trusted & personalised digital solutions

- Dealing with Integrated Care to support healthy and independent living for older individuals

- Strategy: patient-centred and individualised

- Potentially useable in any Member States

- Applicable to a very wide range of patient pathways

- To enable people to remain independent and prevent hospitalisation
Expected Outcomes

Efficiency gains: resources, coordination
Flexibility and Replicability of service delivery
Secure and efficient sharing and processing of data and information
Improvement of:
- quality of life for patient and family
- working conditions for health and social care providers (priority to work time management, quality of data exchange, multi-disciplinary coordination)
Outcome Indicators

To contribute to the assessment of the action: trust, recruitment, patient added value, cost-efficiency

• Number of professionals registered compared with those in the pilot.
• Quality of life based on common used questionnaires or specific disease-oriented measurement tools
• Cost-efficiency based on work time dedicated to each patient
TO PROVIDE MEASURABLE PROGRESS TOWARDS

- Technical prerequisites and framework to ensure user trust (in line with GDPR)
- Evidenced-based minimum data set:
  - Clerical information
  - Clinical information
- Solutions for integrated care: harmonisation, certification, approval labelling or reliable identification
- Business Models: robust, reliable, replicable
- Environment: personalised, multi-disciplinary
COORDINATION AND SUPPORT ACTION

SC1-HCC-02-2019:

Support for the large scale uptake of open service platforms in the Active and Healthy Ageing domain

Budget: 1,5 M€
SCOPE I

- Deliver an **inventory of State of the Art and analyze use of open service platforms in the Active and Healthy Ageing** domain covering open platform-UniversAAL and FIWARE- and partly-open/proprietary platforms.

- Elaborate a **methodology to monitor development, adoption and spread** of open platforms across EU.

- Apply the methodology by, amongst other actions, **collecting and processing data from running and recently ended projects –including EU-funded-** using those platforms, with special focus UniversAAL and FIWARE.
Proposals should:

- Elaborate **evaluation guidelines** for collecting evidence on socio economic costs and benefits of the use of open platforms

- Engage the required stakeholders to ensure the reliability of the data collected and to maximize the value of results achieved

- Include activities aimed at **fostering integration efforts and knowledge exchange** between projects and initiatives using the platforms and user communities around them
• Identification of critical success factors of open platform development, deployment and spread
• Increase knowledge on differences and synergies between open platforms, regarding features and interoperability
• Socioeconomic benefit of open service platforms
• Engagement of the required stakeholders
• Increased level of participation by service platform providers and users in networking and knowledge exchange events
• Contribution to effective implementation of relevant policy initiatives
• Enhanced synergies with other European projects to progress framework conditions and standardisation
Thank you!

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