Digital Transformation of Health and Care
empowering citizens and building a healthier society

DG Communications Networks, Content and Technology (DG CONNECT)
Directorate H Digital Society, Trust & Cybersecurity
Unit H3, eHealth, Well Being and Ageing
Birgit Morlion

Call 2019 Info Day AAL Programme
31 January 2019 - Brussels
The ultimate dream is that **every family doctor** will be able to access artificial intelligences and **super-computing** as a service at his desktop, very much like he accesses cloud services like email or electronic prescriptions today.

Roberto Viola
Director-General DG Connect, European Commission

#DA18eu
#DigitalHealth

https://innovations.eus/2962018
Commission Communication COM (2018) 233

Digital transformation of health and care in the Digital Single Market
empowering citizens and building a healthier society

25 April 2018
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

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 can securely access and share (e.g. with doctors or pharmacists) their health data anywhere in 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.

#DigitalSingleMarket  #DigitalHealth  #eHealth_EU  #EU_Health
**Ambition:**
Citizens can monitor their health, adapt their lifestyle and interact with their doctors and carers (receiving and providing feedback).
Supporting innovation and uptake of digital solutions beyond 2020
Commission’s budget proposal for 2021 - 2027

A BUDGET ALIGNED TO POLITICAL PRIORITIES
Simplification, transparency and flexibility

In billion euro, current prices

I. SINGLE MARKET, INNOVATION AND DIGITAL
   1. Research and Innovation
   2. European Strategic Investments
   3. Single Market
   4. Space
   €187.4

II. COHESION AND VALUES
    5. Regional Development and Cohesion
    6. Economic and Monetary Union
    7. Investing in People, Social Cohesion and Values
    €442.4

III. NATURAL RESOURCES AND ENVIRONMENT
    8. Agriculture and Maritime Policy
    9. Environment and Climate Action
    €378.9

IV. MIGRATION AND BORDER MANAGEMENT
    10. Migration
    11. Border Management
    €34.9

V. SECURITY AND DEFENCE
    12. Security
    13. Defence
    14. Crisis Response
    €27.5

VI. NEIGHBOURHOOD AND THE WORLD
    15. External Action
    16. Pre-Accession Assistance
    €123

VII. EUROPEAN PUBLIC ADMINISTRATION
     17. European Public Administration
     €85.3

Source: European Commission
DIGITAL IN THE NEXT MFF: OVERVIEW

**Digital Europe: Capacities & roll out**
- 1. High Performance Computing (HPC)
- 2. Artificial Intelligence (AI)
- 3. Cybersecurity
- 4. Advanced digital skills
- 5. Digital transformation and interoperability

- €9.2 billion

**Connecting Europe Facility - Digital Connectivity**
- 5G roll out
- BB 4EU, Connecting communities
- Synergies with Transport /Energy

- €3 billion

**Digital in Horizon Europe R&D&I**
- 1. Digital under "global challenges"
  - Digital and industry cluster
  - Digital in other clusters - health, mobility, energy, environment,..
- 2. FET Open under Open Innovation
- 3. Research Infra under Open Science

- > €12 billion for digital

**Creative Europe MEDIA**
- Distribution of works
- Creation

- €1.1 billion
Horizon Europe: evolution not revolution

Specific objectives of the Programme

- Support the creation and diffusion of high-quality knowledge
- Strengthen the impact of R&I in supporting EU policies
- Foster all forms of innovation and strengthen market deployment

Optimise the Programme’s delivery for impact in a strengthened ERA

**Pillar 1**
Open Science
- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

**Pillar 2**
Global Challenges and Industrial Competitiveness
- Clusters
  - Health
  - Inclusive and Secure Society
  - Digital and Industry
  - Climate, Energy and Mobility
  - Food and natural resources
- Joint Research Centre

**Pillar 3**
Open Innovation
- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

**Strengthening the European Research Area**
- Sharing excellence
- Reforming and Enhancing the European R&I system
Pillar 2

**Global Challenges & Industrial Competitiveness:**
boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Budget (€ billion)</th>
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<tbody>
<tr>
<td><strong>Health</strong></td>
<td>€7.7</td>
</tr>
<tr>
<td>Inclusive and Secure Societies</td>
<td>€2.8</td>
</tr>
<tr>
<td>Digital and Industry</td>
<td>€15</td>
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<tr>
<td>Climate, Energy and Mobility</td>
<td>€15</td>
</tr>
<tr>
<td>Food and Natural Resources</td>
<td>€10</td>
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Health cluster: Six main areas of intervention

- Health throughout the Life Course
- Environmental and Social Health Determinants
- Non-communicable and Rare Diseases
- Infectious diseases
- Tools, Technologies and Digital Solutions for Health and Care
- Health Care Systems
Pillar 3
OPEN INNOVATION:
stimulating market-creating breakthroughs and ecosystems conducive to innovation

European Innovation Council
- Support to innovations with breakthrough and market creating potential

European innovation ecosystems
- Connecting with regional and national innovation actors

European Institute of Innovation and Technology (EIT)
- Bringing key actors (research, education and business) together around a common goal for nurturing innovation

€10.5 billion, including up to €500 million for ecosystems

€3 billion
Horizon Europe: Partnerships

New approach to European Partnerships

New generation of objective-driven and more ambitious partnerships in support of agreed EU policy objectives

Key features

- Simple architecture and toolbox
- Coherent life-cycle approach
- Strategic orientation

Co-programmed
Based on Memoranda of Understanding / contractual arrangements; implemented independently by the partners and by Horizon Europe

Co-funded
Based on a joint programme agreed by partners; commitment of partners for financial and in-kind contributions & financial contribution by Horizon Europe

Institutionalised
Based on long-term dimension and need for high integration; partnerships based on Articles 185 / 187 of TFEU and the EIT-Regulation supported by Horizon Europe
Digital Europe programme – What?

Digital Europe Programme
Reinforcing digital capacities
Ensuring their best use

Digital transformation & Interoperability
1.3 € billion

Advanced digital skills
0.7 € billion

High performance computing
2.7 € billion

Cybersecurity & trust
2 € billion

Artificial intelligence
2.5 € billion

€ 9.2 billion in total

#EUBudget
#DigitalEurope
Digital Innovation Hubs: Deployment and best use

Digital Innovation Hubs will diffuse digital capacities - high performance computing, artificial intelligence, cybersecurity and digital skills - across the economy enabling the digital transformation of the industry and public sector organisations.

HPC centres of excellence
Cybersecurity competence centres
AI research excellence centres
Advanced digital skills

Network

Broad roll-out of digital advances
CONNECTING EUROPE AND ACCELERATING INNOVATION THROUGH COLLABORATION
Ageing well in the Digital World
Joining forces

The Silver Economy

Demographic change comes with great opportunities.

By 2060, one in three Europeans will be over 65.

Active ageing in good health allows us to:

- Travel
- Work for more years
- Learn new things
- Prepare our homes for living independently for the many years to come

By 2025, the Silver Economy is expected to contribute over €5.7 trillion to Europe’s economy.

AAL PROGRAMME

EUROPEAN INNOVATION PARTNERSHIP
on Active and Healthy Ageing

2016 EIP on AHA Call Results:

- Over 850 commitments submitted to support the 6 Action Groups activities
- 78 Reference Site Applications from 22 countries to scale up innovation for active and healthy ageing

Together we can create a Digital Single Market for the Ageing Society!

Together for a Stronger Partnership 2016-2018

ec.europa.eu/eip/ageing

#ActiveAgeing
Horizon 2020 Work Programme for Research & Innovation 2018–2020

'Health, demographic change and wellbeing' challenge in H2020

Open and forthcoming Calls
Health Research in Horizon 2020

Collaborative R&I projects

Public-Private Partnership with big Pharma

Grants for small businesses

InnovFin
Loans for small & large companies

Public-Public Partnerships with EU Member States & beyond

Horizon 2020

Blue sky research

Education – R&D - Innovation

Horizon Prize

Prizes
• **SC1-DTH-05-2019**: Large scale implementation of digital innovation for health and care in an ageing society

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

• **SC1-DTH-11-2019**: Large Scale pilots of personalised & outcome based integrated care
• **SC1-DTH-01-2019**: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment

• **SC1-HCC-02-2019**: Support for the large scale uptake of open service platforms in the Active and Healthy Ageing domain
Contact: CNECT-H3-H2020-TOPICS@ec.europa.eu

- Submission Deadline: **24 April 2019 17:00** (Brussels time)

- **Further Reading:**

- EU SC1 Projects (finished and ongoing):
Horizon Prize in Social Innovation to improve the mobility of older people

We expect to have 88 million elderly EU citizens by 2030. With this prize, we hope to tackle one of the most pressing challenges of our ageing society: mobility.

Commissioner for Science, Research and Innovation
Carlos Moedas

Budget: €2 million, funded under Horizon 2020. **Deadline: 28 February 2019.**

The prize will be awarded in the second quarter of 2019.
Thank you!

@eHealth_EU
@DSMeu

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- R&D&I: http://ec.europa.eu/horizon-europe