

# Big data in health

## Current and future initiatives of the Commission



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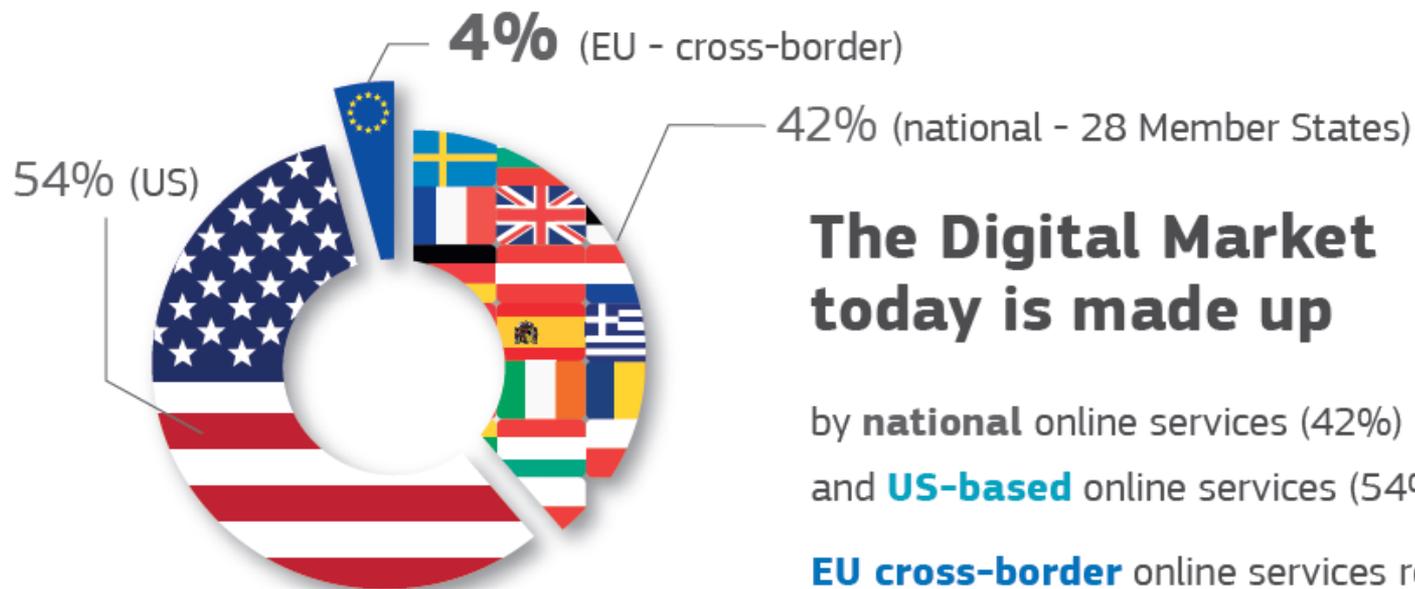
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# 1. Digital Single Market (DSM)

- To make the EU's Single Market ready for the digital age
- One of the top priorities of the Juncker administration
- Covers a broad area (incl. health) and is built on 3 pillars





## The Digital Market today is made up

by **national** online services (42%)  
and **US-based** online services (54%)

**EU cross-border** online services represent only 4%

## 1.a (e) Health in the DSM

- Health technology is considered critical in improving the EU's competitiveness
- Condition is to provide essential interoperability and standardization in the health sector (mHealth, telemedicine)

*The Commission will launch an integrated standardisation plan to identify and define key priorities for standardisation with a focus on the technologies and domains that are deemed to be critical to the Digital Single Market, including essential sectoral interoperability and standards in areas such as health (telemedicine, m-health), transport (travel planning, e-freight), environment, and energy. The Commission will revise and extend the European Interoperability Framework.*

## 1.b Digitizing Industry

Set of measures to help European industry, researchers and public authorities to make the most of the growth potential of a digital data-driven economy:

- Priority standards to boost digital innovation
- Modernise digital public services: An eGovernment Action Plan
- The European Cloud Initiative to give a virtual environment to store, manage, analyse and re-use a big amount of research data

### Big data and cloud



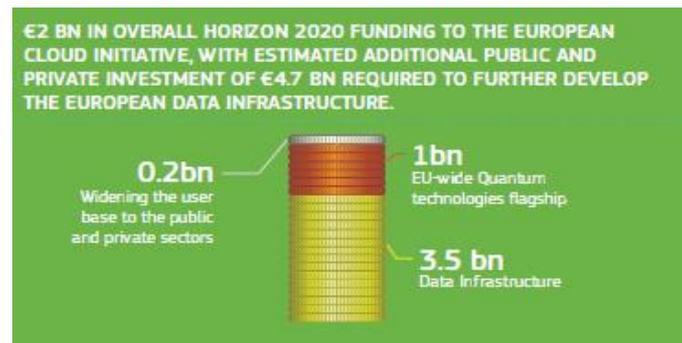
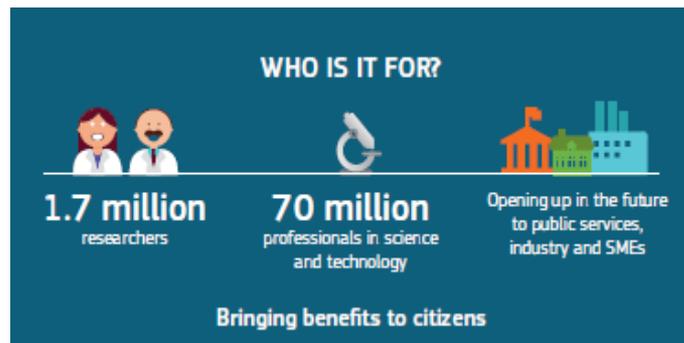
Digital data stored in cloud:  
**2013: 20% - 2020: 40%**

The use of big data by the top 100 EU manufacturers could lead to **savings worth €425 billion**

Studies estimate that, by 2020, big data analytics could boost EU economic growth by an additional **1.9%**, equalling a **GDP increase of €206 billion**

## 1.c European Cloud Initiative

- Strengthening the EU's position in data-driven innovation and improve competitiveness
- Based on 3 pillars in support of European science, industry, and public authorities:
  1. World-class data infrastructure to store and manage data
  2. High-speed connectivity to transport data
  3. More powerful High Performance Computers to process data



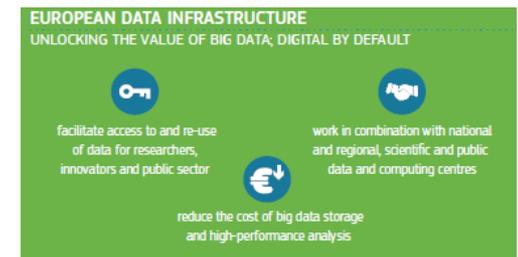
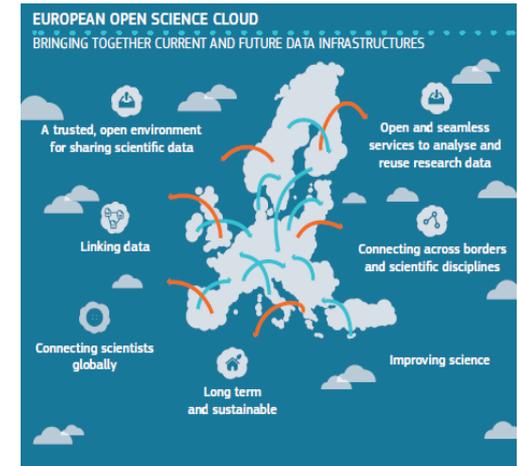
# 1.c.a How to achieve this

## European Open Science Cloud

- Virtual environment, open and seamless services for storage, management, analysis and re-use of research data, across border and scientific disciplines (for free!)
- Could be used for education and training purposes in higher education

## European Data Infrastructure

- Deploying high-bandwidth networks
- Deploying supercomputing capacity necessary to effectively access and process large datasets



## 1.d. mid-term review of the DSM

Taking stock of what has been delivered and what should still be done.

- Communication to be published on 10 May 2017
- Public consultation
- Follow-up initiatives in health
  - Big data in the context of personalised health and care is investigated

## 1.e. Other initiatives supporting big data

- The EU strategy on the data-driven economy
- Funding research and innovation activities in the field of "Big Data" and "Open Data"
- The communication "Connectivity for a European Gigabit Society" recognises connectivity as an essential enabler of the data economy
- Free Flow of Data Initiative

## 2. eHealth Action Plan 2012-2020

The eHealth Action Plan (eHAP) has the following objectives:

- Achieving wider interoperability of eHealth services
- Support research, development and innovation in eHealth and wellbeing
- Facilitate the uptake and ensuring wider deployment
- Promoting policy dialogue and international cooperation on eHealth at global level

## 2.a Future of the eHAP

- Many activities to bring objectives into fruition are met or currently on-going
- eHealth Network played a pivotal role
- Superseded (integrated) by the Digital Single Market
- Could give sectorial implementation to the Digital Single Market strategy

## 3. EU-funded research on big data

The Commission has allocated € 2 billion under Horizon 2020 to invest in research and innovation for the first 4 years under the call Personalising Health and Care.

This call will:

- improve understanding of the causes and mechanisms underlying health, healthy ageing and disease
- improve ability to monitor health and to prevent, detect, treat and manage disease
- support older persons to remain active and healthy
- and test and demonstrate new models and tools for health and care delivery

## 3.a Horizon 2020 projects

- Topic: Big Data supporting public health
- 4 projects funded:
  1. MIDAS: develop an integrated solution that allows the users to tap into evidence-based actionable information from various sources for health policy
  2. EVOTION: use of Big Data in supporting a holistic approach to hearing loss
  3. BigO: use of Big Data for childhood and adolescent obesity
  4. PULSE: use if Big Data from different sources to change public health from a reactive to a predictive system

## 3.b Public-Private Partnership (1)

- Big Data Value Association: a PPP with 24 members of large and SME industry, and research
- Budget: Investment expected to reach approx. € 2.5 billion
- Period: 1 January 2015 – 31 December 2020
- Objective: boost European Big Data Value R&D&I and to foster a positive perception of Big Data

### **The PPP aims to:**

- Strengthen competitiveness
- Promote wide and best uptake of Big Data Value technologies and services
- Establish excellent science base

## 3.b Public-Private Partnership (2)

- Innovative Medicines Initiative (IMI 2): world's biggest public-private partnership
- Budget: € 3.3 billion (€ 1.638 billion H2020, € 1.425 EFPIA companies, € 213 million other life science industries or organisations)
- Period: 2014- 2024
- Objective: Improve health through development of, and patient access to, innovative medicines
- Big Data for better outcomes programme with a focus on blood cancers and Alzheimer's disease

## 4 eHealth Network

*The network aims to enhance interoperability between electronic health systems and continuity of care and to ensure access to safe and quality healthcare*

- Article 14, Directive 2011/24/EU
- EU no competence on eHealth
- Strategic/political decisions made by Member States
  - Multiannual work plan 2015-2018 (2018-2021)
- Commitment through collaboration

# eHealth Network and big data

Multiannual work programme 2018-2021:

- Big Data or meaningful use of data will get a more prominent place
- Input is study on Big Data in Public health, Telemedicine and Healthcare <https://bookshop.europa.eu/en/home/>

Specific actions to be executed by new Joint Action on eHealth

# Thank you!



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**DG Health and Food Safety**

[http://ec.europa.eu/health/ehealth/policy/index\\_en.htm](http://ec.europa.eu/health/ehealth/policy/index_en.htm)

**DG Connect**

<http://ec.europa.eu/digital-agenda/en/eu-policy-ehealth>