Accelerating digital transition in health

EU perspective and funding opportunities

Piatra Neamt, 9 Iunie 2022

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HaDEA.A3-Health Research

EU Context: *e*Health – Smart Health – Digital Health

Definitions: Whilst there is no single definition of what constitutes *Smart Health*, it essentially refers to the development of smart (usually digitally aided) solutions to improve the way healthcare solutions are delivered.

Challenges: ageing, workforce shortages, the rising burden of preventable non-communicable diseases or growing threats from infectious diseases and the huge cost (healthcare accounts for 9,6% of GDP in the EU as a whole (2017))

Solutions: A paradigm shift is needed towards protective and responsive health care systems, where maintance of good health is the prime focus of disease management. Fundamental to the paradigm shift is the availability of continous health monitoring data from both clinical and citizen/patient generated sources as well as strategic and multidisciplinary collaboration between citizens/patients, researchers, healthcare and medical professionals and firms of different sizes.

Smart Health products and services are expected to lead to faster, better and more personalised healthcare with better health outcomes and improved wellbeing.

EU legal framework

The organisation and delivery of health and social care are the responsibility of the Member States. The Commission provides its support through funding and actions that promote policy cooperation and exchange of good practice:

- ✓ **Horizon Europe/** Horizon2020
- ✓ **Connecting Europe Facility** (CEF)
- ✓ **Directive 2011/24/EU** of the European Parliament and of COMMISSIONER : STELLA KYRIAKIDESthe Council of 9 March 2011 on the application of patients' rights in cross-border healthcare
- ✓ **Regulation (EU) 2017/745** of the European Parliament and of the Council of 26 May 2021 on medical devices
- ✓ **Regulation (EU) 2016/679** of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data
- ✓ **Regulation (EU) No 910/2014** of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market
- ✓ **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
- ✓ The European Innovation Partnership on Active and Healthy Ageing (EIP on AHA)
- ✓ **Council Regulation (EU) No 557/2014** of 6 May 2014 establishing the Innovative Medicines Initiative 2 Joint Undertaking
- ✓ **Council Regulation (EU) No 561/2014** of 6 May 2014 establishing the Electronic Components and Systems for European Leadership Joint Undertaking
- ✓ Health Emergency Preparedness and Response **(DG HERA)** - COMMISSIONER : STELLA KYRIAKIDES

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European
Commission

Need for further EU action

1. citizens' secure access to and sharing of health data across borders;

2. better data to advance research, disease prevention and personalised health and care;

3. digital tools for citizen empowerment and person-centred care.

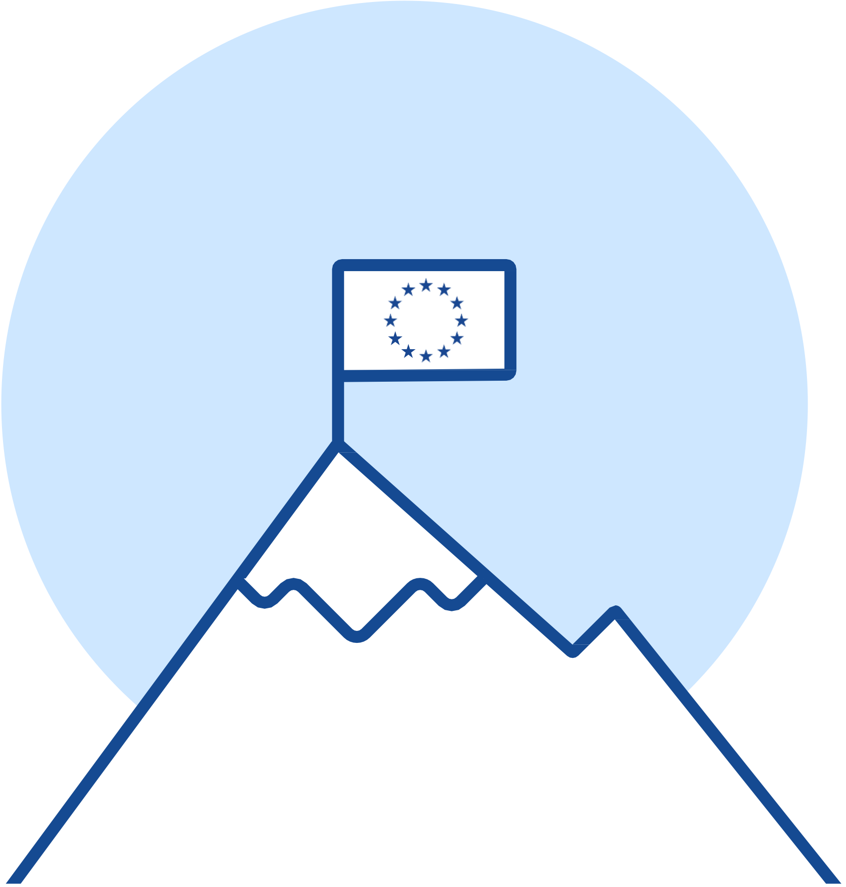
European
Commission

The Health and Digital Executive Agency (HaDEA)

HORIZON 2020
Better Society
A 2

HaDEA – boosting Europe by building, from earth to space, a healthy society, a digital economy and a competitive industry.

Mission



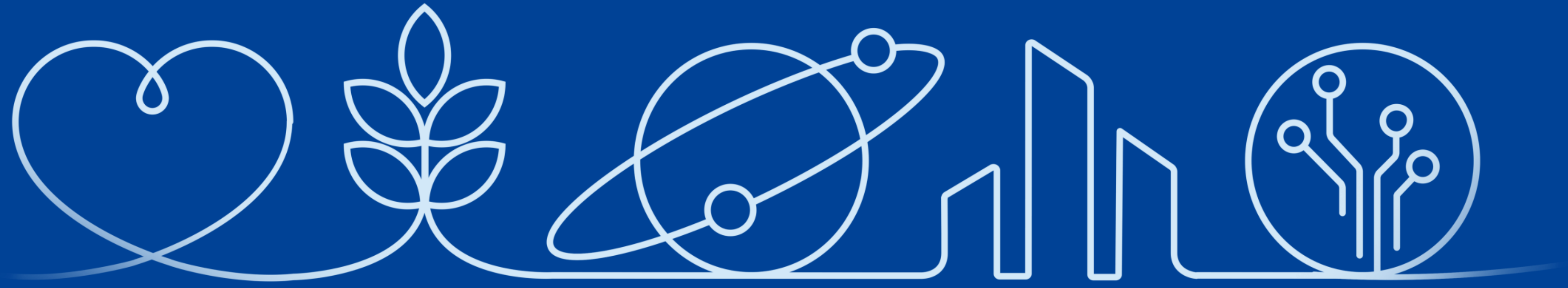
To implement actions that strengthen Europe in the domains of health, food safety, digital technologies and networks, industrial capacities and space.

We provide high quality and service-oriented support, with the aim to enable European society to become more healthy, resilient and fair and European industry to become more competitive.

We ensure that the projects funded by the HaDEA deliver concrete results that benefit the lives of all EU citizens and provide the European Commission with valuable input for its policies

European Commission

Programme sectors



Health

Food safety

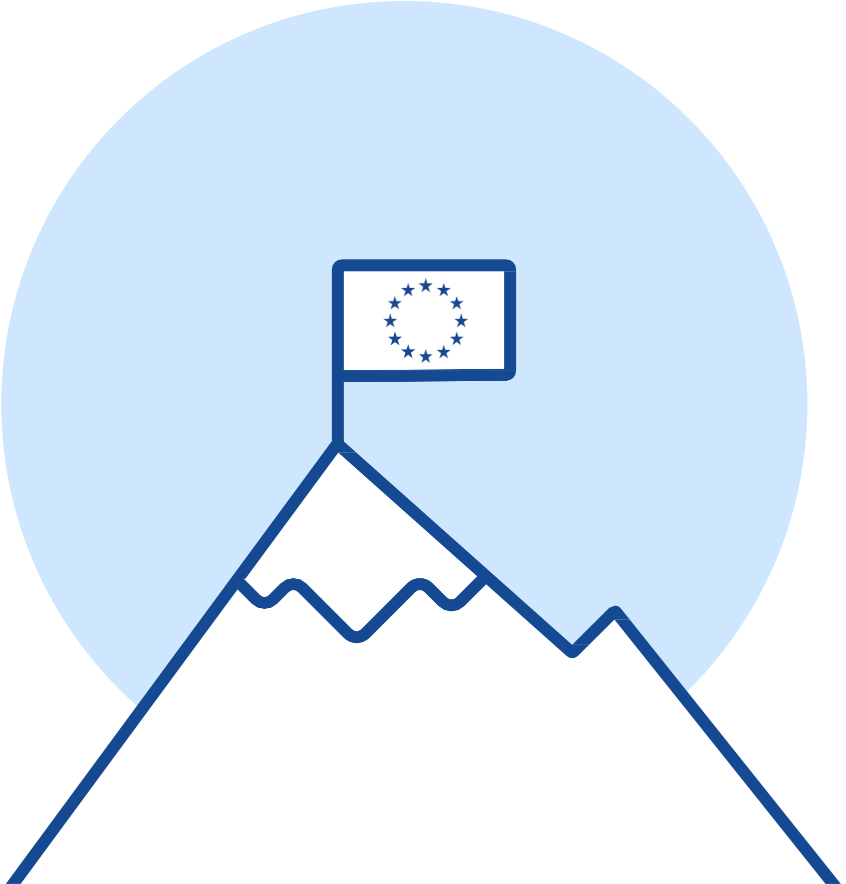
Space

Industry

Digital

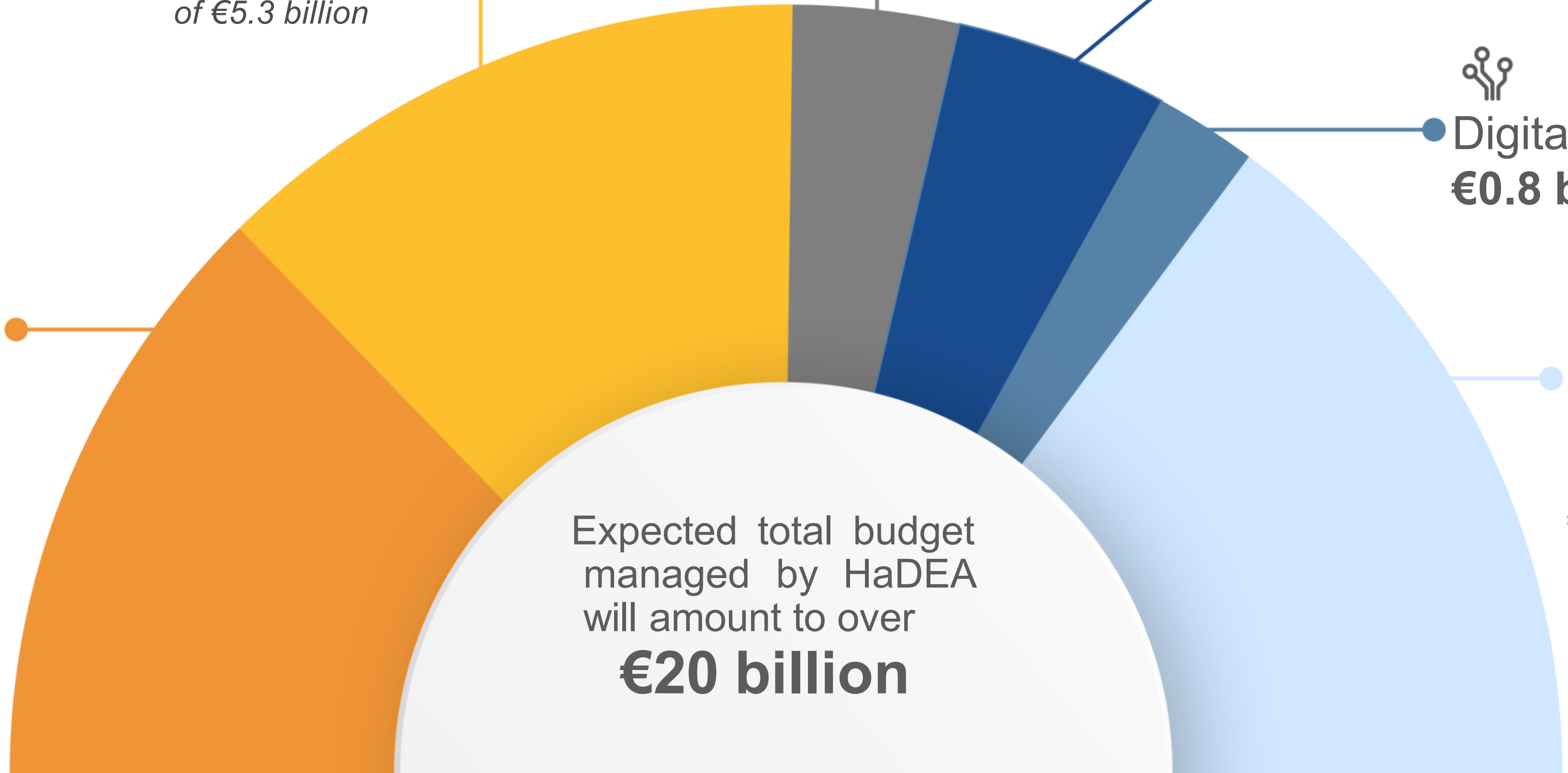
Horizon Europe Health cluster

Areas of intervention



1. Health throughout the life course
2. Environmental and social health determinants
3. Non-communicable and rare diseases
4. Infectious diseases including poverty-related and neglected diseases
5. Tools, technologies and digital solutions for health and care including personalised medicine
6. Health care systems

Programme budgets



Horizon Europe
Health cluster
€4.8 billion

EU4Health
€4.7 billion
Out of total budget of €5.3 billion

Single Market Programme
Food safety
€1.3 billion

Connecting Europe Facility
€1.7 billion

Digital Europe
€0.8 billion

Horizon Europe
Digital, Industry & Space cluster
€5.6 billion

Expected total budget managed by HaDEA will amount to over
€20 billion

Roles and responsibilities (1)

European Commission

Defines policy

- Defines strategy, objectives and priority areas/work programmes
- Makes programme decisions
- Selects projects for (co-)funding
- Evaluates the programme implementation and the Agency's performance

Executive Agencies

Turns policy into action

- Manages the project lifecycle:
  - Organises calls for proposals and external evaluations
  - Monitors the implementation of projects
- Supports communication activities (Info Days, publications, etc.)
- Provides feedback to policy making

Roles and responsibilities (2)

European Commission

Digital Agenda for Europe: 2020-2030

- **Skills**: At least 80% of all adults should have basic digit skills and there should be 20 million ICT specialists employed in the EU, while more women should take up such jobs;
- **Businesses**: 75% of companies should use cloud computing services, big data and AI; more than 90% of EU SMEs should reach at least a basic level of digital intensity; and the number of EU unicorns should double;
- **Infrastructure**: All EU households should have gigabit connectivity and all populated areas should be covered by 5G; the production of cutting-edge and sustainable semiconductors in Europe should make up 20% of worldwide production; 10 000 climate-neutral highly secure edge nodes should be deployed in the EU, and Europe should have its first quantum computer;
- **Public services:** All key public services should be available online; all citizens will have access to their e-medical records, and 80% of citizens should use an electronic identity solution **COM(2018) 233 final**

HaDEA

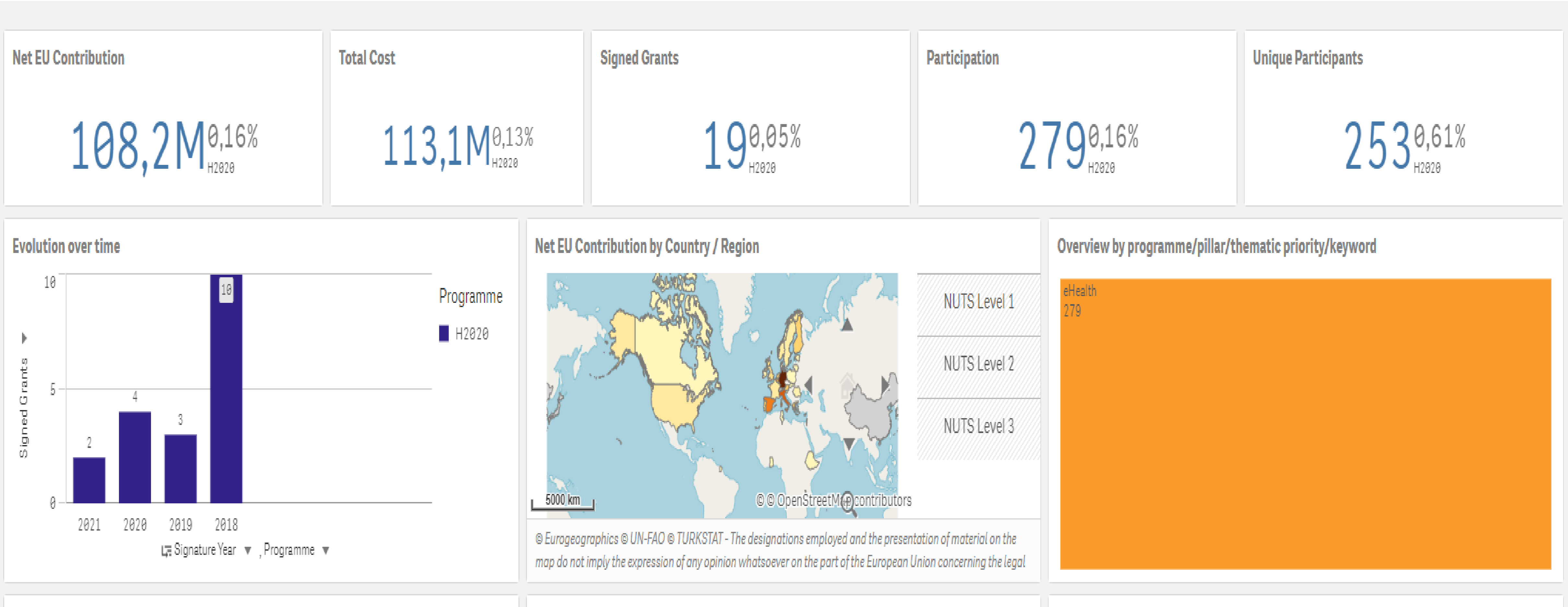
Programmes

- Horizon Europe
    - ○ Cluster 1 (Health)
    - ○ Cluster 4 (Digital, Industry & Space)
- EU4Health
- Single Market
- Connecting Europe Facility
- Digital Europe

Horizon 2020 digital health projects (2014-2020)

European Commission

eHealth



Net EU Contribution
108,2M 0,16% H2020

Total Cost
113,1M 0,13% H2020

Signed Grants
19 0,05% H2020

Participation
279 0,16% H2020

Unique Participants
253 0,61% H2020

Evolution over time

Signed Grants
10
5
0
2
4
3
10
2021
2020
2019
2018
Signature Year ▼
, Programme ▼
Programme
H2020

Net EU Contribution by Country / Region

NUTS Level 1
NUTS Level 2
NUTS Level 3
5000 km
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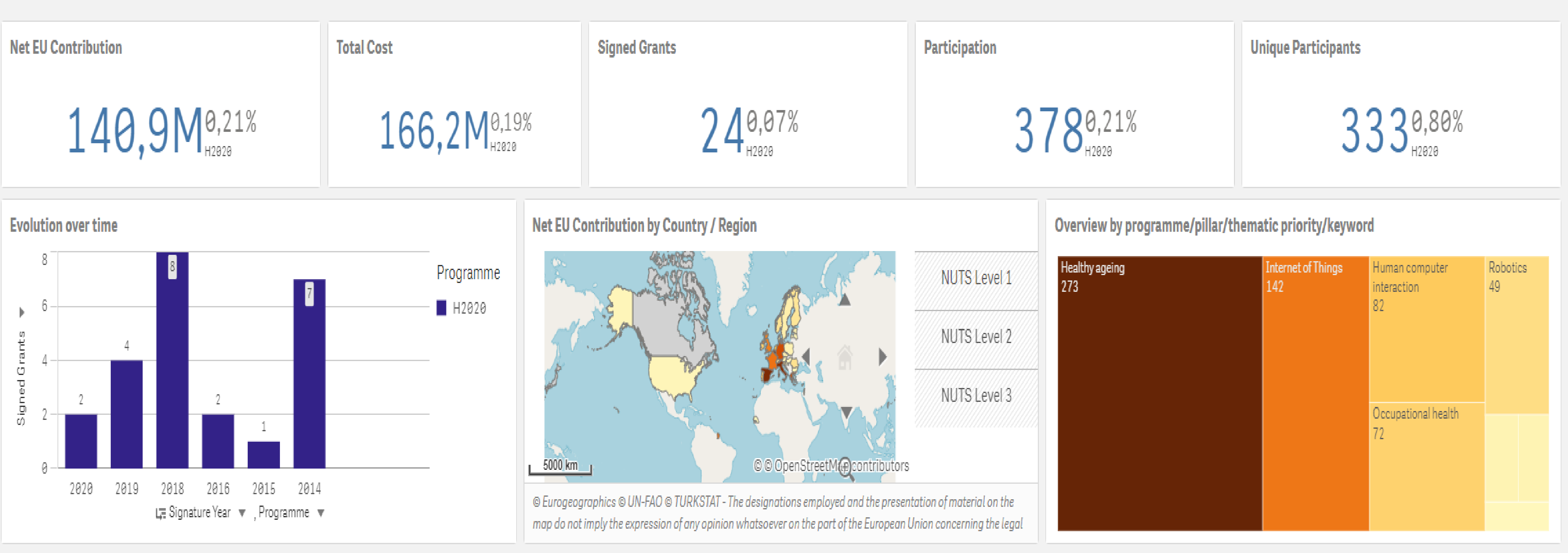
Overview by programme/pillar/thematic priority/keyword

eHealth
279

Smart Health



Net EU Contribution
140,9M 0,21% H2020

Total Cost
166,2M 0,19% H2020

Signed Grants
24 0,07% H2020

Participation
378 0,21% H2020

Unique Participants
333 0,80% H2020

Evolution over time

Signed Grants
8
6
4
2
0
2
4
8
2
1
7
2020
2019
2018
2016
2015
2014
Signature Year ▼ , Programme ▼
Programme
H2020

Net EU Contribution by Country / Region

5000 km
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NUTS Level 1
NUTS Level 2
NUTS Level 3

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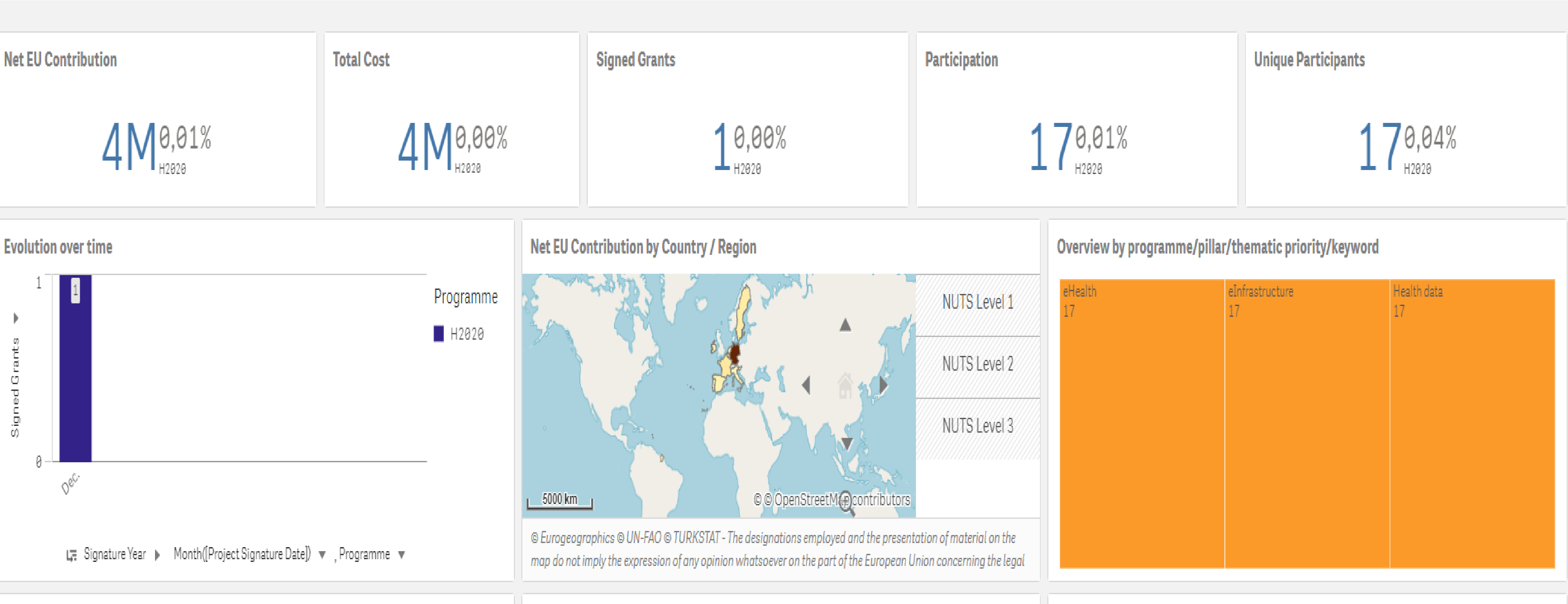
Overview by programme/pillar/thematic priority/keyword

Healthy ageing
273
Internet of Things
142
Human computer interaction
82
Robotics
49
Occupational health
72

Digital Health



Net EU Contribution	Total Cost	Signed Grants	Participation	Unique Participants
4M 0,01% H2020	4M 0,00% H2020	1 0,00% H2020	17 0,01% H2020	17 0,04% H2020

Evolution over time

Signed Grants
1
0
1
Dec.
Programme
■ H2020
Signature Year
Month([Project Signature Date])
, Programme

Net EU Contribution by Country / Region

NUTS Level 1
NUTS Level 2
NUTS Level 3
5000 km
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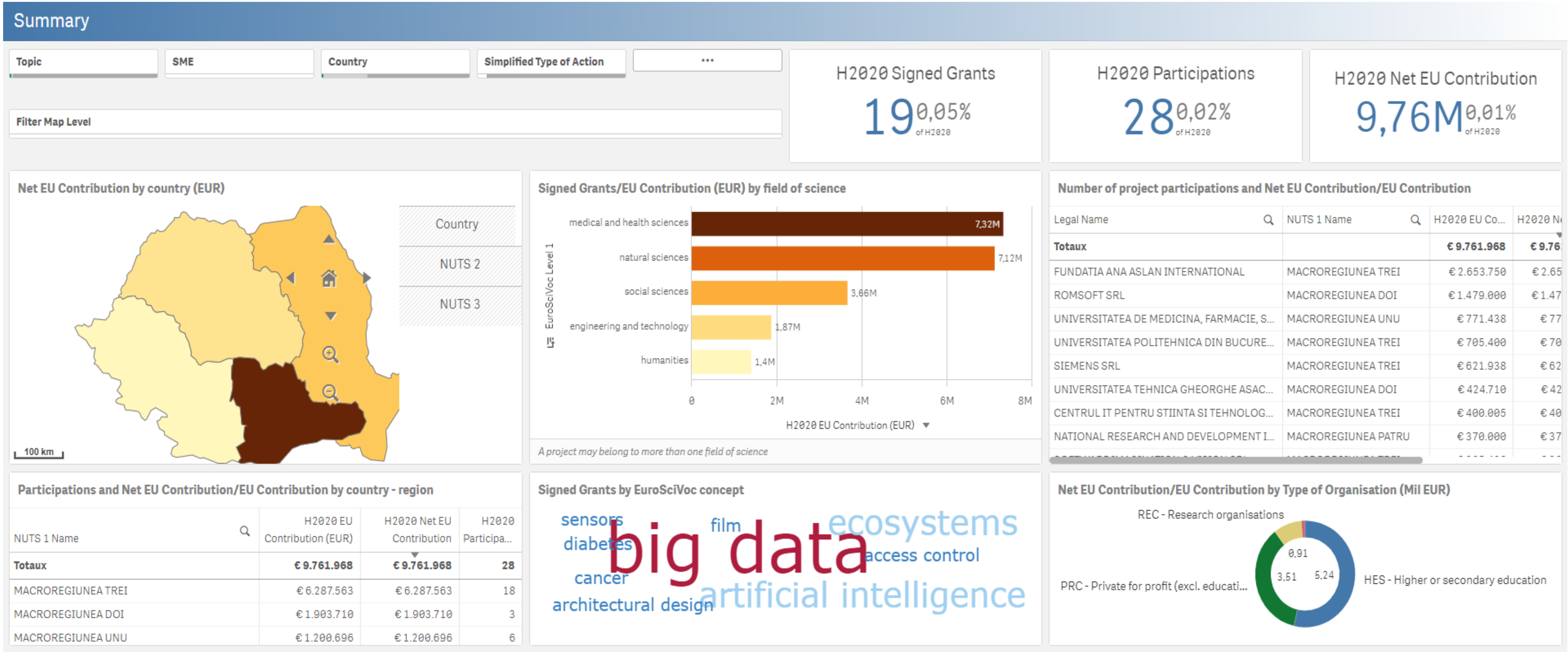
Overview by programme/pillar/thematic priority/keyword

eHealth
17
eInfrastructure
17
Health data
17

România



Summary
Topic
SME
Country
Simplified Type of Action
...
Filter Map Level

H2020 Signed Grants
19 0,05% of H2020

H2020 Participations
28 0,02% of H2020

H2020 Net EU Contribution
9,76M 0,01% of H2020

Net EU Contribution by country (EUR)

Country
NUTS 2
NUTS 3
100 km

Signed Grants/EU Contribution (EUR) by field of science

EuroSciVoc Level 1
medical and health sciences
7,32M
natural sciences
7,12M
social sciences
3,66M
engineering and technology
1,87M
humanities
1,4M
0
2M
4M
6M
8M
H2020 EU Contribution (EUR)

A project may belong to more than one field of science

Number of project participations and Net EU Contribution/EU Contribution

Legal Name	NUTS 1 Name	H2020 EU Co...	H2020 N
Totaux		**€ 9.761.968**	**€ 9.76**
FUNDATIA ANA ASLAN INTERNATIONAL	MACROREGIUNEA TREI	€ 2.653.750	€ 2.65
ROMSOFT SRL	MACROREGIUNEA DOI	€ 1.479.000	€ 1.47
UNIVERSITATEA DE MEDICINA, FARMACIE, S...	MACROREGIUNEA UNU	€ 771.438	€ 77
UNIVERSITATEA POLITEHNICA DIN BUCURE...	MACROREGIUNEA TREI	€ 705.400	€ 70
SIEMENS SRL	MACROREGIUNEA TREI	€ 621.938	€ 62
UNIVERSITATEA TEHNICA GHEORGHE ASAC...	MACROREGIUNEA DOI	€ 424.710	€ 42
CENTRUL IT PENTRU STIINTA SI TEHNOLOG...	MACROREGIUNEA TREI	€ 400.005	€ 40
NATIONAL RESEARCH AND DEVELOPMENT I...	MACROREGIUNEA PATRU	€ 370.000	€ 37

Participations and Net EU Contribution/EU Contribution by country - region

NUTS 1 Name	H2020 EU Contribution (EUR)	H2020 Net EU Contribution	H2020 Participa...
Totaux	**€ 9.761.968**	**€ 9.761.968**	**28**
MACROREGIUNEA TREI	€ 6.287.563	€ 6.287.563	18
MACROREGIUNEA DOI	€ 1.903.710	€ 1.903.710	3
MACROREGIUNEA UNU	€ 1.200.696	€ 1.200.696	6

Signed Grants by EuroSciVoc concept

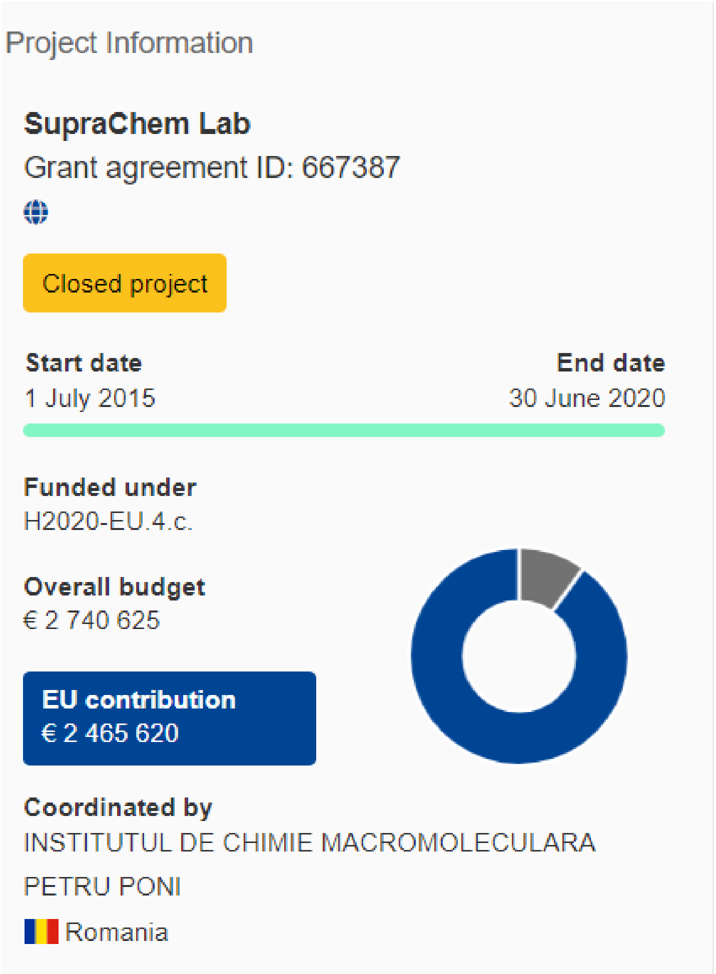
sensors
diabetes
big data
film
ecosystems
access control
cancer
architectural design
artificial intelligence

Net EU Contribution/EU Contribution by Type of Organisation (Mil EUR)

REC - Research organisations
0,91
3,51
5,24
PRC - Private for profit (excl. educati...
HES - Higher or secondary education

Success story – SupraChem Lab

New lab seeks supramolecular solutions for gene therapy



Project Information

SupraChem Lab

Grant agreement ID: 667387

Closed project

Start date	**End date**
1 July 2015	30 June 2020

Funded under

H2020-EU.4.c.

Overall budget

€ 2 740 625

EU contribution

€ 2 465 620

Coordinated by

INSTITUTUL DE CHIMIE MACROMOLECULARA PETRU PONI

Romania

Horizon Europe digital health calls & topics (2021-2022)

Destination 1 - Staying healthy in a rapidly changing society

HORIZON-HLTH-2021-STAYHLTH-01-03: *Healthy Citizens 2.0 - Supporting digital empowerment and health literacy of citizens*
Type of Action: Coordination and Support Action
Budget: EUR 3 million

HORIZON-HLTH-2022-STAYHLTH-01-04-two-stage: *Trustworthy artificial intelligence (AI) tools to predict the risk of chronic non-communicable diseases and/or their progression*
Type of Action: Research and Innovation Actions
Budget: EUR 60.00 million

Destination 4 - Ensuring access to innovative, sustainable and high-quality health care

HORIZON-HLTH-2021-CARE-05-02: *Data-driven decision-support tools for better health care delivery and policy-making with a focus on cancer*
Type of Action: Research and Innovation Actions
Budget: EUR 40.00 million

Destination 5 - Unlocking the full potential of new tools, technologies and digital solutions for a healthy society

HORIZON-HLTH-2021-TOOL-06-01: *Smart medical devices and their surgical implantation for use in resource-constrained settings*
Type of Action: Innovation Actions
Budget: EUR 25.00 million

HORIZON-HLTH-2021-TOOL-06-03: *Innovative tools for use and re-use of health data (in particular of electronic health records and/or patient registries)*
Type of Action: Research and Innovation Actions
Budget: EUR 30.00 million

HORIZON-HLTH-2022-TOOL-11-02: *New methods for the effective use of real-world data and/or synthetic data in regulatory decision-making and/or in health technology assessment*
Type of Action: Research and Innovation Actions
Budget: EUR 35.00 million

HORIZON-HLTH-2022-TOOL-12-01-two-stage: *Computational models for new patient stratification strategies*
Type of Action: Research and Innovation Actions
Budget: EUR 60.00 million

Destination 6 - Maintaining an innovative, sustainable and globally competitive health-related industry

HORIZON-HLTH-2021-IND-07-03: *Promoting a trusted mHealth label in Europe: uptake of technical specifications for quality and reliability of health and wellness apps*
Type of Action: Coordination and Support Action
Budget: EUR 2.00 million

HORIZON-HLTH-2022-IND-13-01: *Enhancing cybersecurity of connected medical devices*
Type of Action: Research and Innovation Actions
Budget: EUR 20.00 million

HORIZON-HLTH-2022-IND-13-02: *Scaling up multi-party computation, data anonymisation techniques, and synthetic data generation*
Type of Action: Research and Innovation Actions
Budget: EUR 30.00 million

HORIZON-HLTH-2022-IND-13-04: *Setting up a European Smart Health Innovation Hub*
Type of Action: Coordination and Support Action
Budget: EUR 2.00 million

HORIZON-HLTH-2022-IND-13-05: *Setting up a European Electronic Health Record Exchange Format (EEHRxF) Ecosystem*
Type of Action: Coordination and Support Action
Budget: EUR 2.00 million

How to get involved

Participation in consortia for collaborative research projects:

- **Register as a participant** on “Funding & tender opportunities” portal
  https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/participant-register
- **Use Partner search facility** on “Funding & tender opportunities” portal
  https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/partner-search
- **National Contact Points**
  https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/ncp

Participation in evaluations and reviews:

- **Register as an independent expert** on “Funding & tender opportunities” portal
  https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/work-as-an-expert

Stay in touch

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European Health and
Digital Executive Agency

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- ✓ General information on Horizon Europe: https://ec.europa.eu/info/horizon-europe
- ✓ Funding & Tenders Opportunities portal: https://ec.europa.eu/info/funding-tenders/opportunities/portal

European
Commission

Thank you

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