



# Oportunidades de financiación en Horizon 2020

## SC1: Salud, Cambio demográfico y Bienestar

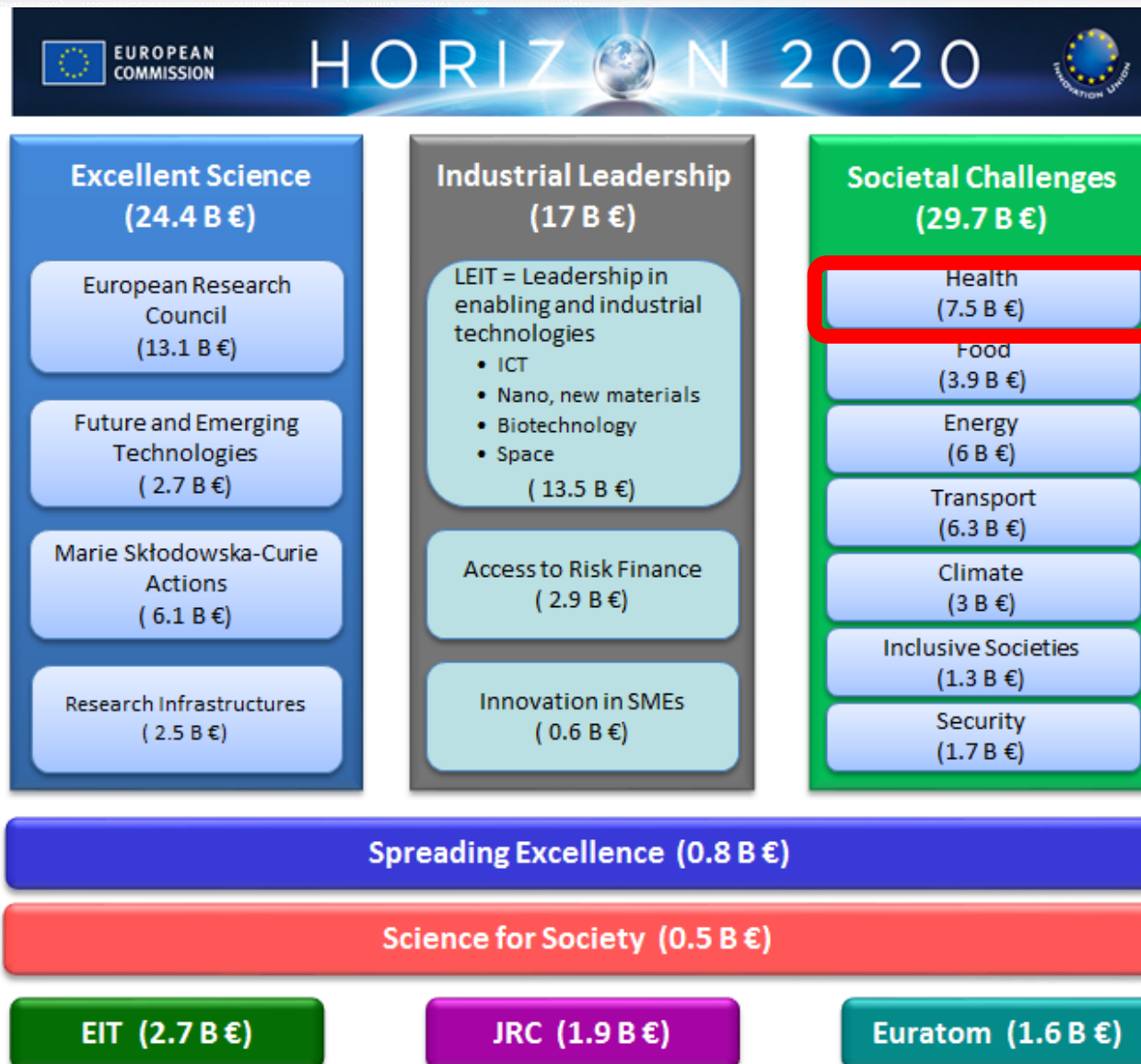
## Presentación de las Convocatorias 2020

---

*Secció d'R+D+I Internacional – Servei d'Investigació i Innovació*

---

# H2020 (2014 – 2020)



## **(I) Better health and care, economic growth and sustainable health systems**

### **(Topics BHC)**

1. Personalised medicine
2. Innovative health and care industry
3. Infectious diseases and improving global health
4. Innovative health and care systems – Integration of care
5. Decoding the role of the environment for health and well-being
6. Contribution to the Call on Digital Transformation in Health and Care

## **(II) Digital transformation in health and care (Topics DTH)**

## **(III) Trusted digital solutions and cybersecurity in health and care (Topics TDS)**

**Otras acciones se encuentran en el programa piloto European Innovation**

**Council:** premios, Instrumento PYME, FTI, FET Open

## SC1-BHC-06-2020 Digital diagnostics – developing tools for supporting clinical decisions by integrating various diagnostic data

### Scope

- To develop tools, platforms or services that will use information provided by most relevant diagnostic means for a particular area, resulting in an accurate, detailed, structured, systemic and prioritized assessment of the health status in a patient.
- These tools/platforms/services should contribute to improving diagnosis and clinical decision, not only integrate existing data, and should involve intelligent human- computer interface solutions to facilitate its daily use in clinical practice.

### Expected impact

- Increase EU's capacity to innovate in the area of medical instruments technologies.
- Improve the quality and sustainability of healthcare systems.
- Contribute to the growth of the European diagnostics sector, in particular for SMEs.
- Reinforce EU's role among world leaders in the production of medical diagnostic devices.

**Total Budget:** 40 M€

**Deadline:** 7 April 2020

**Contribution per project:** 8 – 15 M€

**Type of Action:** Research and Innovation (RIA)

## HCO-01-2020: Actions in support of the International Consortium for Personalised Medicine

### Scope

Support the implementation of the ICPeMed Action Plan including actions such as:

- Support the building of PM networks with third countries (for the 2020 call: focus on Africa).
- Continuation of the work done by the ICPeMed secretariat.

### Expected impact

Support the implementation of the IC PerMed goals.

- International aspect: Integrating the country/group of countries into ICPeMed activities. Support wider adoption of standards developed in Europe. Contribute towards the UN Sustainable Development Goal 3: Ensure healthy lives and promote well-being for all at all ages.
- ICPeMed secretariat: Ensure continuity of the operations of ICPeMed beyond 2020. Increase the visibility of the consortium and provide harmonised vision for the further development of personalised medicine.

**Total Budget:** 4 M€

**Deadline:** 7 April 2020

**Contribution per project:** 1.5-2 M€

**Type of Action:** Coordination and Support (CSA)

## SC1-HCO-03-2020 Bridging the divide in health research and innovation – boosting return on investment

### Scope

- Focus on widening countries and leveraging on ESIF investments.
- Support to carry out institutional reforms, in terms of governance, science evaluation, internationalisation, attracting and retaining talents.
- Building on earlier “bridging-the-divide” CSAs (2014 and 2017).

### Expected impact

- Institutional culture that rewards scientific performance and innovation.
- Better embeddedness in international networks.
- Increased participation in Horizon projects.

**Total Budget:** 2 M€

**Deadline:** 7 April 2020

**Contribution per project:** 1.5-2 M€

**Type of Action:** Coordination and Support (CSA)

## SC1-HCO-17-2020: Coordinating and supporting research on the human microbiome in Europe and beyond

### Scope

- Synergistic collaboration across research programmes on human microbiome.
- Complement, support and enhance cooperation within Europe and beyond.
- Harmonisation and standardisation of procedures, sample collection, processing of microbiome data.

### Expected impact

- Concrete methods, standards, procedures and in vivo models.
- Increased comparability of microbiome data, more meaningful results.

**Total Budget:** 2 M€

**Deadline:** 7 April 2020

**Contribution per project:** 1.5-2 M€

**Type of Action:** Coordination and Support (CSA)

## SC1-BHC-11-2020 Advancing the safety assessment of chemicals without the use of animal testing

### Scope

- Integrative approaches in human biology and related toxicity pathways to propose and demonstrate scientifically valid means for comprehensive safety assessment of chemicals without animal testing.
- Establish the scientific credibility of the approaches for a variety of relevant decision-making contexts and regulatory requirements.
- Cooperation with complementary initiatives in and outside the EU, including with industry and JRC.

### Expected impact

- Non-animal solutions for safety assessment of chemicals.
- Recognition from regulatory bodies for safety assessment practice.
- Uptake and commercial exploitation.
- Contribution to 3Rs (Replace, Reduce, Refine).

**Total Budget:** 60 M€

**Deadline:** 7 April 2020

**Contribution per project:** 10 – 20 M€

**Type of Action:** Research and Innovation (RIA)



## SC1-HCO-18-2020 Developing methodological approaches for improved clinical investigation and evaluation of high-risk medical devices

### Scope

- Analysis and review of current clinical investigation and evaluation designs for high-risk medical devices.
- Development of new methodologies for generating sound clinical data coming from different sources incl. real-world data, adapted for conformity assessment and continuous clinical evaluation.
- Networking and exchange of best practices among regulators and developers with goal to establish pool of expertise.

### Expected impact

- High quality clinical data for conformity assessment and market access.
- Improved knowledge of legislative frameworks and regulatory requirements.
- Improved evidence of safety and efficacy for patients and health systems.

**Total Budget:** 2 M€

**Deadline:** 7 April 2020

**Contribution per project:** 1 -2 M€

**Type of Action:** Coordination and Support (CSA)

## SC1-HCO-19-2020 Reliable and accessible information on cell and gene-based therapies

### Scope

- Proposals should offer well-structured and detailed strategies to convey accurate and up-to-date information on cell and gene-based therapies using multiple contemporary modalities, including a website. The consortium should consist of diverse actors and could include experts in science communication, patients' representatives, industry, SMEs, clinical and academic researchers as well as the major European learned societies in the field.
- All communication material/information should be translated to English and dedicated to at least researchers, patients, and the public.
- A series of communication events should be organised, also open to the public, where innovative technologies could be presented and discussed.
- Proposals should create an information source on the practical steps needed for cell and gene-based therapy development (one-stop shop information relating to manufacturing guidelines, regulatory requirements, intellectual property rights, market acceptability and ethical matters).
- Proposals should provide a strategy on how they will liaise with regulatory agencies and include a realistic sustainability plan. Sustainability should be ensured for at least 5 years after the end of the project.

### Expected impact

- Better informed decision making by patients and the public, due to objective, accurate and transparent communications of the latest developments and actual treatments available in the field in order to avoid misconceptions.
- Better informed decision making by regulatory and healthcare authorities, due to better access to reliable and updated information, and to stronger synergies and knowledge sharing between decision-makers and other stakeholders including advanced therapies learned societies.
- Improved products development, by providing the research community and patients with a high-quality information source.

## SC1-HCO-19-2020 Reliable and accessible information on cell and gene-based therapies

**Total Budget:** 2 M€

**Deadline:** 7 April 2020

**Contribution per project:** 1.5 -2 M€

**Type of Action:** Coordination and Support (CSA)

## SC1-BHC-17-2020 Global Alliance for Chronic Diseases (GACD) - Prevention and/or early diagnosis of cancer

- Part of the GACD scientific community.

### Scope

- Implementation research (also promising interventions).
- Prevention and/or early diagnosis of cancer on in LMIC and/or in vulnerable populations in HIC.

### Expected impact

- Advance local, regional or national cancer prevention and/or early diagnostic health policies.
- Inform health service providers, policy and decision makers on effective scaling up of cancer interventions at local, regional, and national levels.
- Provide pathway to cancer care for the patients diagnosed with cancer.

**Total Budget:** 20 M€

**Deadline:** 7 April 2020

**Contribution per project:** 1 – 3 M€

**Type of Action:** Research and Innovation (RIA)

## SC1-BHC-33-2020 Addressing low vaccine uptake

### Scope

- To increase the understanding of the determinants of low vaccine uptake in specific contexts in the EU and/or Associated Countries (AC), develop and test strategies/interventions to increase vaccination rates; include a strategy to measure the impact of the proposed interventions. The finding must be gathered onto a set of recommendations useful for public health authorities.
- Proposals to include social science and public health related disciplines, and create links with existing European and/or international initiatives.

### Expected impact

- Contribute to increase vaccine coverage in Europe.
- Develop practical and readily implementable guidelines to aid public health authorities in Europe to increase vaccination rates.
- Work towards meeting the goals on vaccination set out in President Juncker's State of the Union address (2017) and Council Recommendations on strengthened cooperation against vaccine preventable diseases.

**Total Budget:** 9 M€

**Deadline:** 7 April 2020

**Contribution per project:** 2 – 3 M€

**Type of Action:** Research and Innovation (RIA)

## SC1-BHC-34-2020: New approaches for clinical management and prevention of resistant bacterial infections in high prevalence settings

### Scope

- Proposals should focus on the identification of best practices, and the development and validation of interventions, infection prevention and clinical management plans for dealing with resistant bacterial infections in high prevalence settings. The research needs to take into account the variety and capacities of local health care/nosocomial infrastructures, and the trends of resistance patterns on local, national and international level. The research needs to lead to management plans.

### Expected impact

- Availability of tested cost effective models for prevention and treatment of bacterial infections in health care settings with high prevalence levels of resistant infections.
- Reduced spread of resistant hospital acquired infections in these settings.
- Knowledge that can be of use for other countries around the globe, including low and middle income countries, benefitting their local population.

**Total Budget:** 25 M€

**Deadline:** 7 April 2020

**Contribution per project:** 10 – 15 M€

**Type of Action:** Research and Innovation (RIA)

## SC1-BHC-35-2020 Creation of a European wide sustainable network for harmonised large-scale clinical research studies for infectious diseases

### Scope

- Proposals should set up a European-wide multidisciplinary network able to provide a platform for a rapid response in the conduct of clinical studies in relation to any severe infection. The initial clinical studies to be performed should be included in the proposal, whereas criteria and processes for including further clinical studies in the project should be clearly described. This should include provisions for flexibility in case of new scientific developments.

### Expected impact

- Reduced cost and time through efficiently implemented clinical trials for diagnosis, prevention and treatment of infections.
- Create and strengthen the operational capacity and the infrastructures for providing realtime evidence for optimal medical intervention and practice in infectious diseases.
- Contribute to existing EU policies on vaccines and AMR.

**Total Budget:** 30 M€

**Deadline:** 7 April 2020

**Contribution per project:** 25 – 30 M€

**Type of Action:** Research and Innovation (RIA)

## SC1-BHC-37-2020: Towards the new generation of clinical trials – trials methodology research

### Scope

- Methodology research to develop innovative solutions in order to improve the design, conduct and analysis of clinical trials.
- Identification of best practices to prevent bottlenecks in execution of clinical trial (e.g., issues related to patient recruitment, adherence and compliance, governance, ethics, sex and gender-based analysis, data sharing).
- Identification and validation of methods that will improve the generalizability of evidence generated through differently designed trials, including personalized medicine approaches and combinatorial interventions.

### Expected impact

- Improved relevance, quality and efficiency of clinical trials conducted with public funding.
- Potential to establish a novel clinical trial methodology supported by regulatory authorities.

**Total Budget:** 6 M€

**Deadline:** 7 April 2020

**Contribution per project:** 4 - 6 M€

**Type of Action:** Research and Innovation Action Lump Sum (RIA LS)



## SC1-BHC-36-2020 Micro- and nano-plastics in our environment: Understanding exposures and impacts on human health

- Clustering of selected projects; JRC involvement

### Scope

- Produce scientific data in support of improved human health hazard and risk assessment of micro and/or nanoplastics.
- A list of knowledge gaps included as a suggestion.

### Expected impact

- Better understanding of health impacts of exposure to micro- and/or nano-plastics, including preliminary investigations into long-term impacts.
- Innovation in human health hazard and risk assessment methodologies of micro- and/or nano-plastics.
- Contribution to the health-relevant aims of the European Strategy for Plastics in a Circular Economy202 and of the Bioeconomy Strategy.

**Total Budget:** 25 M€

**Deadline:** 7 April 2020

**Contribution per project:** 4 - 6 M€

**Type of Action:** Research and Innovation Action (RIA)

## SC1-DTH-12-2020 Use of Real-World Data to advance research on the management of complex chronic conditions

### Scope

- Clinical research integrating Real World Data (RWD), either newly acquired or from existing sources, and linking them with data collected with a research purpose if relevant. Use of RWD to improve the clinical management of adults with complex chronic conditions (CCC).

### Expected impact

- Demonstrate the potential of the use of Real World Data to advance clinical research on complex chronic conditions.
- Demonstrate potential and use of RWD by health authorities to understand safety, quality and effectiveness of therapies.
- Improve the clinical outcomes as well as quality of life of CCC patients.
- Advance the understanding of management of complex diseases.
- Contribution to the cross-border health data exchange and to the DSM.

**Total Budget:** 41 M€

**Deadline:** 7 April 2020

**Contribution per project:** 4 - 6 M€

**Type of Action:** Research and Innovation Action (RIA)

## SC1-HCC-10-2020 Towards a Health research and innovation Cloud: Capitalising on data sharing initiatives in health research

### Scope

- Building on existing EU data-intensive initiatives, design an implementation roadmap for a FAIR health research data portal respecting legal and ethics requirements.
- Define and promote, among research projects, procedures to make data FAIR as well as a standard way of communicating such data, so that any IT-system can easily provide metadata to the portal.
- Build a community to align strategies and capitalise on the work done.
- Develop two use cases to test the above.

### Expected impact

- A catalogue of all relevant publicly-funded health research databases, allowing access to high quality health research data (link to EOSC).
- Through use cases, demonstrate the added value of close collaboration between health researchers and healthcare providers.

**Total Budget:** 3 M€

**Deadline:** 7 April 2020

**Contribution per project:** 2 - 3 M€

**Type of Action:** Coordination and Support (CSA)

## SC1-DTH-02-2020 Personalised early risk prediction, prevention and intervention based on Artificial Intelligence and Big Data technologies

### Scope

- Innovative ICT solutions through data, data analytics, advanced or novel digital technologies, services, products, organisational changes (also including citizens data ownership and increasing health literacy).
- Validation and active stakeholder engagement in the design.
- Personalised early risk prediction, prevention and intervention approaches and better understanding of disease symptoms and effects and behavioural changes.
- Addressing the needs of individuals, improving the uptake of preventive approaches and leading to more effective health and care systems).

### Expected impact

- Adequate information on personalised risk prediction, prevention and intervention
- Clear improvements of outcomes for individuals, care systems and wider society and contribution to new health and care pathways.
- Large-scale collection of user-generated data in compliance with data protection, privacy and security rules and principles.

**Total Budget:** 32 M€

**Deadline:** 22 April 2020

**Contribution per project:** 4 - 6 M€

**Type of Action:** Research and Innovation Action (RIA)

## SC1-DTH-04-2020 International cooperation in smart living environments for ageing people

### Scope

- Develop and validate new solutions that provide personalised advice, guidance and follow-up by smart living environments for ageing people, supporting independent active and healthy lifestyles, fostering social participation and avoiding social exclusion (considering ethics, privacy, security and regulatory aspects, gender issues).
- Building on active user engagement.
- Validation in realistic test sites (eg. home or care centres).
- Collaboration with Japan (standardisation) or Collaboration with Canada (Transitions in Care Initiative).

### Expected impact

- Independent living, and quality of life of older persons compared to current state of the art.
- Usefulness and effectiveness of personalized recommendations and follow-up in terms of the goals of preserving physical, cognitive, mental and social well-being for as long as possible.
- Evidence of user-centred design and innovation, effective ways of human computer interaction, and user acceptance.
- Fostering social participation and reducing social exclusion's risks.
- Validation of non-obtrusive technology for physical, cognitive, social and mental wellbeing.
- Strengthened international cooperation in Research and Innovation on ICT for AHA.

**Total Budget:** 8 M€

**Deadline:** 22 April 2020

**Contribution per project:** 2 – 4 M€

**Type of Action:** Research and Innovation Action (RIA)

## SC1-DTH-06-2020 Accelerating the uptake of computer simulations for testing medicines and medical devices

### Scope

- Develop innovative scientific and technological computer modelling solutions for testing medicines and/or medical devices based on multidisciplinary research.
- Also explore and inform of the reasons for failure and suggest improvements.
- Measures for validation of the in-silico results.
- Benefit for human health, environment and animal welfare should be analysed.
- Engagement with regulators and consideration of the regulatory framework.

### Expected impact

- Adoption of computer simulations and translation into the clinic and the market.
- Increasing the trust of users, investors and stakeholders at industry and academia.
- Redesigning current drug clinical trials by integrating in-silico methods using digitised, personalised testing environments.
- Engagement with regulators, consideration of the regulatory framework.
- Reducing size and duration of human clinical trials and/or reducing animal testing.
- Increased efficacy and patient safety.
- Reducing development costs and/or shorter time-to-market.
- Setting standards for computer modelling solutions for testing.
- Open, reusable data and in silico models.

**Total Budget:** 32 M€

**Deadline:** 22 April 2020

**Contribution per project:** 6 - 8M€

**Type of Action:** Research and Innovation Action (RIA)

## SC1-HCC-08-2020 Scaling up innovation for active and healthy ageing

### Scope

- Facilitate further uptake by actively involving partners from the European Innovation Partnership on Active and Healthy ageing as well as other relevant stakeholder groups and R&I projects, at European, national and regional levels.
- Focus on successful support to supply and demand sides (also facilitating regular exchanges) in implementing scaling up strategies and large-scale deployment (incl. twinning programmes, capacity building for local and regional authorities).
- Long-term investment strategy leveraging and blending funding sources from European, national and/or regional programmes/promotional banks and private investments, also involving new players.
- Recommendations or guidelines for public health authorities.
- Fields: mHealth solutions for active and healthy ageing, smart age-friendly homes and independent living, chronic disease management.

### Expected impact

- Accelerated progress on scaling-up digital innovation for active and healthy ageing across the EU.
- Contribution of the policy activities to i) The Quality of Life of the EU population, ii) The Sustainability of Health and Care delivery and iii) Economic growth and job-creation.
- Increased levels of investment by public authorities and private investors in digital innovation for health and active ageing.
- Wider commitment to investment leading to successful and cost-effective implementation of digitally-enabled, person-centred care solutions.
- Enhanced market conditions that can facilitate economies of scale for the suppliers of technology and services.

**Total Budget:** 2 M€

**Deadline:** 22 April 2020

**Contribution per project:** 1,5 – 2 M€

**Type of Action:** Coordination and Support (CSA)

## SC1-HCC-09-2020 Supporting deployment of eHealth in low and lower middle income countries in Africa for better health outcomes

### Scope

- Support the coordination of a registry of relevant existing e- Health solutions with their services and potential for low and lower middle income African countries or regions.
- Roadmap and strategic implementation plans building on the requirements of end-user communities and policy makers.
- Take into account national and regional policies and (best) practices regarding health and care services and health infrastructures, incl. lessons learned from existing eHealth policies and programmes at all levels of the health system.
- Build on relevant existing and emerging initiatives and capacities in Europe and Africa for future cooperation and deployment.
- Consideration of ethics and data protection of health data, socio- economic and gender issues.
- Involvement of relevant stakeholders (incl. end-users) through national, regional and international workshops and communication and dissemination actions.

### Expected impact

- Higher level of international cooperation and networking in eHealth programmes and policies between European countries or regions and low and middle income African countries, focusing on areas that are beneficial to the target countries / regions and their citizens in eHealth.
- Increased opportunities for e-health innovators, patients, medical staff and health system stakeholders in Europe and Africa.
- Better accessibility of eHealth Services.

**Total Budget:** 2 M€

**Deadline:** 22 April 2020

**Contribution per project:** 1,5 – 2 M€

**Type of Action:** Coordination and Support (CSA)



## DT-TDS-04-2020 AI for Genomics and Personalised Medicine

### Scope

- Demonstrate the potential and benefits of AI technologies for advancing research and personalised medicine through the linking of relevant genomics data and repositories, according to adequate organisational, regulatory, security, ethical and technical requirements.
- Develop and test AI solutions for linking genomics repositories across the EU, including banks of "-omics" and health related data, biobanks and other registries - supporting clinical research, decision making, diagnostic capacity in personalised medicine.
- Potential to build a large-scale distributed repository of relevant genomic data and other -omics and medical data for AI solutions.
- Compliance with the relevant privacy, cybersecurity, ethical and legal rule (incl. exchange of cross-border data).

### Expected impact

- Development and testing of effective AI technologies on genomics and other linked -omics and healthdata repositories.
- Promoting the sharing of data and infrastructure for prevention and personalised medicine research, linking with ongoing '-omics' and human cell mapping initiatives, secure access and cross-border exchange, interoperability of relevant registries.
- Measuring patient-based value healthcare outcomes.
- Supporting the pooling of health data and resources across the EU.
- Standards for genomic data generation, analysis, privacy and sharing.
- Providing open, reusable data for prevention, genomics and personalised medicine research.
- Trust of users on AI solutions to process and link genomics data with other -omics and health related data for better decision-making and value-based patient health outcomes.

**Total Budget:** 35 M€

**Deadline:** 22 April 2020

**Contribution per project:** up to 10 M€

**Type of Action:** Research and Innovation Action (RIA)

## DT-ICT-12-2020: AI for the smart hospital of the future

### Scope

- Pilot demonstrators that deliver innovative AI-based solutions in health and care settings (e.g. hospital, primary care facility or care home).
- Support clinical diagnosis and treatment, etc. carried out with clinical outcomes comparable to human delivered procedures and with comparable results.
- May address any aspect of health facility operations across their range of functions, such as diagnostics, treatments, logistical aspects, measured against health and care metrics.
- Consider wider dimensions such as impact on resources, staff training and alignment with existing practice.
- Build AI-based systems that combine digital and physical services that support individualised and integrated care solutions in care facilities.
- Integrate health and care partners in the design of the pilots.
- At scale" benefits in efficiency or cost reduction and demonstrate the effectiveness of any novel service models in providing economic justification for scale-up investment.
- Address privacy and cybersecurity issues.
- Align with actions of DT-ICT-02-2018: Robotics -Digital Innovation Hubs.

### Expected impact

- European-led AI based pilots for the smart hospital of the future, enabled by open system platforms.
- Effectiveness of AI based technologies, such as smart robots, in a range of healthcare tasks, developing deployable applications.
- Engagement of healthcare policy makers, investors, stakeholders.
- Reaching a high leveraging effect on other sources of funding, in particular regional and national funding.
- Trust and acceptance building in the AI technology among all stakeholders (including patients, their formal and informal caregivers, decision makers, etc.).

**Total Budget: 40 M€**

**Contribution per project: 7 - 10 M€**

**Deadline: 22 April 2020**

**Type of Action: Innovation Action (IA)**

## Research and Innovation Action (RIA)

- **Objective**: To develop **new knowledge** or well to explore the feasibility of a **new technology**, service or solution. It may include fundamental and applied research, technology development and integration, testing and validation of a prototype at small scale in a laboratory or simulated environment.
- **Funding**: Up to **100%** of the eligible costs.
- **Eligibility criteria**: Three independent legal entities based in 3 different Member States or Associated Countries.

## Coordination and Support Action (CSA)

- **Objective**: Accompanying measures such as normalisation, dissemination and communication, networkg creation, support services, dialogues on policies, exercises and studies for mutual learning, complementary activities such as strategic planning, coordination of networks among different countries,...
- **Funding**: Up to **100%** of the eligible costs

## Innovation Action (IA)

- **Objective**: To produce plans, structures or to design new products, processes and enhanced or improved services. It may include prototyping, testing, demonstrations, pilots, validation and large scale and market replication.
- **Funding**: Up to **70%** of the eligible costs. Up to 100% for non-profit organisations.
- **Eligibility criteria**: Three independent legal entities based in 3 different Member States or Associated Countries.