



COCIR'S MISSION PROPOSAL FOR FP9

LIVE LONGER, FEEL BETTER

DIGITISATION OF HEALTHCARE

MARCH 2018

COCIR SUSTAINABLE COMPETENCE IN ADVANCING HEALTHCARE

European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry





INTRODUCTION

The European Union is in a critical phase to determine its future priorities. The discussion for the next Multiannual Financial Framework is on-going. It is crucial that the right directions are set now, building on Europe's strengths in research & innovation. The next EU Framework Programme for Research & Innovation will include several so-called missions. As defined by Professor Mariana Mazzucato in her recently published report¹, ***“mission-oriented policies can be defined as systemic public policies that draw on frontier knowledge to attain specific goals”***. COCIR believes that one of the main challenges FP9 should tackle is the combination of demographic change and the increasing digital transformation of European economy and society. Ensuring healthy lives for all requires a strong commitment and the next EU Framework Programme for Research & Innovation needs to play its part. We have thus developed the following mission proposal following the five criteria set out in the report.



Context and structure of proposed mission

1. Mariana Mazzucato, Mission-Oriented Research & Innovation in the European Union: A problem-solving approach to fuel innovation-led growth, 22 February 2018.



1 BOLD, INSPIRATIONAL WITH WIDE SOCIETAL RELEVANCE

Our proposed mission sets ambitious goals to reach until 2030:

- Adding three healthy life years for every European citizen by 2030, while containing healthcare costs.
- Improve quality and sustainability of healthcare through digitisation to
 - 1) drive efficiency in health, social and informal care delivery;
 - 2) enable value-based health systems;
 - 3) improve patient and citizen involvement.

BENEFITS FOR EUROPEAN SOCIETY AND CITIZENS

- Staying active and healthy for an extended period of time, preventing citizens from getting a disease
- Early and definite diagnosis -prior to symptoms occurring- enabling treatment before a disease progresses
- Digitised health to help promote prevention models, shorten time to diagnosis and optimize care, adapted to specific patient conditions and contexts (including environmental, behavioral and social contexts)
- Personalised treatment and acute care for better therapy outcomes, informed prognosis, more patient comfort and reduced workload for care givers
 - > Focus on chronic disease management, addressing biggest share of healthcare expenditure
 - > First-time-right diagnosis and treatment; reducing overall hospital stays by 30% through e.g. minimally invasive therapies, reducing re-admissions, etc.
- Improved workload for health professionals at large and increased job satisfaction
- Keeping budget of healthcare in Europe at sustainable levels below 10% of GDP, while providing high value-based healthcare, will lead to an additional three healthy life years for every European citizen by 2030

BREAKTHROUGH OR TRANSFORMATIVE POTENTIAL FOR SCIENCE, TECHNOLOGY, INDUSTRY OR SOCIETY

The digital transformation of health and social care will drive creation of new types of innovations, with convergence of technologies (e.g. medical informatics, biomolecular sciences, artificial intelligence and imaging technologies), medical know-how with novel methods of diagnosis and therapy decision making, as well as patient engagement through smart applications ranging from social platforms through devices at the point of care and dynamic coaches. Stakeholders are connected across the continuum of care or integrated supported by new organisational models, business and financial models with benefits for European citizens, societies and economies.

These digital innovations will touch upon all parts of the care continuum individually, but they will also enable to interconnect them, across multi-disciplinary professionals and stakeholders allowing for true patient centred and connected health and social care.



Continuum of Care



2 A CLEAR DIRECTION: TARGETED, MEASURABLE AND TIME-BOUND

In 2030, healthcare will be fast, precise, personalised and cost-effective. Advanced diagnostics, pervasive monitoring and innovative e-health applications will be able to detect body signals, symptoms and diseases early on. Treatment will be highly targeted, minimally invasive and increasingly effective, reducing disability and mortality from cancer, strokes and other major diseases. Diagnosis and treatment will be delivered instantly at the point of care, thanks to the new science of “*theranostics*”. With the help of these and other innovations, including data available to provide means to optimise personalised medicine, Europe will keep an ageing population healthy and fit.

TARGETS TO BENEFIT SOCIETY AND THE EUROPEAN CITIZEN

- Personalised health, better outcomes and higher efficiency healthcare reducing waste and optimising use of healthcare professionals.
 - > Each European citizen to have access to his/her own digital health record at any place and any time
 - > Personalised treatment based on patient individual data
 - > Keep healthcare costs at 10% or below of GDP while adding three healthy life years
- A “*continuum of care*” providing integrated solutions, supported by a high level of connectivity of equipment and devices.
 - > Tailor-made and responsive care for each individual
 - > Combine deep data from both personal measurements and professional healthcare solutions to create a rich and comprehensive overview of people's health to give more (contextual) insights to care teams



3 AMBITIOUS BUT REALISTIC RESEARCH & INNOVATION ACTIONS

Digitisation will facilitate two major developments in healthcare towards 2030:

1. **QUALITY AND EFFICIENCY OF CARE:** standardising and optimising the (currently siloed) building blocks of healthcare to enable health systems to deliver value-based healthcare with better outcomes at lower cost.
2. **PERSONALISATION OF CARE:** convergence of professional healthcare and consumer health, enabled by data and digitalisation, leading to increasing self-management and individualised treatment paths.

These major developments are crucial to the ambition of adding three healthy life years, while containing costs and improving quality, efficiency and satisfaction. We consider the following IT enabled advancements instrumental to achieving this mission.

CONNECTED CARE OR INTEGRATED CARE

Connected Care aims to industrialise care through standards and evidence-based practices, while enabling precision medicine and personalised treatment, amongst others based on the following advancements:

- Analytics-enabled clinical and operational programs for acute-care and chronic care patient management, to help providers efficiently allocate resources across a highly varied patient/clinical needs landscape.
- Building IT solutions and tools that enable migration of on-premises solutions to hybrid/cloud-based deployments, with advanced data science capabilities.

- Enabling Electronic Health Record (EHR) data capturing, aggregation and sharing into clinical relevant contexts and more user-friendly will drive reduction of false alarms, improve the early detection of deterioration and support timely delivery of interventions.
- Deploying well integrated tools for team collaboration, both technical and visual, across the health and social care settings based on social media and collaborative principles.
- Deploying IT systems that support dynamic, distributed, citizen-specific and integrated (clinical + social + informal) care workflows.
- Ubiquitous monitoring technology, combined with cloud based interconnected analytics, will enable continuous healthcare delivery across care teams and settings, with adaptable cost-structures.
- Connected care solutions shall engage multi-disciplinary clinicians, consumers/patients, and their families to support worried-well and healthy-aging consumers, as well as acute and post-acute patients with ongoing (poly-)chronic disease management needs.

DEFINITIVE DIAGNOSIS, BIOMEDICAL MODELING AND TREATMENT OPTIMISATION (THERANOSTICS)

Early and definitive diagnosis will combine information from medical imaging, digital pathology, genomics and other clinical and patient data to deliver first-time right diagnoses within and outside of the hospital. This will amongst others be based on the following advancements:

- Population and patient-specific findings, disease and clinical pathway models, and predictive analytics will enable personalized treatment selection.
- Intelligent and standardized clinical solutions, combined with value added services, will improve departmental efficiency and cost-effective care delivery.
- Image Guided Therapy will industrialize care-delivery processes for better quality assurance, clinical outcomes, and cost control.
- Integrated solutions that combine real-time imaging with smart devices and intra-procedural navigation will further accelerate the transformation from open surgical to minimally and non- invasive procedures.
- New biocompatible materials, low-cost miniaturized sensors, virtual/augmented reality guidance, and data-driven algorithms will enable real-time adaptive therapy delivering more predictable outcomes in cardiology, oncology and many other medical treatments.





4 CROSS-DISCIPLINARITY, CROSS-SECTORAL AND CROSS-ACTOR INNOVATION

Medical and digital health technology industry, healthcare providers, and academic institutions can drive digitisation, i.e. through full value chain involvement. Challenge is in the coupling of various data sources amongst the healthcare actors (like patients, hospitals, care centers, insurance companies, pharma- and medical technologies industries). The role of industry is in providing digital technologies to connect and integrate data sources to turn data into patient centric information.

All actors across the value chain will have to cooperate to fulfill the objectives of this mission: patients and patient associations, clinicians, hospitals and care centers, Research & Technology Organisations and academia/scientific societies, industry (large and small), health insurers and public authorities.



5 MULTIPLE BOTTOM-UP SOLUTIONS

The targets of the mission can only be fulfilled through a combination of diverse and interconnected solutions. We are giving examples of some of these solutions in earlier sections, but different types of other solutions are possible with a distinct EU-added value:

- Technological: Breaking down silos between various health actors and enable data integration;
- Competitiveness: A healthy Europe with healthier and well-educated workforce; medical and digital technology industries at the forefront of digitizing healthcare creating a competitive advantage;
- Societal: Europe as ageing but healthy society. Keeping healthcare manageable and affordable;
- Scientific/technological: Apply Key Enabling Technologies (KETs) to solve the above-mentioned healthcare challenges, i.e. ageing society at manageable healthcare cost through digitisation.



GENERAL INFORMATION ABOUT COCIR

COCIR is the European Trade Association representing the medical imaging, radiotherapy, health ICT and electromedical industries.

Founded in 1959, COCIR is a non-profit association headquartered in Brussels (Belgium) with a China Desk based in Beijing since 2007. COCIR is unique as it brings together the healthcare, IT and telecommunications industries.

Our focus is to open markets for COCIR members in Europe and beyond. We provide a range of services in the areas of regulatory, technical, market intelligence, environmental, standardisation, international and legal affairs.

COCIR is also a founding member of DITTA, the Global Diagnostic Imaging, Healthcare IT and Radiation Therapy Trade Association (www.globalditta.org).

COCIR COMPANY MEMBERS:



NATIONAL TRADE ASSOCIATIONS MEMBERS:



COCIR HOW TO JOIN US

COCIR aisbl | Bluepoint Building | Boulevard A. Reyerslaan 80 | 1030 Brussels | Belgium
 Tel +32 (0)2 706 89 60 | Email info@cocir.org | www.cocir.org | [@COCIR](https://twitter.com/COCIR)

