



Health Data Space calls Digital Europe WP 2021-22

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*Szymon Bielecki,
European Commission (CNECT.H3)*

DIGITAL work programme 2021-2022 adopted on 10 November 2021

- Digital Health topics

Artificial Intelligence, data and cloud

Data spaces

Genomics

Call published

**Cancer
Imaging**

2nd Call Q1/2022

Testing and
Experimentation
Facilities

**TEF
for
Health**

**2nd Call
Q1/2022**

Cybersecurity and
trust

**Support for
health sector**

Q1/2022

Accelerating best
use of
technologies

**Uptake of digital
solutions in
Health and Care
Call published**

**An ecosystem for
digital twins in
healthcare
Call published**

Federated European infrastructure for genomics data

- Topic ID: DIGITAL-2021-CLOUD-AI-01-FEI-DS-GENOMICS
- Single-stage, simple grant, co-funding 50%, 36-48 months, EU budget €20M
- Submission deadline: 22 February 2022 / evaluation results Q2/2022

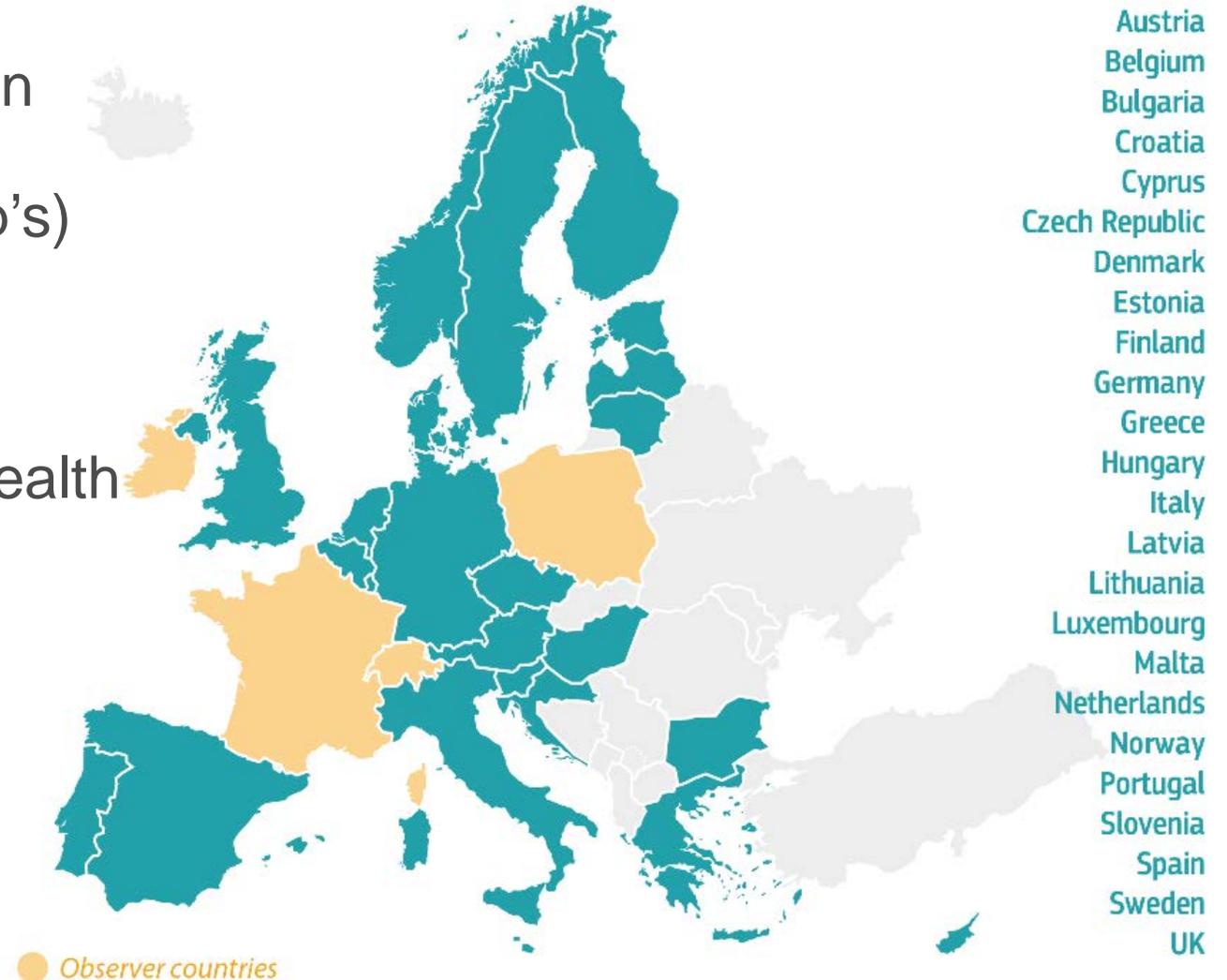
Objectives:

- to deploy sustainable and secure cross-border linkage of and access to a multitude of genomic and related phenotypic, clinical and other datasets across Europe based on the progress achieved in the context of the 1+ Million Genomes initiative (1+MG)
- to advance our understanding of genomics for **more precise and faster clinical decision-making, diagnostics, treatments and predictive medicine**, and for **improved public health measures** that will benefit citizens, healthcare systems and the overall economy

1+MG initiative

- 24 countries signed the declaration
- 1+MG Group (Member States' rep's)
- 12 Working Groups (experts)
- healthcare, research and public health
- high relevance for EU priorities: European Data Strategy (EHDS, data governance, AI, open data), Europe's Beating Cancer Plan, research and digital agendas

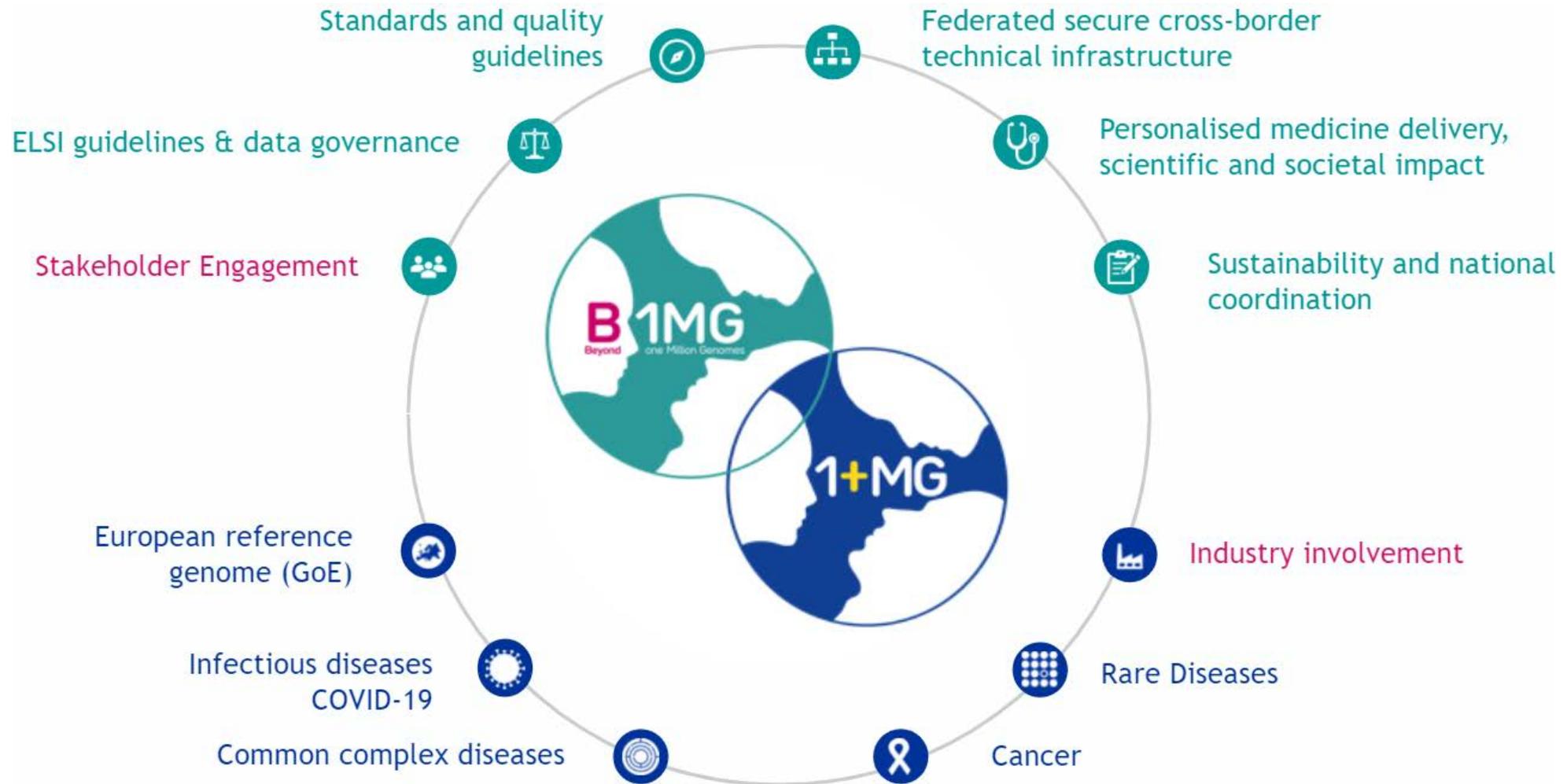
Countries that have signed the 1+MG Declaration since 2018



The role of trust in implementing 1+MG

- **Public trust** as a key condition and enabler for health data sharing
 - ✓ Broad stakeholder engagement
- **Trust framework** needed:
 - ✓ Legal, ethical and societal issues (ELSI)
 - ✓ Technological aspects (interoperability, data security)
 - ✓ Healthcare implementation

1+MG and CSA B1MG (coordinator: Elixir/EMBL)



Potential role for industry

- **advantages:** capabilities and resources to solve complex issues in genomics, e.g. technical infrastructure, data analytics, personalised medicine delivery, value-based implementation in healthcare systems
- **challenges:** public trust, public-private collaboration, IP issues, costing
- **roles:**
 - solutions provider (infrastructure, tools, services, data)
 - innovator (in science and R&D)
 - project support and capacity building

Digital Europe grant call (cont.)

- Secure federated **infrastructure** and **data governance**
- **Platform** performing distributed **data analysis** enabling application of high-end computing, AI, simulation techniques etc.
- Clear description of the **roles and responsibilities** related to personal data and privacy protection
- **Business model** including an **uptake strategy** towards sustainability
- **Communication strategy** (design and implementation) to ensure trust of all stakeholders
- **Capacity building** measures necessary to ensure the successful uptake of the infrastructure
- **Targeted stakeholders** e.g. public administrations (national, regional and local level), hospitals, research institutes, biobanks, research agencies, research infrastructures, not-for-profit organisations, industry, SMEs
- **Info Day: 14 December 2021** ([ppt](#))

Federated European infrastructure for cancer images data - DIGITAL WP 2021-2022

- deployment of the infrastructure needed to link and explore fragmented European repositories of medical images of different types of cancer
- infrastructure facilitating access to cancer images and related patient data in full compliance with the applicable data protection requirements
- targeted users: clinicians, researchers and innovators
- clear business model for ingestion of data and its exploitation by public and private organisations, industry and innovators
- supported by advanced IT tools and capacities, e.g. AI and HPC
- interoperable with the other components of the European health data space
- ultimate aim: more precise and faster clinical decision-making, diagnostics, treatments and predictive medicine

Indicative budget: €18 M

Simple grant: 50% co-funding rate

Indicative duration: 36 months

Call publication in Q1 2022

Online information session in the beginning of March 2022



H2020 projects on AI and cancer imaging

Chameleon	EuCanImage	ProCancer-I	Incisive	Primage
<i>Accelerating the lab to market transition of AI tools for cancer management</i>	<i>A EU cancer image platform linked to biological and health data for next-generation AI and precision medicine in oncology</i>	<i>An AI Platform integrating imaging data and models, supporting precision care through prostate cancer's continuum</i>	<i>A multimodal AI-based toolbox and an interoperable health imaging repository for the empowerment of imaging analysis related to the diagnosis, prediction and follow-up of cancer</i>	<i>PRedictive In-silico Multiscale Analytics to support cancer personalized diaGnosis and prognosis, Empowered by imaging biomarkers</i>
Setting up an EU-wide structured repository for health imaging data as a distributed infrastructure to be openly reused in AI experimentation for cancer management.	Building a highly secure, federated and large-scale European cancer imaging platform , populated with new data from 25 000 subjects and cross-linked to biological and health repositories through the European Genome–phenome Archive.	Establishing a validated AI Platform integrating imaging data and models to support precision care and clinical decision making for prostate cancer treatment	Establishing a pan-European federated repository of medical images; developing and validating an AI-based toolbox to enhance existing cancer imaging methods; developing an automated, machine learning-based annotation mechanism .	Establishing a cloud-based platform to support asking for clinical mdecision management based on the use of novel imaging biomarkers , in-silico tumour growth simulation and machine-learning based translation into predictors for Clinical End Points
Lung, breast, colorectal and prostate cancer	Colorectal, breast cancer	Prostate cancer	Lung, breast, colorectal and prostate cancer	Neuroblastoma and Diffuse Intrinsic Pontine Glioma

European Cancer Imaging Initiative

Enabling innovators to pilot technologies that target cancer, and demonstrate the power of AI and digital technologies to beat cancer

- interoperable, FAIR compliant and secure cross-border connection of cancer image data sources
- an EU ‘atlas’ of **cancer-related anonymized images** accessible to a wide range of stakeholders
- involving the **Testing and Experimentation Facilities (TEFs)**
 - to link the data to tools such as HPC and AI
 - for testing in real or close to real conditions
 - including benchmarks for cancer screening algorithms
- supported by **Digital Innovation Hubs**

