

Genomic Data Infrastructure - new EU project to unlock the potential of human genomics for healthcare, research and innovation

EMBARGOED until 14:00 CET on Thursday 17 November

Today, the European Genomic Data Infrastructure (GDI) project kicks-off in Brussels, Belgium. The new €40 million GDI project, coordinated by ELIXIR, is jointly funded by the European Commission under the Digital Europe Programme and through co-funding from participating Member States. In the area of health, the Digital Europe Programme aims to support the creation of elements of the European Health Data Space. The aim of the project is to realise the 1+MG initiative's ambition to enable secure access to human genomics and corresponding clinical data across Europe by creating data infrastructure. The project involves a consortium of partners from 20 European countries and will facilitate a cross-border federated network of national genome collections for biomedical research and personalised medicine solutions.

The 1+MG initiative aims to enable secure access to genomics and corresponding clinical data across Europe for better research, personalised healthcare and health policymaking. The Beyond 1 Million Genomes (B1MG) project that started in 2020, funded by H2020, develops guidelines for implementing the 1+MG Initiative and creating blueprints and recommendations for creating federated networks of genomic data.

Building on the preparatory work of 1+MG working groups and the B1MG project, the GDI project brings 20 EU Member States together with two infrastructure organisations (BBMRI and EMBL) to work collectively to support the 1+MG Initiative's vision to facilitate better healthcare for citizens in Europe by providing cross-border access to at least one million genomes and related clinical data.

The GDI project aims to unlock a data network of over one million human genome sequences for research and clinical reference. This will create unprecedented opportunities for transnational and multi-stakeholder actions in personalised medicine for common, rare and infectious diseases.





Authorised data users, such as clinicians, researchers and innovators, will be able to advance understanding of genomics for more precise and faster clinical decision-making, diagnostics, treatments and predictive medicine, and for improved public health measures to benefit European citizens, healthcare systems and the overall economy.

Serena Scollen, the GDI Project Coordinator and Head of ELIXIR Human Genomics and Translational Data team, spoke of the importance of having an infrastructure for genomic data:

'Genomes will soon be generated more routinely as part of healthcare. To realise the full promise of genomics and its implementation into healthcare, it is critical to facilitate research and innovation and integrate findings into the clinic and healthcare. One of the biggest challenges we face is the lack of infrastructure - needed to support the discovery, access, sharing and analysis of human genomics data on a massive scale. By working together, countries will be able to deploy infrastructure to facilitate secure cross-border data access. Ultimately the benefit will be for the citizens of Europe and through shared learnings and improved healthcare, citizens globally.'

As a critical component of Europe's ambition to lead the integration of genomics into healthcare, the GDI project will make data accessible for research, clinical reference and policy development uses through three key 'pillars':

How the project is organised

The European Genomics Data Infrastructure (GDI) project is structured into three pillars of work and a coordination work package.

Coordination and support

The coordination and support work package coordinates the project, supports the consortium and the 1+MG initiative, monitors progress and liaises with other European and global initiatives.

Pillar I

Long-term sustainability

Pillar I brings together country representatives to agree on a long-term governance model, a legal framework and a business model for the infrastructure. These will ensure the infrastructure continues to operate after the end of the GDI project.

Pillar II

Infrastructure deployment

Pillar II implements the infrastructure by increasing the interoperability of European data resources. It ensures these resources can operate as part of the 1+MG infrastructure and are ready to access once the required agreements are in place. "Real" synthetic data will be used to demonstrate and validate the infrastructure, and data provided from EU projects under their current agreements.

Pillar III

Use cases

Pillar III guides the implementation of the project through key use cases (for example, the Genome of Europe, cancer data and infectious disease data). It works with users like clinicians, researchers and innovators to identify solutions that could form part of the infrastructure.

Fig1. How the project is organised



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GDI is an exciting project that will deploy sustainable and secure cross-border linkage of and access to a multitude of genomic and related phenotypic, clinical and other datasets across Europe. Coordinated by ELIXIR, the project will be the driving force to create a data space for genomics data to implement the 1+MG initiative and benefit European citizens.

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Visual





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Social media text

. Twitter:

> Today marks the launch the new @EU_Commission funded project: @GDI_EUprojectI! The project will deploy infrastructure to facilitate a cross-border federated network of national genome collection.

Visit our website: https://gdi.onemilliongenomes.eu/

#DigitialEU #1MGenomes

LinkedIn:

> Today marks the launch of the new project funded by the European Commission under the Digital Europe Programme: Genomic Data Infrastructure (#GDI_EUproject)! The GDI project involves a consortium of partners from 20 European countries. The project will work on providing the data infrastructure for the #1MGenomes initiative, including legal and ethical frameworks for cross-border access to sensitive data.

Visit the project website and read the news release: https://gdi.onemilliongenomes.eu/

