

WHAT DRIVES US

THE OBJECTIVES OF THE PROJECT

The goal of NextGen is to create a small-scale European Health Data Space (EHDS) with full functions:

a health specific ecosystem comprised of rules, common standards and practices, infrastructures, and a governance framework which would enhance citizens' trust in health technologies.

The Pathfinder project and its component pilots serve as practical demonstrations of the NextGen project.

PARTNERS




 @NextGenCVDDataSpace

 @nextgen-cvd-dataspace

 @NextGenCVD



 NEXTGEN project has received funding by the European Union's Horizon Europe, under grant agreement no 101135577

NextGen

Genome-Centric Multimodal
Data Integration in Personalised
Cardiovascular Medicine.

www.nextgentools.eu

THE CONTEXT

THE CURRENT SCENARIO OF HEALTHCARE AND CARDIOVASCULAR DISEASE

Personalised medicine is one of the main approaches to address the issues of increasing demand for healthcare and the economic burden on health, driven by demographic evolution, the aging population, the chronicisation of diseases. Genomic data-based personalized medicine adopts tailored approaches for prevention, diagnosis, monitoring, and treatments, charting the path towards the optimisation of chronic care and to reduce the burden of disease and improve the quality of life.

NextGen Tools will develop and test

- a toolbox for multimodal data integration and research portability, extension of secure federated analytics to genomic computation,
- effective federated learning over distributed infrastructures, accessible tools for genomic data analysis;
- a set of approaches to improved clinical efficiency of variant prioritisation;
- tested and validated methods for scalable genomic data curation;
- solutions for improved data discoverability and data management.

THE GOAL OF NEXTGEN

NextGen tools focuses its genomics-founded approach on the data integration of a wide range of cardiovascular use cases and using the relevant datasets to construct a thematic dataspace and its operational and technological management functions, working out solutions for data integration.

These will overcome the hurdles of privacy & governance requirements, the presence of multiple standards, distinct data formats, and underlying data complexity and volume of multimodal data.

THE PILOTS AND THE PATHFINDER

- **Integrated in the PATHFINDER**, several real-world pilots will demonstrate the effectiveness of NextGen tools and help connecting and joining together the five collaborating clinical sites as a self-contained data ecosystem and comprehensive proof of concept.
- **The pilots will demonstrate the advanced integration** and workflow tools in data use cases displaying the removal of technical and operational barriers. The pilots will then be integrated into the “NextGen PATHFINDER”: a multi-site “mini-EHDS” network showcasing NextGen innovations in data management, data governance, cataloguing, compute, advanced data integration, genomic and interoperability capacities.
- There will be six 6 pilot demonstrations; 5 sites included in PATHFINDER and at least 1 successful public Pathfinder demonstration.