



Fingenious® –Your Gateway to Finnish Biobanks and Biomedical Research

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FINBB

Finnish Biobanks Cooperative – FINBB

Founding Partners

Hospital Districts



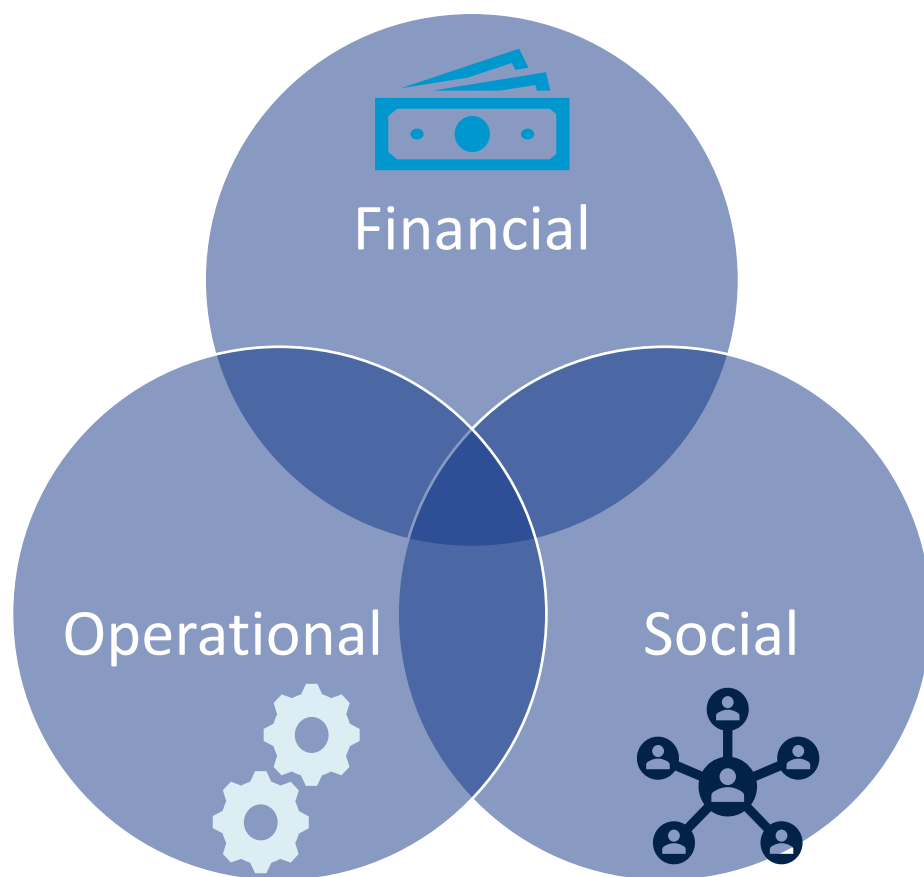
Universities



THL*



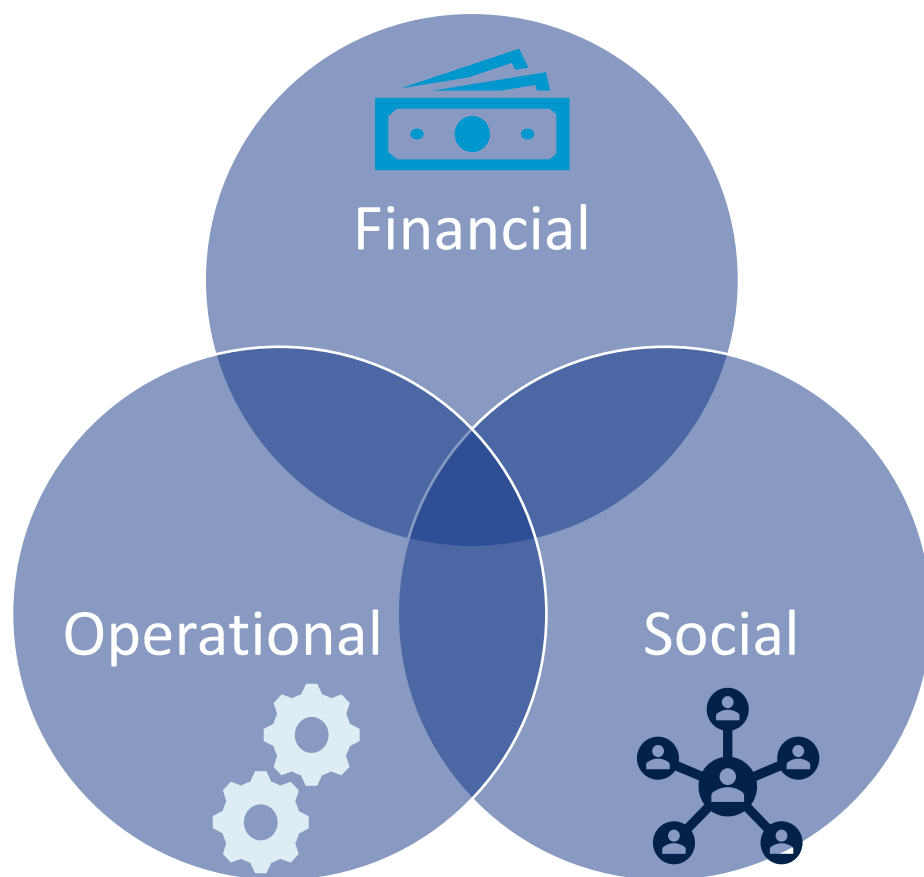
Biobank sustainability



How to make your biobank sustainable?

1. Business plan
2. Adopt a user-centred perspective
3. Know and show your value
4. Choose a business model
5. Learn your costs
6. Find multiple sources of funding
7. Engage with your stakeholders
8. Become an attractive partner
9. Make sure samples and data are used and enriched

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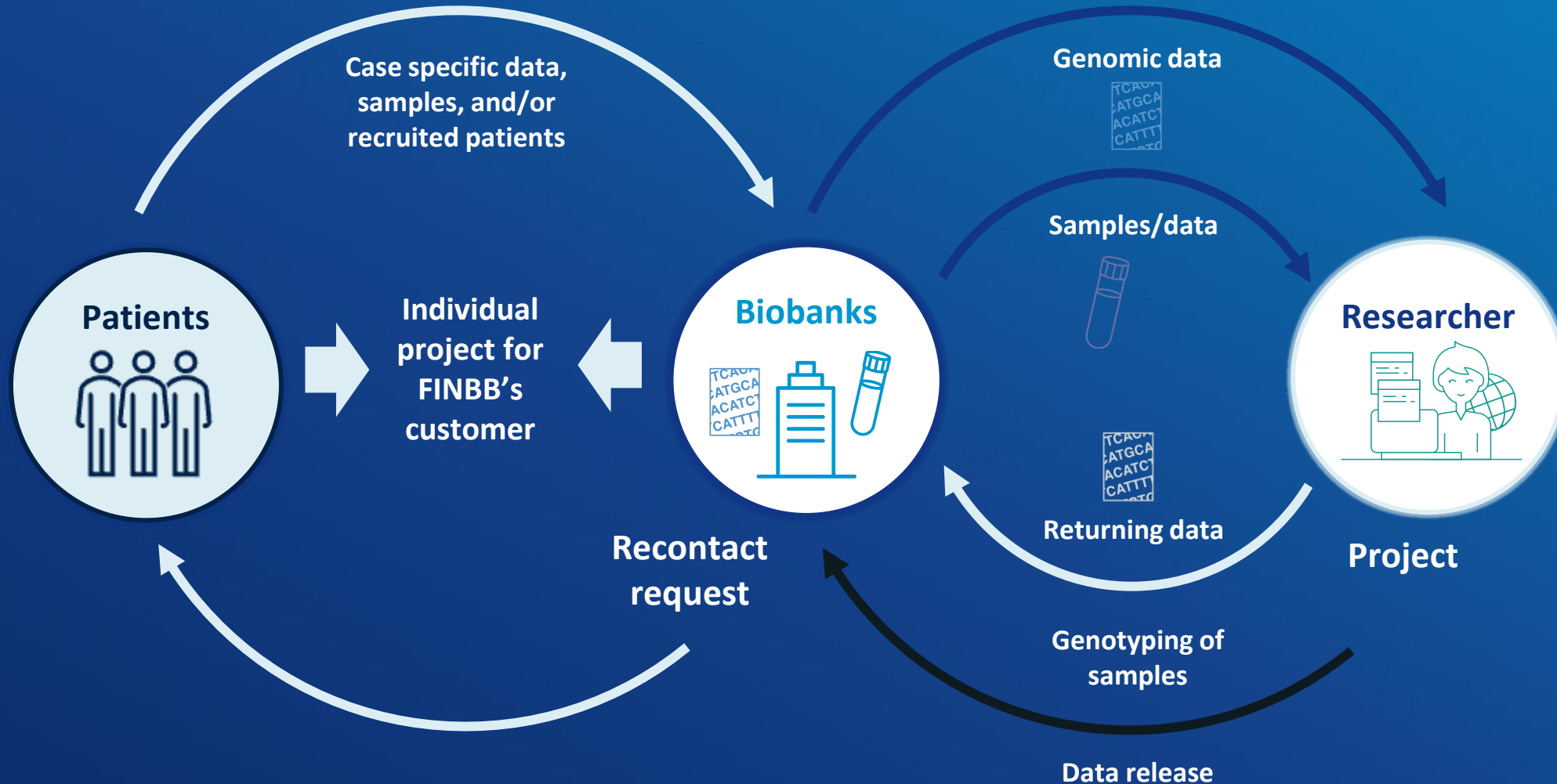
Fingenious® - Your Gateway to Finnish Biobanks and Biomedical Research



- Sample, data and study participant finding
- One point of contact for all Finnish public biobanks
- Expertise and Strategic Partner finding on RWD and RWE studies

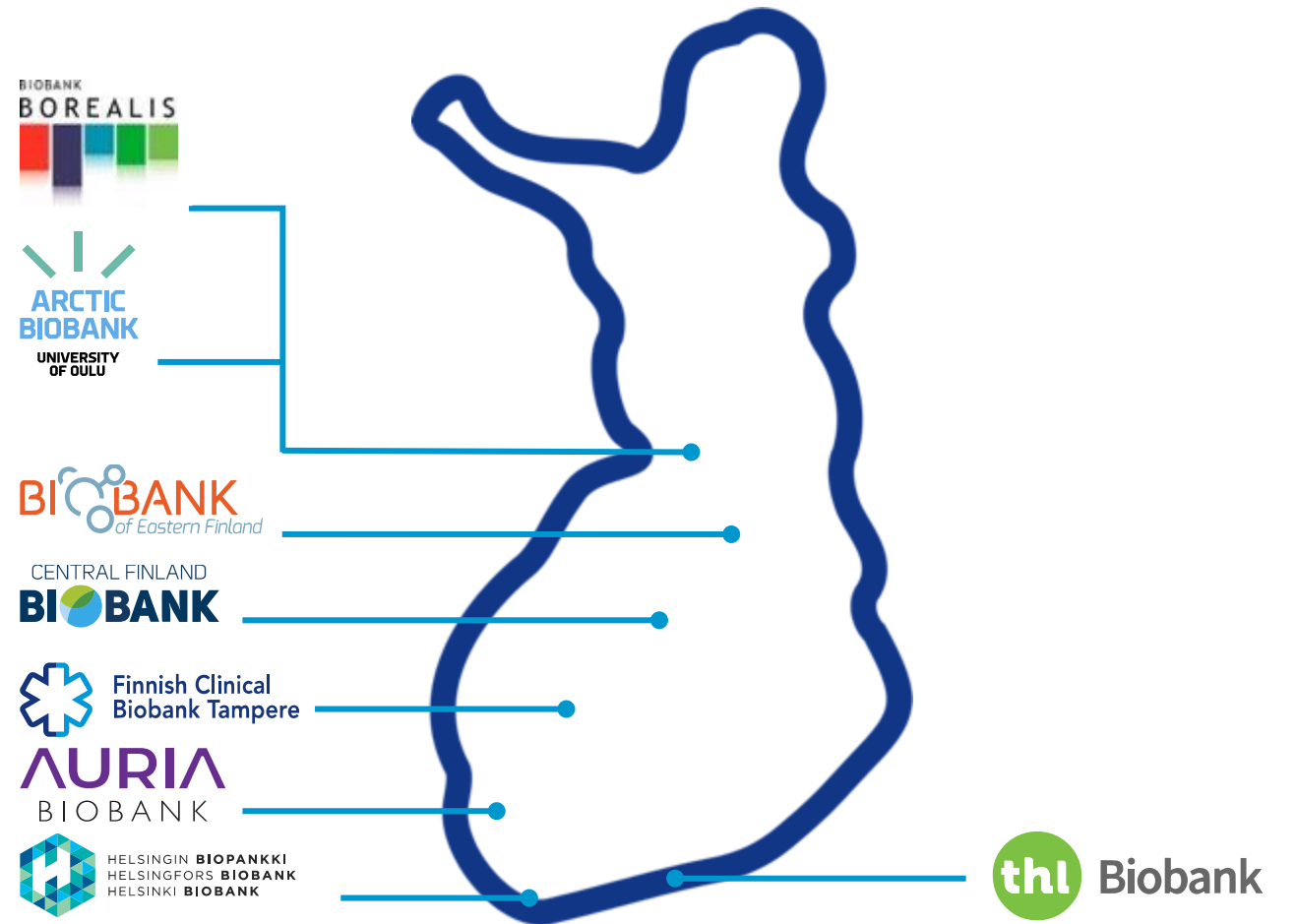
Researchers

Our sustainable business model



Gateway To Finnish Biobanks

- Over 13 million samples
- Extensive amount of data
- Study participants
- Expertise



Fingenious® service and collaboration

- Fingenious service provides solutions for researchers to tackle unmet medical needs globally
- Collaboration with researchers from academia and industry





Register with Fingenious for



Availability

Availability of Biospecimen and Biodata



Request

For Fast-track Access to Biospecimen and Biodata



Recruit

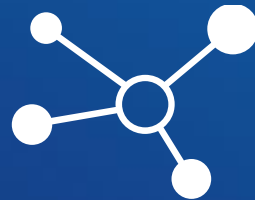
For Targeted Study Participant Recruitment

Key figures of Fingenious® service in 2021

Biobank research
projects

229

(growth +17% vs 2020)



108

Number of oncology
projects
(growth +54% vs 2020)



Number of feasibility requests
increased in all biobanks

22%-49% vs 2020



Number of access requests increased
in all biobanks

22%-127% vs 2020



Scientific peer-reviewed
publications in 2021

> **200**



FINGENIOUS®



FinnGen: Unique genetic insights from combining isolated population and national health register data. medRxiv 2022.03.03.22271360; doi: <https://doi.org/10.1101/2022.03.03.22271360>

Genetic associations of protein-coding variants in human disease. Nature. 2022 Feb 23. doi: 10.1038/s41586-022-04394-w.

Integration of questionnaire-based risk factors improves polygenic risk scores for human coronary heart disease and type 2 diabetes. Commun Biol. 2022 Feb 23;5(1):158. doi: 10.1038/s42003-021-02996-0

Genome-wide analysis of 102,084 migraine cases identifies 123 risk loci and subtype-specific risk alleles. Nat Genet. 2022 Feb;54(2):152-160. doi: 10.1038/s41588-021-00990-0. Epub 2022 Feb 3.

The COVID-19 Host Genetics Initiative. Mapping the human genetic architecture of COVID-19. Nature (2021). <https://doi.org/10.1038/s41586-021-03767-x>

FinnGen Consortium. Association of the MYOC p.(Gln368Ter) Variant With Glaucoma in a Finnish Population. JAMA Ophthalmol. 2021 Jun 3:e211610. doi: 10.1001/jamaophthalmol.2021.1610. Epub ahead of print.

Real-life collaboration

FinnGen – the largest biobank research project in Finland





FIN-HIT STUDY

The Finnish Health in Teens Study (Fin-HIT) is a follow-up study from childhood to early adulthood that focuses on the causal relationships between genetic and various lifestyle factors that affect weight and health. Material currently available for biobank research contains > 3000 DNA samples



TWIN STUDY

The Twin study is a large research collection of data and samples from Finnish twins. The Twin study available in THL Biobank consist of DNA samples and GWAS data from more than 14 000 participants as well as longitudinal data collected by questionnaires and interviews covering over three decades.



FINNISH IPF STUDY

The Finnish IPF cohort includes patients with confirmed diagnosis of idiopathic pulmonary fibrosis (IPF), a progressive lung disease. Currently, DNA and GWAS data from over 300 patients, as well as serum and PBMCs from the subset of patients are available for biobank research via THL Biobank. The Finnish



FINNGEN STUDY COHORT IN FINNISH BL

In the large Finngen biobank study (www.finngen.fi/en), the genomic variant data of 500,000 Finnish sample donors will be generated using GWAS (genome-wide association study) genotyping. For 320,000 sample donors included in the Finngen Study Cohort the genome data



CONNECTING COHORTS WITH BIOBANKS

CoCohi is a cohort formed to study healthy aging. It contains 1.39M unique sample donors from Arctic Biobank, Biobank Borealis of Northern Finland and THL Biobank. The joint resource contains harmonized health and lifestyle data, and data to assess metabolic health from over 100,000 Finnish



HELSINKI UROLOGICAL BIOBANK

Urological patients (n=2000) were recruited to donate their blood, urine and tissue samples into Helsinki Urological Biobank (HUB) during the years 2012-2015 in a longitudinal sample collection.



HEALTH 2000 AND 2011 SURVEYS

A comprehensive 10-year follow-up survey of the Finnish population containing total of 8600 sample donors recruited in 2000 and 2011. The research material available in biobank consists of extensive health data, large-scale omics data (GWAS, WES, WGS, telomeres, NMR metabolomics), and high



FINHEALTH 2017 STUDY

A health and well-being survey study that involved 6650 randomly selected donors from the adult Finnish population. The data include GWAS and NMR metabolomics data, physical and laboratory measurements as well as extensive amount of self-reported data on lifestyle and health. High-quality



THL DIABETES STUDIES

THL Diabetes cohort is a combination of several diabetes studies conducted in Finland between 1986 and 2013. The cohort consists of samples and data (including GWAS from > 10 000 participants) from more than 13 500 young donors with type 1 diabetes and from their family members. The



MIGRAINE STUDY

One of the largest family collections of migraine research consisting of more than 9500 participants. The genetic data in THL Biobank includes GWAS data from over 8400 sample donors, WES data from 490 donors and WGS data from more than 600 donors. The DNA samples of the study have been collected



THL PSYCHIATRIC FAMILY COLLECTIONS

Research cohort includes patients diagnosed with bipolar spectrum disorders (BPD), schizophrenia (SZ) or schizoaffective disorder (FSZ) and their family members. The data consist of a wide range of phenotypes, neurocognitive tests as well as GWAS from all 4000 participants and WES data from 385



HELSINKI HEART STUDY

Samples and data of 4000 middle-aged men (40 to 55 y), collected as part of the five-year clinical trial to test whether the cholesterol-lowering drug Gemfibrozil could reduce the risk of coronary heart disease. All participants had primary dyslipidemia but no previous major illness or coronary heart



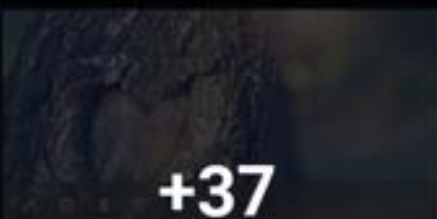
ATBC, LUNG CANCER PREVENTION STUDY

The ATBC study conducted between 1984-1993 in Finland had nearly 29 000 middle-aged male participants. Available research material contains GWAS data currently from > 9000 participants and extensive amount of self-reported data, dietary information, physical and laboratory measurements



FINNISH MOBILE CLINIC HEALTH EXAM.

The Finnish Mobile Clinic Health Examination Surveys in THL Biobank consist of three study cohorts. The Finnish Mobile Clinic Survey conducted in two phases: a baseline health examination with serum and plasma samples of 51 522 donors collected during 1968-1972, and a follow-up study of



COBOGENE STUDY

Coronary artery disease (CAD) and other related heart diseases, such as heart failure and aortic valve disease. All patients (aged 55-81 years) had been assigned for coronary angiography at the Helsinki University Central Hospital during 2008-2014.



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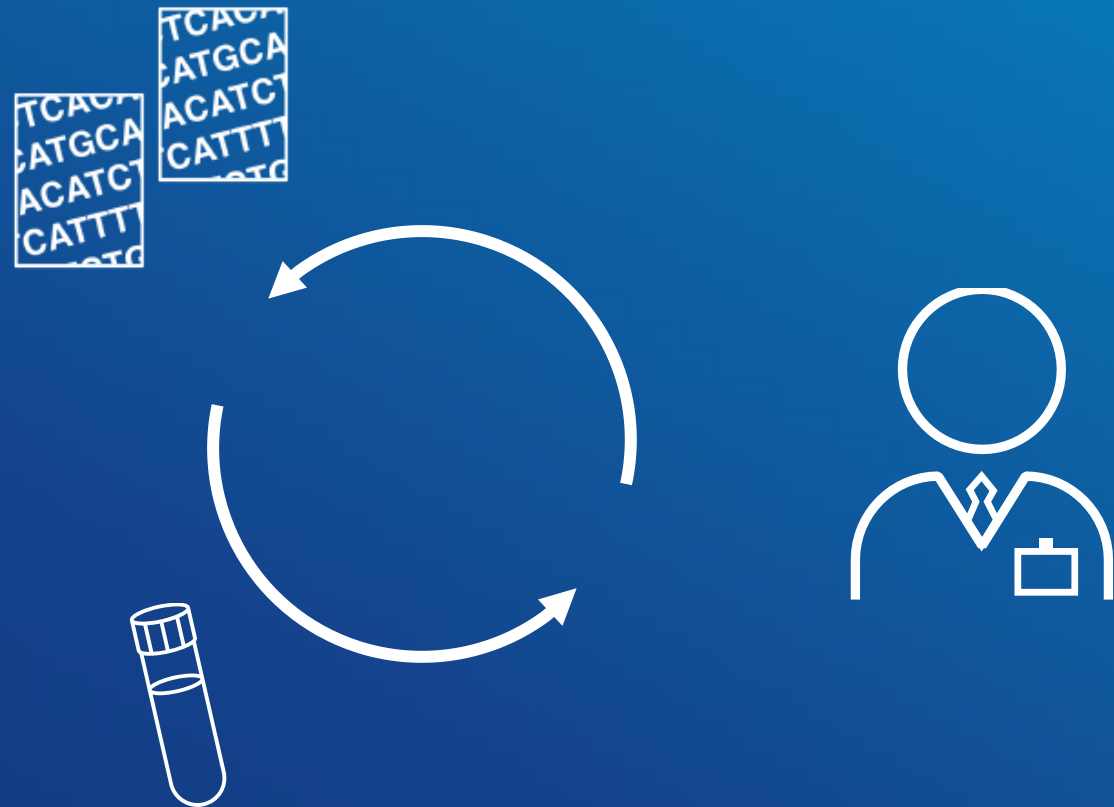
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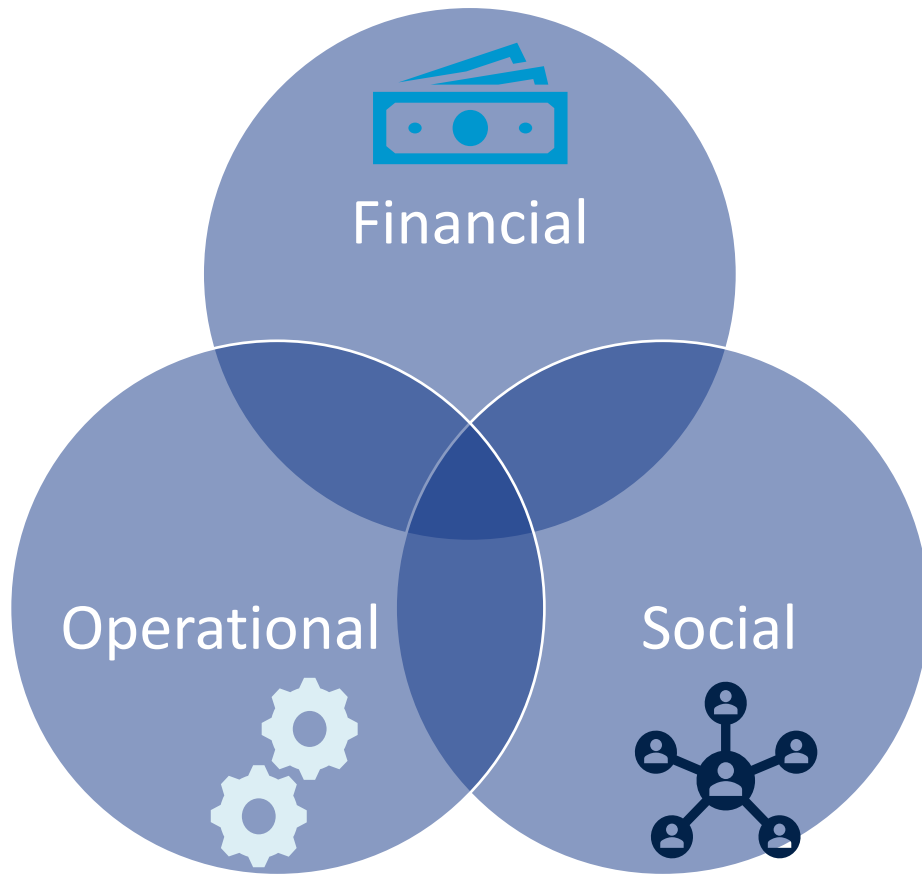
COROGENE STUDY

Corogene study includes over 5000 patients with coronary artery disease (CAD) and other related heart diseases, such as heart failure and aortic valve disease. All patients (aged 65.6 ±11.1 years) had been assigned for coronary angiogram at the Helsinki University Central hospital during 2006 to March

Returning Data



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Take Home Messages

- Biobank sustainability – financial, operational and social
- Fingenious® service provides access to unique Finnish biobank samples, data and patients – sustainable collaboration
- Registration at www.fingenious.fi

Contact us for further information:

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Thank you!