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Medicine

Translational Medicine Intelligence Platform TMIP

Presenter:

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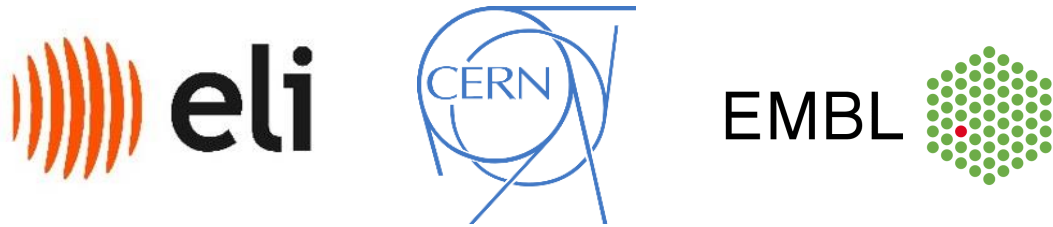


Vilnius university & VU MF Medical Science Center



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Vilnius University is part of major European
research infrastructures



State of the art facility for medical research &
education → VU MF Medical Science Center

Lab infrastructure

70+ labs, 19k sq.m for
research & education:

- Genomics
- Metabolomics
- Proteomics
- Transcriptomics
- Microbiology
- Virology

Experimental medicine

- Animal house
- Animal operating theaters
- Imaging block
- Cell culture labs
- Cell imaging & analysis technologies

Highly controlled lab spaces

- BSL3 laboratory
- Paleogenetics

Applied research

- Dentistry labs
- 3D imaging and printing
- Center for Applied Neuroscience
- Rehabilitation labs
- Digital health center

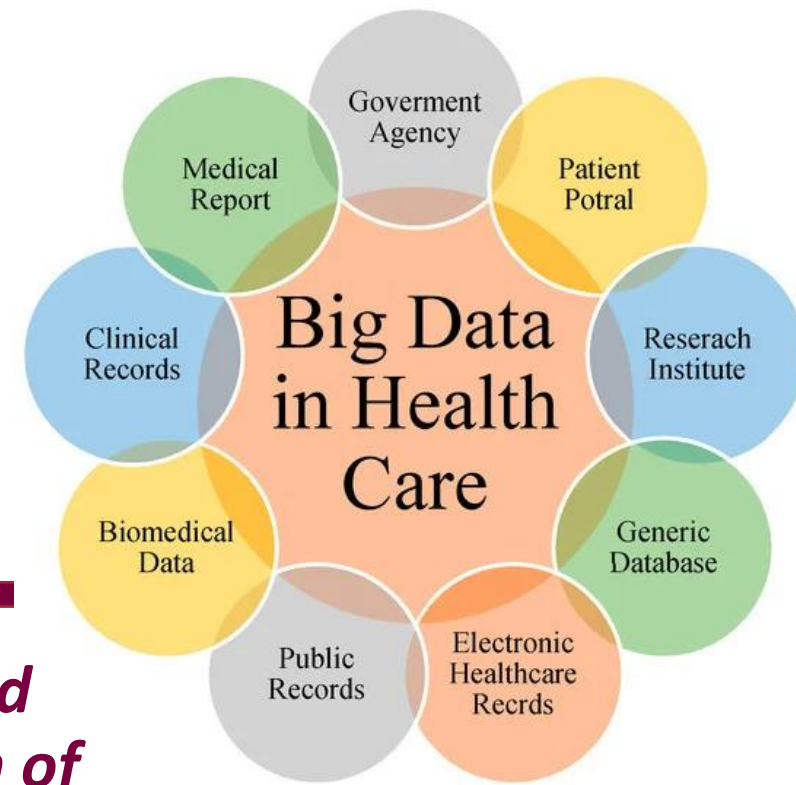
Biobank of Lithuanian Population & Rare Disorders

Potential & bottlenecks of data utilization for personalized medicine

Massive amounts of health data are generated in a **fragmented** way by **multiple stakeholders** & remain underutilized

While genotype provides a backbone for precision medicine, collection of **phenotype data** in healthy and diseased individuals remains a challenge

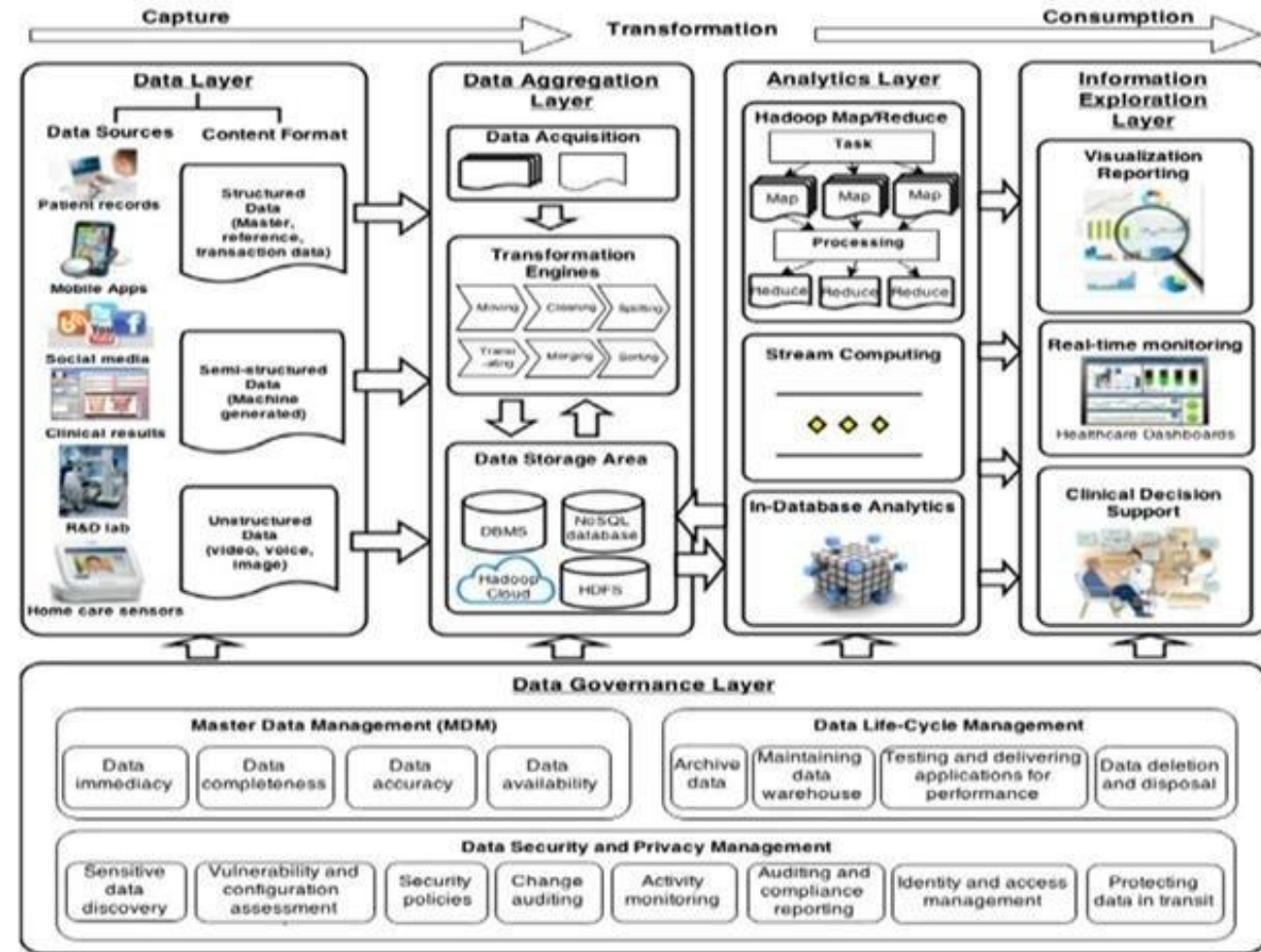
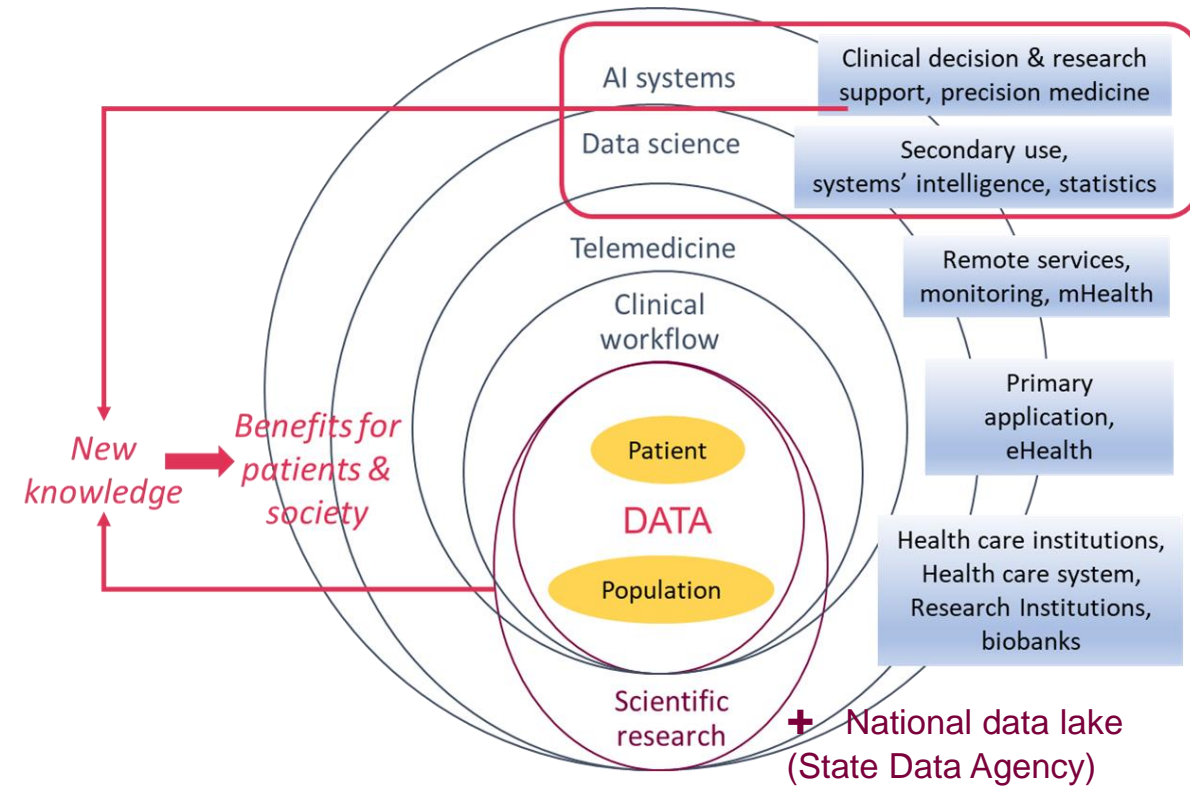
Streamlined integration of multimodal and dynamic data is needed for both discovery and patient care



Conceptual visions require complex implementation architectures



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Aims, anticipated outcomes & impact of TMIP



- *Integrate population-specific data from both an academic medical campus and national data sources*
 - *Enable prospective and retrospective data collection with multidisciplinary teams involved in medical R&D*
 - *Utilize biobanking, data storage, and computational capacities to establish the translational medicine excellence hub*
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- ✓ *A patient-centric, AI-enhanced healthcare model*
 - ✓ *for development and validation of medical products*
 - ✓ *to streamline medical advancements' translation into clinical practice*

The proposal for potential academic & industry partners

- *to partner in development of digital healthcare platform*
- *to focus on health data integration, machine learning, and patient-centric care*
- *for enhanced clinical research & improved patient management workflows*
- *to serve as a node in federated machine learning networks*

Thank you!

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