Personalised medicine at EU level

LUXCORE Health event

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Personalised medicine to address significant challenges…

…and benefit from opportunities

- Burden of non-communicable diseases (loss of €35 trillion over next 20 years)
- Pressure on healthcare systems
- Gap between EU and global innovation leaders
- Challenges of drug development in Europe

- Better outcomes for patients and potential cost savings (as suggested by early studies of stratified approach)
- Europe can lead implementation of personalised medicine thanks to favourable conditions

Personalised medicine at activities at EU level

2010: Preparatory workshops
2011: European Perspectives conference
2013: Commission Staff Working Document on "use of '-omics' technologies in the development of personalised medicine"
2015: Council conclusions on Personalised Medicine
2015: Strategic Research and Innovation Agenda of PerMed
2016: Personalised Medicine Conference
2016: Launch of International Consortium of Personalised Medicine

Research areas

- Large scale data gathering and "-or
- Technology development
- Statistics
- Diagnostics
- Biomarkers
- Clinical trial methodologies
- Pre-clinical and clinical research
- Rare diseases: small patient populations
- Omics for health promotion and disease prevention
- Piloting personalised medicine in healthcare

EU funding - over 2 billion EUR to top research

International Consortium for Personalised Medicine (ICPerMed)

WHAT

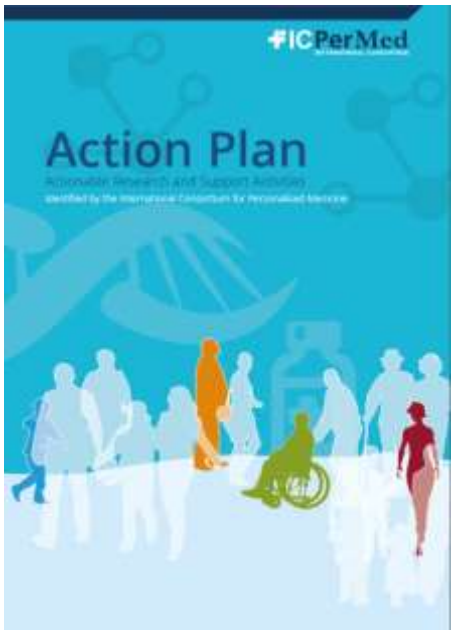
Collaboration of research funders and policy makers

WHY

- Establish Europe as a global leader in PM research
- Support the PM science base through a coordinated approach to research
- Provide evidence to demonstrate the benefit of PM to citizens and healthcare systems
- Pave the way for PM approaches for citizens

HOW

Implementation of a Action plan based on PerMed Strategic Research Agenda (SRIA)

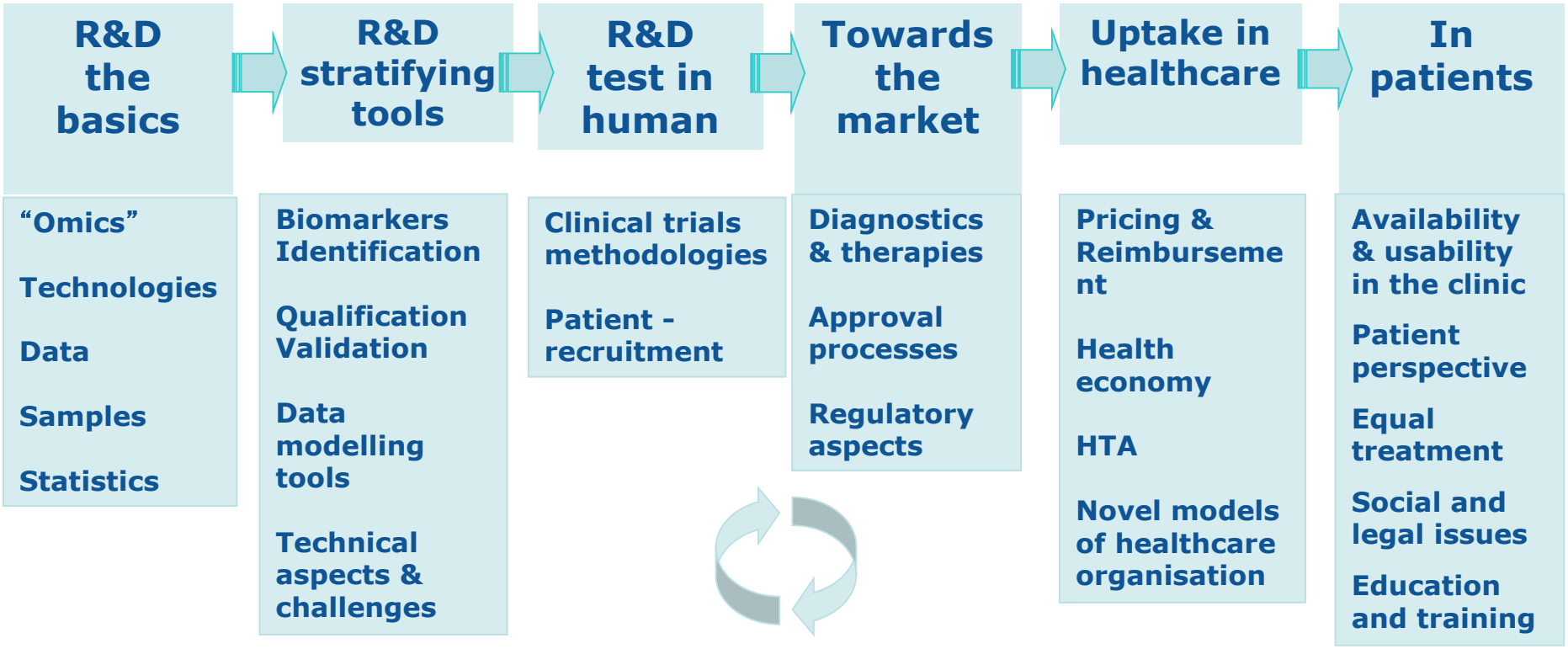


www.icpermed.eu

Next steps IC PerMed

- Work programme to implement the Action Plan
- ERA-Net Cofund in personalised medicine (ERA PerMed) – first call for proposals 2018 (up to 3 more calls)
- Database of EU wide personalised medicine activities (to inform funding priorities, funding strategies, policies)
- Mapping project – PM related initiatives

Framework for Personalised Medicine



Prediction - Prevention – Treatment - Cure

Rare diseases – a model for PM
Need for a coherent strategy – from bench to bedside

- More efficiently bring the results of research and innovation to the patient
- Programme to implement a research and innovation pipeline, from bench to bedside
- Integrative programme linking major EU and national initiatives – R&D, research infrastructures, registires
- Bridging to ERNs to help implementing research results and taking lessons learned from the clinic back to the bench

Rare diseases activities at EU level

Research and Innovation

Coordination of research

National plans, information, codification, patient registries, access to best care and knowledge

RD Connect

Infrastructure for data sharing in rare disease research

Flagship IRDiRC project implementing IRDiRC policies and guidelines on data sharing

EU 7th Framework Programme, 12M EUR, 6 years

Genomic analysis and gene discovery

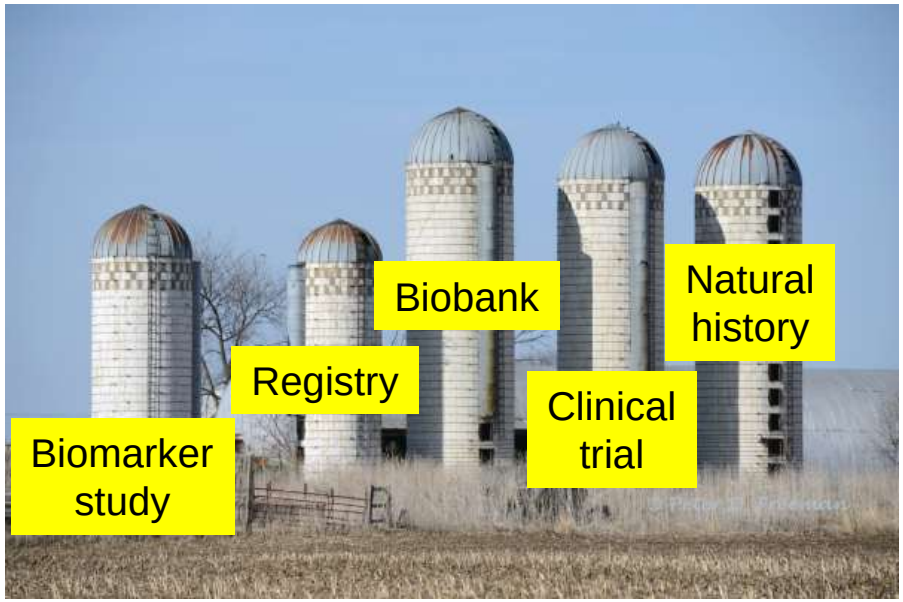
Standardized phenotypic data collection

Searchable catalogue of biosamples

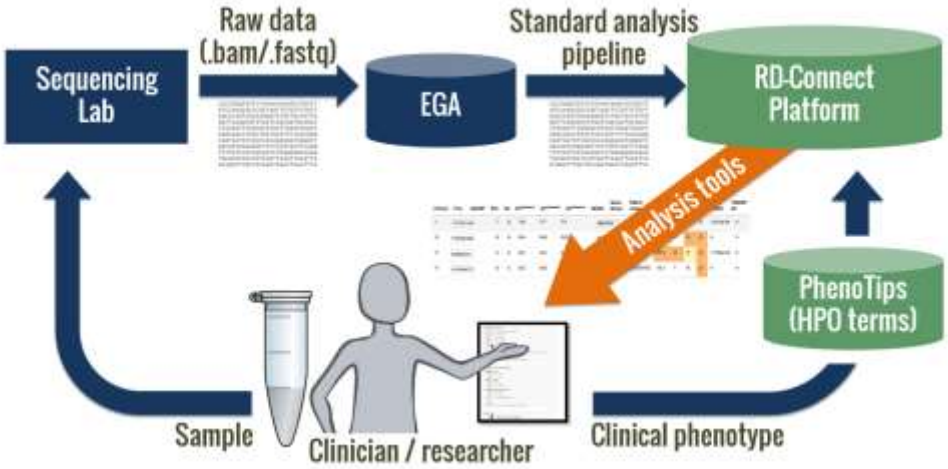
Data linkage across resources

Overcoming Silos

Data sharing for research and better data analysis



Omics data, clinical data and biosamples from individual with RD



Disease-causing variant can be identified using the genomics analysis platform

Sample is findable in the Sample Catalogue

Registry data in the ID-Cards directory of registries and biobanks

European Rare Diseases Research Initiative

European Commission

Pillar1

Transnational calls for proposals to fund rare diseases research.

Joint funding by EC and national funding agencies.

Pillar2

Virtual platform for coordinated access, data exchange and repository facilities building on existing resources.

Standards, analysis tools, links to care data.

Pilots to ensure usefulness in clinical setting/ERNs.

Pillar 3

Training and support on data management, product development, translational research etc. for stakeholders including patient organisations.

Sharing best practices.

Tech transfer facility towards industry.