CORE APPLICATIONS

University of Luxembourg	University Hospital Heidelberg	Institut Curie	Barcelona Supercomputing Center
Open COBRA	CellNOpt	MaBoSS	PhysiCell
Software extensions	Software extensions	Software extensions	Software extensions

HPC/Exascale Adaptation and Optimisation

BSC HPC experts

HPC/Exascale Guidelines

POP CoE experts

*Open COBRA

For the simulation of cellular metabolism at genome-scale.

*CellNOpt

For modelling signal transduction networks.

*MaBoSS

For stochastic simulations of Boolean models.

*PhysiCell

An agent-based modelling framework for simulating cell-cell interactions.

Per Med CoE

HPC/Exascale Centre of Excellence in Personalised Medicine

Stay tuned!

@PerMedCoE

linkedin.com/company/permedcoe

www.permedcoe.eu

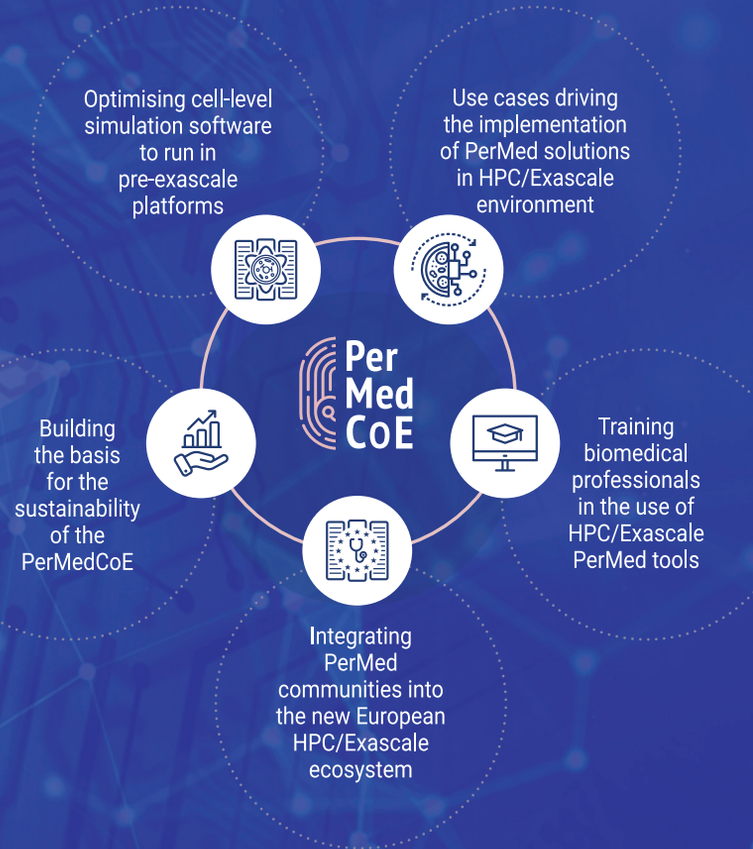
The PerMedCoE project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement N°951773

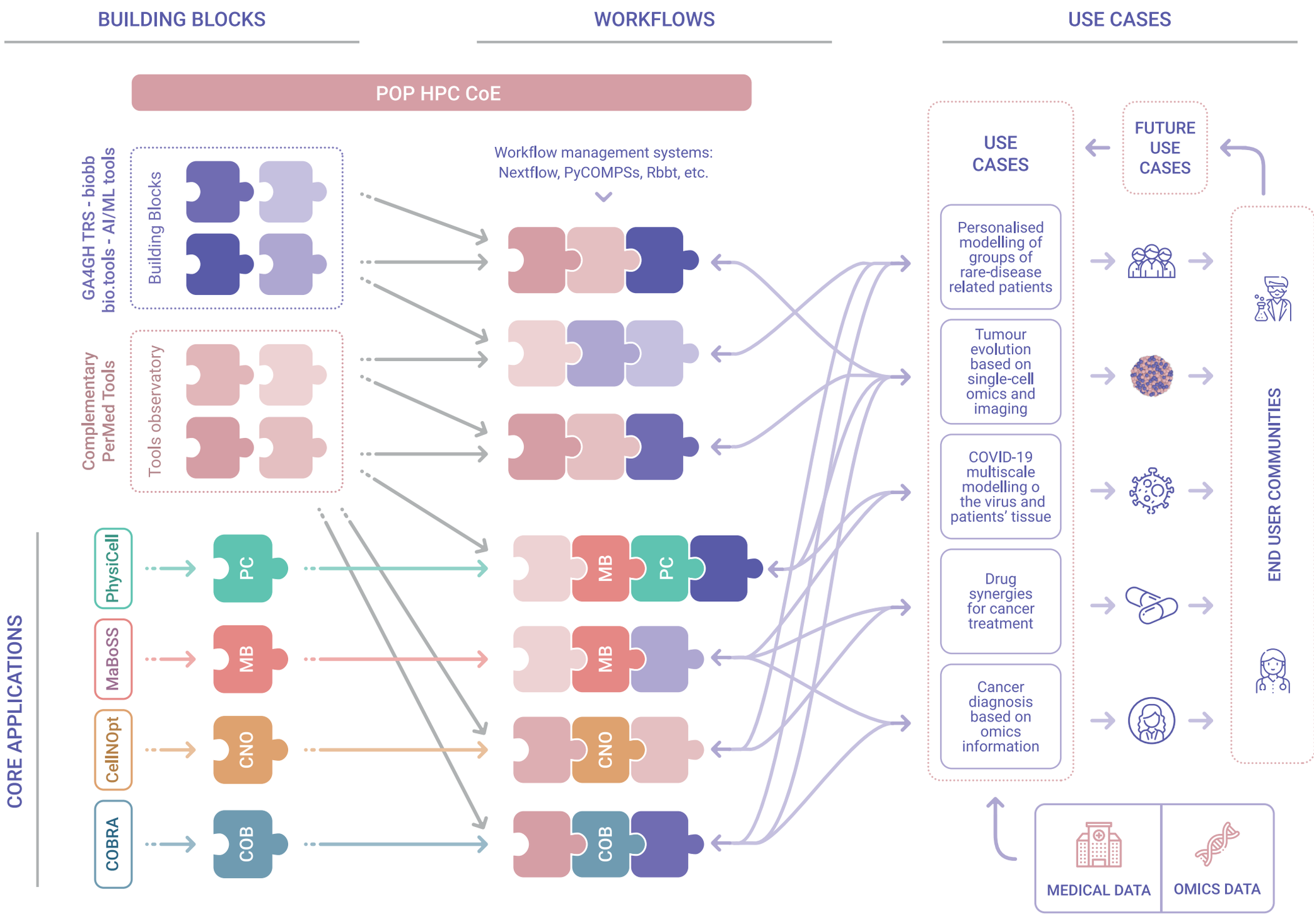
Per Med CoE

HPC/Exascale Centre of Excellence in Personalised Medicine

Exascale-ready cell-level simulations for European Personalised Medicine

OBJECTIVES




BUILDING BLOCKS
WORKFLOWS
USE CASES
POP HPC CoE
GA4GH TRS - biobb
bio.tools - AI/ML tools
Building Blocks
Complementary
PerMed Tools
Tools observatory
Workflow management systems:
Nextflow, PyCOMPSs, Rbbt, etc.
CORE APPLICATIONS
PhysiCell
MaBoSS
CellNOpt
COBRA
PC
MB
CNO
COB
USE
CASES
FUTURE
USE
CASES
Personalised modelling of groups of rare-disease related patients
Tumour evolution based on single-cell omics and imaging
COVID-19 multiscale modelling o the virus and patients' tissue
Drug synergies for cancer treatment
Cancer diagnosis based on omics information
END USER COMMUNITIES
MEDICAL DATA
OMICS DATA