SPHN Swiss Personalized Health Network

Call 1 - 2017

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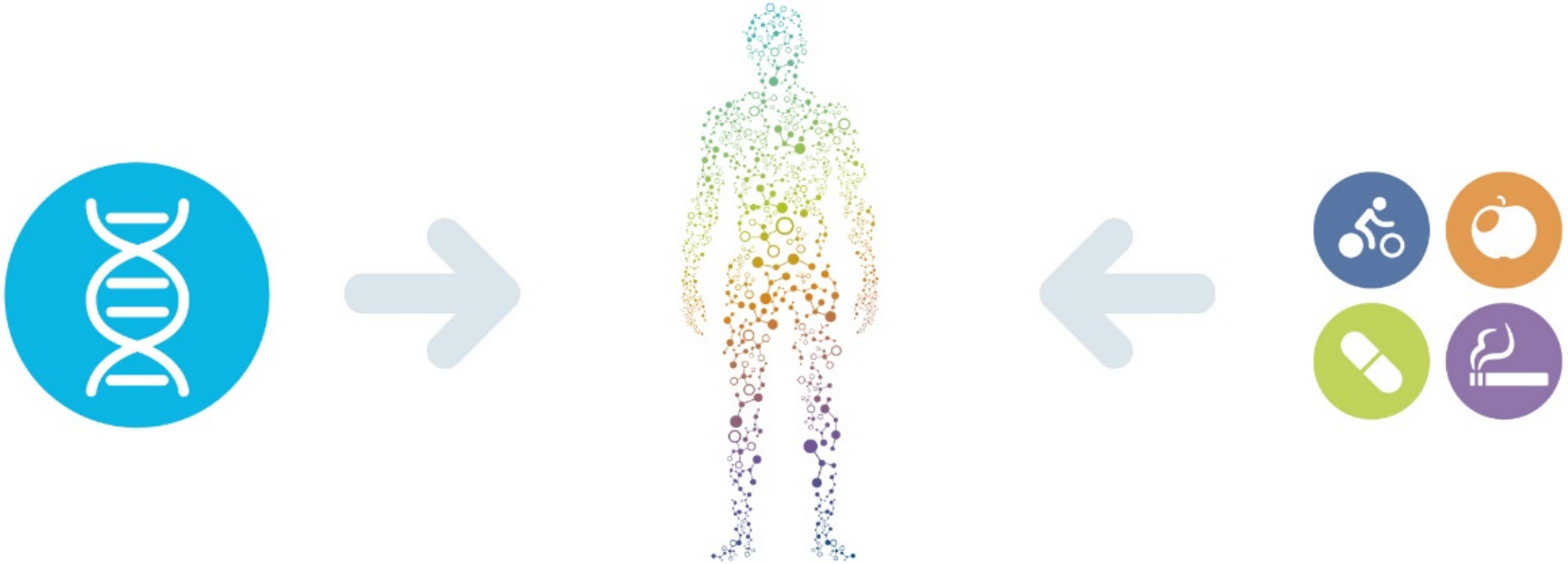
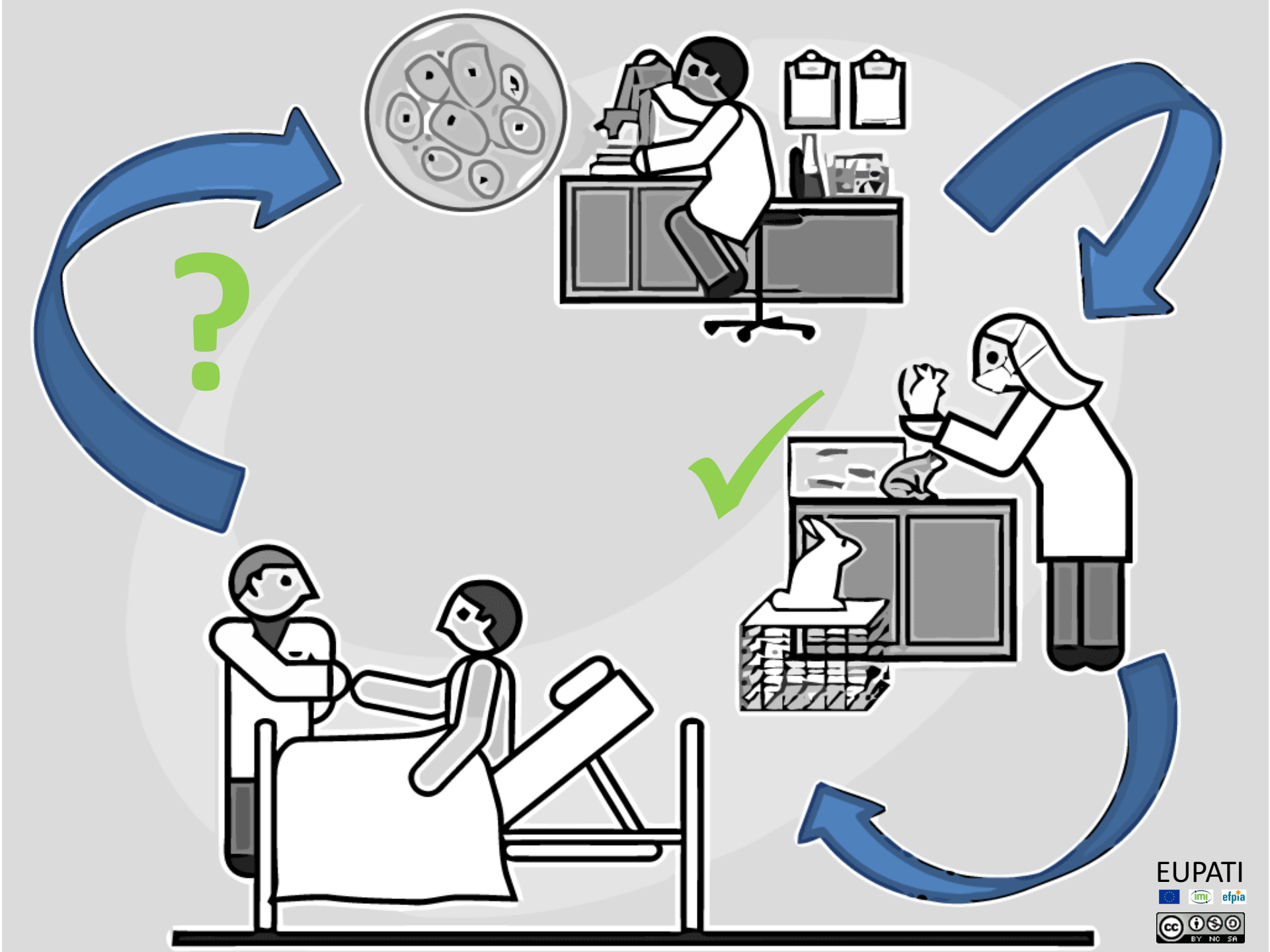
Swiss Personalized Health Network (SPHN)



The main goal of the SPHN initiative is to bring Switzerland at the forefront of **personalized health research** by establishing **nationwide interoperability of biomedical information. Data sharing** must be the guiding principle.

Swiss Personalized Health Network



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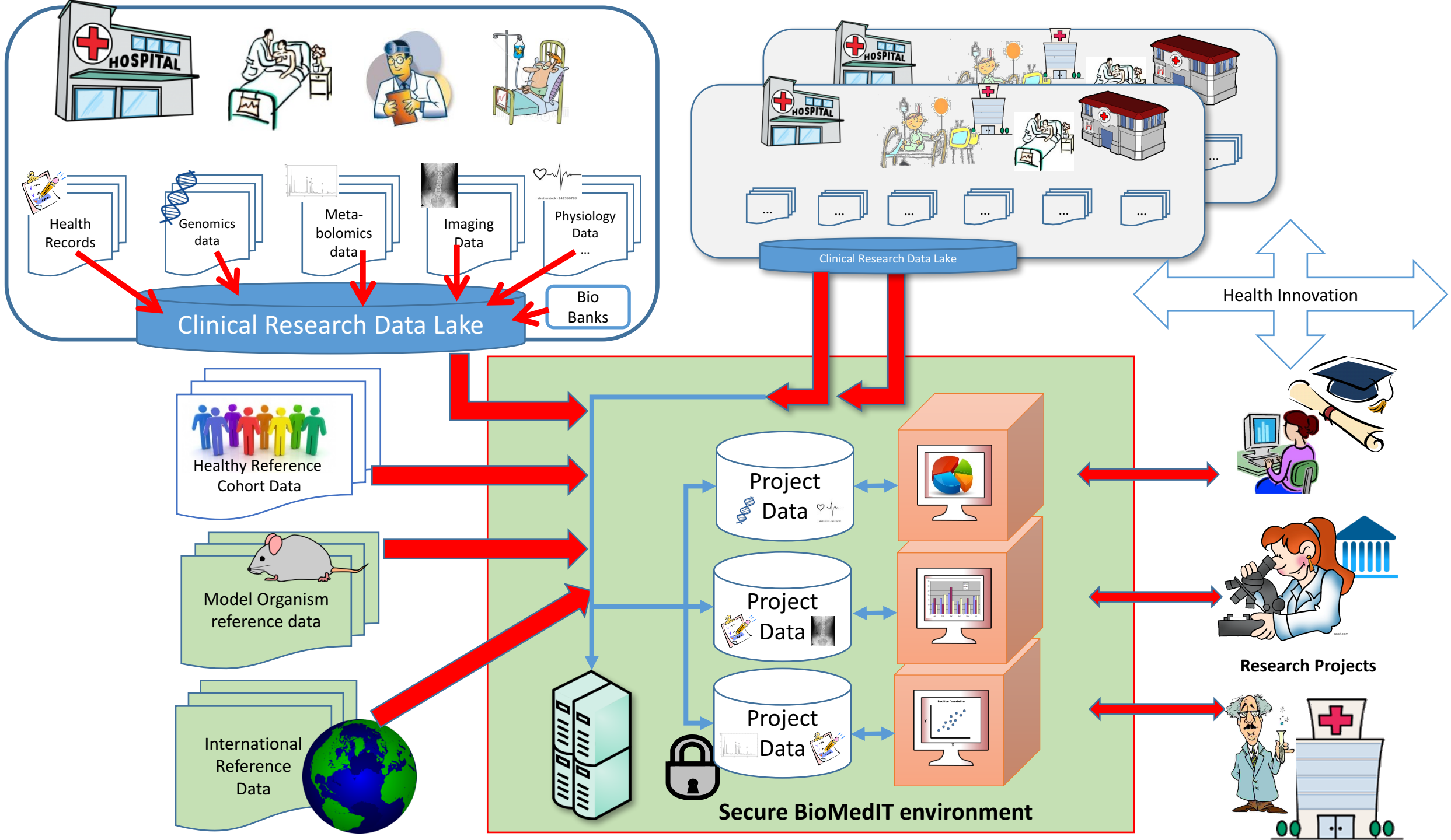
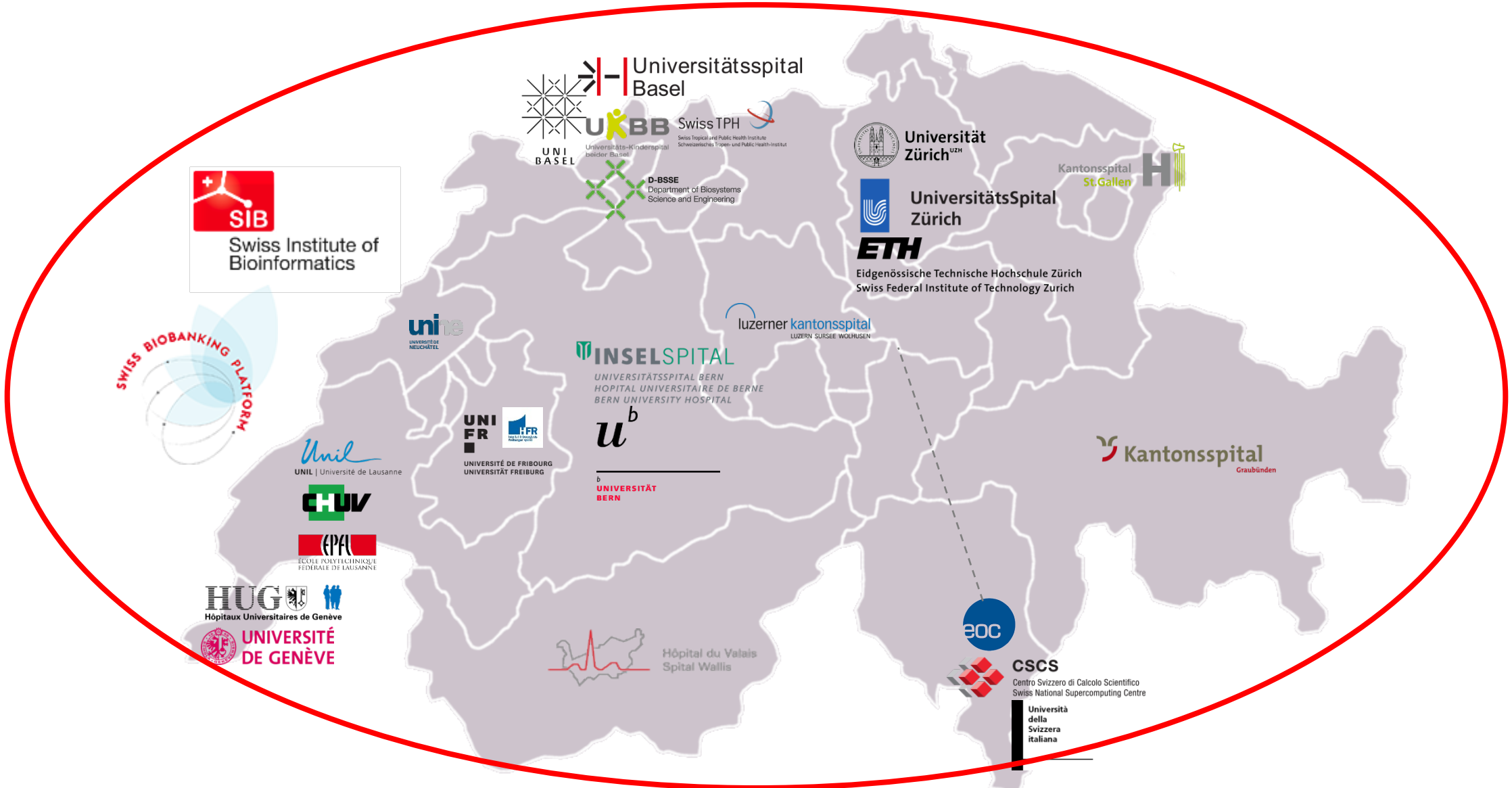

HOSPITAL
Health Records
Genomics data
Meta-bolomics data
Imaging Data
Physiology Data
...
Bio Banks
Clinical Research Data Lake
Clinical Research Data Lake
Health Innovation
Healthy Reference Cohort Data
Model Organism reference data
International Reference Data
Project Data
Project Data
Project Data
Secure BioMedIT environment
Research Projects

Swiss Personalized Health Network (SPHN)



Funding mechanisms in SPHN

Funding mechanisms in SPHN

- Infrastructure Implementation Projects
- Driver Projects (Call 2017)
- Infrastructure Development Projects (Call 2017)

Infrastructure Implementation Projects

Collaboration contracts with University Hospitals:

- Implementation of clinical research data management systems at hospitals
- Harmonization of data semantics
- Standardization of data exchange formats and mechanisms
- Implementation of a distributed query system (data discovery)
- Introduction of a harmonized general informed consent

BioMedIT / Data Coordination Center

National Research Infrastructure Roadmap project coordinated by the SIB :

- Network of secure scientific IT HPC centers at Swiss universities
- Support for management of clinical / personal data for research
- Provisioning of a standard harmonized software stack
- Development of standardized data analysis workflows and software pipelines
- Provisioning of large (access controlled) reference data sets

Molecular Profiling and Biobanks

- SBP Swiss Biobanking Platform
- Health 2030 Genome Center
- ETH PHRT Mass Spectrometry Platform

…. See presentation by PHRT.

Strategic Focus Area
Personalized Health and Related Technologies

Driver projects are guiding infrastructure implementation

Call for proposals open, deadline 15 September.

Driver projects are guiding infrastructure implementation

"Driver projects" **demonstrate the value of personalized health research** and **guide the development of appropriate research infrastructures** and nationwide data **interoperability** mechanisms by "test driving" the infrastructures in a specific area of biomedical research (e.g. making use of patient data obtained in the course of routine clinical decision making for research in cancer research, immunology, etc.).

Driver projects are guiding infrastructure implementation

Driver projects are motivated by specific medical or scientific questions, which **require a coordinated personalized research approach** to succeed. The main goal of these projects is to “drive” the interoperability of the Swiss personalized health research infrastructure network, i.e. the scientific questions must be linked to the development of the infrastructure.

Driver projects are guiding infrastructure implementation

Milestones of driver projects should therefore demonstrate the **readiness of the infrastructure** to support the specific research question. In order to achieve its task in driving **nationwide interoperability**, driver projects are expected to **include the relevant institutions** in the specific field.

Example for potential “driver projects”

Translational research question

Specific medical or scientific question, which requires **nationally coordinated approach** to succeed (e.g. rare diagnosis) and can benefit **from using clinical data, samples or *-omics* data for personalized health research**.

Example for potential “driver projects”

Driving Nationwide Interoperability

Project includes the relevant actors to establish nationwide technical and semantic interoperability in the specific domain. **Multicenter consortium applications** are strongly encouraged.

Example for potential “driver projects”

Change of culture

Driver projects have the ambition to implement **sustainable mechanisms** which enable future translational research projects in related areas, making clinical phenotype data interoperable and usable for research and link them with other types of human data (e.g. ***–omics*** **data, imaging data, physiology, lab data** etc.).

Building the consortium

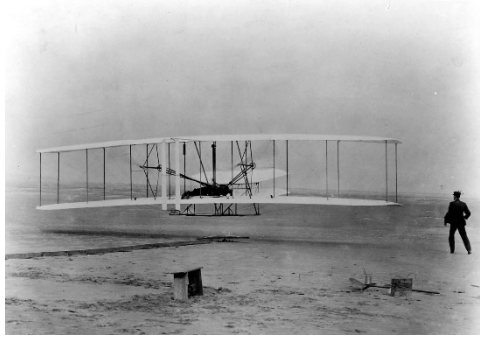
- Feel free to use the SPHN LinkedIn group to look for **potential partners** in other cities; Regional PH clusters (GE-LS-BE and BS-ZH-TI) can help making contacts.
- Please consult the relevant **platform providers** (hospital data management groups, molecular profiling platforms, scientific IT centers) when preparing the proposal to ensure that the required **infrastructures and services are available and adequately budgeted** in the proposal.
- Please ensure that the necessary **ethical approvals** for the project are obtained.

Development projects address bottlenecks

Jet planes did not evolve from pigeons.

Call for proposals open, deadline 15 September.

Example for potential “Development projects”



Bottlenecks

Development projects address major obstacles which currently hinder the development of personalized health research, or explore solutions which have the potential to significantly accelerate or improve the process.

Examples

- Automated approaches for de-identification of unstructured data;
- Benchmarking of AI methods for data analytics and DSS;
- Distributed data analytics approaches and edge computing;
- Advanced methods for data privacy protection and personal data management;
- Societal and health economics aspects of personalized health.

Call 2017

Administrative details

SPHN Call for proposals 2017

- "**Driver projects**" are envisaged to span 3 years and can be funded up to a total of CHF 3 million from SPHN.
- "**Infrastructure development project**" proposals can be funded up to a total of CHF 500k from SPHN.
- SPHN can allocate up to CHF 18.5 million for the 2017 call.

SPHN Call for proposals 2017

- Funding by SPHN requires matching contributions by the applicant institutions (in cash or in kind).
- SPHN funding is intended for the purpose of **supporting the additional effort/capacity** (e.g. personnel, software) necessary to make clinical phenotype data interoperable and usable for research and to link them with other types of human data (e.g. –*omics* data, imaging data, lab data etc.).

Coordination with SFA PHRT

The call is launched in coordination with «Strategic Focus Area in Personalized Health and Related Technologies». Project activities taking place within the ETH Domain and within the scope of PHRT can request **additional** funding from this program.

See presentation by Ruedi Aebersold for details.

Application and Evaluation Process

- Call text, guidelines, and forms can be found at http://www.sphn.ch
- The submission deadline is **15 September 2017 (17h00 CET).**
- Joint applications for SPHN and PHRT must be submitted in **parallel to both** programs.
- Results from the evaluation by the **International Advisory Board** expected in November 2017.

Swiss Personalized Health Network (SPHN)

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Eidgenössisches Departement für Wirtschaft, Bildung und Forschung WBF
Staatssekretariat für Bildung, Forschung und Innovation SBFI

Coordinated with:

Strategic Focus Area
Personalized Health and Related Technologies

SWISS BIOBANKING PLATFORM

FNSNF
FONDS NATIONAL SUISSE
SCHWEIZERISCHER NATIONALFONDS
FONDO NAZIONALE SVIZZERO
SWISS NATIONAL SCIENCE FOUNDATION

SAMW ASSM

SIB Swiss Institute of Bioinformatics