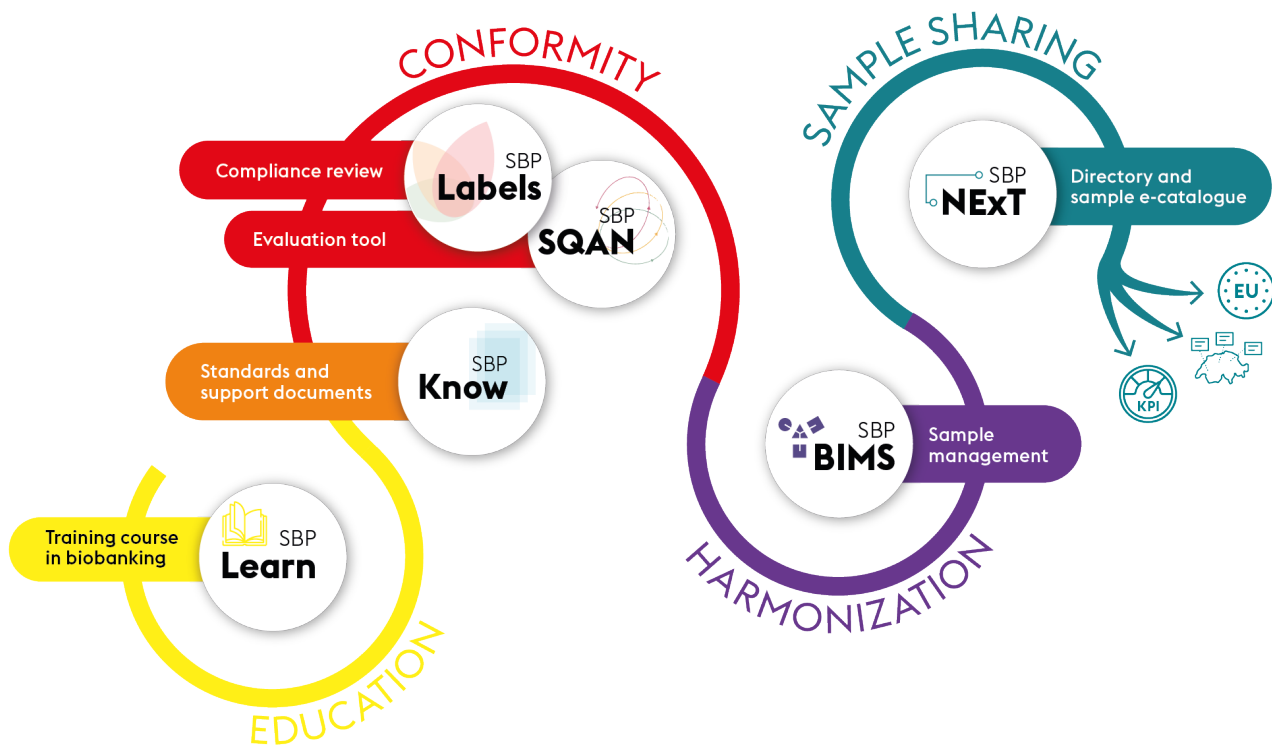




# SWISS BIOBANKING PLATFORM

# ANNUAL REPORT 2022



## Swiss Biobanking Platform

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Route de la Corniche 3A

1066 Epalinges

[www.swissbiobanking.ch](http://www.swissbiobanking.ch)

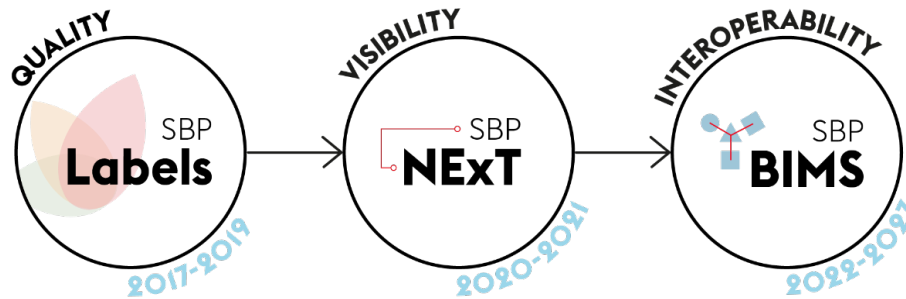
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# INTRODUCTION

Swiss Biobanking Platform made some significant progress with our service portfolio. Based on three pillars, we developed tools to serve a growing network of biobanks and researchers.



Swiss Biobanking Platform (SBP) is the national coordination platform for biobanks from the human and non-human biobanking fields. It is an initiative of the Swiss National Science Foundation (SNSF), which responds to the increasing needs of researchers in biomedical and biological sciences in terms of quality, access, transparency and interconnectedness of biobanks for research purposes.

SBP’s vision is to foster research by facilitating access and optimal usage to high-quality and harmonized samples and sample related data while our mission is to create a network of biobanks promoting FAIR (findable, accessible, interoperable and reusable) samples. SBP has been created to respond to the needs of the Swiss research community facing these challenges following defined values to reach its objectives. **Independence** is an asset to foster collaboration between partners



for a **common good** perspective/aim by treating them in an equitable way (**equity**). BP aims at developing specific and professional **expertise** in the domain with innovative tools (**innovation**) helping partners to adhere to the standards. SBP is positioning its role as a **reliable** service provider to biobanks.

With these values at the center of the collaboration, SBP shall attain the following goals as stated in the agreement for the period 2021-2024 between the SNSF and SBP.:

1. SBP promotes a quality strategy for biobanks that serves both quality management issues and sample quality.
2. SBP develops guidelines to facilitate access to biobanking samples by establishing a Swiss biospecimen catalogue at the sample level. SBP provides advice in IT systems for quality and networked biobanks.
3. SBP drives the quality management of biobanking activities.
4. SBP consolidates the collaboration with the European networks of biobanks.
5. SBP provides a concept for its sustainable funding.

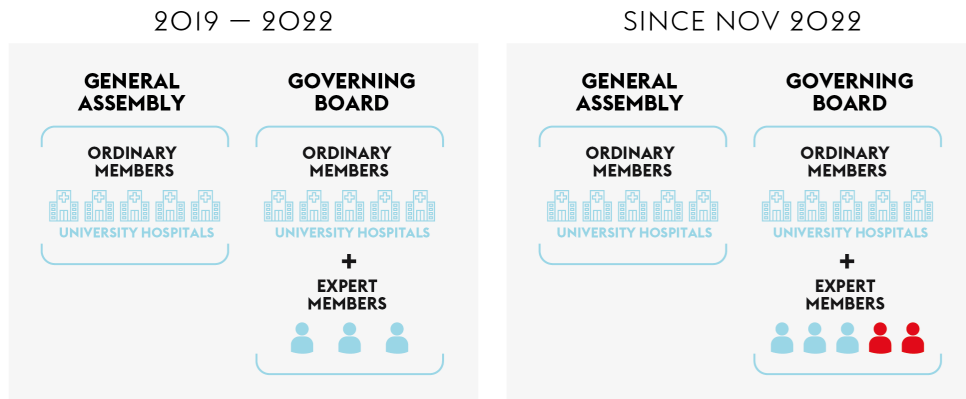
Based on the previous SBP achievements since 2015, this agreement aims at consolidating SBP’s position providing additional tools and services to fulfill the needs of the human biobanking community. It has also the objective of extending and adapting them to the non-human biobanking activities. A budget of 4 Mio for four years has been allocated to reach these objectives.

This report covers the activity period 2022 as delineated in the agreement 2021-2024.

# GOVERNANCE

## Governance Board

Swiss Biobanking Platform (SBP) is an independent association initiated by Swiss National Science Foundation (SNSF) in 2016. Since September 2019, a new SBP governance structure is in place and defined in the bylaws. SBP governance is composed of ordinary and expert members from non-profit and publicly funded institutions active in the biobanking field. The ordinary members constitute the SBP General Assembly. The expert members are individuals highly recognized in three specific biobanking domains (liquid, tissue and non-human biobanking). (<https://swissbiobanking.ch/about-us/>)



Pr Antoine Geissbühler, Geneva University Hospital, assumes the presidency and Pr Aurel Perren, Bern University, the vice-presidency for a three year period (September 2019 to September 2022). A flexible appointment of three years enables the Governing Board to gather expertise for proper decision making in a fast moving field and environment. The ordinary and expert members for the next 3-year period will be elected 17th November 2022.

<p><b>PRESIDENT</b>  <b>Prof. Antoine Geissbühler</b>                  Vice-rector, UNIGE                  Director, eHealth and telemedicine, HUG</p>	<p><b>ORDINARY MEMBERS</b></p> <p><b>Basel</b>                  Prof. Christian Müller                  Head of Clinical Research and Stationary Cardiology, USB</p> <p><b>Bern</b>                  Prof. Thomas Geiser                  Director Education and Research, Inselspital Bern</p> <p><b>Geneva</b>                  Prof. Antoine Geissbühler,                  President                  Vice-dean for humanitarian and international affairs, UNIGE</p> <p><b>Lausanne</b>                  Prof. Mauro Oddo                  Vice-medical Director, Research, Education and Innovation, CHUV</p> <p><b>Zürich</b>                  Prof. Gabriela Senti                  Director Research and Education, USZ</p>	<p><b>EXPERT MEMBERS</b></p> <p><b>Liquid</b>                  Prof. Carlo Largiadèr                  Head of Liquid Biobank Bern, Inselspital</p> <p><b>Tissue</b>                  Prof. Aurel Perren,                  Vice-President                  Director Institute of Pathology, University Hospital Bern</p> <p><b>Non-human — Veterinary</b>                  Prof. Tosso Leeb                  Head Institute of Genetics, Vetsuisse Faculty, Be</p>
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At the last governing board meeting 22<sup>nd</sup> September 2022, the members agreed on two important developments:

- the number of expert members will be enlarged with new representatives in the microbiology and natural history museums
- the creation of an advisory board composed of representatives of biobanks selected within our network and of European partners selected within BBMRI-ERIC. The objective is to include biobanks in the evaluation of SBP tools and services, and to build the future together.

## Swiss node in the BBMRI organization



SBP is the Swiss node of BBMRI-ERIC, the European research infrastructure for Biological and Biomolecular Biobanking. BBMRI-ERIC brings together all the main players from the biobanking field – researchers, biobankers, industry, and patients – to boost biomedical research.

Until now, Switzerland has only an observer status which does not allow researchers from Swiss universities and research institutions to exploit the full potential of international cooperation.

As the Swiss node, SBP is very active in BBMRI Quality services as well as in the development of the Federated Search Platform at the European level.

**In April 2022, the Federal Council proposed that Switzerland become member of six European research infrastructures among which BBMRI-ERIC.**

**This will help SBP consolidate its position in BBMRI-ERIC and provide access to Swiss biobanks and researchers in international projects.**

## Coordination Platform Clinical Research (CPCR)

SBP has been invited to participate in the White Paper as well as in the National Coordination Platform Clinical Research presented below.

SBP has been identified as an important partner together with the other national research infrastructures (Swiss Clinical Trial Organisation (SCTO), Schweizerische Arbeitsgemeinschaft für Klinische Krebsforschung (SAKK) and Swiss Personalized Health Network (SPHN)) to create synergies and economies of scale for the publicly funded clinical researchers.

The White Paper Clinical Research published in 2021 by Swiss Academy of Medical Science (SAMS) is a mandate from the SERI to analyse the position of clinical research in Switzerland and to identify solutions to improve it. The White Paper presents seven goals which constitute an action plan for change to make Switzerland an international leader in patient-centered clinical research. The first goal was to create a national platform to coordinate publicly funded stakeholders in clinical research, the Coordination Platform for Clinical Research (CPCR).

The main tasks are to strengthen the interaction between publicly funded stakeholders of clinical research at the national level so as to exploit synergies, reduce redundancies and improve the coordination and the use of resources; and to facilitate the Implementations of the measures outlined In the White Paper, especially the tasks and responsibilities among the stakeholders.



During its build-up phase, SBP will support the CPR as a permanent member besides Swiss National Science Foundation (SNSF), Swiss Clinical Trial Organisation (SCTO), Schweizerische Arbeitsgemeinschaft für Klinische Krebsforschung (SAKK), Swiss Personalized Health Network (SPHN), Swiss School of Public Health (SSPH+), unimeduisse, swissuniversities, ETH Domain, Swiss Academy of Medical Sciences (SAMS), early career researcher representative, and patient representative. The CPR met three times in 2022.

SBP participated in the selection of the patient representative, is involved in the identification of gaps and synergies between the other national research Infrastructures and participates in the simplification of ethics committees' processes.

## Executive Office

SBP executive office has diversified its members with the reinforcement of support services in the interoperability and quality domains to respond to the growing needs for SBP services.

The development of the future SBP Biobank Information Management System (BIMS) needs the expertise of a user experience designer to fit the system to the biobanks. In terms of quality, there was a need to strengthen the team to support new biobanks in the non-human field. Finally, the education and sustainability projects will be led by a specific collaborator.

### STRATEGY AND COMMUNICATION



**Christine Currat, PhD**  
Executive Director



**Sabine Bavamian, PhD**  
Chief Scientific Officer



**Claudia Lagier**  
Marketing Officer

### INTEROPERABILITY AND VISIBILITY



**Louise Roy**  
User Experience Designer



**Khalil Klouche, PhD**  
Innovation Officer



**Riad Gacem**  
IT Engineer  
*End on October 31st 2022*



**Raphaël Colsenet**  
IT Solution Architect  
*Consultant*

### QUALITY AND EDUCATION



**Lou Ferraton**  
Education and Sustainability Officer  
*Start on September 1st 2022*



**Joséphine Uldry**  
Quality Officer



**Camille Doras, DVM, PhD**  
Biobank Officer  
*Start on September 1st 2022*



**Flavien Delhaes, PhD**  
Biobank Officer  
*Start on September 1st 2022*



**Aline Dousse, PhD**  
Biobank Officer  
*End on July 31st 2022*

## Main achievements

- SBP governance met three times this year : on 25<sup>th</sup> November 2021, 17<sup>th</sup> February and 22<sup>nd</sup> September 2022 with the annual General Assembly on 17<sup>th</sup> February 2022.
- 22<sup>nd</sup> September 2022 : SBP Governing board validates the addition of **new expert members** in biobanking fields of interest in the non-human domain (microbiology and natural history museums) for the next period 2022 to 2025.
  - A change in the bylaws is planned to be approved on 17<sup>th</sup> November 2022 during an extraordinary General Assembly to give the ordinary members the task to decide on the relevant number of expert members to join the SBP governance.
- SBP has been invited to participate in the White Paper as well as in the National Coordination Platform Clinical Research as an Important partner to build the future of publicly funded clinical research.
- SBP executive office is diversifying its team to respond to the needs of biobanks and researchers in terms of interoperability and quality of biobanking

## Future developments

- New Advisory Board
  - Identify and invite volunteered SBP network biobanks and european partners within BBMRI to join the Board.
  - Give them the mandate to evaluate Swiss Biobanking Platform developments until June 2023.
- Bylaws : integration of additional expert members representing relevant fields of biobanking in the non-human domain.
- Election of SBP association members planned 17<sup>th</sup> November 2022.
- SBP will become a member of BBMRI-ERIC to consolidate its position and provide access in international projects to the Swiss biobanking community.

# COMMUNICATION

2022 has been favorable for the development of the notoriety and the promotion of our tools and services. The audience engaged on social media, visiting SBP website and registering in our database, has allowed us to better target the needs of our various partners and tailor our communication as well as our tools, on one side the biobanks and on the other the researchers.

For the biobanks, the enlargement of our audience and the useful information collected, now allow us to personalize our messages and offers. The goals are to get more registrations in our tools to expand our network, and to make the platform data rich and therefore attractive for research.

To target the researchers, the approach is made through specific communication on our website, via factsheets, newsletters, events, etc. as well as through partnerships and the creation of close links with important actors of the research world. (prescribers).

## Introducing our new website

The website has been updated for a more user-friendly and intuitive navigation, a better understanding of the proposed services and an improved accessibility to the SBP tools (March 2022).

A customer service using a chat box and a newsletter subscription pop-up give a direct contact to SBP executive office. The website is more active with regular updates on the progression of the biobanks number in the SBP network, on new developments and available documents (<https://swissbiobanking.ch/documents/>).

## Main achievements

- Newsletters : 12 newsletters sent in 4 languages to 846 subscribers
- LinkedIn subscriptions since November 2021 = + 51%
- Twitter subscriptions since November 2021 = +11 %
- What's new ?
  - Did you Know : 8 posts
  - Q&A : 5 posts
  - Testimonials : 5 posts
  - Label awards : 23 posts

## Future developments

- Organisation of an international conference in 2023 which was not possible during the Covid pandemic and is now an opportunity to provide the Swiss biobanking community a sharing of experience with european experts



## Measuring customer satisfaction

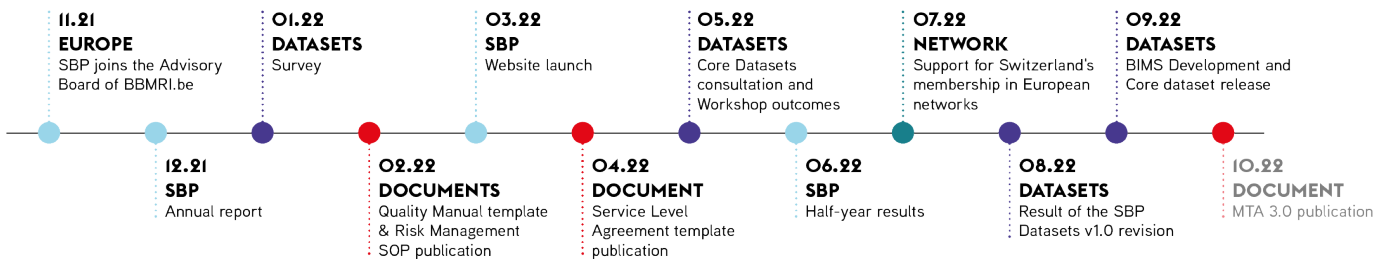
Customers satisfaction is our priority. We need to know where we stand and what we need to improve to satisfy users and gain new ones. Testimonials are thus very impactful in peer-to-peer communication. We thus regularly sent the feedbacks of some biobanks regarding SBP support and post them on LinkedIn: some examples are presented below.



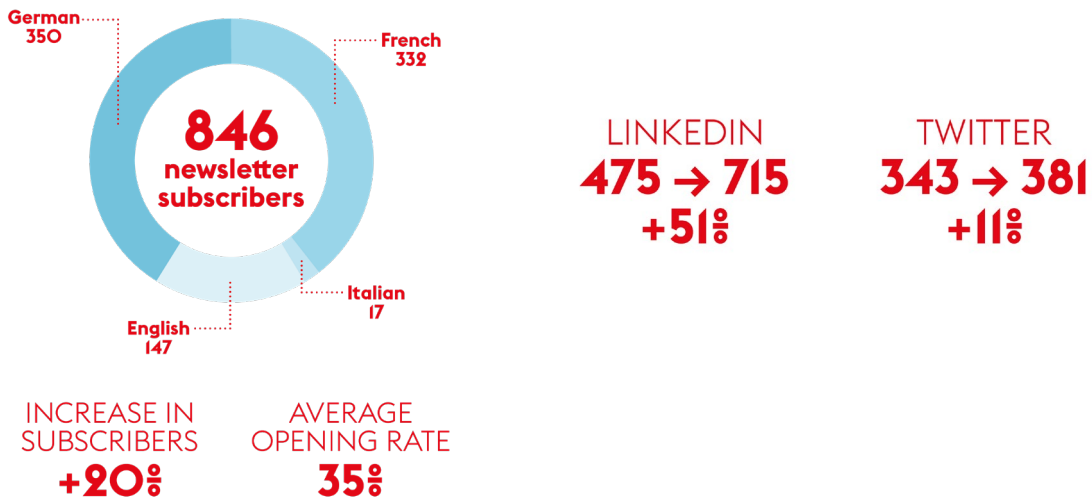
## Newsletters and social media

In line with the new website design and structure, the newsletters are simplified, giving emphasis on a new topic and with direct access to the chapters of interest on the website. They are relayed on LinkedIn and Twitter as the main distribution channels for our different communications.

### 12 NEWSLETTERS IN 4 LANGUAGES



In 2022, the frequency of newsletters is one per month with a distribution list of 846 subscribers in 4 languages.



This new communication strategy is more efficient with 20% increase in newsletters' subscribers, 51% increase in LinkedIn followers and 11% increase on Twitter for the year 2022. On Twitter, despite the slow follower growth, this remains the main social media for relaying important information to the BBMRI partners and researchers. Twitter's feed is embedded on our website, to allow the visibility of the posts.

This is also the consequence of a diversification of the posts with

- Informative posts: newsletters, website launch, workshop events targeting the network
- Entertaining posts: "Did You Know?", articles on biobanking reposting targeting a larger audience
- Education posts : Q&A targeting the biobanking professionals
- Feedback posts: testimonials, partners communications (peer-to-peer)



# EDUCATION

Training course  
in biobanking



To reach its objectives, SBP realized that education is the cornerstone of Biobanking. In 2022, SBP was asked to develop the "Biobanking" module in the Easy-Guide for Clinical Studies (Easy-GCS) launched by the Swiss Clinical Trial Organization (SCTO). In parallel, together with Geneva University, Institut Pasteur and Health Sciences eTraining Foundation (HSeT), SBP developed the concept for a Certificate of Advanced Studies (CAS) in Biobanking that was approved by Geneva University in June 2022.

With those projects, SBP will develop a new service, SBP Learn, to help creating bridges between Swiss biobanks, researchers, other national research infrastructures, ethics committees and society.

## Main achievements

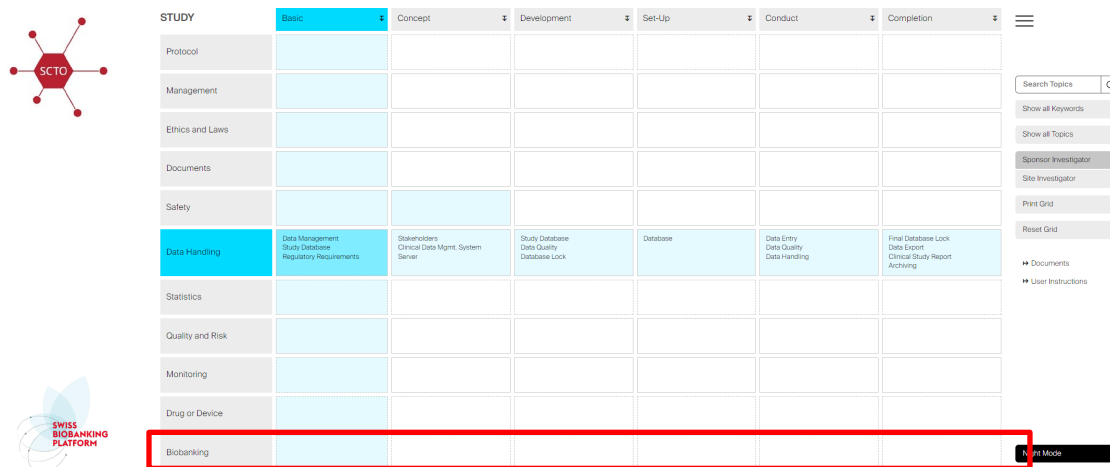
- Easy-GCS :
  - Development of the biobanking module in the Easy-GCS tool provided by SCTO
  - Content to be released in December 2022
- CAS in Biobanking
  - Market analysis on
  - Development of a concept for the CAS aligned with SBP strategy based on three modules helping biobanks to integrate knowledge progressively
  - Targeting different audiences to make the biobanking education as large (diffuse) as possible
  - Successful funding request at the Loterie Romande (90K CHF) to specifically coordinate the CAS development
  - Negotiation of the collaboration agreement

## Future developments

- Easy-GCS :
  - Final revision of the content and release planned in December 2022
- CAS in Biobanking
  - Signing the collaboration agreement with the other three partners
  - Development of the module 1
  - Identify key experts to integrate in the module 1

## Easy-GCS

SBP has worked in collaboration with SCTO to develop the biobanking module of the Easy Guide for Clinical studies. The Easy-GCS is a comprehensive tool that provides all professionals involved in clinical studies answers and guidance on how to proceed with the set up and implementation of their study (<https://www.easy-gcs.ch/grid/yecss.html>). In practice, the information related to the proper conduct of a clinical trial is accessible through a GRID divided into six study phases (from concept to completion) and eleven study subjects including the one focusing on Biobanking.



The screenshot shows the Easy-GCS grid interface. On the left is the SCTO logo. The main area is a grid with columns for study phases: Basic, Concept, Development, Set-Up, Conduct, and Completion. The rows represent study subjects: Protocol, Management, Ethics and Laws, Documents, Safety, Data Handling, Statistics, Quality and Risk, Monitoring, Drug or Device, and Biobanking. The 'Data Handling' row is highlighted in blue, and the 'Biobanking' row is highlighted with a red box. On the right side, there are search and navigation controls.

STUDY	Basic	Concept	Development	Set-Up	Conduct	Completion
Protocol						
Management						
Ethics and Laws						
Documents						
Safety						
Data Handling	Data Management Study Database Regulatory Requirements	Stakeholders Clinical Data Mgmt. System Server	Study Database Data Quality Database Lock	Database	Data Entry Data Quality Data Handling	Final Database Lock Data Export Clinical Study Report Archiving
Statistics						
Quality and Risk						
Monitoring						
Drug or Device						
Biobanking						

The new educational tool including the biobanking module should be available in December 2022. This work is a first education program on biobanking within clinical studies and a fruitful collaboration with SCTO.

## CAS in Biobanking

There is a gap in Switzerland around biobank education with a large target audience starting with general interests in biobanking concepts to detailed interests in biobanking processes. This raises the importance of developing a learning strategy that responds to these different needs. For some stakeholders, biobanking is still just a question of storing samples for research ignoring the complexity of biobanking related issues.

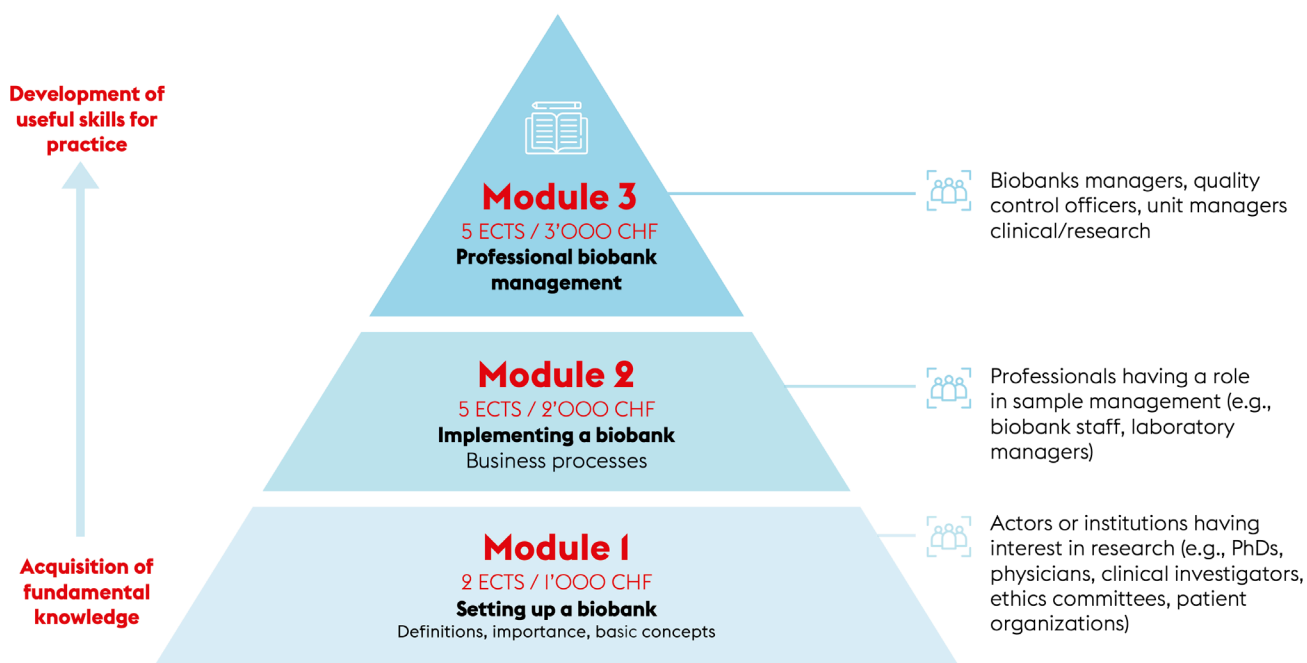
SBP is very interested in setting up the foundation of biobanking by creating a harmonized education program. In that context, SBP aims at valorizing the Swiss expertise and its own vision through the development of a CAS in biobanking in cooperation with the Geneva University and was awarded with an additional financial support from the Loterie Romande for this purpose.

To maximize the participation to the CAS, the concept has been elaborated as a three modules' design covering all necessary information on biobanking, starting from the basic concepts and utility of biobanking to the detailed requirements of an accredited infrastructure by ISO norms.

The CAS in biobanking will be mainly online with contents and learning activities split in three progressively complexer modules, from basic knowledge acquisition to the development of practical and usable competencies. Experts in Switzerland and abroad through the BBMRI network will be identified to provide testimonials or capsules on specific topics.

With this design, the modules target a large audience in a step-by-step approach as presented in the pyramid below:

1. Module 1 provides to any interested stakeholder harmonized training, for laying the foundations of biobanking and to bring everyone up to a common language (standard).
2. Module 2 describes the operational processes for harmonized and efficient sample management, as well as quality storage and personnel management.
3. Module 3 helps biobank managers to follow up the optimization of the Quality Management System and the ISO accreditation.



### SBP contribution to the CAS

SBP will actively participate in the content creation and has hired a scientific collaborator for this project. SBP will identify and propose experts in the various fields from the Swiss and European networks that will bring value to this CAS in addition to the experts proposed by the Geneva University and the Pasteur Institute.


In summary, SBP will contribute to this CAS by:

- Developing content and structure of the CAS in collaboration with all other partners
- Offering access to its national and European network for identifying experts
- Promoting the CAS through its website and finding potential students interested in taking one or more CAS modules
- Participating in the evaluation of the candidates during the analysis of the application files
- Collaborating with Health Sciences eTraining Foundation in the construction of moodles.

### Partners

The CAS in Biobanking is an initiative involving four complementary key partners that will sign a partnership agreement which is still in the negotiation process.

The agreement shall cover the contribution of each partners as described below :

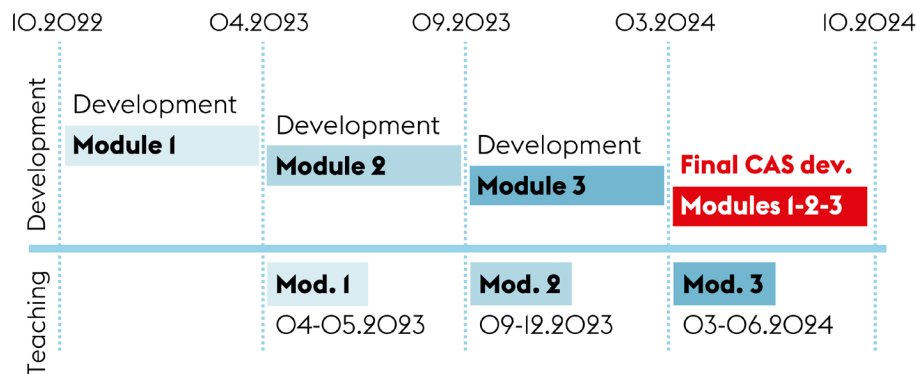
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 ○ The "formation continue" of Geneva University allows the CAS recognition as a certificate in Switzerland providing visibility, communication and registration facilities.
- The HSeT foundation being a privileged partner of Geneva University for other education programs has experience in online courses development with the use of moodle technologies will put online the CAS content.
- The Pasteur Institute (PI) having developed an online course focused on virology and biobanks gives access to the already existing content and expects to benefit from the updated version of the CAS. In addition, the IP would like to offer this CAS to the emerging countries.
- The Swiss Biobanking Platform (SBP) association having developed a unique expertise in the biobanking field with an important Swiss and European network of potential candidates, will contribute to the content development and CAS promotion in Switzerland and abroad.

The agreement shall also describe the possibility to provide the module 1 in other education programs in Switzerland and abroad, the fair distribution of CAS registration revenues and the Intellectual Property rights on the content.

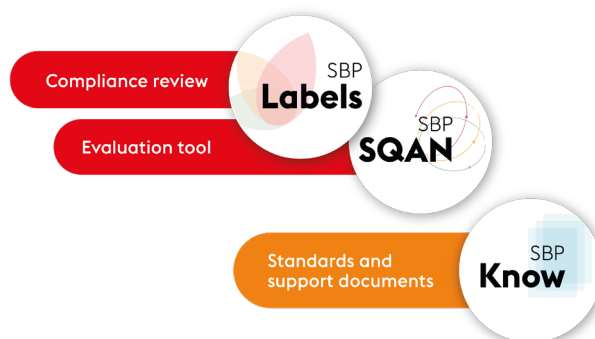
### CAS development

The development of the CAS is sequential, starting with the release of module 1 planned Q2 2023. This will allow SBP and the partners to communicate on the CAS and find interested partners in Switzerland and abroad. The first module will be advertised to biobank managers who will be interested in the whole CAS, and to any interested stakeholder in the research community.



**First edition of the CAS complete from autumn 2024**

# QUALITY



In terms of quality, SBP is offering different services to support biobanks in the development of a state-of-the-art practice. SBP Know provides a set of standardized support documents available in the website. the compliance tool SBP SQAN delivers quality labels to biobanks and provide them a proof of conformity on distinct requirements being the mandatory step to enter the Swiss and European network of biobanks.

## Main achievements

- A quality manual template and a risk management SOP to assist biobanks implementing their quality strategy
- A service Level Agreement (SLA) to satisfy a requirement from ISO 20387 on biobanking regarding subcontractors
- Revision of the MTA template aligned with the SPHN DTUA and Consortium Agreement (Schedule 4)
- Creation of two Working Groups on biobanking in the context of industry-sponsored clinical trials and on the development of a cost-calculator for University hospitals' Biobank Infrastructures.

## Future developments

- MTA 3.0 with a scheme to help researchers fill in the document (November 2022)
- SOP's on Data Quality
- A cost calculator for biobank infrastructures
- A set of mandatory requirements for sample transfer that are harmonized across all Swiss University hospital



## Documentation (measure 1.1)

### a. Quality Manual (November 2021)

The quality manual template is intended to assist the biobanks in implementing their quality strategy. It describes the organization, the operations and in more detail the quality management system of the biobanks. This document covers the aspects of organization, resource management, operational processes, and quality. The SBP model has been designed to be easily adopted by any type of biobank or biobank infrastructure. It can be implemented at the creation of the biobank and completed as it evolves.

### b. Risk Management SOP (November 2021)

Risk assessment is one of the key foundations for the establishment and proper functioning of biobanks. It allows them to identify, evaluate and prioritize the risks associated with their activity, to allocate resources where they are needed. The Risk Management SOP provides the methodology to reduce and better control the occurrence of hazards and minimize their potential impact.

### c. SBP Service Level Agreement (April 2022)

Biobanks often collaborate with support services like maintenance, cleaning, informatics (IT), or related to a specific biobanking process (e.g. sample transport or sample storage). These services indirectly contribute to the implementation of biobanking activities and need to be integrated into a contract. SBP Service Legal Agreement (SLA) details in a contract form the service provided and the mutual obligations between the parties. SLAs are developed to satisfy a requirement from the ISO 20387 on biobanking regarding subcontractors.

This document drafted by SBP has been validated by the Legal Services of the 5 University Hospitals and the main Technology Transfer Organizations. This document was released in April 2022 and is now available in our website.

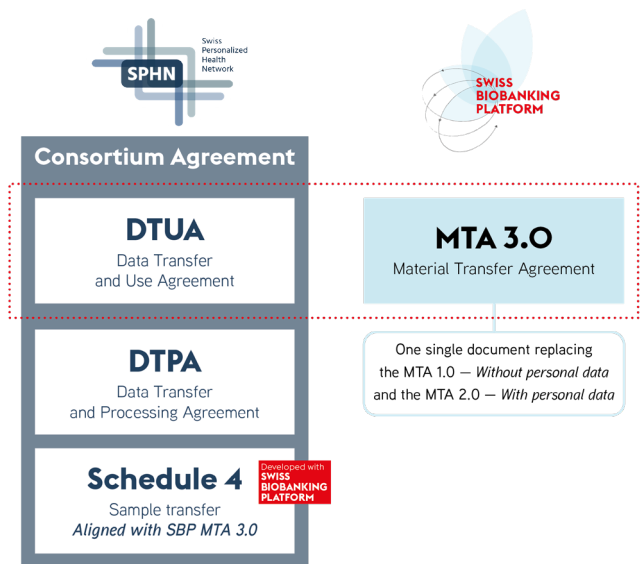
### d. MTA 3.0 (To be released in November 2022)

To better serve biobanks and find the most suitable support strategy to help researchers access and use biological resources (i.e. biological material and/or data) in a more easy and effective manner, SBP has revised its MTA templates (v1.0 and 2.0) to propose only one single document (MTA 3.0) which now includes different options and guidance depending if you share or not personal data.

The new version of MTA 3.0 relies on a Master Legal Instrument defining the legal terms and a Project Agreement which will be filled with all necessary information related to the project. Both documents are part of the MTA 3.0 contract. This new template is fully aligned with the latest version of the SPHN DTUA and refers to it when applicable.

In parallel, SBP has participated to the revision of the SPHN consortium agreement which now includes a DTUA/DTPA and a MTA schedule aligned with the new version of SBP MTA v3.0.

In the context of the SPHN legal agreement revision templates, a group of legal experts has been appointed to comment and review the updated documents. To align our national effort, SBP has consulted with the same group of experts for the revision of its MTA v3.0. This document has been validated by SBP Governing Board 22<sup>nd</sup> September 2022 before its final release in November 2022 with a scheme to help researchers fill in the document.





### e. SOP on “Data Quality” (To be released in December 2022)

SBP document templates related to data protection (“Data protection SOP”) and data and sample traceability (“Data and samples traceability SOP”) will be merged into one single document named SOP on “Data Quality”. In this document, practical guidance will be provided, with a focus on the documentation of available measures to guarantee data integrity, protection and security as well as sample associated data quality.

The proposed measures are fully aligned with SNSF strategy and requirements to develop a Data Management Plan (DMP). This SOP on “Data Quality Management” will be submitted for review to IT experts identified by SBP Governing Board members and validated by the latter before final release in December 2022.



The minimal requirements related to data quality management will be further integrated in the revision of SBP VITA label to support biobanks/researchers developing their Data Management Plan (DMP) (as per the SNSF requirements, <https://www.dlcm.ch/resources/dlcm-dmp>). This revision will also integrate the Core Dataset evaluation to emphasize the importance of the documentation of sample-related data and foster quality in biobanking by enhancing harmonization of practices.

## Working Groups

### Sample management in industry-sponsored clinical trials

Industry-sponsored clinical trials can involve the collection of participant’s samples that are then usually transferred to the industrial partner either for analysis or for constituting an internal biobank. When samples are analysed within a clinical trial, the left-over material is kept in a biobank for further undetermined analysis and/or research projects. When the biobank is planned in industry, particular attention has to be raised to :

- minimise the risk of approving biobanks created within clinical trials without a standardized process checking conformity, quality and governance of the biobank building on SBP expertise offered to any type of biobanks.
- minimise the risk of sample reuse for further research performed (in CH and abroad) without knowledge of patients.
- prevent the loss of donors' willingness to participate in those clinical trials.

The objective of this new Working Group co-led with SCTO and initiated by Pr Thomas Geiser from Inselspital, is to develop a set of mandatory requirements for sample transfer to promote academic-industrial collaborations. These requirements will then be integrated in industrial partners collaboration contracts providing incentive clauses around biobanking and leftover samples. To mitigate the risks of losing industrial partners attractiveness, these clauses need to be harmonised between the Swiss University Hospitals and CTU recruiting centers. Bern is thus interesting in regrouping Swiss University Hospitals and CTUs to come up with a harmonized process with a one voice strategy towards industrial-sponsored trials and their related industrial biobanks.

#### Stakeholders to be involved

- SCTO, SBP, SAKK, Swissethics
- Patients’ representatives
- Industrial representatives and/or representatives of CROs
- Representative of clinical trials contracts in each hospital and in each CTU

**Sustainability project / Cost calculator for biobank infrastructures (measure 4.2)**

“Sustainability is the capacity of a research infrastructure to remain operative, effective, and competitive over its expected lifetime.” as defined by the OECD at the Global Science Forum in 2017. Applied to biobanking, the infrastructures provide services to the biobank community in terms of sample processing, storage as well as trained personnel and equipment. To maximize their use, visibility, and efficiency at an institutional level, they must develop a self-sustainable business model with prices harmonized within the country.

The objective is to develop a cost calculator for biobank infrastructures’ services and a self-sustainable business model harmonized between the five University Hospitals to help institutional biobank infrastructures better promote their services and become self-sustainable in the long run.

A first meeting with Dr Michael Weisskopf from Universität Spital Zürich identified a joint interest for the development of a cost calculator to serve the biobank infrastructures in Switzerland to harmonize their practices and pricing model. The creation of a Working group with a kick-off meeting 1<sup>st</sup> November 2022 will help sharing existing practices and documentations to come up to a cost-calculator development. SBP will also provide BBMRI nodes experience (Belgium, Germany) towards this issue.

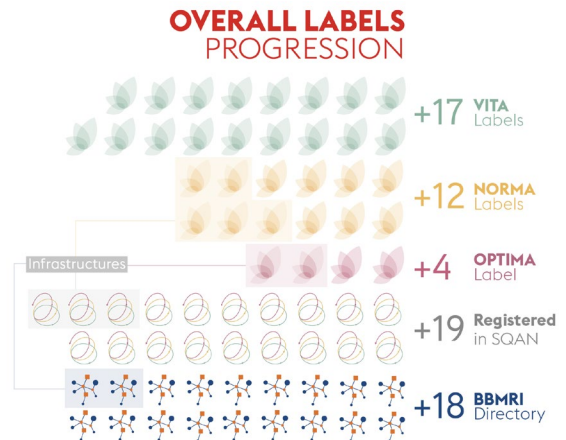
**Stakeholders to be involved**

- The biobank Infrastructures within the 5 University Hospitals
- SAMS representatives

**SBP Labels**

**SBP Network (measure 1.2)**

The SBP Network is composed of 70 entities, 10 being Biobank Infrastructures and 60 Biobanks. 22 new Biobanks joined the SBP Network this year, complying with the VITA requirements. In terms of the already existing network, the activities around Quality labels (NORMA and OPTIMA), as they were not possible with the pandemic situation since requiring on-site visits, increased with 8 new NORMA biobanks (3 biobank infrastructures) and 6 new OPTIMA biobanks (1 biobank infrastructure).



In 2022, the SBP Network of biobank and biobank Infrastructures is distributed across the different labels we propose with an increase of 62% for the VITA, 25% for the NORMA and 13% for the OPTIMA, showing the interest and progressive understanding of the biobank community to adhere to higher standards than just the minimal requirements integrated in the VITA label.

**NUMBER OF LABELS**  
BIOBANKS



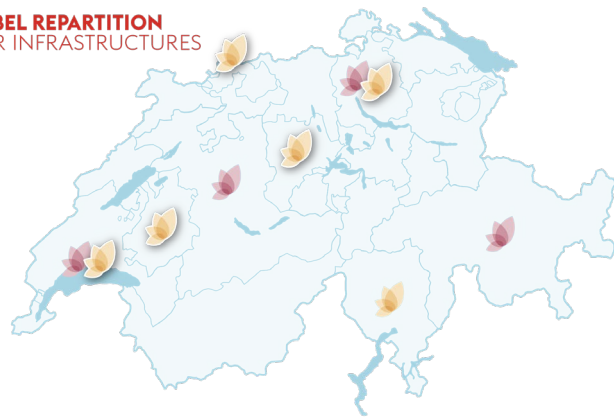
**Biobank infrastructures**

In its Quality strategy, SBP proposes to promote compliance and visibility of the local infrastructure of an Institution by achieving at least the Normal label. This guarantees the quality of its operational processes according to applicable standards (e.g. ISO 20387).

**NUMBER OF LABELS**  
INFRASTRUCTURES



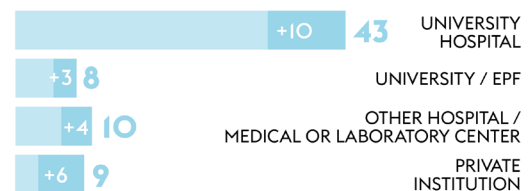
**LABEL REPARTITION**  
FOR INFRASTRUCTURES

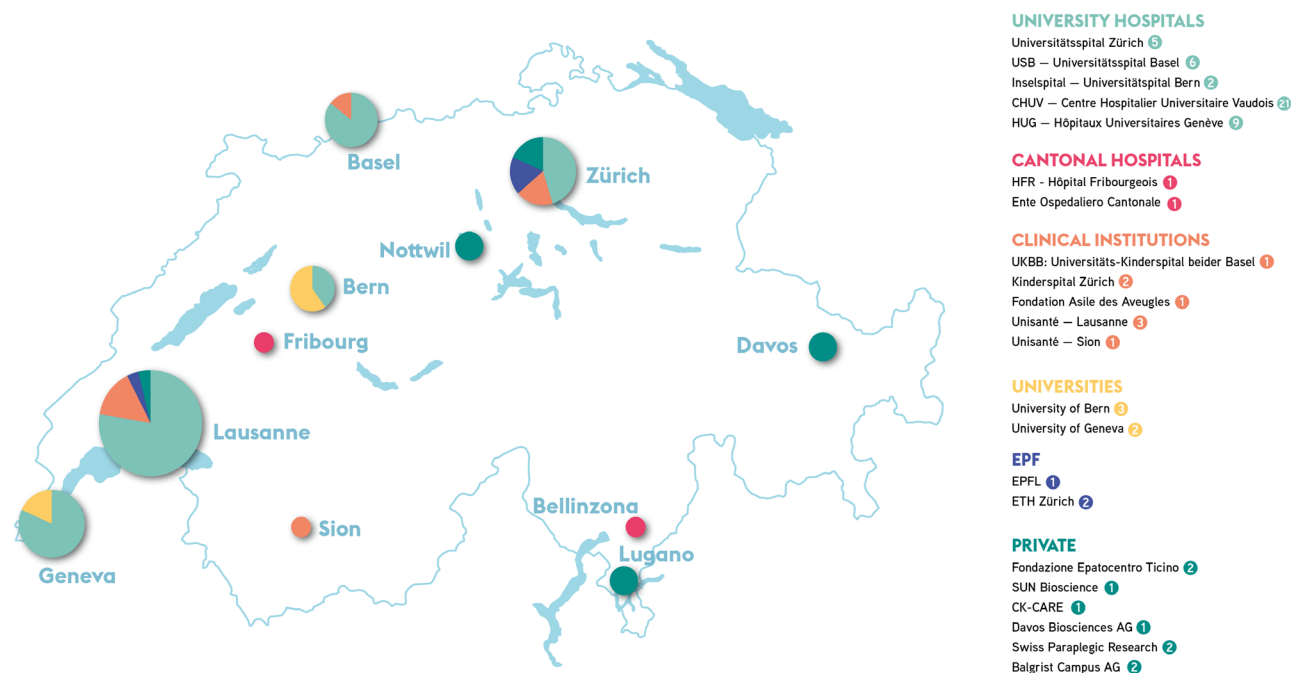


Compared to last year, 3 new biobank Infrastructures joined the SBP network making to 19 Infrastructures registered in total in the Swiss network. 7 labels were awarded this year to biobank Infrastructures (5 NORMA and 2 OPTIMA labels). Those infrastructures belong to University hospitals (CHUV, Universitätsspital Basel), cantonal hospital (Hôpital de Fribourg) and from the private sector (Balgrist and Davos Biosciences AG).

As depicted above, the Network is not only composed of biobanks within University hospitals, but numerous biobanks from universities, cantonal hospitals or private institutions have been successful in achieving SBP labels. The interest of biobanks or biobank infrastructures from non-university hospitals is growing over the time, and as already noticed last year, the strategy applied to these partners allows to provide support from the beginning with a greater efficiency.

**SBP NETWORK**  
BY TYPE OF INSTITUTION





## Revision of SBP Label

As described in the aims and milestones in Appendix, the SBP labels requirements need to be regularly updated to ensure compliance with the latest developments at the national and european levels.

To that end, two main developments are planned:

### Datasets Integration into SBP labels (measure 1.3)

The SBP datasets v1.0 were revised for human liquid, tissue and bacteria samples and split into the Core Dataset (SBP datasets v2.0, first round revision) and the Extended Dataset (SBP datasets v2.0, revision planned for 2023) to allow a step-by-step approach towards quality documentation and facilitate its implementation. This strategy is aligned with SPHN Clinical Datasets (see chapter on Interoperability).

The evaluation of the Core Datasets will be integrated in SBP VITA label, in the context of the revision of our labels to develop a new questionnaire focusing on sample-related data. This approach aims at helping biobanks to develop a standardized documentation practice from its early stage of development.

The evaluation of the Extended Datasets will be integrated in SBP NORMA label, with a step further in the documentation of sample-related data and a strong focus on quality.

Finally, the mapping of the Core and Extended Datasets into the sample workflow will help their implementation by the biobanks as well as their integration into SBP BIMS, our tool currently in development to support biobanks in their daily sample management, ensure traceability and promote biobank interoperability.

### Integration of non-human requirements (measure 3.1)

The revision of SBP VITA label will integrate the needs and requirements of the non-human biobanking community starting with the Microbiology and the Veterinary fields. The current questionnaire of our Biobank SQAN focusing on human biomedical biobanks will be revised and tailored to integrate the governance and operational requirements of these domains.

## Strategy to biobanks towards the ISO 20387 accreditation

### (measure 1.4)

All experienced biobanks agree that accreditation is strongly encouraged as it demonstrates that staff are competent, resources are adequate for the biobank's activities, methods are validated, and procedures are applied. This is crucial to increase the visibility of a biobank and to harmonize practices at national and international level.

The main challenges to reach and implement these processes are the following :

- The difficulty of defining the fit-for-purpose for each type of biological material as the research carried out on the samples is not always known in advance
- the difficulty of providing objective proof of impartiality
- the management of equipment and infrastructure that is sometimes shared and managed by external providers
- defining the precise scope of accreditation, for example, whether the collection process should be integrated or not when it is only partially performed by the biobank
- the process of validation and verification of methods

Accreditation of a biobank to ISO 20387 indeed requires independent, unbiased assessment of the biobanking activities to determine competence, impartiality, and consistent operations. SBP with its expertise and independent position already offers, through its OPTIMA labelling, a support to biobanks willing to get prepared for the future ISO 20387 accreditation. This accreditation can only be delivered by a competent and recognized ISO accreditation body, the Swiss Accreditation Service (SAS) in Switzerland. SBP is thus in contact with SAS which does not yet offer accreditation of biobanks under the ISO 20387 to see how an active collaboration could be envisioned to serve biobanks' interests.

SAS is currently in the process of defining a uniform procedure with the other European accreditation bodies to setup the accreditation system and is also interested to involve Swiss Biobanking Platform in this process.

In parallel, SBP works closely with BBMRI National Nodes (e.g. Belgium, Germany) to align the Swiss strategy with the European developments around the ISO 20387 accreditation. SBP being part of the Belgium node Advisory Board is much aware of the Belgium node example with its new B3-ISO project.

# INTEROPERABILITY

Sample  
management



Interoperability in the biobanking field is a generic wording aiming at promoting exchange and use of biological samples. Once the sample-related data from different biobanks are comparable and searchable, researchers can assess the samples suitability for their projects.

SBP strategy is to document relevant sample data needs in a standardized way to become comparable and searchable. To that end, SBP works on different types of Datasets to agree on at a Swiss level and in parallel in the integration of them into a pre-configured Biobank Information Management System (BIMS) that SBP will provide to biobanks as an adaptive and interoperable solution.

## Main achievements

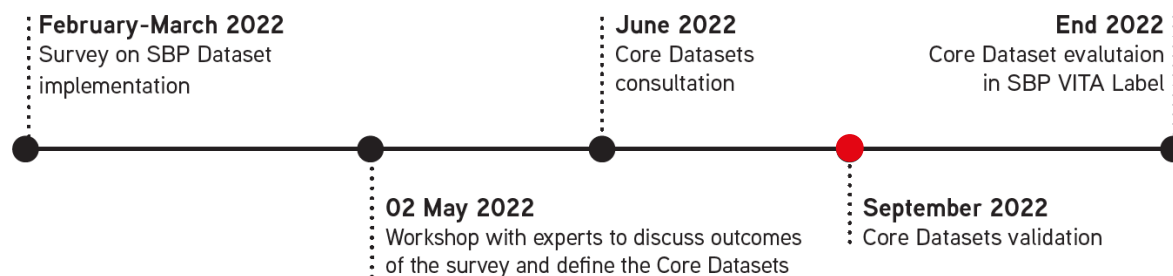
- SBP Datasets :
  - Revision of the SBP Datasets for tissue, liquid and bacteria during a SBP Workshop organized at SNSF 2<sup>nd</sup> May 2022.
  - Publication of SBP Core Datasets corresponding to the minimal data any biobank should document to characterize a sample.
- SBP Ecosystem: Putting in place a federated user management system is critical to ensure a strong security foundation and enhance user experience with the use of Keycloak already used in SPHN Ecosystem.
- Biobank Information Management System (BIMS)
  - Official Public tender process completed.
  - Evaluation of the candidates by an independant Swiss committee to end up with the choice of DiData.
  - Definition of the SBP BIMS concept with a Sample Management Platform containing different BIMS specific environments.
  - Definition and negotiation of a 6-month "Proof-of-Concept" with DiData.

## Future developments

- SBP Datasets :
  - Revision of the Core Datasets for liquid and tissue veterinarian biobanks
  - Revision and publication of the SBP Extended Datasets
  - Integration of the Core Datasets in the VITA label requirements and the Extended Datasets in the NORMA requirements
- SBP BIMS :
  - Proof of Concept with key features to be developed and implemented for the SBP BIMS instances
  - Regular workshops
  - Development of the SBP BIMS business model and negotiation with DiData around Intellectual Property rights

## Core Datasets v2.0 (measure 2.1)

The publication of our first 5 datasets (DS) for tissue and liquid samples derived from human and animals (in 2018), as well as for bacteria (in 2019) was the first step to provide guidance to biobanks on sample-related documentation and towards biobank interoperability. This important achievement was the result of the involvement of national experts who agreed on a list of data that need to be documented for each sample, however, with the feature of being mandatory or optional.



Based on discussions with operational Biobank managers and to facilitate the implementation of the full DS, SBP has revised the v1.0 version of its Datasets to define the minimum requirements in terms of sample-related documentation. This list of minimum requirements should help biobanks in implementing the Datasets into their daily practice and documenting the essential data related to their samples at every step of their biobanking processes. These minimal requirements Datasets will form the so-called "Core Datasets" and were agreed during the SBP Workshop on May 2<sup>nd</sup> 2022 at the SNSF. This revision is aligned with current SBP interoperability activities which provide a Core Datasets for clinical data.

This revision of SBP datasets v1.0 (= Core Datasets v2.0) aimed to:

- Engage biobanks in the documentation of sample-related data by identifying the minimum information to be documented for their internal activities
- Provide a step-by-step approach to facilitate their understanding and implementation
- Support the future development of SBP BIMS by mapping the Core variables into the biobank sample workflow
- Be integrated in SBP labels to further support interoperability and their implementation by the biobanks into their daily practice

### Workshop on SBP Datasets on May 2<sup>nd</sup> at the SNSF in Bern (measure 4.3)






#### *A step-by-step approach towards quality documentation*

Following an evaluation survey of the current SBP datasets documentation practices, the essential fields characterizing biobanked samples have been discussed and agreed upon during this workshop bringing together biobanking experts. The tissue- liquid- and bacteria- Core Datasets are the result of a consensus reached during our workshop on May 2 at the SNSF in Bern under the lead of different experts :

- Tissue: Prof. Aurel Perren, SBP Vice-President
- Liquid: Prof. Carlo Largiadèr, Inselspital
- Bacteria: Prof. Adrian Egli, University Hospital Basel



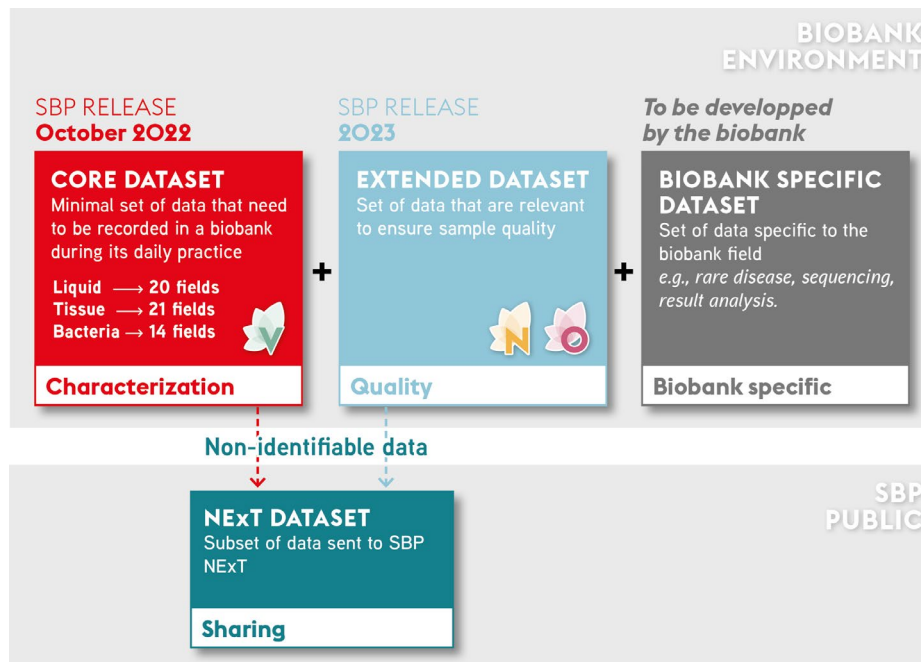
The Core Datasets were sent for consultation to the SBP Network during the summer, consolidated and approved by the SBP Governing Board in September 2022.

	 Case	 Collection	 Processing	 Storage	 Distribution
<b>20</b> Liquid (Human) Core Dataset	6	3	4	5	2
<b>21</b> Tissue (Human) Core Dataset	6	4	6	3	2
<b>14</b> Bacteria Core Dataset	4	6	1	1	2

As presented, the Core Datasets are applied to the lifecycle of a sample matching specific workflows, and is composed of 20 data for liquid, 21 for tissue and 14 for bacteria.

Regarding the methodology, SBP has designed a survey to evaluate the practice of biobanks around the full SBP DS v1.0 with a first focus on the Core Datasets for tissue- liquid- and bacteria- samples. All the other variables that were not chosen in the Core Datasets will be further discussed in the next round of Datasets revision process planned in 2023. This next round of revision will define the Extended Dataset which will contain the other pre-analytical variables to document to ensure sample quality.

The novel representation of SBP Datasets aims at helping biobanks in their implementation and to further support their integration in the future SBP BIMS.



In its revised strategy of DS documentation, SBP invites biobanks to complete the Core and Extended Datasets with a dedicated DS called the Biobank Dataset that will list other variables relevant to their specific field (e.g. rare diseases, oncology).



# Development of a ready to use Biobank Information Management System (BIMS)

## (measure 2.2)

Biobanks are under ever growing pressure to improve documentation of samples and processes. The complexity and sheer amount of data to record makes it necessary to use dedicated systems that will facilitate traceability as required by the Human Research Act (HRA) and interoperability to promote sample exchange and comparability.

Such systems are referred to as Biobank Information Management Systems (BIMS), and to our opinion, the currently commercially available BIMS offer a suboptimal solution to help certain types of biobanks working on excel to switch to a professional BIMS system.

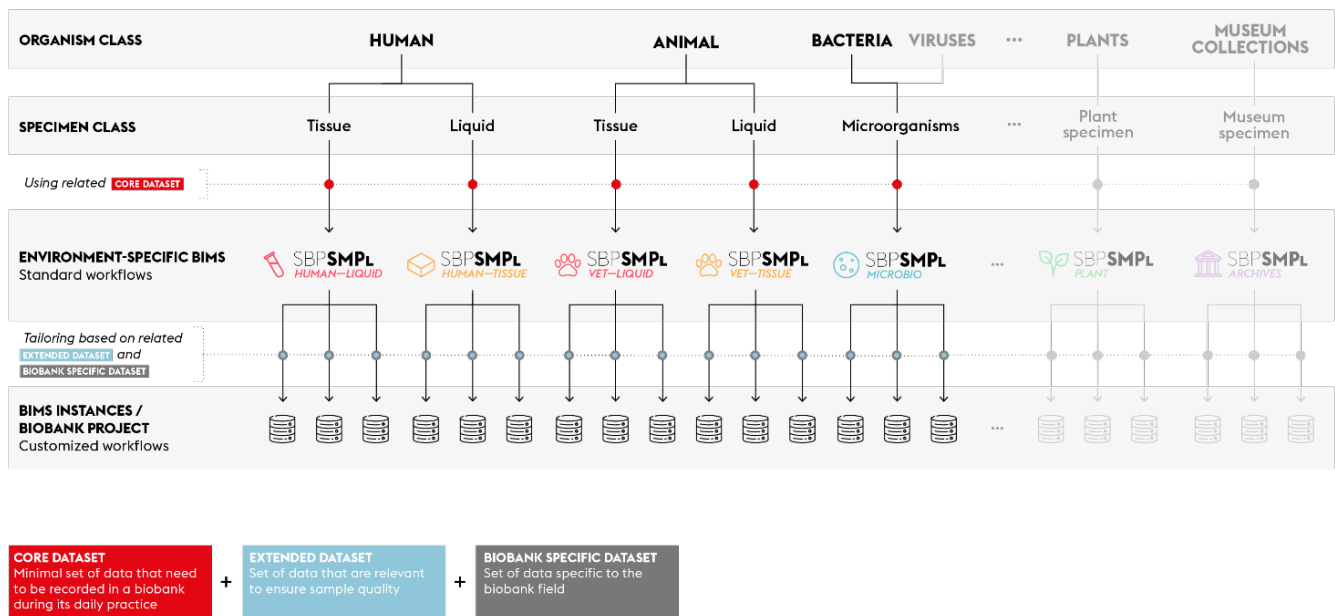
### SBP BIMS Concept

The SBP BIMS consists in the development of pre-configured systems to be used by the Swiss biobanking community

- to increase efficiency in regular biobanking processes,
- to make BIMS accessible to smaller structures and
- to increase quality through data exhaustivity and interoperability.

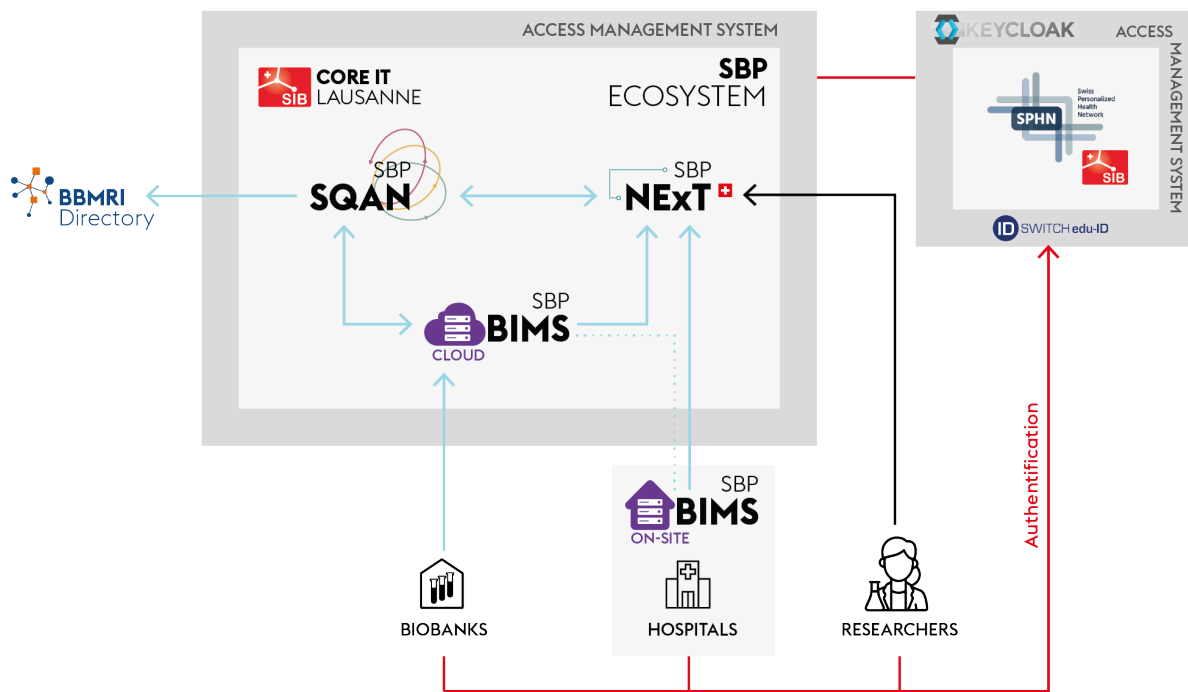
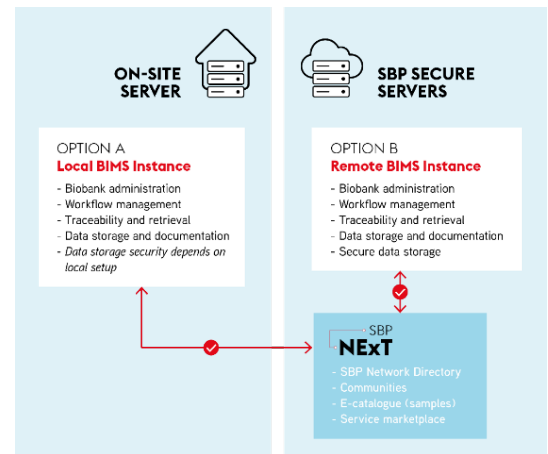
Those preconfigured systems, called BIMS instances, will respond to different biobanking environments as listed in the scheme below. These instances will integrate the Core and Extended Datasets for each environment, while the biobank specific Datasets will be customized by SBP for each partner as an additional service.

Altogether the different BIMS instances are forming the SBP Sample Management Platform, called SMPI.



The BIMS could be hosted, either on a local instance within institutions (Option A) or on a remote instance at BioMedIT (Option B).

The SBP BIMS shall, in any option, be integrated in the SBP Ecosystem having the samples information directly linked with the SBP e-catalogue, SBP NExT and Biobank information directly linked to the Biobank SQAN.

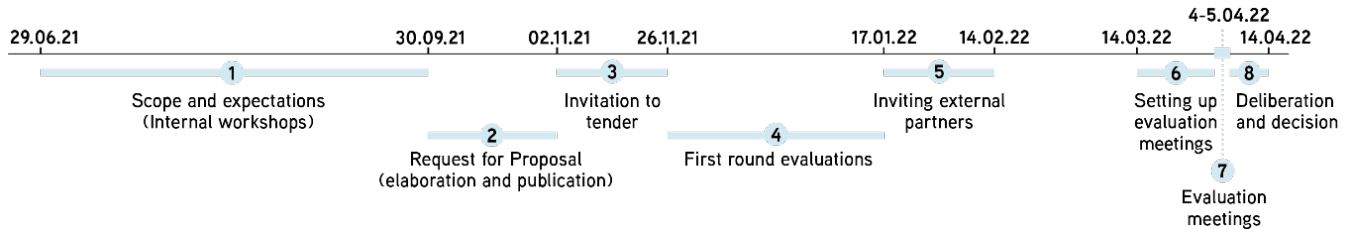


### Keycloak Installation

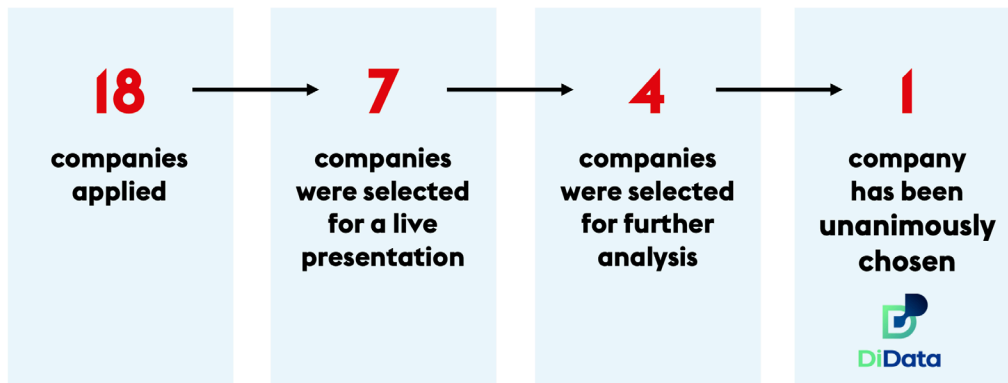
In order to continuously improve the SBP user experience within the SBP ecosystem, a complete redesign of the security access management system is ongoing. The number of applications owned and offered by SBP is growing and it's important to have a unified security layer. The new architecture based on Keycloak will simplify users' access and strengthen security for the SBP ecosystem. Keycloak is a security framework that manages authentication, authorization and single sign-on. This framework is widely used by many, including SPHN. The new SBP keycloak instance will be hosted on SIB infrastructure and managed by SPHN which will ensure expert skills, as well as other possible synergies. Trusted users from other security networks such as SPHN and Switch Edu-ID will then have facilitated access to SBP tools.

### SBP Public Tender

To find the appropriate vendor that would help SBP to develop and provide the SBP BIMS to the Swiss Biobank community, SBP published a selective procedure of a public tender 2<sup>nd</sup> November 2021 whose process has been finalized 14<sup>th</sup> April 2022.



After internal workshops (1), SBP BIMS requirements were then formalized into a Request for Proposal (RfP) document (2) and published 2<sup>nd</sup> November 2021 on SIMAP, the national platform for public procurements (3). Around 50 companies showed interest but finally 18 companies formally applied. The first round evaluations (4) were done by two assessors from the SBP team and the SBP IT consultant considering vendor profile (40%), methodology (20%), technical fit (20%) and cost (20%). 7 companies were graded above the threshold and selected for the 2<sup>nd</sup> round, which consisted of live presentations. Companies that were not selected were provided individual debriefing.

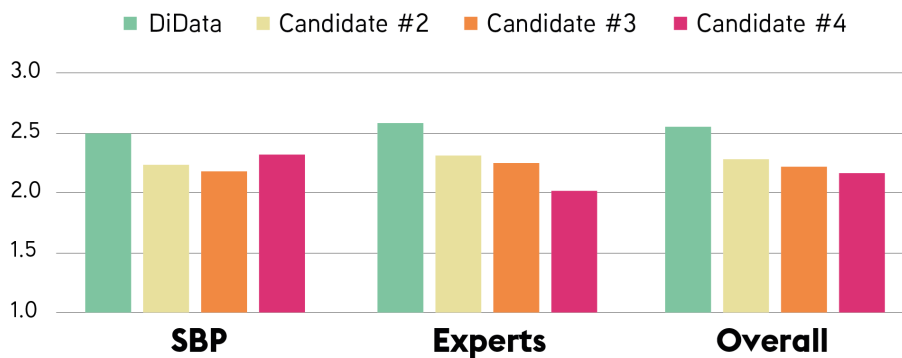


To avoid any conflict of interest, the companies were evaluated by external partners including IT and biobanking experts from Switzerland (5) having volunteered to participate in the "Independent panel of experts".

- Tanja Froehlich** ..... **INSELSPITAL** ..... LBB biobank manager
  - Franco Guscetti** ..... **UZH** ..... Professor Veterinary pathology
  - Denis Marino** ..... **HUG** ..... Geneva pediatric onco-hematology biobank
  - Elodie Ristorcelli** ..... **CHUV** ..... Biobank and laboratory manager
  - Thierry Sengstag** ..... **USB** ..... Deputy Director sciCORE
  - Heinz Stockinger** ..... **SIB** ..... Head of Core-IT
  - Tatiana Terrot** ..... **EOC Ticino** ..... Clinical Research operations Manager
  - Andreas Unterkircher** ..... **CHUV** ..... Product Owner in Clinical Research & Datascience
  - Julien Virzi** ..... **HUG** ..... Scientific collaborator specialized in biobanking
- Remote**
- Michael Weisskopf** ..... **USZ** ..... Head Research Biobanking Service Center
  - Duygu Istanbulu** ..... **USZ** ..... Biobank manager

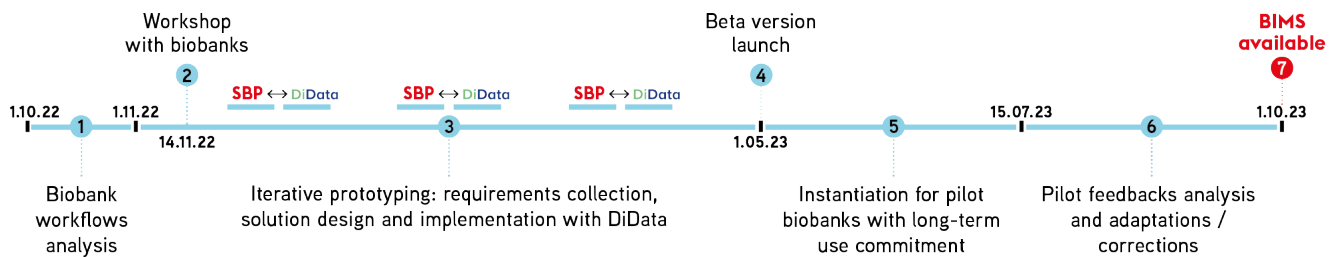
The Independent panel of experts attended live presentations of the 7 selected companies during a workshop in Epalinges 4<sup>th</sup> and 5<sup>th</sup> April. The companies were evaluated and ranked on the following criteria that were agreed on by the panel of experts during the workshop : simplicity of the proposed architecture, understanding of the demand and motivation, capability for a co-development with SBP, cost estimation and overall impression. Each expert gave a note from 1 to 3 to the five criteria resulting in four companies scored higher than 2.

4 companies were analyzed in-depth (7) and DiData was unanimously chosen by the expert panel as the best candidate in terms of co-development, architecture and costs. unanimously agreed on that choice and the decision was made official (8).



**SBP Proof of Concept**

For the development of the SBP BIMS, a Proof of Concept (PoC) is envisioned with DiData for a 6-month period where SBP will integrate actively biobanks to collect their needs and configure their workflows in the system. To that end, a first workshop is already planned 14<sup>th</sup> November with 24 participants already registered, and two others will be scheduled to develop a fit-for-purpose system.



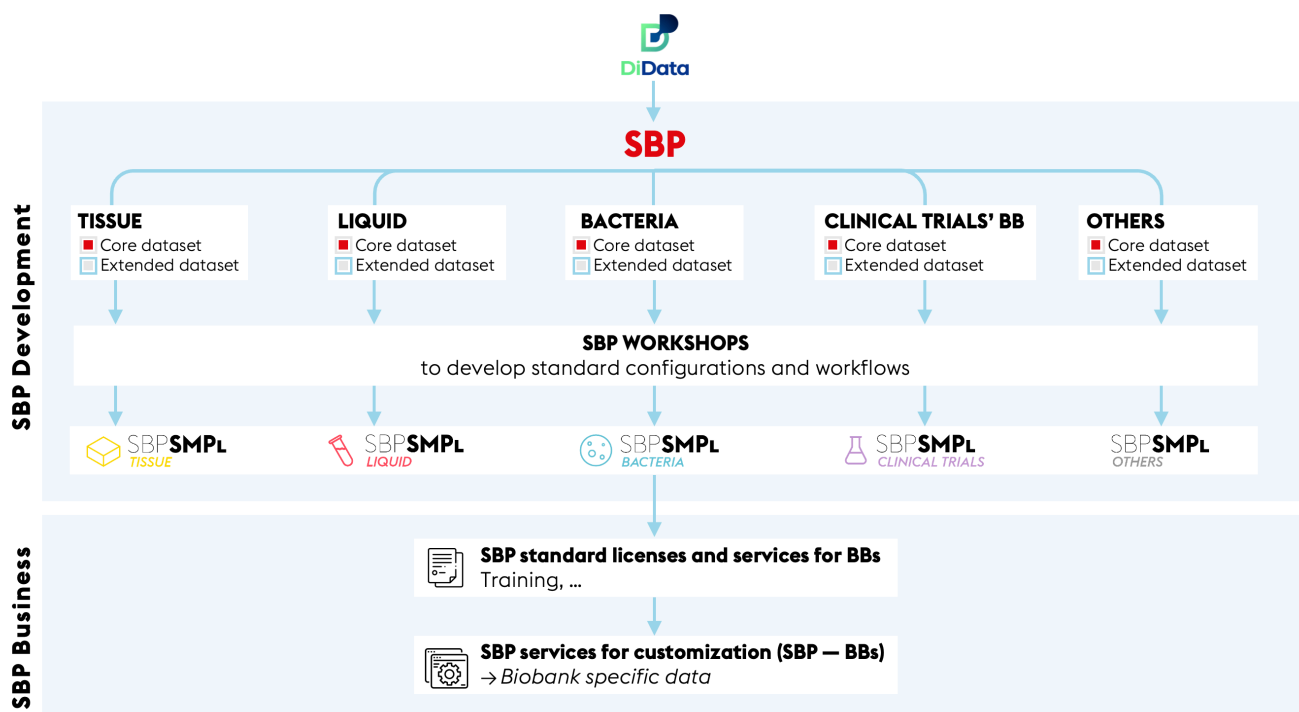
The PoC will start 1<sup>st</sup> October 2022, once the contract is signed by both parties where DiData provides SBP with a License for 6 months, extendable to 1 year, including up to for 10 identified users, who may be external users and 2 servers installations for 5’000 CHF. The hosting is planned to be in BioMedIT and the other at the CHUV. In parallel, an independent security audit is planned in collaboration with the CHUV, already using DiData for their registries.

In terms of business requirements and solution design, a capped amount of 96’600 CHF has been dedicated with, at the end of the PoC, the necessary information to decide how and when to enter the implementation phase.

The objectives of the PoC are :

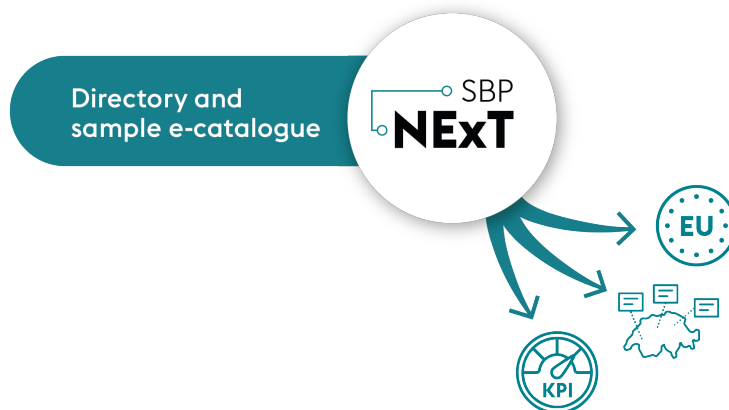
- a) Define SBP's business requirements in terms of developing BIMS instances that meet predefined environments.
- b) Identify the functionalities to be developed in top of the DiData Solution to implement SBP needs defined under letter (a) above.
- c) For each functionality, obtain from DiData a proposed solution in terms of specifications, design, cost, time frame and ease of implementation.
- d) For each functionality, the Parties will define who will be responsible for the development of the feature (DiData or SBP), as well as a prioritization of functionalities for the implementation phase.

The Implementation phase will allow the development of the different BIMS Instances that will be tested by the already Identified users active In the PoC workshops.



The business strategy will be negotiated with the two options on the central hosting of SBP BIMS, on a BioMedIT node or on local institutions. For the central hosting at BioMedIT, biobanks will benefit from privileged pricing of the preconfigured BIMS directly from SBP, and for the local hosting, biobanks will have contracts with DiData and SBP will receive a commission to provide the preconfigured BIMS to the biobank. It is planned in future as part of the business model of SBP that access to the BIMS and the hosting solutions will be charged. The fees will however be lower as commercially available solutions.

## VISIBILITY



One of the biggest challenge biobanks faces is the under-used banked samples. To overcome this challenge and to respond to the increasing demand for sample visibility, SBP has developed a Swiss directory that offers a shared platform for biobanks and the possibility for researchers to find samples and their related data.

A concept for an electronic catalogue (e-catalogue) at the sample level has then been developed to maximize visibility through a network, where connections between biobanks and researchers are enabled not only on a national level but throughout Europe via the BBMRI Directory.

Implementing Key Performance Indicators is also a way to help biobanks get aware of sample reuse and efficiency through a collaboration with BBMRI.

### Main achievements

- The NExT (Network exploration tool) is operational to search biobanks within the SBP Network of biobanks, and is still under construction to access samples data.
- A risk analysis to ensure biobanks could import their samples data in compliance with data protection requirements was achieved in collaboration with the CHUV using the SPHN template.
- A list of Key Performance Indicators, approved by BBMRI, will have to be reported by BBMRI Headquarters, national nodes and biobanks within each node from 2023 as a mandatory process.

### Future developments

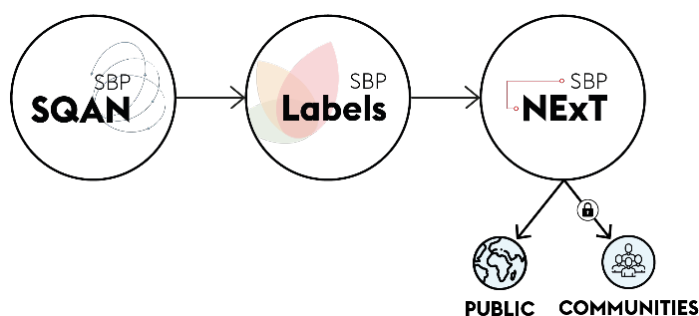
- Communication on the risk analysis performed for the biobanks hosted on a BioMedIT node and those that are hosted on any other server.
- Active collaboration with the biobanks to help them report on the BBMRI KPIs from January 2023.
- Interconnection of the NExT with the SPHN Federated Query System.

## Network Exploration Tool

(measures 2.3 and 2.4)

Promoting biobank's visibility and sample sharing being a central task, SBP has developed a centralized national e-catalogue, called SBP Network Exploration Tool (SBP NExT), combining the features of a directory (search at a biobank level) with the ones of a catalogue (search at a sample level) using visualization aspects to facilitate the search.

The e-catalogue being integrated in 2021 (<https://swissbiobanking.ch/sbp-next/>), and the samples being accessible from 2022, the SBP NExT appears on SBP website as an initial version featuring only the SBP directory. The NExT has been officially released April 20 2021 at the workshop and advertised in a series of newsletters from January 2021.



This new tool has been developed and improved with the help of pilot biobanks who have challenged and tested the solution until end of 2020. They have still been very active in 2021 to help us improving the system and providing the first samples on the platform. A great diversity of pilots allows the NExT to fulfill multiple criteria and functions with a community of tissue biobanks taking part of the Patholink project, with a Vetsuisse biobank for non-human needs, with the Liquid Biobank Bern biobank infrastructure (LBB), and a Swiss cohort study, the Swiss Transplant Cohort Study (STCS).

The Swiss Health Study (SHes) and the Tissue Biobank Bern (TBB) have imported their samples information in the system, while others are in the pipeline waiting for the publication of a risk analysis that was performed with the CHUV (The Liquid Biobank Bern, the Swiss Transplant Cohort Study and the Genomic Biobank Center).

## SPHN Cohort and Registries Task Force

SPHN has mandated the Cohort and Registries Task Force to map the current cohort landscape in Switzerland. This mapping included an overview of the most relevant cohorts in Switzerland and the main obstacles to overcome on the way to FAIRification of data. SBP was one of the members of the TF which listed the major multicentric cohorts, selected in function of their overall importance in the field, the period of activity, the size of the population studied and their publication record. In parallel, 10 major Swiss cohorts have been registered on Maelstrom, a renowned catalog providing a user-friendly solution for data discovery, to increase the findability and usability of these cohort datasets at international level.

## Understanding the bottlenecks to data sharing in Switzerland





















Along the same line and to achieve complementary goals, SPHN has conducted a study to understand the bottlenecks to biomedical data sharing. The preliminary conclusions support the need to create a culture of data sharing, the same can be acknowledged for samples and recognize that such a sharing is a service which requires sustainability efforts (e.g. further education about the process and the resources, investment from a funder and institutional perspective).

SBP participated in the elaboration of the questionnaire and was involved to define the list of participants including relevant interactants from the biobanking field (e.g. BBMRI).

## BBMRI Key Performance Indicators (KPIs)
















In 2022, a list of KPIs has been developed by BBMRI-ERIC with the support of the national nodes, and which BBMRI will document on an annual basis.

For SBP, it means that the Swiss node will have to annually report to BBMRI on those KPIs. Some of the KPIs relying on activities of biobanks, an active collaboration with the biobanks within SBP network is needed. This will be a great incentives for biobanks to report regularly on the activities listed in the list below through the SBP channel.

ACCESS TO SAMPLES & DATA (& BIOMOLECULAR RESOURCES)			
#01	Users of BBMRI Directory	Measured by HQ	
#02	Active Users of the BBMRI Negotiator	Measured by HQ	
#03	Requests filed into the BBMRI Negotiator	Measured by HQ	
#04	Requests successfully handled via BBMRI Negotiator in that calendar year	Measured by HQ	
#05	Requests successfully handled outside of the BBMRI Negotiator	Measured by: 1. Collected by each biobank. 2. Aggregated by each Node. 3. Aggregated by HQ. 4. HQ subtracts the number of requests handled via Negotiator.	  
ETHICAL, LEGAL & SOCIETAL ISSUES (ELSI)			
#06	Hours of BBMRI ELSI Services provided	Measured by HQ and BBMRI wide experts	
#07	Number of Attendees in BBMRI ELSI Dialogues	Measured by HQ	
#08	Number of BBMRI Quality-Labels on BBMRI Biobank, Laboratory/Institute or Expert Centre level in BBMRI Directory	Measured by HQ	
#09	Number of BBMRI Quality-Labels on Collection level in BBMRI Directory	Measured by HQ	
#10	Number of Certified/Accredited BBMRI Biobanks, Laboratories/Institutes & Expert Centres	Measured by HQ	
OUTREACH, EDUCATION & OUTCOME			
#11	Number of Publications involving BBMRI	Measured by: 1. Collected by each biobank. 2. Aggregated by each Node and complemented by National Node publications. 3. Aggregated by HQ and complemented by Headquarters publications.	  
#12	Number of Participants reached by BBMRI Outreach Events	Measured by: 1. Collected by each biobank. 2. Aggregated by each Node and complemented by National Node outreach events. 3. Aggregated by HQ and complemented by Headquarters outreach events.	  
STAKEHOLDER FORUM			
#13	Number of participants in Stakeholder Forum	Measured by HQ	
FUNDING			
#14	Number of successful grants	Measured by: 1. Collected by each biobank. 2. Aggregated by each Node and complemented by National Node outreach events. 3. Aggregated by HQ and complemented by Headquarters outreach events.	  
SOCIO-ECONOMIC			
#15	Number of mainstream Articles/Publications involving BBMRI	Measured by: 1. Collected by each biobank. 2. Aggregated by each Node and complemented by National Node publications. 3. Aggregated by HQ and complemented by Headquarters publications.	  





# AIMS AND MILESTONES 2021 - 2024

Aims	Measures and deliverables 2019-2020	Milestone	Deliverables	Status
<b>1. SBP promotes a quality strategy for biobanks that serves both quality management issues and sample quality.</b>	1.1 — Provide biobanks with guidelines, support documentations and consulting services to improve their preanalytical process	10.2021	SOPs, a quality manual and specific trainings are developed	
		10.2021	Biobanks from University Hospitals are the main SBP partners	
	1.2 — Enlarge the SBP national network of biobanks to other hospitals, universities, public or private research organizations.	10.2022	Biobanks from Universities are part of the network	
		10.2023	Interest of other research partners is encountered	
		10.2024	Interest of private industries is considered and evaluated	
	1.3 — Develop and update guidance, know-how and consulting services in terms of quality on a regular basis	10.2022	The Biobank SQAN and its related labels are updated	
		10.2024	The Biobank SQAN and its related labels are updated	
	1.4 — Provide biobanks with guidance, support and consulting services to prepare the ISO accreditation	10.2022	Interest and needs of biobanks getting accredited by ISO norm is evaluated	
	1.5 — Develop and coordinate peer-review audits on specific fields of biobanking by SBP experts	10.2024	An expert panel is created and guidelines for audits are developed	
	<b>2. The SBP develop guidelines to facilitate access to biobanking samples by establishing a Swiss biospecimen catalogue at the sample level. The SBP provides advice in IT systems for quality and networked biobanks.</b>	2.1 — Provide biobanks with solutions to implement SBP datasets promoting interoperability and ensuring quality documentation	10.2021	Datasets are endorsed by SBP partners and implemented in most biobanks
10.2021			SBP BIMS concept is developed with a business plan	
2.2 — Develop a ready-to-use Biobank Information Management System (BIMS) for biobanks in Switzerland and abroad		10.2023	SBP BIMS is developed and implemented in interested biobanks	
		10.2022	SBP e-catalogue development is operational and its efficiency evaluated on a regular basis	
2.3 — Develop a catalogue at the sample level facilitating search, usage and turnover of samples for research purposes aligned to the Swiss Personalized Health Network Strategy (SPHN)		10.2022	SBP e-catalogue development is operational and its efficiency evaluated on a regular basis	
2.4 — Setup counselling services and tools to facilitate national and cross border exchange	10.2022	Guidelines and services are developed and provided by an ELSI helpdesk		
2.5 — Facilitate access to samples for researchers through the development of	10.2023	Tools and processes such as a sample negotiator are developed		







guidelines, access policies and a defined process promoting efficient usage of biobanks

with a one-stop-shop approach to efficiently connect researchers and biobanks



**3. The SBP drives the quality management of biobanking activities.**

3.1 — Adapt SBP quality labels with minimal quality and interoperability requirements to the non-human biobanks needs	10.2022	Non-human biobanks' specificities are integrated in the minimal requirements of the different labels	
3.2 — Identify an international non-human biobanking consortium or initiative to network Swiss biobanks as BBMRI for the human biobank	10.2022	The consortium or initiative is identified and the collaboration is defined	
3.3 — Analyze the needs for services and guidelines to be developed for bacteria/virus and veterinary biobanking field as well as for other animal, plant and other organisms, if applicable	10.2023	A list of services and guidelines are proposed and prioritized	
3.4 — Develop a concept or non-human biobanking in terms of processing and storage infrastructures based on the information gathered under 3.2 and 3.3	05.2024	A concept for the development of specific non-human biobank infrastructures is validated (type of storage, specific	

**4. SBP consolidates the collaboration with the european networks of biobanks**

4.1 — Participate in BBMRI as well as ESBB and ISBER development and inform on a regular basis the Swiss biobanking community on the important achievements in biobanking	10.2022	Regular newsletters and analysis are provided to SBP partners	
4.2 — Provide a list of SBP services that could be developed for the European community or other interested stakeholders (Biobank SQAN, support documents,...) as paying services	10.2024	Interested services are provided and a price is calculated for each	
4.3 — Organize regular national and international conferences to promote knowledge-sharing on different biobanking aspects aligned with european guidance	10.2021	a national conference is organized	
	10.2022	an international conference is organized	
	10.2023	a national conference is organized	
	10.2024	an international conference is organized	

**5. SBP provides a concept for its sustainable funding**

5.1 — Maintain a coherent and efficient collaboration between research infrastructures of national importance in Switzerland by creating and intensifying synergies with other infrastructures (SPHN, SCTO, Swissethics,...)	10.2024		
5.2 — Develop a concept to be integrated in the SERI list of research infrastructures of national importance	10.2023		
5.3 — Develop a business plan with financing measures	10.2023		