

Projektantrag
«Swiss Learning Health System»
(Projektgebundene Beiträge
2021-2024 nach HFKG)

Projektgebundene Beiträge 2021-2024 nach HFKG

Projektantrag

(einzureichen durch swissuniversities bis Ende Februar 2020)

Projekttitle: **Swiss Learning Health System (SLHS)**

1 Kurze Umschreibung des Projekts (in Deutsch oder Französisch; max. 20 Zeilen)

Das *Swiss Learning Health System* (SLHS) ist ein gemeinschaftliches Projekt von Schweizer Universitäten und Fachhochschulen zur langfristigen Etablierung einer nationalen Plattform für Gesundheitssystem- und Versorgungsforschung, Politik und Praxis.

Die Vision des SLHS ist ein Gesundheitssystem, welches flexibel auf aktuelle und zukünftige Gesundheitsbedürfnisse reagiert und welches sich kontinuierlich weiterentwickelt und verbessert. Das SLHS stützt sich dabei auf ein nationales und internationales Netzwerk von Experten, um im Austausch mit Politik und Praxis aktuelle Probleme im Gesundheitswesen der Schweiz zu erkennen und zu priorisieren und evidenzbasierte Handlungsoptionen aufzuzeigen.

Um das *Swiss Learning Health System* nachhaltig im Schweizer Gesundheitssystem zu etablieren, strebt das SLHS in einer zweiten Förderphase (2021-2024) die folgenden drei konkreten Projektziele an:

- 1) Stärkung und Erweiterung der derzeit im SLHS priorisierten Themen durch intensivierte Einbindung von Stakeholdern in die Governancestruktur des SLHS sowie *Calls for Joint Proposals* für *Policy Briefs* und *Stakeholder-Dialoge*, unter Beteiligung der Hochschulen und weiterer (öffentlicher) Organisationen, verschiedener Disziplinen und Professionen;
- 2) Förderung einer inter- und transdisziplinären Ausbildung von Nachwuchsforschenden im Bereich der Gesundheitssystem- und Versorgungsforschung;
- 3) Langfristige Etablierung eines interuniversitären SLHS Kompetenzzentrums als Bindeglied zwischen den Schweizer Hochschulen und den Akteuren im Gesundheitssystem.

2 Beantragter Bundesbeitrag 2021-2024

4'800'000 CHF

**3 Anfangs- und Enddatum der beantragten Projektfinanzierung
(Beginn frühestens 1.1.2021, Ende spätestens 31.12.2024)**

01.01.2021 – 31.12.2024

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Beitragsberechtigte Hochschulen und andere Institutionen des Hochschulbereichs (gem. Liste Dok. 137/17)

1. (Leading House)	Universität Luzern (UniLu): Departement Gesundheitswissenschaften und Medizin; Zentrum für Religionsverfassungsrecht, Zentrum für Recht und Gesundheit
2.	Swiss Tropical and Public Health Institute (Swiss TPH – Associated Institute of the University of Basel)
3.	Scuola universitaria professionale della Svizzera italiana (SUPSI): Dipartimento economia aziendale, sanità e sociale
4.	Université de Neuchâtel (UniNe): Institut du management de l'information (IMI)
5.	Università della Svizzera italiana (USI): Centre for Organisational Research – Health and Public Management
6.	Universität Zürich (UZH): Institut für Hausarztmedizin; Institut für Epidemiologie, Biostatistik und Prävention (EBPI)
7.	Zürcher Hochschule für Angewandte Wissenschaften (ZHAW): Institut für Physiotherapie; Winterthurer Institut für Gesundheitsökonomie
8.	Université de Lausanne (UNIL): Centre universitaire de médecine générale et santé publique (Unisanté)
9.	Berner Fachhochschule (BFH): Departement Gesundheit
10.	Universität St. Gallen (UniSG): School of Medicine

Übrige (mit Eigenmitteln beteiligte) Partner:

- Institut für Hausarztmedizin & Community Care Luzern (IHAM&CC Luzern)
- Interface Politikstudien Forschung Beratung GmbH
- Swiss Paraplegic Research (SPF)

7 Projektbeschreibung

Siehe Mandat Hochschulrat vom 23.11.2017 (Dok. 136A/17, insb. Punkt 3.3.2)

7.1 Ausgangslage, Problemanalyse (*Hintergrund, spezifische Fragestellungen, die das Projekt behandeln / lösen soll*)

Overview

Switzerland has one of the most advanced health systems in the world. Several reports have emphasized the satisfaction of the Swiss population with the health system, the high quality of care and guaranteed access to a wide range of services through statutory health insurance. Demographic changes, in particular the rising number of elderly people, and the related increase in the demand for health services of chronically ill and multimorbid patients, as well as novel opportunities in the provision of care due to the digitization and other technological advances require the Swiss health system to be adaptive to change and open to continuous transformation. Moreover, there are several challenges that the health system faces, including inefficiencies and associated unnecessary costs, an increasing financial burden on both private and public budgets due to the high health care costs, limited transparency and manageability of the system due to gaps in the collection and use of health information, as well as equity issues.

In order to meet these challenges in the best possible way, the concept of a learning health system, introduced by the National Academy of Medicine in the U.S., has been recognized as a promising approach to make the Swiss health system fit for the future and to ensure that the best available scientific evidence is continuously integrated into the decision-making on all levels of the health system. As part of its project-based contributions, *swissuniversities* has made a commitment to this initiative and supported the foundation of the *Swiss Learning Health System* (SLHS) during the funding period from 2017-2020, with the goal of establishing a targeted and structured cooperation between science, represented by the Swiss universities and universities of applied sciences, and actors from policy and practice.

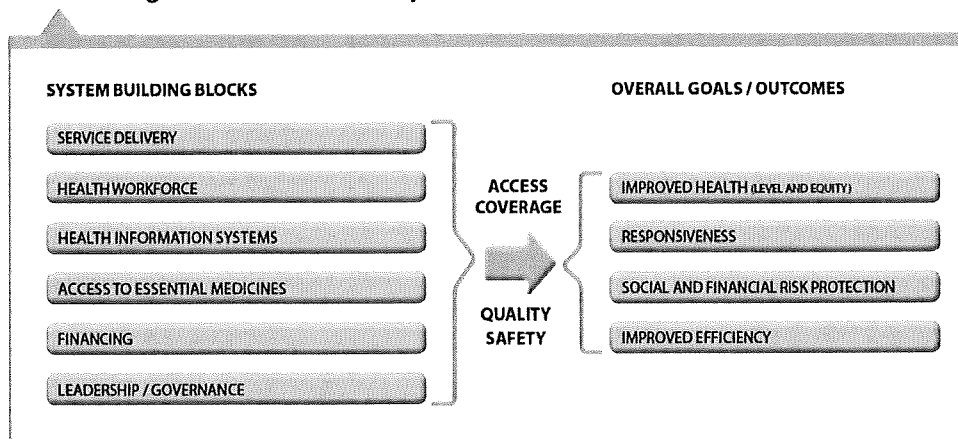
The development of the *Swiss Learning Health System* is based on two premises:

1) A transdisciplinary exchange and interaction between science, policy and practice. On the part of science, this means the inclusion of all relevant scientific disciplines and health care professions as represented at the different higher education institutions. On the part of policy and practice, this involves the inclusion of actors and institutions from all levels of the health system; i.e., at the macro level policy and legislation, at the meso level service delivery and financing, and at the micro level clinical practice, patients, and citizens. The aim of this exchange is to integrate the best scientific evidence efficiently into the Swiss health system, to learn from experiences gained through implementation, and ultimately to strengthen the health system.

2) A systems thinking approach for health systems strengthening that highlights the dynamic architecture and interconnectedness of the health system building blocks and the role of people at the center of the health system, as mediators, beneficiaries, and drivers of the system. This includes the cross-cutting functions of the health system: (i) the availability of reliable and up-to-date information on all domains of the health system, (ii) the availability of well-trained health professionals, and (iii) access to high-quality and cost-effective health interventions.

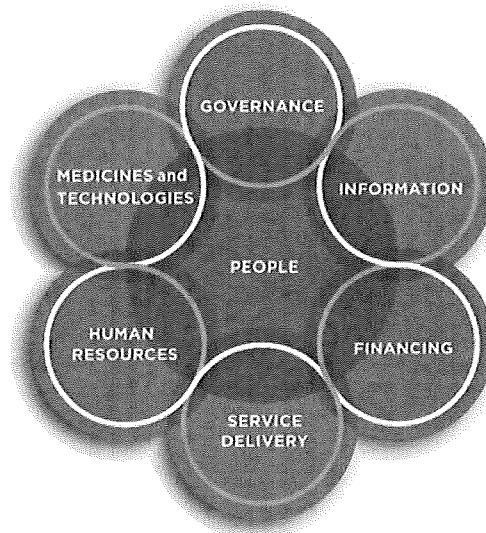
Figures 1 and 2 below illustrate the conceptual framework of the SLHS based on the health systems building blocks, as set out by the World Health Organization (WHO), and the systems thinking approach that puts people into the center of the health system and graphically represents the dynamics and interconnectedness of the different building blocks.

Figure 1: Six building blocks of a health system: Aims and desirable attributes



Source: World Health Organization (2007): Everybody's Business: Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action. Geneva, WHO.

Figure 2: Systems thinking approach to health systems strengthening



Source: De Savigny D, Adam T (eds) (2009): Systems thinking for health systems strengthening. Geneva, Alliance for Health Policy and Systems Research, WHO.

The strategy to support the establishment of the *Swiss Learning Health System* as a systematic mechanism is in line with the effort of *swissuniversities* to strengthen research capacity in health systems and services research in Switzerland and to initiate long-term scientific programs through its project-based contributions. Contributions were made to projects in the field of public health (Swiss School of Public Health, SUC P-09) and primary care (Consolidation of teaching and research in primary medical care/family medicine, SUC P-10) in the funding period 2013-2016, as well as to current projects (2017-2020): "Strategy to combat the lack of qualified workers in the health care industry" (No. 3) and the "Swiss Learning Health System (SLHS)" (No. 4).

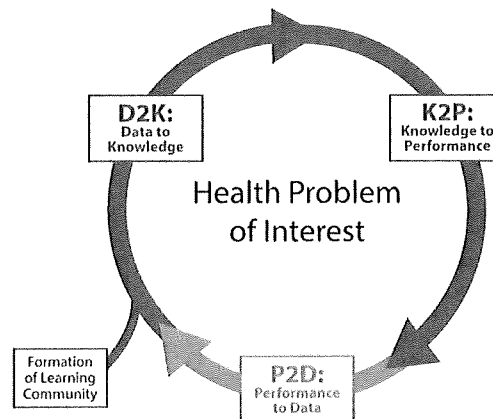
Main pillars of the Swiss Learning Health System (SLHS):

In the initial funding phase of the SLHS, the development of the project mechanisms as well as the interaction and learning between its three main pillars was crucial:

Pillar #1: Development of expertise and scientific foundations for addressing current health system challenges – fostering learning cycles

At the core of the SLHS is the establishment of learning cycles to address current challenges in the Swiss health system. Figure 3 illustrates the concept of learning cycles as in Friedman et al. (2017). A cycle is made up of three components: data to knowledge (D2K), knowledge to performance (K2P), and performance to data (P2D). The aim of such a cycle is to identify effective measures to address a specific problem in the health system, implement change, and learn from the experiences during the implementation. Specific problems can be on all levels of the health system, from the micro to the meso and macro level, and are not restricted to the clinical setting or provision of care but may extend to all components of the health system, including those that affect or are affected by other systems such as education, work, and social security.

Figure 3: Learning cycles to address specific challenges in a health system

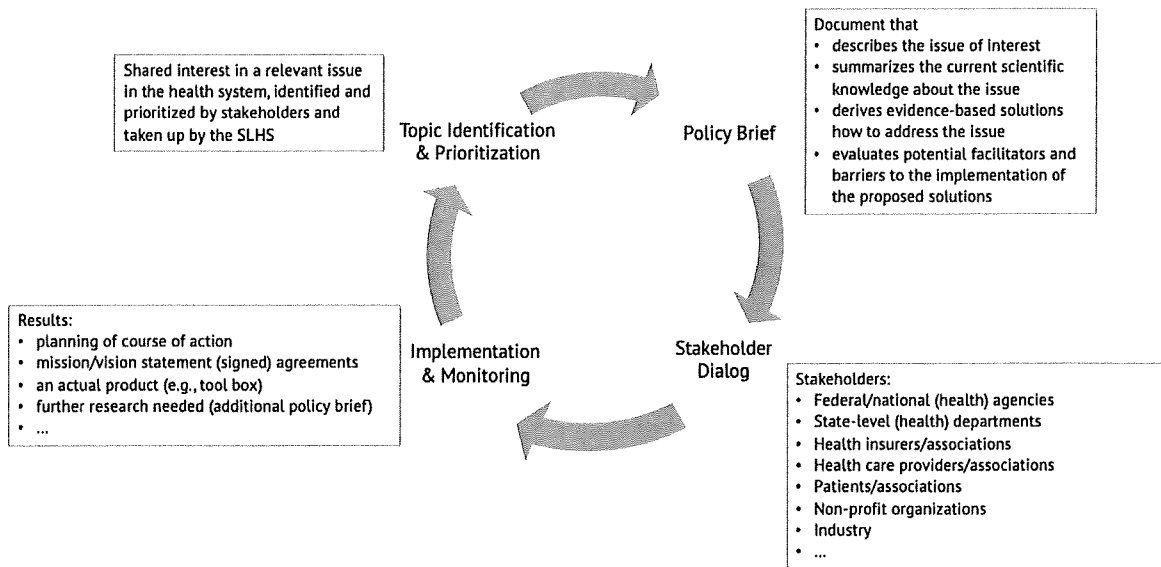


Source: Friedman CP, Rubin JC, Sullivan KJ (2017): Toward an information infrastructure for global health improvement. Yearbook of Medical Informatics 2017, 26:16-17.

In the *Swiss Learning Health System*, the idea of learning cycles is implemented as a structured process, depicted in Figure 4. This process aims at bridging the gap between research, policy and practice, creating a seamless flow to effectively and efficiently implement scientific evidence into policy and practice. A learning cycle is formed by identifying and prioritizing a topic relevant to the Swiss health system. This step takes place at two levels. At a general level, the SLHS prioritizes topics according to their importance on the Swiss policy agenda, in interaction with stakeholders from the health system and in light of the expertise of the partners in the SLHS network. Prioritization takes place in the Strategic Council of the SLHS (see section 7.2) and focuses on the strategic direction of the SLHS. On a specific level, issues are addressed within a particular area or discipline, formed within and supported by thematic clusters that were introduced during the first funding phase of the SLHS (see section 7.2 and Figure 7).

Once an issue within a topic area or discipline has been identified, the next step is to prepare a policy brief. A policy brief is a structured document that describes the issue at hand by explaining the relevant contextual factors. It presents evidence-based solutions to the issue described, and for each possible solution it explains relevant aspects, including the expected benefits and costs of implementation, as well as potential barriers and facilitators to the implementation. Policy briefs serve as input for a subsequent stakeholder dialogue.

Figure 4: Structure of SLHS learning cycles



Source: own illustration

Stakeholder dialogues are structured communication formats that aim at supporting and engaging stakeholders to select and implement evidence-based solutions to a particular issue at hand. Based on a policy brief, a group of usually 6 - 20 stakeholders work collaboratively toward a common understanding of the issue and an agreement on the best course of action. Dialogues are guided by a moderator, who oversees the deliberation, stimulates participants to confront their views and facilitates confrontation over differences of opinion. Using a deliberative approach ensures a participatory process that allows stakeholders to freely express their views and ensures that these views are being taken into consideration.

Dialogues in general close by deciding first whether there is agreement over a course of action, or not. Second, if there is no agreement, whether i) there is need to reconvene for a second dialogue to foster agreement, or ii) more research is needed given a possible lack of evidence to agree on the best solution. When outcome i) occurs, the SLHS engages stakeholders in a structured negotiation to solve the differences of opinion. When outcome ii) occurs, the SLHS informs the research agenda of the academic partners to address the open issues. In the sense of a learning system, dialogues may also take place before or during the development of a policy brief, taking the form of exploratory dialogues. These may serve the purpose of finding consensus on the issue and its specificities to be addressed in a policy brief.

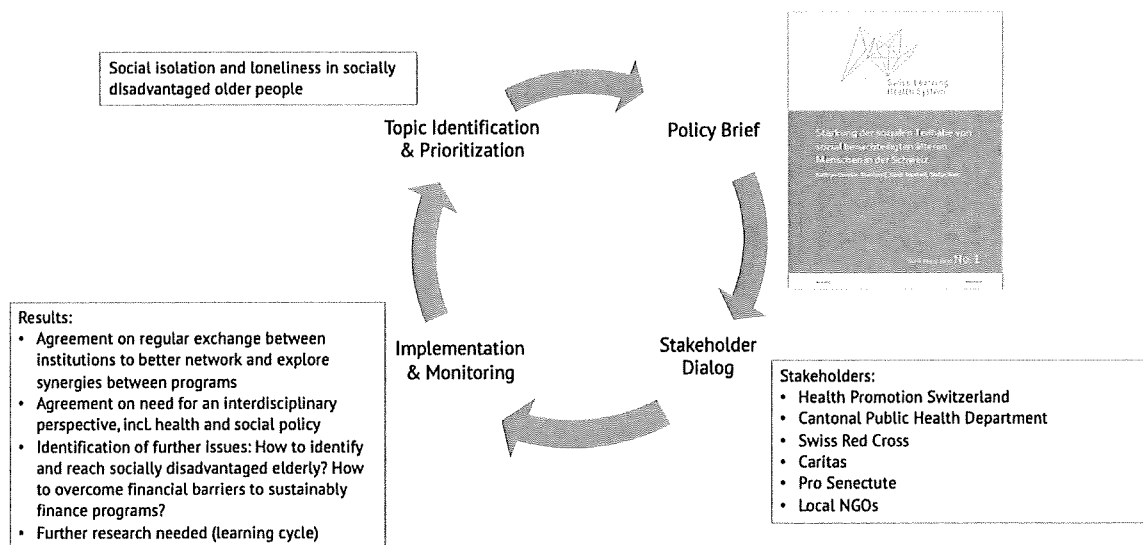
Until the end of the first funding phase in 2020, the SLHS network will have produced a minimum of 20 policy briefs, each of them addressing a different issue relevant to the Swiss health system. Subsequent stakeholder dialogues, that will have proven successful, will be monitored and evaluated with regard to the implementation of agreed steps. Potential success factors, as well as gaps or reemerging issues will be monitored and addressed in further cycles if needed (incl. updated policy briefs and dialogues), eventually becoming continuous learning cycles. A dialogue that ends without agreement also leads to a recurring cycle, with follow-up research and deliberation, thus creating continuous learning in the health system.

Example of a learning cycle in the *Swiss Learning Health System (SLHS)*

Social isolation and loneliness in the elderly have a number of negative health consequences and are particularly harsh for the socially disadvantaged. Strengthening social participation of socially disadvantaged older people can contribute to reducing social isolation and loneliness and the associated health inequalities in this group.

In cooperation with a number of stakeholders from the health system, a learning cycle has been initiated in 2017 that approaches the challenge of increasing social participation among the socially disadvantaged elderly by providing evidence-based insights on i) improved methods of outreach, ii) the inclusion of target groups in the planning and implementation of programs, and iii) improved program evaluation considering socially disadvantaged groups. Figure 5 illustrates the process.

Figure 5: Strengthening social participation of socially disadvantaged older adults in Switzerland



Pillar #2: Building scientific capacity and competencies for learning health systems

The *Swiss Learning Health System* aims at building scientific capacity and a critical mass of health systems researchers by providing young scientists with relevant research skills in learning health systems, and with tools that offer them a solid basis to successfully translate research into policy and practice. In the first funding phase, the SLHS network successfully recruited 20 PhD students working at the funding partner institutions. Additional PhD students from other institutions joined the SLHS network and training. The PhD students regularly attend courses that convey the theoretical and practical foundations for the successful establishment of a learning health system. Additionally, as part of their requirements, PhD students are involved in the development of policy briefs and in the organization of stakeholder dialogues within the framework of the SLHS.

An important basis for the establishment of the SLHS, and specifically its capacity building efforts, is the cooperation with the Swiss School of Public Health (SSPH+). In response to the decision of *swissuniversities* to discontinue inter-university PhD programs such as the SSPH+ PhD Program Public Health, the SSPH+ has launched the innovative "SSPH+ Inter-university Graduate Campus" to strengthen and scale up the multi-disciplinary training opportunities of PhD students. The platform will continue to offer the highly successful courses that have been

established within the SSPH+ PhD Program Public Health. This will be made available to all 400+ PhD students supervised within the network; including the 50 PhD students of the SSPH+ PhD Program Public Health Sciences (GlobalP3HS) funded by EU COFUND, Marie S Curie and the SLHS scholarship students. The courses established for the SLHS PhD students will be fully integrated into the Graduate Campus. Thus, the SLHS succeeds in sustainably scaling up the training in SLHS-relevant domains such as policy briefs and stakeholder processes to a broader group of researchers. The SLHS will be represented in the Academic Board of the Graduate Campus, thus, synergies and curricular integration will be optimized.

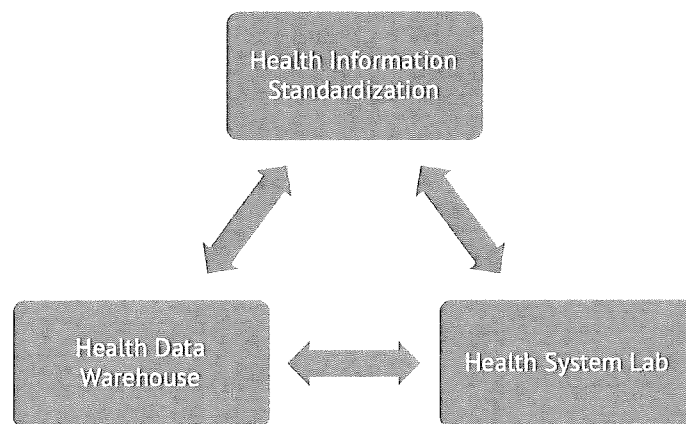
Pillar #3: Management of standardized health information

An important prerequisite for health systems and services research is the availability of timely and relevant health system data. The *Swiss Learning Health System* approaches this from three different albeit related perspectives with the aim of supporting the development of health information infrastructures, including: i) the establishment of reporting standards for health information, ii) the storage of health-related information, and iii) the establishment of a health system lab.

Under the lead of the Information Management Institute at the University of Neuchâtel, the SLHS network agreed on an approach that allows to meaningfully contribute to the harmonization of current Swiss health data infrastructures, namely, to create a metadata repository. The aim of this metadata repository is to provide a central catalog from which a user may identify and access data sources that are relevant to the Swiss health system. A concept for the metadata repository has been developed and is currently implemented. Based on topic-specific projects resulting from both the PhD theses and the SLHS learning cycles, case studies for the establishment of the processes of a metadata repository are currently collected within the SLHS network to provide a proof of concept, which is planned to be completed in mid-2020.

The health system lab aims at building facilities for experimental research. This includes tools for laboratory experimental studies that allow testing new theories and simulating policies and their impact on practice. In addition, it is planned to integrate a knowledge grid, which will allow to effectively and efficiently make knowledge generated within the SLHS re-usable in given or alternative contexts. A concept of the health system lab is currently being developed and will be available by the end of 2020. Figure 6 summarizes the three aspects of this pillar.

Figure 6: SLHS perspectives on the management of health information



Source: own illustration

Success factors and lessons learned from the initial phase of the project

During the meeting of the SLHS Strategic Council in June 2019, members of the *Swiss Learning Health System* critically evaluated the first phase of the project. A main conclusion from this meeting was that across the different project areas, the first funding phase has shown a number of success factors as well as lessons learned through the experiences gained by the partner institutions.

Success factors

One of the main success factors is the strong academic network of partner institutions committed to strengthening the Swiss health system and the vision and mission of the SLHS. This has led to an agreement of all partners on the following core values:

- *Person-centeredness*: Through active engagement with the health system and all its stakeholders, the SLHS is committed to improving people's well-being and quality of life. It places the people at the center of its activities.
- *Inclusiveness*: Every individual and organization committed to improving population health and strengthening the health system, who abides by the governance of the SLHS, is invited and encouraged to participate.
- *Transparency and accessibility*: The activities of the SLHS are transparent to safeguard and deepen the trust of all stakeholders in the health system. All should benefit from the public good that is derived from the SLHS.
- *Privacy*: The SLHS protects the privacy, confidentiality, and security of all data to enable responsible sharing of information and to build trust among all stakeholders.
- *Adaptability*: The SLHS is designed to enable iterative, rapid adaptation and incremental evolution to meet current and future needs of the health system.
- *Governance*: Through its governance, the SLHS aims at supporting its sustainable operation, setting required standards, stimulating ongoing innovation, and building and maintaining mutual trust among all stakeholders involved.
- *Scientific integrity*: Researchers in the SLHS share a commitment to the most rigorous application of science to ensure the validity and credibility of findings, and open sharing and implementation of new knowledge in a timely and responsible manner.
- *Quality and value for all*: The SLHS supports learning activities that serve to improve the effectiveness and efficiency of services and promote equitable access to high quality care.

Among all SLHS partner institutions, there is a common understanding of the principles of a learning health system and a shared methodology of health systems strengthening through learning cycles, which provides an essential condition for a strong collaboration. This is reflected in the regular meetings of the Strategic Council, and the high attendance of PhD students at the specialized course offers and joint events organized for the SLHS PhD cohort.

The model of structured learning cycles that involves all relevant stakeholders in the process has proven fruitful in those cycles that have been already initiated. The feedback of participants from policy and practice has been very positive throughout all aspects of the cycle – the identification and prioritization of topics in interaction with the involved stakeholders, the input provided for the deliberation through a policy brief, and the stakeholder dialogue itself. The format of a stakeholder dialogue in particular, has been highly valued by participants.

Lessons learned

There were also lessons learned from the initial phase of the project.

First, as the Swiss health system is a highly complex and dynamic system with multiple actors, levels of governance, and centers of agency, creating awareness and interest, and ultimately advocacy, for a novel initiative such as the *Swiss Learning Health System (SLHS)* and its mechanisms takes time. Partners in the SLHS are engaged to further expand the network and foster collaboration with other initiatives and organizations, e.g., the Swiss Academy of Medical Sciences, the Swiss Personalized Health Network, cantonal and federal health departments, Health Promotion Switzerland, patient and provider associations, and other non-governmental organizations. While the SLHS has continuously grown since 2017, additional effort is needed to further develop the network and to make collaborations of mutual benefit to all partners. This is important on the level of governance for the SLHS in order to effectively and efficiently address current issues in the health system. It is also important for the implementation of learning cycles to coordinate engagement and participation of stakeholders, and to avoid so-called stakeholder fatigue, i.e., key stakeholders who begin to feel overloaded with engagement activities, which could negatively affect their willingness to participate in the SLHS activities. The SLHS aims to address this issue by optimizing its current governance and by expanding it to key health system partners by creating a *Health System Advisory Board* and *Citizen Panels* (see sections 7.2 and 7.4 for details).

Second, the implementation of learning cycles takes time. The first project year was mainly devoted to developing the theoretical foundations of the SLHS cycle(s) and the structured process for stakeholder participation and engagement. This includes the identification and prioritization of topics, which in the first phase was initiated by the academic partner institutions in the SLHS in collaboration with relevant stakeholders in the health system. One of the most important take-aways from the first funding phase so far has been that more synergies should be explored by linking the different learning cycles and to take advantage of thematic clusters to coordinate collaboration and to synthesize evidence more effectively and efficiently. This issue will be addressed in the second funding phase with *Calls for Joint Proposals* for policy briefs and stakeholder dialogues, which will be coordinated by the thematic clusters.

Third, current challenges in the financing of PhD courses at the different universities involved in the SLHS also has implications for the capacity building efforts for young scientists in the SLHS and the future organization of course offers in the domain of health systems and services. The collaboration with the SSPH+ in this regard is critical to this issue and will help to ensure the sustainability of course offers in SLHS-related topics.

Fourth, the project mechanisms need to be further developed to make sure that the SLHS offers a set of tools that can effectively and efficiently support decision-making, on all levels and across functions of the health system. This requires adaptive formats of stakeholder dialogues depending on the particular issue of interest and stakeholders involved, different types of policy briefs, novel formats of topic identification and prioritization, ideally fully integrated with the existing learning cycles, and an information infrastructure that supports multiple and simultaneous learning cycles. Given the multi- and interdisciplinary nature of the SLHS, this can only be achieved by setting up an *Inter-university Competence Center* for learning health systems.

These points will be further elaborated in the next sections.

7.2 Projektinhalt (Detaillierte Beschreibung des Projekts)

Overview

Building on the first funding phase, the *Swiss Learning Health System (SLHS)* will continue and extend its efforts in developing and implementing mechanisms for bridging the gap between research, policy and practice, in particular the learning cycles as illustrated in Figure 4 above. The principle aim is that the Swiss health system becomes increasingly evidence-informed, in the sense of a learning health system that develops in interaction between science and stakeholders in the health system. For the second funding phase, three project objectives will define the main activities of the SLHS:

- 1) Strengthening and expanding the currently in the SLHS prioritized topics by strengthening stakeholder involvement at the level of the SLHS governance as well as *Calls for Joint Proposals* for policy briefs and stakeholder dialogues, involving the higher education institutions, other (public) organizations, as well as different disciplines and professions.
- 2) Promoting an inter- and transdisciplinary education of young scientists in the domain of health systems and health services research.
- 3) Long-term establishment of an Inter-university SLHS Competence Center as a link between the Swiss higher education institutions and different actors in the Swiss health system.

The objectives and related activities will be explained in more detail below.

Project Objective #1

Strengthening and expanding the currently in the SLHS prioritized topics by strengthening stakeholder involvement at the level of the SLHS governance as well as *Calls for Joint Proposals* for policy briefs and stakeholder dialogues, involving the higher education institutions, other (public) organizations, and different disciplines and professions.

Thematic Clusters

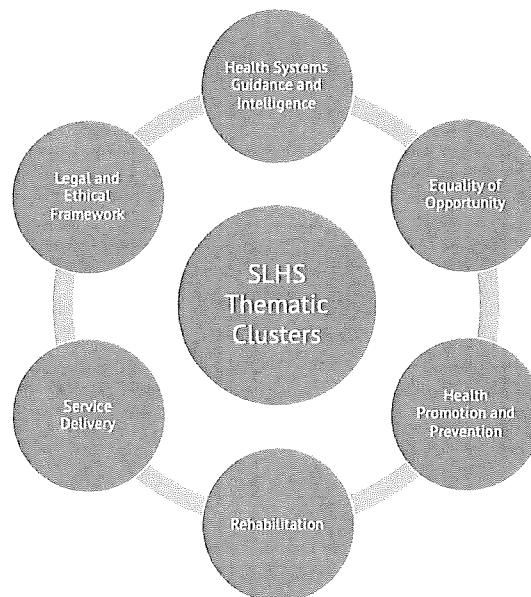
In the first phase of the project, the topics for policy briefs and stakeholder dialogues, and the related PhD projects, were submitted by the academic partner institutions, in interaction with stakeholders from the health system. During the second annual meeting of the SLHS at the end of 2017, the Strategic Council agreed to group the topics into thematic clusters with the aim of sustainably promoting cooperation between project partners and exploring synergies between topics. Thematic clusters bring together expertise and know-how for specific thematic areas and allow responding to current issues in the Swiss health system, as set out for example in the priority areas for health policy action by the Federal Council (Health 2020) and the upcoming follow-up strategy. An overview of the current clusters is provided in Figure 7.

The SLHS network covers six thematic clusters, which aim at responding to:

- *Service delivery*
... the need for new approaches in the provision of care and management of increasingly complex cases. Topics in this cluster include interprofessionality, inter-sectoral collaboration, shared decision-making, "choosing wisely" strategies, integrated care models and the optimization of community services, as well as use of modern information technologies.
- *Rehabilitation*
... the needs of an aging population and the increasing prevalence of chronic health conditions. Topics include, for example, the organization of rehabilitation services, the availability of a suitably trained workforce, novel solutions in rehabilitation financing, and building-up of a health information system in the domain of rehabilitation.

- *Health promotion and prevention*
... the need for coping with societal, environmental and personal challenges, and chronic health conditions. Topics include, for example, the development of new and integrated approaches and incentives to promoting health and preventing disease, (risky) health behaviors, screening and immunization decisions, and health literacy.
- *Equality of opportunity*
... the needs of the most vulnerable groups of the population and safeguard the financing of the health system. Topics include, among others, the development of policies and interventions to reduce health inequities, incentives to increase efficiency, empowerment of patients and insurees, and mechanisms to support low-income households.
- *Legal and ethical framework*
... the need for a comprehensive legislation to ensure a functioning health system, as well as guidelines for ethical decision-making. Topics include, for example, regulations of human subjects research, genetics, legal and ethical aspects related to end of life decisions and patient counseling, fair access to care and just resource allocations.
- *Health systems guidance and intelligence*
... the information and data needs of a modern health system to be responsive and adaptive to changing environments, and to be manageable. Topics include new tools for supporting health system decisions, further development and extension of the mechanisms of the SLHS, and new methodology, technology and standards for health intelligence.

Figure 7: Overview of the current thematic clusters in the SLHS network



Thematic clusters in the SLHS are not static but dynamic and are driven by the timeliness of the Swiss (and European) health policy agendas. Changes can apply to the overall thematic areas, but also to contents and collaborations within clusters. The SLHS partner institutions are actively involved across clusters, depending on their expertise and the exact topics. Clusters are also understood to be interdependent, with overlapping topics and cross-cutting themes, for example related to workforce, health information, communication, and health care financing and governance. In addition to the currently defined clusters, it is conceivable to define new thematic areas in the future, refocus them, or join them if needed in an evolutionary way. Thematic clusters will be continuously developed in close collaboration with actors from the health system.

Identification and prioritization of topics – Calls for Joint Proposals

As for the identification and prioritization of topics, a formal stakeholder-driven approach will be established in addition to the previously used informal approach to ensure that topics respond to current needs of the Swiss health system and are well linked to activities on the international level (e.g., European Observatory on Health Systems and Policies). A structured process within the governance of the SLHS will be set up on how to identify and prioritize topics, in interaction with the academic partner institutions and actors from the health system. To this end, the governance of the SLHS will be re-organized, and the Strategic Council, as the responsible organ of the SLHS for the prioritization of topics, will be renamed to *SLHS Governing Board*, representing the academic partner institutions, and will be complemented by a *Health System Advisory Board*, systematically involving actors from policy and practice (see below: Formalization of stakeholder inclusion).

In addition to the targeted continuation of learning cycles for already prioritized topics, the SLHS plans to leverage the thematic clusters by launching *Calls for Joint Proposals* for policy briefs and stakeholder dialogues in the second funding phase. Each thematic cluster will have a steering group that will be managing calls and decide on the priority areas within the clusters. The steering group will be composed of experts and stakeholders from the SLHS partner institutions, including partners that are represented in the *SLHS Governing Board* and the *Health System Advisory Board*, to shape the calls in ways to address the needs of the Swiss health system. Calls will be distributed within the academic and non-academic network of the SLHS and will also be targeted towards organizations and stakeholders of the Swiss health system that may have an increased interest in the thematic areas of the calls. The steering group will be responsible for ranking topics submitted in response to the call. Final approval on the prioritized topics will then be given by the *SLHS Governing Board*, in interaction with the *Health System Advisory Board*. The steering groups of the clusters will collaborate with each other, overseen by the *SLHS Governing Board*, to make sure that the calls are well coordinated, do not create thematic redundancies, and explore synergies if possible when topics may be of shared interest across clusters, e.g., on cross-cutting themes.

Furthermore, as already done in the current project phase, important and timely topics should be identified informally through activities such as participation in and organization of symposia, conferences, expert discussions and workshops on subjects related to the health system.

Formalization of stakeholder inclusion

In the first funding period, the SLHS built a strong academic network spanning universities and universities of applied sciences. Moreover, the SLHS was able to build a network of stakeholders from policy and practice who seek to implement evidence-based solutions and make use of the mechanisms offered by the SLHS.

The Strategic Council was set up as the highest organ of the SLHS, being responsible for all its strategic decisions. For the second funding phase, the Strategic Council will be renamed to ***SLHS Governing Board*** to reflect its responsibilities and its composition of representatives of all academic partner and funding institutions. The *SLHS Governing Board* is complemented by a ***Management and Coordination Office*** (former Operational Unit), which is responsible for the project management.

Further, the governance model will be expanded with the aim of establishing a broader and more formalized inclusion of stakeholders from the health system. To this end, a ***Health System Advisory Board*** will be created with representatives from all levels of the health system, policy and practice. The function of the *Health System Advisory Board* is to provide advice on all aspects of the SLHS and be actively involved in the different mechanisms of the SLHS. Important stakeholders that will continue to play a pivotal role in shaping the topics and thematic clusters are, for example, the Swiss Federal Office of Public Health (FOPH) and the European Observatory on Health Systems and Policies.

In addition to the *Health System Advisory Board*, it is planned to create **Citizen Panels** that include, among others, representatives from patient organizations. A citizen panel serves two purposes: 1) as a feedback mechanism to review current priority areas of the SLHS, including the thematic clusters and related calls; and 2) as an input mechanism for the development of policy briefs and stakeholder dialogues to incorporate the perspective of citizens.

The above-described formalization of stakeholder and citizen engagement is one of the priority areas set for the second funding phase within the organization of the SLHS, and it is described in more detail in section 7.4 on "Project Governance".

Project Objective #2

Promoting an inter- and transdisciplinary education of young scientists in the domain of health systems and health services research.

Analogous to the current funding period, funds will be mainly allocated to PhD students, with two PhD students employed by each funding partner institution (one student financed by the partner institution and one financed through the funding of *swissuniversities* and the State Secretariat of Education, Research and Innovation/SERI). Another part of the funding can be made available to young investigators (postdocs), ideally with some experience from the first funding phase, to support the preparation of policy briefs and stakeholder dialogues.

Capacity building in the SLHS will be based on two main pillars, building on the successful model of the first funding phase: (1) the *Joint SLHS-SSPH+ PhD Scholarship Program*, and (2) a *Learning Health System Enhancement Program*.

The objectives of the *Joint SLHS-SSPH+ PhD Scholarship Program* are:

- to train a new generation of creative and innovative early-stage researchers, who are able to face current and future challenges in the health sector and to convert knowledge and ideas into products and services for strengthening health systems;
- to raise excellence and structure research and PhD training by complementing existing training settings with learning health system relevant knowledge and skills; and
- to provide enhanced career perspectives in both academic and non-academic sectors for early-stage researchers through an interdisciplinary and high-quality training program that fosters an innovation-oriented mindset.

The program takes full advantage of the existing structures in PhD education provided by the SSPH+, including the newly established SSPH+ Inter-university Graduate Campus, which is likely to replace the SSPH+ PhD program from 2021 onwards, and which offers access to training in the network of the SSPH+ and further networking opportunities with other PhD students and SSPH+ junior and senior scientists all across Switzerland.

The SLHS aims at strengthening its current course offers by developing a curriculum that foresees more core courses that will be sustainable over the following years. In close collaboration with SSPH+, the SLHS will develop course offers in particular in the field of health systems research, implementation science, and infrastructures for learning health systems. It is envisioned to leverage own capacities within the network of academic partner institutions to develop these courses and integrate them in existing local and inter-university programs. In addition, the SLHS strives to link course offers with the thematic clusters, meaning that, in a sense of a learning health system, courses can be used as validation mechanisms for best practice examples, for example in the domain of interprofessional training or to support implementation efforts.

The SLHS also seeks to promote innovative training opportunities as part of its *Learning Health System (LHS) Enhancement Program*, and to organize events that foster networking and exchange in learning health system-related topics and on topics that are part of the thematic clusters. In collaboration with the partner institutions, selected calls for workshops or short courses will be launched for relevant course offers that are geared towards both practice and research. Symposia and conferences may be (co-)organized to showcase the work of the SLHS and allow for in-depth coverage of subjects relevant for the Swiss health system. Examples from the current funding phase include the Swiss Public Health Conference 2020, which will be held at the University of Lucerne on September 2/3, 2020 on the topic «From Evidence to Public Health Policy and Practice», and the first conference of the Swiss Society of Health Economics on the theme «Health Economics and Health System Reforms», which was held in September 2018. The annual SSPH+ faculty meetings offer further opportunities to highlight the SLHS and connect PhD students and the multi-disciplinary research community of the network.

All course offers and events will be leveraged and communicated through the SLHS website, the SSPH+ Graduate Campus and other channels, to contribute to the further profiling and sustainable use of the services.

Project Objective #3

Long-term establishment of an *Inter-university SLHS Competence Center* as a link between the Swiss higher education institutions and different actors in the Swiss health system.

The SLHS aims to establish an ***Inter-university Competence Center for Learning Health Systems*** in Switzerland, comprised of all academic partner institutions of the SLHS. The competence center brings together the knowledge and expertise of those institutions with the aim of further developing the conceptual basis of the SLHS and representing a formalized link between the Swiss higher education institutions and different actors in the health system. The competence center has the ambition of becoming a main reference point for knowledge and information on learning health systems internationally, with important links to initiatives like the European Observatory on Health Systems and Policies, the Learning Health System Collaboratory and the Learning Health Community in the US, and the UK-based Learning Healthcare Project. Through its substantial and continuously growing expertise on learning health systems and related infrastructures, the *Inter-university SLHS Competence Center* seeks to provide new insights and leadership on how to develop and apply methods in learning health systems to support real world impact.

The competence center as a comprehensive network of the academic partner institutions will be overseen by the *SLHS Governing Board*. Core tasks of the center are to develop and oversee the development of a comprehensive concept for policy briefs and stakeholder dialogues, taking into account the needs of the Swiss health system (see section A below for details), and to further develop the SLHS network (see section B below). The competence center will be accompanied by the *Management and Coordination Office* to coordinate the activities in the SLHS and to monitor overall progress (for more information see section 7.4). Within the competence center, working groups involving the different partner institutions will be established on particular aspects of the SLHS, e.g., on developing guidelines for writing policy briefs, the organization and execution of stakeholder dialogues, or data infrastructures for a learning health system.

Inter-university SLHS Competence Center (core) tasks and activities (see also section 7.4 below):

A. Policy briefs and stakeholder dialogues - the SLHS learning cycle: Development and oversight of a comprehensive concept for a Swiss learning health system that covers:

1. Guidelines for the processing and appraisal of scientific evidence in policy briefs, taking into account the specific needs of the Swiss health system, its institutional context, political economy, role of stakeholders, and the relevant target population.
2. Guidelines for health needs assessment, including citizen panels, complemented by survey data and innovative use of other data sources, including big data.
3. Guidelines for using appropriate forms of communication for stakeholder dialogues with different starting points and issues. While deliberative forms of a dialogue have been already successfully used in the SLHS, exploratory stakeholder dialogues offer complementary tools to clarify and/or eliminate potential issues or concerns that may emerge prior or during the development of a policy brief and the subsequent stakeholder dialogue, e.g., insufficient specificity of the issue addressed in the policy brief.
4. Integration into existing political processes and platforms in Switzerland, taking into account and using the diverse mechanisms of the Swiss concordance system. The competence center aims at supporting activities that foster the inclusion of the SLHS into decision-making processes relevant to the Swiss health system to best respond to current needs.
5. Monitoring and evaluation activities after stakeholder dialogues. The *Inter-university SLHS Competence Center* will assist with the implementation of solutions (roadmaps) discussed and agreed on in stakeholder dialogues, as well as the evaluation of the impact. To this end, standardized processes for monitoring and evaluation activities will be developed, both for formative evaluations as well as summative and impact evaluations.

B. Further development of the SLHS network:

1. Inclusion of additional higher education institutions in the academic network to cover all relevant aspects of the (Swiss) health system from a research capacity perspective.
2. Establishment and cultivation of lasting collaborations with stakeholders from the Swiss health system, including the Federal Office of Public Health (FOPH), the Federal Statistical Office, cantonal health departments, professional associations, Health Promotion Switzerland, the Swiss Academy of Medical Sciences, the Swiss Academy of Humanities and Social Sciences, SSPH+, and the relevant national research programs (NRPs) of the Swiss National Science Foundation (e.g., NRP 74 "Smarter Health Care" and NRP 75 "Big Data"). As described above, the SLHS aims at formalizing the current involvement of stakeholders by creating a *Health System Advisory Board*. Besides, it aims at engaging with other programs and organizations through its different pillars, e.g., FOPH, the Swiss Personalized Health Network (SPHN) and the Swiss Centre for Expertise in the Social Sciences (FORS) to foster exchange and collaboration on efforts that aim at providing infrastructures for health data and potential linkages thereof.
3. Establishment of a systematic collaboration with the Swiss Health Observatory (Obsan) and the European Observatory on Health Systems and Policy.
4. Establishment of collaborations with the large Swiss cohort studies, e.g., the Swiss National Cohort or the Swiss Spinal Cord Injury Cohort Study (SwiSCI) to inform current issues in the Swiss health system and to enable SLHS researchers to make use of the available data.

The following table summarizes key partnerships planned in the extended SLHS network and briefly summarizes the contents of these collaborations:

Partner	Type of partnership and content
Federal Office of Public Health (FOPH)	<p>Coordinated activities and collective goals</p> <p>The SLHS is in continuous exchange regarding topics with different directorates and divisions of the FOPH, including Health Policy, Public Health, Health and Accident Insurance, and International Relations.</p> <p>The SSPH+ and the SLHS are currently setting up a formal collaboration with the FOPH (and the European Observatory) to mandate an editorial commission to coordinate the content of health system-related publications.</p>
Cantonal Health Departments	<p>Coordinated activities and collective goals</p> <p>The SLHS aims at a continuous exchange with relevant cantonal health departments, in particular to foster collaborative efforts on thematic clusters and topics.</p>
European Observatory on Health Systems and Policies	<p>Coordinated activities and collective goals</p> <p>The SLHS is in regular contact with the European Observatory on Health Systems and Policies, an intergovernmental partnership hosted by the World Health Organization (WHO) Regional Office for Europe, mainly as part of its Health Systems and Policy Monitor (HSPM). The SLHS provides regular updates on current health reforms and policies in Switzerland for the platform of the HSPM.</p>
Swiss Personalized Health Network (SPHN)	<p>Coordinated activities and collective goals</p> <p>The SLHS and SPHN will be engaged in a regular information exchange to coordinate aspects related to data warehousing, health information standards, and share knowledge regarding methodological and technical questions.</p>
Swiss Health Observatory (Obsan)	<p>Coordinated activities and collective goals</p> <p>A constant exchange between Obsan and the SLHS has been established, more in-depth collaboration is foreseen on the level of health system topics as well as for the development of information infrastructures.</p>
NRP 74 (Smarter Health Care)	<p>Coordinated activities and collective goals</p> <p>An overlap between academic groups and topics of the NRP 74 and the SLHS already exists, e.g., on optimized service delivery (University of Zurich, SUPSI) and standardized assessment and reporting of functioning information (University of Lucerne). Collaboration is also foreseen on the level of knowledge transfer, possibly leveraging the mechanisms of the SLHS.</p>
Swiss Academies	<p>Network relationship and collective goals</p> <p>The SLHS aims to have regular meetings with the Swiss Academies, in particular the Swiss Academy of Medical Sciences and the Swiss Academy of Humanities and Social Science to share knowledge, exchange information on current topics and best practice, in particular on the thematic clusters and topics.</p>
Swiss Centre for Expertise in the Social Sciences (FORS)	<p>Network relationship</p> <p>The SLHS aims to engage in a regular information exchange and knowledge sharing regarding aspects of data standards and data warehousing.</p>
NRP 75 (Big data)	<p>Network relationship</p> <p>The SLHS aims to engage in a regular information exchange regarding aspects of data standards and data warehousing, and the effective and efficient use of big data. Collaboration is also foreseen on selected health system-related topics.</p>

7.3 Ziele (Welches sind die Ziele des Projekts und wie wird der Projekterfolg gemessen und nachgewiesen?)

The *Swiss Learning Health System* (SLHS) is a collaborative project of higher education institutions in Switzerland to establish a national platform for health systems and services research, policy and practice. The vision of the SLHS is a health system that is responsive to current and future health needs, where services, programs and policies are based on the best evidence available, where improvement is continuous through ongoing research and implementation, and where infrastructure enables learning processes on all levels of the system.

Through a constant exchange between science, policy and practice, the SLHS aims to support decision-makers in finding and using the best scientific evidence available to effectively and efficiently address challenges in the health system. This aim is complemented by efforts to build scientific capacity by educating a new generation of scientists, who understand health systems and services research as a cooperative endeavor involving multiple stakeholders, and the development of information infrastructures that support the SLHS activities.

After the first funding phase (2017-2020), the following three concrete project goals will be at the core of the further development of the SLHS in the period 2021 to 2024:

- 1) Strengthening and expanding the currently in the SLHS prioritized topics by strengthening stakeholder involvement at the level of the SLHS governance as well as *Calls for Joint Proposals* for policy briefs and stakeholder dialogues, involving the higher education institutions, other (public) organizations, as well as different disciplines and professions.
- 2) Promoting an inter- and transdisciplinary education of young scientists in the domain of health systems and health services research.
- 3) Long-term establishment of an *Inter-university SLHS Competence Center* as a link between the Swiss higher education institutions and different actors in the Swiss health system.

The three goals will be achieved through (1.) continuation of already started learning cycles, with the aim to sustainably strengthen the Swiss health system, (2.) formalization of involvement of stakeholders and citizens in the SLHS, (3.) further development of thematic clusters and *Calls for Joint Proposals* for new topics for policy briefs and stakeholder dialogues, (4.) continuation of the *SLHS-SSPH+ PhD Scholarship Program* and targeted course offers, (5.) establishment of an inter-university competence center for learning health systems in Switzerland.

Project success will be measured by achieving the milestones and the deliverables set out in the timetable in the following section 7.4.

7.4 Projektorganisation und Zeitplanung (Detaillierte Darlegung der Projektstruktur, Governance, Art der Zusammenarbeit sowie eine Zeitplanung mit Milestones)

Project Governance

The SLHS is organized as an *Inter-university SLHS Competence Center*, which, through its activities and structured mechanisms for bridging research, policy and practice, provides a national information and service infrastructure for health systems and services research.

Its organization includes the following (see also Figure 8 below):

- 1) An *SLHS Governing Board* of representatives of all participating academic partner institutions, including the SSPH+. The *SLHS Governing Board* will convene at least twice per year to coordinate its work. The board is responsible for:

- i) the supervision of the SLHS mechanisms in cooperation with the participating universities and universities of applied sciences, in light of furthering the sustainability of the SLHS;

ii) the prioritization of the topic list, in close cooperation with the *Health System Advisory Board* and the *Citizen Panel(s)*;

iii) formulating the *Calls for Joint Proposals* for policy briefs and stakeholder dialogues;

iv) directing and delegating the production of policy briefs to the leadership of a scientist at one of the academic partner institutions, and to the related thematic cluster(s) (based on applications to *Calls for Joint Proposals*);

v) contributing to the development of the curriculum of the *SLHS-SSPH+ PhD Scholarship Program* including the selection of existing courses offered in the SSPH+ network;

vi) communicating progress and plans to all partners, including relevant selected information to the wider circle of non-signatory partners of the SLHS incorporating their feedback and ideas into platform activities and processes.

The composition of the *SLHS Governing Board* will guarantee coordination, complementarity, and the strengthening of synergies of the SLHS and its partners, e.g., among the network of participating universities and universities of applied sciences, as well as with SSPH+, and the Swiss Academies, and any other links to policy and practice in the Swiss health system.

2) A ***Management and Coordination Office*** hosted by the Department of Health Sciences and Medicine at the University of Lucerne (as Leading House) that serves as secretariat of the *Inter-university SLHS Competence Center* and that coordinates the project, including monitoring, evaluation, and reporting. The *Management and Coordination Office* is led by a Professor of the Department of Health Sciences and Medicine at the University of Lucerne and is composed of at least two positions for scientific staff with relevant background (coordinators) and one office assistant. The *Management and Coordination Office* is responsible for the:

i) establishment of a nationwide monitoring, reporting and information system on topic-specific evidence syntheses in the SLHS, including policy briefs and stakeholder dialogues;

ii) reporting as required by the funder;

iii) coordination of the working groups for the further development of the SLHS mechanisms and coordination of the steering groups for the continuous development of thematic clusters in cooperation with the academic partners and actors in the health system;

iv) coordination of *Calls for Joint Proposals* for policy briefs and stakeholder dialogues as decided by the *SLHS Governing Board*;

v) further development and coordination of the *Joint SLHS-SSPH+ PhD Scholarship Program* in close cooperation with the SSPH+ and the academic partner institutions;

vi) coordination of activities for the further development of the *Health Data Warehouse*, including methods for standardized health reporting, support of the implementation of the metadata repository developed by the Information Management Institute at the University of Neuchâtel; further development and implementation of the *Health System Lab*, and coordination with other national and international initiatives, including the SPHN with its *Data Coordination Centre* and the initiative of FORS to build a *Research Data Linking Center*;

vii) coordination of stakeholder network of SLHS and external communication;

viii) coordination of the SLHS network, including management and distribution of information/internal communication, organization of events relevant to the SLHS.

3) **Scientists at the academic partner institutions**

a) **Coordinators** at the partner institutions (see **Annex 1**) are responsible for:

i) taking up an active role in the working groups of the *Inter-University SLHS Competence Center* and the steering groups of the thematic clusters;

ii) acting as a central focal and liaison point to coordinate all activities of the SLHS at the respective partner institution;

iii) coordinating the policy briefs and other forms of evidence syntheses by the PhD students and the senior expert scientists at the partner institution; and

iv) coordinating the input of the partner institutions to the stakeholder dialogues (invitation of participants from own contacts), execution (delivery of expert input), and post-production coordination (development of meeting summaries including addition(s) of newly emerging issues to previously developed policy briefs, and implementation guidance).

b) **Researchers** at the partner institutions are responsible for:

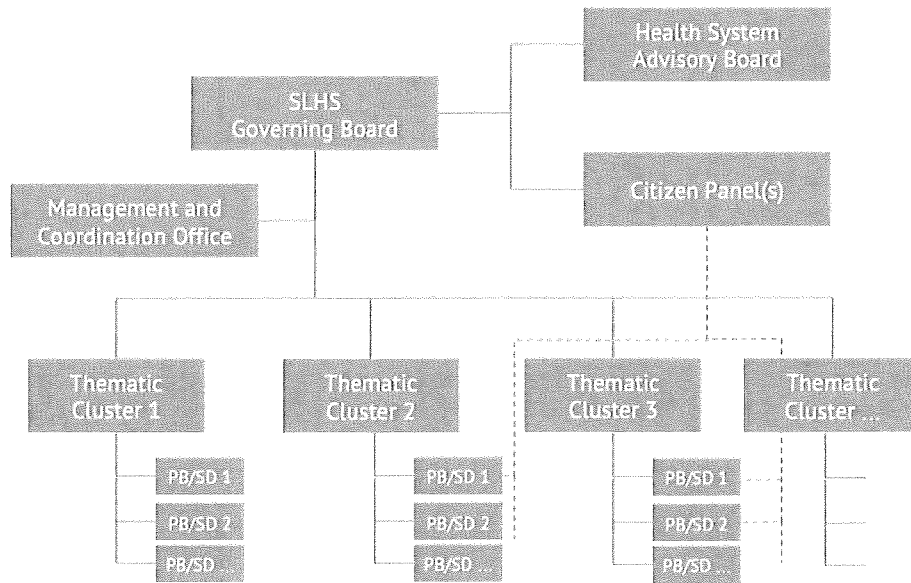
i) supervising and educating PhD students; and

ii) giving expert advice to PhD students and contributing to the development and writing of policy briefs and other forms of evidence syntheses.

4) The **Health System Advisory Board** is composed of representatives of different actors in the health system from the macro to the meso and micro levels and across all functions. This includes representatives of different governmental institutions on the federal, cantonal and community level, non-governmental organizations, organizations of health care providers, payers, the private industry, and patient associations. The function of the *Health System Advisory Board* is to provide advice and guidance on all aspects of the SLHS and to be actively involved in the different mechanisms of the SLHS, including the identification and prioritization of topics, the continuous development of thematic clusters, and the learning cycles in general to ensure that the activities of the SLHS respond to the needs of the Swiss health system. Organizations and individuals that will be invited to serve on the board will be identified through stakeholder mapping, and should include, among others, official representatives of the federal and cantonal health departments, provider associations, insurers, public health-related institutions and NGOs, as well as patient organizations. A governance and operations guide for the *Health System Advisory Board* will be established in the first year of the project.

5) **Citizen Panels** are foreseen on two levels. At a higher level, a citizen panel will be established that includes representatives of patient organizations in Switzerland that are not involved in the *Health System Advisory Board*. This panel will be consulted and invited on a regular basis to comment on the thematic areas of the SLHS. It serves as a feedback mechanism to review current priority areas of the SLHS and as input mechanism for the development of policy briefs and stakeholder dialogues. At the lower level, citizen panels will be convened to support the development of policy briefs and dialogues on specific topics, if useful. These panels seek to bring together engaged citizens who are willing to share their experiences and ideas on a specific issue at hand. Those panels will allow collecting new insights into an issue that may not have been taken sufficiently into account beforehand, and to identify preferences and values that should be taken into consideration for next steps taken on an issue. A governance and operations guide for the *Citizen Panels* will be established in the first year of the project.

Figure 8: Foreseen organizational chart of the Inter-university SLHS Competence Center



PB: Policy Brief; SD: Stakeholder Dialogue

It is important to note that governance in the SLHS is strictly committed to diversity as outlined in the document “Checkliste Diversity Mainstreaming PgB 2021-2024” by swissuniversities. On the organizational level, this will be institutionalized by appointing a person responsible for diversity, who will oversee the activities of the SLHS. On the level of the health system, when working on topics, the SLHS will take aspects of diversity into consideration, for example, when inviting stakeholders, forming working or advisory groups, but also when selecting topics.

Core competencies of the partners and collaboration

Accompanying this proposal is a summary of the partners’ core competencies (see **Annex 2**). The core academic network possesses the relevant access points and competencies in relation to the different functions of the health system across the six health system building blocks (see Figure 1 in section 7.1) and has the know-how and expertise to successfully establish the planned *Inter-university SLHS Competence Center* as a key focal point for learning health system activities and research in Switzerland and as a national service infrastructure that links the Swiss higher education institutions and different actors in the Swiss health system.

Collaboration of the partners takes place on the level of the organs above, in particular the *SLHS Governing Board* as the highest strategic organ of the SLHS, as well as in the working groups for the methodological development of the SLHS mechanisms, the steering groups of the thematic areas, and on topics for which learning cycles are established. Collaboration also takes place on the level of the PhD students (**Annex 3**), in research and education.

The following table summarizes the yearly milestones and deliverables of the project:

Year	Work package description	Milestones & Deliverables
2021	1) Strengthening and expanding prioritized topics	
	Further development of thematic clusters	<ul style="list-style-type: none"> - Steering group for each thematic cluster established - Concept for priority areas for each thematic cluster developed
	Continuation of already established learning cycles – update of topics for policy briefs and stakeholder dialogues	<ul style="list-style-type: none"> - Updated topic list established as a living document and used by the Boards - Systematic evaluation of learning cycles of first funding phase available - At least 2 topics identified for continuation of learning cycles, and specific topics for follow-up policy briefs defined
	<i>Calls for Joint Proposals</i> for policy briefs and stakeholder dialogues	<ul style="list-style-type: none"> - 2 <i>Calls for Joint Proposals</i> developed and published, in interaction with actors from the Swiss health system - Submitted topics in response to calls prioritized and at least 4 topics assigned to academic partners
	Formalization of stakeholder inclusion	<ul style="list-style-type: none"> - Governance and operations guide for <i>Health System Advisory Board</i> available - <i>Health System Advisory Board</i> established - Governance and operations guide for <i>Citizen Panels</i> available - Joint event of Boards organized and held
	2) Promoting inter- and transdisciplinary education	
	<i>Joint SLHS-SSPH+ PhD Scholarship Program</i> for second cohort (2021-2024)	<ul style="list-style-type: none"> - Recruitment of PhD students at the respective partner institutions completed (competitive selection) - All PhD students in the <i>SLHS-SSPH+ PhD Scholarship Program</i> enrolled - List with thesis project plans for PhDs available - PhD program plan available and published on websites of SLHS and SSPH+ Graduate Campus
	<i>Learning Health System Enhancement Program</i> and innovative training offers	<ul style="list-style-type: none"> - <i>Learning Health System Enhancement Program</i> plan available and published - First call for innovative training offers published and 1 training offer selected
	3) Establishment of Inter-university SLHS Competence Center	
	Organization	<ul style="list-style-type: none"> - 2 coordinators, 1 office assistant employed - Kick-off meeting for second funding phase organized and held
	Establishment of nationwide monitoring, reporting and information system on topic-specific evidence syntheses in the SLHS, incl. policy briefs and stakeholder dialogues	<ul style="list-style-type: none"> - Concept for a nationwide monitoring, reporting and information system available
	Development of a comprehensive concept for policy briefs and stakeholder dialogues, taking into account the specific aspects of the Swiss health system	<ul style="list-style-type: none"> - Working groups established for the further methodological development of policy briefs and stakeholder dialogues
	Further development of information infrastructure for a learning health system	<ul style="list-style-type: none"> - Working groups established for the further methodological development of information infrastructures for a learning health system

2022	1) Strengthening and expanding prioritized topics	
	Further development of thematic clusters	- Thematic clusters and priority areas updated according to current health system needs
	Continuation of already established learning cycles – update of topics for policy briefs and stakeholder dialogues	- Topic list updated and used by the Boards - Systematic evaluation of ongoing learning cycles available - At least 3 topics identified for continuation of learning cycles, and specific topics for follow-up policy briefs defined
	<i>Calls for Joint Proposals</i> for policy briefs and stakeholder dialogues	- 2 <i>Calls for Joint Proposals</i> developed and published, in interaction with actors from health system - Submitted topics in response to the calls prioritized and at least 4 topics assigned to academic partner institutions
	Formalization of stakeholder inclusion	- A network between universities, universities of applied sciences and actors in the Swiss health system is established - <i>Citizen Panel</i> with representatives of patient organizations established - Joint event of Boards organized and held
	2) Promoting inter- and transdisciplinary education	
	<i>Joint SLHS-SSPH+ PhD Scholarship Program</i> for second cohort (2021-2024)	- First PhD progress evaluation completed - Course offers available and published on websites of SLHS and SSPH+ Graduate Campus - PhD students and young investigators are enrolled in courses and workshops
	<i>Learning Health System Enhancement Program</i> and innovative training offers	- <i>Learning Health System Enhancement Program</i> plan available and published - Second call for innovative training offers published and 1 training offer selected
	3) Establishment of Inter-university SLHS Competence Center	
	Development of a comprehensive concept for policy briefs and stakeholder dialogues, taking into account the specific aspects of the Swiss health system Development of guidelines for - the processing and appraisal of evidence on the effectiveness of interventions in policy briefs - health needs analysis taking into account citizen panels, survey data and other data sources, including big data - the use of appropriate forms of communication for stakeholder dialogues	- Guidelines developed
	Establishment of nationwide monitoring, reporting and information system on topic-specific evidence syntheses in the SLHS, incl. policy briefs/stakeholder dialogues	- Nationwide monitoring, reporting and information system established and used
	Further development of information infrastructure for a learning health system	- Update on the further methodological development of information infrastructures for a learning health system presented by working groups
	Development of SLHS network	- Further partners of the SLHS added to the network and integrated into activities

2023	1) Strengthening and expanding prioritized topics	
	Further development of thematic clusters	- Thematic clusters and priority areas updated according to current health system needs
	Continuation of already established learning cycles – update of topics for policy briefs and stakeholder dialogues	- Topic list updated and used by the Boards - Systematic evaluation of ongoing learning cycles available - At least 3 topics identified for continuation of learning cycles, and specific topics for follow-up policy briefs defined
	<i>Calls for Joint Proposals</i> for policy briefs and stakeholder dialogues	- 2 <i>Calls for Joint Proposals</i> developed and published, in interaction with actors from the health system - Submitted topics in response to the calls prioritized and at least 4 topics assigned to academic partner institutions
	Formalization of stakeholder inclusion	- A network between universities, universities of applied sciences and actors in the Swiss health system is established - Joint event of Boards organized and held
	2) Promoting inter- and transdisciplinary education	
	<i>Joint SLHS-SSPH+ PhD Scholarship Program</i> for second cohort (2021-2024)	- Second PhD progress evaluation completed - Course offers available and published on websites of SLHS and SSPH+ Graduate Campus - PhD students and young investigators are enrolled in courses and workshops
	<i>Learning Health System Enhancement Program</i> and innovative training offers	- <i>Learning Health System Enhancement Program</i> plan available and published - Third call for innovative training offers published and 1 training offer selected
	3) Establishment of Inter-university SLHS Competence Center	
	Establishment of nationwide monitoring, reporting and information system on topic-specific evidence syntheses in the SLHS, incl. policy briefs and stakeholder dialogues	- Nationwide monitoring, reporting and information system established and used
	Development of a comprehensive concept for policy briefs and stakeholder dialogues, taking into account the specific aspects of the Swiss health system	- Guidelines developed and regularly updated according to needs of the health system
	Development of health data warehouse and health system lab	- Update on the further methodological development of information infrastructures for a learning health system presented by working groups
	Development of SLHS network	- Further partners of the SLHS added to the network and integrated into activities
	Preparation of the follow-up phase of the SLHS (from 2024)	- Funding concept for follow-up phase available

2024	1) Strengthening and expanding prioritized topics	
	Further development of thematic clusters	- Thematic clusters and priority areas updated according to current health system needs
	Continuation of established learning cycles – update of topics for policy briefs and stakeholder dialogues	- Topic list updated and used by the Boards - Systematic evaluation of ongoing cycles available - At least 4 topics identified for continuation of cycles, and specific topics for follow-up policy briefs defined
	<i>Calls for Joint Proposals</i> for policy briefs and stakeholder dialogues	- 2 <i>Calls for Joint Proposals</i> developed and published for follow-up phase (beyond 2024), in interaction with actors from the health system - Submitted topics in response to the calls prioritized and at least 4 topics assigned to academic partner institutions
	Formalization of stakeholder inclusion	- A network between universities, universities of applied sciences and actors in the Swiss health system is established - Joint event of Boards organized and held
	2) Promoting inter- and transdisciplinary education	
	<i>Joint SLHS-SSPH+ PhD Scholarship Program</i> for second cohort (2021-2024)	- Third PhD progress evaluation completed - Finalization and publication of PhD theses and related projects - abstracts of PhD theses are available and published on the SLHS website - Course offers available and published on websites of SLHS and SSPH+ Graduate Campus - PhD students and young investigators are enrolled in courses and workshops
	<i>Learning Health System Enhancement Program</i> and innovative training offers	- <i>Learning Health System Enhancement Program</i> plan available and published - Fourth call for innovative training offers published and 1 training offer selected
	3) Establishment of Inter-university SLHS Competence Center	
	Establishment of nationwide monitoring, reporting and information system on topic-specific evidence syntheses in the SLHS, incl. policy briefs and stakeholder dialogues	- Nationwide monitoring, reporting and information system established and used
	Development of a comprehensive concept for policy briefs and stakeholder dialogues, taking into account the specific aspects of the Swiss health system	- Guidelines developed and regularly updated according to needs of the health system
	Development of health data warehouse and health system lab	- Update on the further methodological development of information infrastructures for a learning health system presented by working groups
	Development of SLHS network	- Further partners of the SLHS added to the network and integrated into activities
	Preparation of the follow-up phase of the SLHS (from 2024)	- Funding concept for follow-up phase established - Difficulties addressed based on SWOT analysis

Overall, there will be at least 12 topics for policy briefs and stakeholder dialogues that are developed out of the already established learning cycles from the first funding phase (2017-2020), and at least 12 new topics for policy briefs and stakeholder dialogues out of the *Calls for Joint Proposals*. Each participating partner institution will develop 2 policy briefs and organize 2 stakeholder dialogues that will be completed by the end of 2024. This will lead to a total of 24 policy briefs/stakeholder dialogues in the overall project.

7.5 Nachhaltigkeit (Wie werden die Aktivitäten nach Beendigung der Projektfinanzierung weitergeführt?)

The SLHS directly responds to the call of the Swiss Academy of Medical Sciences and the Federal Office of Public Health for strengthening health systems and services research in Switzerland, and related scientific capacities, by means of establishing a national service infrastructure. During the initial funding period 2017-2020, the SLHS has proven its ability to address specific challenges in the Swiss health system effectively and efficiently by initiating learning cycles for continuous health system improvement. Monitoring and evaluation of the implementation efforts by stakeholders after the policy briefs and deliberation about the best possible actions are still ongoing, but initial feedback demonstrates the value added that the SLHS can provide for stakeholders on different levels of the Swiss health system.

The long-term establishment of the SLHS is based on six factors:

- 1) All participating academic partners are committed to continue contributing to the further development of the SLHS mechanisms. They will be actively engaged in the established working groups of the *Inter-university SLHS Competence Center* and in the *SLHS Governing Board*, which is the strategic organ of the SLHS responsible for the prioritization of topics and the initiation of learning cycles in different thematic clusters to address specific issues in the health system. Thus, all academic partners commit to drive the contents of the SLHS beyond 2024 and provide a service for the Swiss health system to sustainably strengthen it for the future.
- 2) The University of Lucerne commits to host the *Management and Coordination Office* beyond 2024 out of own funds to ensure the provision of essential support services for running the SLHS in the future. This includes the coordination of the activities of the SLHS, e.g., policy briefs and stakeholder dialogues and related monitoring, reporting and information infrastructures, management of the SLHS stakeholder network, and the provision of regular updates for the platform of the European Observatory on Health Systems and Policies.
- 3) The comprehensive, all university-type encompassing *Joint SLHS-SSPH+ PhD Scholarship Program* and the *Learning Health System Enhancement Program* will continue to promote the development of scientific capacities in health systems and services research in Switzerland. On an operational level, all academic partners participating in the SLHS commit to continue funding of at least one PhD position at their institution beyond 2024, and to actively contribute to the education of young scientists. The close collaboration with the SSPH+ ensures that sustainable PhD course offers can be integrated with the structures of the existing programs to avoid redundancies, to promote synergies, and to optimize the use of resources.
- 4) The development of a broad and comprehensive network for the successful interaction between research, policy and practice in the health sector will include partners from universities and universities of applied sciences from a range of disciplines (including medicine, the health professions, law, social and cultural sciences, economics and political science), as well as partners from health policy, services, systems and infrastructures. This will enable the SLHS to increasingly draw from a broader and yet more specialized network of experts to help inform, contribute to and expand its operations. Additionally, the expert network in itself will continue to cross-fertilize and initiate learning health system interactions utilizing the SLHS platform.
- 5) The development of guidelines and information infrastructures within the SLHS will continue to evolve in the future, including guidelines for using policy briefs and stakeholder dialogues to inform decision-making, the data warehouse, and the health system lab to provide central services to the community and to effectively inform and use learning processes in the Swiss health system. To this end, the SLHS is strategically aligned with other national and international initiatives to promote a value- and science-driven health system, for example the Swiss Personalized Health Network, the Federal Office of Public Health, the Federal Statistical Office, the Swiss Health Observatory, the European Observatory on Health Systems and Policies, and the learning health system related programs of the National Academy of Medicine in the US.

6) It is envisioned that sustained financial contributions by stakeholders to the SLHS will be fueled by the continuation of the successful model of bridging research, policy and practice through learning cycles. The goal is to establish a funding stream by stakeholders, for instance for the organization of a stakeholder dialogue, including the preparation of a policy brief, or other forms of evidence syntheses, and post-dialogue support, in particular the monitoring and evaluation of implementation steps. The *Calls for Joint Proposals* are designed to foster this interaction, with thematic calls developed jointly with actors from the health system.

7.6 Berücksichtigung der Ergebnisse aus dem Auswahlverfahren der Projektskizzen (*Nachweis der auf Grund der inhaltlichen Prüfung der Expert/innen und der hochschul- und finanzpolitischen Prüfung der Fachkonferenz verlangten Ergänzungen und Empfehlungen des Hochschulrats*)

1) Inclusion of patient organizations should be considered

The SLHS aims at establishing a formalized *Health System Advisory Board* to provide advice on all aspects of the SLHS. Members of the board will be actively involved in the mechanisms of the SLHS, including the identification and prioritization of topics, the continuous development of thematic clusters, and the learning cycles to ensure that the activities of the SLHS respond to the needs of the Swiss health system. Organizations and individuals that will be invited to serve on the board will be identified through stakeholder mapping, and should include, among others, official representatives of the federal and cantonal health departments, provider associations, insurers, public health-related institutions and non-governmental organizations, private sector industry, as well as patient organizations. While there is a number of disease-specific patient organizations that will be involved on topic-specific learning cycles, with additional perspectives provided by the creation of citizen panels, general patient organizations like *Stiftung SPO Patientenschutz* or *Stiftung Patientensicherheit Schweiz* will be involved on a broader level.

2) Incorporate ethical / legal aspects

Ethical and legal aspects are explicitly accounted for in the thematic clusters of the SLHS, and in particular in the cluster on enhancing the *Legal and Ethical Framework*. Topics currently addressed in learning cycles include, for example, legal aspects related to human subjects research and the protection of personal (health) data, end of life decisions, and service provision in basic and supplementary insurance. Equally relevant in the SLHS are topics related to guidelines for ethical decision-making, from the perspective of individuals, organizations, governments and the health system as a whole. This includes aspects of patient care, such as counselling, psychotherapy or pastoral care, responsible organizations as well as fair access to health services and just resource allocations. Several partner institutions in the academic network are involved in these topics, for example the University of Lucerne, SUPSI, and the Winterthur Institute of Health Economics (ZHAW). Further partners with relevant expertise, e.g., the University of Zurich, University of Basel and University of Neuchâtel will be involved in topic-specific learning cycles, coordinated by the steering groups of the different thematic clusters.

3) Show gender equality/statement related to aspects of diversity

The SLHS will address diversity and gender equality on the level of the project organization and on the level of the topics addressed in the learning cycles. On the organizational level, the *SLHS Governing Board* will pay particular attention to aspects of diversity and gender equality, in its own composition and on the level of the PhD students (in the current SLHS cohort, for example, almost 70% of the PhD students are female). On the level of the health system, when working on topics, the SLHS will take diversity and gender equality aspects into consideration. For example, one cluster that specifically addresses issues around diversity and inclusion is the cluster "Equality of Opportunity". Besides, many of the topics in the SLHS implicitly address aspects around equal opportunity and accessibility to care.

Throughout its governance, as well as its methods (development of policy briefs and stakeholder dialogues), the SLHS always aims at an inclusive stakeholder approach. One area that should be highlighted in particular is the inclusion of citizen panels on the level of the project governance, as well as on the level of individual projects. These panels will include representatives of patient organizations, and, in some cases, minority organizations, and will ensure that dimensions such as gender, cultural background, age, etc. are taken into consideration across all levels of the SLHS. In view of evaluating and tracking diversity-related aspects in the project, the SLHS will appoint a person with the task to track appropriate representation of topics and groups in research areas, in the steering and working groups, and in meetings and events organized by the SLHS. Further, a guiding document will be developed that will be distributed among all partners. The document will include recommendations on how to address diversity-related aspects in the individual work environments, as well as on the level of individual projects. Further, it will provide an evaluation framework (checklist) that will allow the partners to track and report predefined aspects on the individual level.

4) Be more explicit on the planned collaboration with the Swiss Personalized Health Network

The SLHS aims at engaging with other programs and organizations active in the area of health systems and health services research through its different pillars, for example developing collaborations and co-operations with the Federal Office of Public Health, the Federal Statistical Office, the Swiss Personalized Health Network (SPHN), and the Swiss Centre for Expertise in the Social Sciences FORS to foster exchange and collaboration on efforts that aim at providing infrastructures for health data and potential linkages thereof. Examples include the coordination of the activities for the further development of the metadata repository, the further development of methods for the standardized reporting and analysis of health data, and the exemplary cooperation with the SPHN to allow the International Classification of Functioning, Disability and Health (ICF) to be used as a reference system for the exchange of health data and interoperability for personalized medicine and health care research in Switzerland.

5) Show relationship with the on-going NRP 74

Establishment and cultivation of lasting collaborations and co-operations with stakeholders of the health system, including the FOPH, the cantonal health departments, professional associations, the Swiss Academies, SSPH+, and relevant national research programs (NRPs) of the Swiss National Science Foundation are of high priority for the SLHS. On the level of NRPs, this includes the current NRP 74 "Smarter Health Care" and NRP 75 "Big Data" but is not confined to these two programs, and the SLHS will be open to new programs in the future with relation to the Swiss health system and the activities of the SLHS. For NRP 74, there already exists a significant overlap and co-operation between academic groups and within topics (e.g., projects led by SUPSI, University of Zurich, and Swiss Paraplegic Research). Apart from synergies, in research, projects in NRP 74 can also leverage the mechanisms of the SLHS for knowledge transfer to implement research results into practice. Moreover, educational offers are of relevance to PhD students in the SLHS and the NRP 74, and coordination via SSPH+ ensures that both cohorts of students can benefit as much as possible from the different offers.

6) Rules for the use of data in the SLHS

The SLHS ensures that new scientific findings generated through research at the participating partner institutions are made available through structured mechanisms, e.g., by their inclusion in a policy brief that will serve as a basis for a stakeholder dialogue, which ideally leads to implementation steps to strengthen the Swiss health system. Thus, policy briefs and stakeholder dialogues are two important mechanisms that generate data in the SLHS. Policy briefs are published through the website of the SLHS and thus are available to the public domain. Stakeholder dialogues are implemented according to the Chatham House Rule. This rule aims at encouraging openness of discussion and facilitating the sharing of information. It is now used throughout the world as an aid to free discussion of sensitive issues. Thus, detailed information from the stakeholder dialogues is not available to the public domain, but meeting summaries will be published to inform about the main outcomes of the dialogues. Data generated and used

by the PhD students in their research projects are underlying the regulations of the respective institutions, but fully comply to national and international regulations.

7) *Explain in more detail how the topics are derived and prioritized*

The process of topic identification and prioritization is explained in more detail in section 7.2. Identification and prioritization will be based on a formal stakeholder-driven approach in addition to an informal approach where topics are informed by the academic partner institutions in interaction with actors from the health system. In the sense of a learning health system, the SLHS aims at a targeted continuation of learning cycles for already prioritized topics from the first funding phase, based on the needs of the involved stakeholders. In addition, the SLHS plans to leverage the thematic clusters by launching *Calls for Joint Proposals* for policy briefs and stakeholder dialogues in the second funding phase. Each thematic cluster will have a steering group that will be managing the development and distribution of calls. The steering groups will be composed of experts from the SLHS partner institutions and may include additional external experts, if appropriate, to shape the calls in ways to address the needs of the Swiss health system. The steering group will be responsible for ranking topics submitted in response to the call. Final approval on the prioritized topics will be given by the *SLHS Governing Board*, in interaction with the *Health System Advisory Board*, which will be composed of different actors including the Federal Office of Public Health and the European Observatory.

8) *Describe in more detail the thematic clusters*

Thematic clusters bring together expertise and know-how for specific thematic areas. During the second annual meeting of the SLHS at the end of 2017, topics were grouped into thematic clusters with the aim of sustainably promoting cooperation between project partners and exploring synergies between topics. At present, there are six thematic clusters covered by the SLHS network: Service Delivery; Rehabilitation; Health Promotion and Prevention; Equality of Opportunity; Legal and Ethical Framework; and Health Systems Guidance and Intelligence. A brief description and graphical illustration of the clusters are given in section 7.2. It is important to note that thematic clusters in the SLHS are not static but dynamic and driven by the timeliness of the Swiss (and European) health policy agendas. Changes can apply to the overall thematic areas, but also to contents and collaborations within the clusters. The SLHS partner institutions are actively involved across clusters, depending on their expertise and the exact topics. Clusters are also understood to be interdependent, with overlapping topics and cross-cutting themes, for example related to workforce, health information, and health care financing and governance. In addition to the currently defined clusters, it is conceivable to define new thematic areas in the future, refocus them, or join them if needed in an evolutionary way. Thematic clusters will be continuously developed in close collaboration with actors from the health system.

9) *Build on the experience of the program organization of the first phase of the project*

The organization of the SLHS with its Strategic Council and Operational Unit was sufficient for the first phase of the project. For the second funding phase (2021-2024), and to prepare the SLHS for the future, the project governance will be optimized to organize the network of academic partner institutions effectively and efficiently and to collaborate better with stakeholders in the Swiss health system. To this end, the governance of the SLHS will be optimized. First, the Strategic Council, as highest organ of the SLHS responsible for all strategic decisions, will be renamed to *SLHS Governing Board* to reflect its responsibilities and composition of representatives of all academic partners and funding institutions. The board is complemented by a *Management and Coordination Office* (former Operational Unit), which is responsible for the project management, including project coordination, monitoring, evaluation, and reporting, and is hosted by the leading house of the SLHS at the University of Lucerne. The governance model will be expanded by a *Health System Advisory Board*, with representatives from the health system, policy and practice. The function of the *Health System Advisory Board* is to provide advice on all aspects of the SLHS, and to be actively involved in the different mechanisms of the SLHS, including the identification and prioritization of topics, the continuous development of the thematic clusters, and the learning cycles in general to ensure that the activities of the SLHS re-

spond to the needs of the Swiss health system. In addition, it is planned to create *Citizen Panels*, which bring together engaged citizens from different backgrounds with an interest or personal involvement in an issue under consideration. The roles and responsibilities of these organs are outlined in sections 7.2 and 7.4; Figure 8 illustrates the foreseen organization in a chart.

10) *Show financial planning, use and distribution of funds*

A detailed financial plan including the distribution of funds to the participating partner institutions is enclosed to this proposal, see sections 8, 9 and 10.

11) *Sharpen aspects of interprofessional care: clarify possibilities, show models, etc.*

Interprofessionality is an important topic for the SLHS and is relevant not only for the thematic cluster on service delivery but also for the cluster on rehabilitation, and as a cross-cutting theme on health workforce more generally. Through the addition of the Berner Fachhochschule (BFH), and in collaboration with partners from SUPSI, ZHAW, and primary and community care, there is a unique opportunity in the SLHS to drive innovative topics in the domain of interprofessional health care delivery, and to establish learning cycles to strengthen interprofessionality in the Swiss health system. Such a focus can be included, for example, in the envisioned *Calls for Joint Proposals* to identify and prioritize topics related to interprofessionality, and it may also be integrated in the educational offers. As part of the steering groups that will be set up for the thematic clusters, the different possibilities for integrating interprofessionality will be discussed and evaluated.

12) *Demonstrate sustainability of the project and financing of all activities by the universities and universities of applied sciences from 2025 onwards*

The long-term establishment and sustainable financing of the SLHS from 2025 onwards is based on six main factors, outlined in section 7.5 above. These factors include the long-term establishment of an *Inter-university SLHS Competence Center*, a commitment of all participating academic partner institutions to continue their contribution to the SLHS in the future, and a close collaboration with actors from the Swiss health system who are (and will become) active users of the mechanisms offered by the SLHS for bridging research, policy and practice. Embedded in a shared culture to promote learning cycles for continuous health system improvement in Switzerland, and the related necessity for capacity building, the consortium of partner institutions of the SLHS is committed to the continuation of the SLHS beyond 2024.

** Based on additional information received from swissuniversities, the SLHS would like to confirm the openness of the SLHS network to include additional partners from universities and universities of applied sciences with relevant health system expertise.*

The SLHS is open to include additional partners from universities and universities of applied sciences in its network, which has been part of the strategy from the very beginning and which will continue to be a strategic goal for the second project phase. Project partners from the BFH and the University of St. Gallen have formally agreed to join the SLHS as funding partners for the second funding phase (see cooperation partners, section 6 of the proposal).

8 Gesamtprojektkosten und Finanzierung

Die Gesamtprojektkosten (Betriebskosten) sind auf die zwei Haupt-Budgetrubriken Personal- und Sachkosten aufzuteilen. Falls der tatsächliche Einsatz der Mittel für die einzelnen Unterrubriken Sachkosten bei Projekteingabe noch nicht bekannt ist, muss er auf jeden Fall im jährlichen Reporting detailliert ausgewiesen werden.

In der Leistungsvereinbarung mit dem SBFI werden die projektgebundenen Beiträge HFKG anteilmässig auf die Rubriken Personal- und Sachkosten aufgeteilt. Bis zu 10% der Jahrestrenche können im Projektverlauf von der einen Rubrik in die andere verschoben werden. Eine Verschiebung grösserer Beträge setzt die Zustimmung des Hochschulrats voraus.

	2021	2022	2023	2024	Total
Personalkosten (inkl. Sozialleistungen)	2'300'000	2'300'000	2'400'000	2'400'000	9'400'000
Apparate und Anlagen	0	0	0	0	0
Übrige Sachkosten	200'000	200'000	200'000	200'000	800'000
Total Sachkosten	200'000	200'000	200'000	200'000	800'000
Gesamtprojektkosten	2'500'000	2'500'000	2'600'000	2'600'000	10'200'000
Finanzierung					
Projektgebundener Beitrag HFKG	1'200'000	1'200'000	1'200'000	1'200'000	4'800'000
Eigenleistungen der beitragsberechtigten Projektpartner (min. gleich hoch wie der Beitrag gemäss HFKG)	1'200'000	1'200'000	1'200'000	1'200'000	4'800'000
Andere Beiträge des Bundes (z.B. BFE, BAK, u.a.)	0	0	0	0	0
Übrige Beiträge	100'000	100'000	200'000	200'000	600'000
Total Finanzierung	2'500'000	2'500'000	2'600'000	2'600'000	10'200'000

9 Aufteilung des projektgebundenen Beitrages auf die Projektpartner

Mit dem Einverständnis der betroffenen Partnerinstitutionen kann die Aufteilung des projektgebundenen Beitrags auf die Projektpartner im Verlauf des Projektes verändert werden. Im jährlichen Reporting ist die tatsächliche Verteilung korrekt auszuweisen.

Beim Ausstieg eines Projektpartners oder der Beteiligung eines neuen Projektpartners ist die SHK bzw. das SBFI vorgängig zu informieren.

Hochschule / Institution	2021	2022	2023	2024	Total
Swiss TPH (assoziiertes Institut der Universität Basel)	80'000	80'000	80'000	80'000	320'000
Universität Luzern (Leading House)	400'000	400'000	400'000	400'000	1'600'000
Université de Neuchâtel	80'000	80'000	80'000	80'000	320'000
Scuola universitaria professionale della Svizzera italiana (SUPSI)	80'000	80'000	80'000	80'000	320'000
Università della Svizzera italiana (USI)	80'000	80'000	80'000	80'000	320'000
Universität Zürich	160'000	160'000	160'000	160'000	640'000
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)	80'000	80'000	80'000	80'000	320'000
Université de Lausanne	80'000	80'000	80'000	80'000	320'000
Berner Fachhochschule	80'000	80'000	80'000	80'000	320'000
Universität St. Gallen	80'000	80'000	80'000	80'000	320'000
Total	1'200'000	1'200'000	1'200'000	1'200'000	4'800'000

Die Modalitäten der **Auszahlung** der projektgebundenen Beiträge durch das SBFI werden in der Leistungsvereinbarung definiert.

10 Zugesicherte Eigenmittel der einzelnen Projektpartner

Die Hochschulen und anderen Institutionen des Hochschulbereichs erbringen gesamthaft eine Eigenleistung, die mindestens dem Bundesbeitrag entspricht. Davon ist mindestens die Hälfte als Real money zu erbringen. Die andere Hälfte kann als Virtual money ausgewiesen werden. In Ausnahmefällen kann bei Projektpartnern, die eine wesentliche Koordinationsleistung erbringen, auf eine Eigenleistung verzichtet werden; diese Entscheidung obliegt dem SBFI (vgl. Art. 49 Abs. 2 V-HFKG).

Hochschule / Institution	Real money*	Virtual money**	Total	Der Anteil „Virtual money“ wird in der folgenden Form ausgerichtet
Swiss TPH (assoziiertes Institut der Universität Basel)	200'000	120'000	320'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Universität Luzern***	400'000	1'200'000	1'600'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Université de Neuchâtel	200'000	120'000	320'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Scuola universitaria professionale della Svizzera italiana (SUPSI)	200'000	120'000	320'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Università della Svizzera italiana (USI)	200'000	120'000	320'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Universität Zürich	400'000	240'000	640'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)	200'000	120'000	320'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Université de Lausanne	200'000	120'000	320'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Berner Fachhochschule	200'000	120'000	320'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Universität St. Gallen	200'000	120'000	320'000	Räume, Einrichtung, technische Ausstattung, Personalkosten
Total Eigenmittel	2'400'000	2'400'000	4'800'000	

* Annual own resources in form of real money of in total CHF 2'400'000 will be provided by the participating funding partner institutions in form of PhD students. The calculated costs for PhD students are based on the salary recommendations of the Swiss National Science Foundation (SNSF), including social security contributions made by the employer. There might occur slight salary differences between the project partners as the rates for social security contributions and local salary standards vary.

** Annual own resources in form of virtual money of in total CHF 2'400'000 will be provided by the participating funding partner institutions in the form of personnel and material costs, as well as rooms and equipment, mainly related to the supervision of PhD students, the preparation of policy briefs and stakeholder dialogues, and the engagement of the partner institutions in the development of the project mechanisms.

*** The University of Lucerne provides a disproportionately higher amount of own resources as virtual money due to its role of leading house for the project and the related project coordination and project management tasks.

Erklärung zum Begriff Eigenmittel (Real money und Virtual money):

Die Eigenleistungen können als Geld- oder Sachleistungen erbracht werden. Mindestens die Hälfte der Eigenleistung ist als Geldleistung zu erbringen.

Als Geldleistung (**Real money**) gilt die Finanzierung von Projektkosten, die beim Projektteilnehmer durch die Projektteilnahme zusätzlich zu den normalen laufenden Ausgaben entstehen. Diese umfassen

- Personalkosten einschliesslich Sozialleistungen;
- Sachkosten für Apparate und Anlagen, Betriebsmittel, Kosten für speziell angemietete Räumlichkeiten, Tagungs- und Reisekosten.

Als Sachleistungen (**Virtual money**) können Aufwendungen für bestehende Personalressourcen, Apparate und Anlagen sowie Betriebsmittel in dem Ausmass angerechnet werden, in dem sie dem Projekt eindeutig zugeordnet und belegt werden können. Die Leistungen von Mitarbeitenden, die über nationale Förderprogramme (z.B. SNF) finanziert sind, gelten als Sachleistungen.

11 Unterschriften

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

Für den Hauptantragsteller der projektgebundenen Beiträge nach HFKG:

Ort und Datum:

Der/die Projektleiter/in

.....

.....

Ort und Datum:

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in

.....

.....

Für die Projektpartner:

Ort und Datum:

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in

.....

.....

Ort und Datum:

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in

.....

.....

Der Antrag ist **durch swissuniversities** einzureichen bis spätestens **29. Februar 2020** an folgende Adresse (auf Papier und in elektronischer Version):

- Schweizerische Hochschulkonferenz, Ressort SHK, Einsteinstrasse 2, 3003 Bern
- shk-cshe@sbfi.admin.ch

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ANNEX 1

ACADEMIC PARTNER INSTITUTIONS AND LOCAL COORDINATORS

Universität Luzern (Leading House)

Department of Health Sciences and Medicine (Host Department)

Coordinators: Prof. Dr. Gerold Stucki (Main Applicant) / Prof. Dr. Stefan Boes (Project Coordinator)

Center for Health, Policy and Economics (Department of Health Sciences and Medicine)

Coordinator: Prof. Dr. Stefan Boes

Zentrum für Recht und Gesundheit (Rechtswissenschaftliche Fakultät)

Coordinator: Prof. Dr. Bernhard Rüttsche

Zentrum für Religionsverfassungsrecht (Theologische Fakultät)

Coordinator: Prof. Dr. Adrian Loretan

Universität Basel

Swiss Tropical and Public Health Institute

Coordinator: Prof. Dr. Kaspar Wyss

Berner Fachhochschule

Departement Gesundheit

Coordinator: Prof. Dr. Urs Brügger

Université de Lausanne

Institut universitaire de médecine sociale et préventive, Unisanté

Coordinators: Prof. Dr. Muriel Bochud / Prof. Dr. Isabelle Peytremann-Brideveaux

Université de Neuchâtel

Institut du Management de l'Information

Coordinators: Prof. Dr. Kilian Stoffel / Prof. Dr. Paul Cotofrei

La Scuola Universitaria Professionale della Svizzera Italiana

Dipartimento economia aziendale, sanità e sociale

Coordinators: Prof. Dr. Luca Crivelli / Prof. Dr. Carlo De Pietro

Universität St. Gallen

School of Medicine

Coordinator: Prof. Dr. Kuno Schedler

Università della Svizzera italiana

Centre for Organisational Research - Health and Public Management (CORE) - Istituto di economia politica

Coordinator: Prof. Dr. Marco Meneguzzo / Prof. Dr. Stefano Calciolari

Universität Zürich

Institut für Hausarztmedizin

Coordinators: Prof. Dr. Thomas Rosemann / Prof. Dr. Oliver Senn / Prof. Dr. Stefan Neuner-Jehle

Institut für Epidemiologie, Biostatistik und Prävention

Coordinators: Prof. Dr. Milo Puhan / PD Dr. Margot Mütsch

Zürcher Hochschule für Angewandte Wissenschaften

Institut für Physiotherapie

Coordinators: Prof. Dr. Astrid Schämamm / Prof. Dr. Karin Niedermann

Winterthur Institute of Health Economics

Coordinator: Prof. Dr. Simon Wieser

Swiss School of Public Health (SSPH+)

Coordinator: Prof. Dr. Nino Künzli

ANNEX 2

CORE COMPETENCIES OF THE NETWORK PARTNERS

Swiss Learning Health System - A national platform for health systems and services research, policy and practice

Overview of competencies of the network partners

1) in relation to the functions of the health system

2) in relation to disciplinary scientific perspectives

1) Competencies in relation to the levels and functions of the health system

Levels of the health system

Macro-level (Policies and Programs, Governance and Leadership)

- Centre for Organisational Research (USI)
- Istituto di economia politica (USI)
- Dipartimento economia aziendale, sanità e sociale (SUPSI)
- Center for Health, Policy and Economics (Universität Luzern)
- Zentrum für Recht und Gesundheit (Universität Luzern)
- Zentrum für Religionsverfassungsrecht (Universität Luzern)
- Institut de droit de la santé (Université de Neuchâtel)
- Swiss School of Public Health (SSPH+)
- Departement Gesundheit (BFH)
- Institut universitaire de médecine sociale et préventive (Université Lausanne)
- Winterthurer Institut für Gesundheitsökonomie (ZHAW)
- Institut für Epidemiologie, Biostatistik und Prävention (Universität Zürich)

Meso-level (Service Provision and Payment Financing)

- Dipartimento economia aziendale, sanità e sociale (SUPSI)
- Centre for Organisational Research (USI)
- Department of Health Sciences and Medicine (Universität Luzern)
- Institut für Hausarztmedizin und Community Care Luzern (IHAM&CC Luzern)
- Institut für Epidemiologie, Biostatistik und Prävention (Universität Zürich)
- Institut für Hausarztmedizin (Universität Zürich)
- Institut für Physiotherapie (ZHAW)
- Winterthurer Institut für Gesundheitsökonomie (ZHAW)

Micro-level (Clinical Care)

- Institut für Physiotherapie (ZHAW)
- Departement Gesundheit (BFH)
- Institut für Hausarztmedizin (Universität Zürich)
- Institut für Hausarztmedizin und Community Care Luzern (IHAM&CC Luzern)

Cross-cutting functions of the health system

Health interventions (Health intervention assessment - evidence and impact)

- Department of Health Sciences and Medicine (Universität Luzern)
- Center for Health, Policy and Economics (Universität Luzern)
- School of Medicine (Universität St. Gallen)
- Departement Gesundheit (BFH)
- Winterthurer Institut für Gesundheitsökonomie (ZHAW)
- Institut für Epidemiologie, Biostatistik und Prävention (Universität Zürich)

Health information (Data standards, data quality, data warehouse)

- Department of Health Sciences and Medicine (Universität Luzern)
- Institut universitaire de médecine sociale et préventive (Université Lausanne)
- Institut du management de l'information (Université de Neuchâtel)

Health work force (Professionals for four areas - clinical, public health, organization, knowledge generation)

- Dipartimento economia aziendale, sanità e sociale (SUPSI)
- Institut für Physiotherapie (ZHAW)
- Institut für Hausarztmedizin (Universität Zürich)

2) Competencies in relation to disciplinary scientific perspectives

Health Policy and Economics

- Centre for Organisational Research (USI)
- Istituto di economia politica (USI)
- Dipartimento economia aziendale, sanità e sociale (SUPSI)
- Center for Health, Policy and Economics (Universität Luzern)
- Winterthurer Institut für Gesundheitsökonomie (ZHAW)
- Departement Gesundheit (BFH)

Law and Health-Management

- Dipartimento economia aziendale, sanità e sociale (SUPSI)
- Centre for Organisational Research (USI)
- Zentrum für Recht und Gesundheit (Universität Luzern)
- Zentrum für Religionsverfassungsrecht (Universität Luzern)
- Institut de droit de la santé (Université de Neuchâtel)
- Winterthurer Institut für Gesundheitsökonomie (ZHAW)

Health Services Research

- Department of Health Sciences and Medicine (Universität Luzern)
- Institut für Hausarztmedizin und Community Care Luzern (IHAM&CC Luzern)
- Swiss Paraplegic Research (SPF)
- Institut für Hausarztmedizin (Universität Zürich)
- Institut für Epidemiologie, Biostatistik und Prävention (Universität Zürich)
- Institut für Physiotherapie (ZHAW)
- Winterthurer Institut für Gesundheitsökonomie (ZHAW)

Clinical Care Sciences

- Institut für Hausarztmedizin (Universität Zürich)
- Institut für Hausarztmedizin und Community Care Luzern (IHAM&CC Luzern)
- Institut für Physiotherapie (ZHAW)

Health Information, Health Communication and Implementation Sciences

- Department of Health Sciences and Medicine (Universität Luzern)
- Institut universitaire de médecine sociale et préventive (Université Lausanne)
- Institut du management de l'information (Université de Neuchâtel)
- Institut für Epidemiologie, Biostatistik und Prävention (Universität Zürich)

Public Health, Social and Preventive Medicine

- Swiss Tropical and Public Health Institute (Swiss TPH)
- Institut universitaire de médecine sociale et préventive (Université Lausanne)
- Institut für Epidemiologie, Biostatistik und Prävention (Universität Zürich)
- Swiss School of Public Health (SSPH+)

Ethics & Law

- Zentrum für Recht und Gesundheit (Universität Luzern)
- Zentrum für Religionsverfassungsrecht (Universität Luzern)
- Institut de droit de la santé (Université de Neuchâtel)

ANNEX 3

PHD SCHOLARSHIPS ACROSS ACADEMIC PARTNERS

Goal

- 24 PhD scholarships; second cohort from to 2021 - 2024

Financing

- 12 scholarships: own resources, as listed below (real money)

- 12 scholarships: matched funding SUC application

Universität Basel

1 *Swiss Tropical and Public Health Institute*

Berner Fachhochschule

1 *Departement Gesundheit*

Université de Lausanne

1 *Institut universitaire de médecine sociale et préventive*

Universität Luzern

1 *Department Health Sciences and Health Policy*

1 *Zentrum für Religionsverfassungsrecht*

Université de Neuchâtel

1 *Institut du management de l'information*

Scuola universitaria professionale della Svizzera italiana

1 *Dipartimento scienze aziendali, sociali e sanitarie*

Universität St. Gallen

1 *School of Medicine*

Università della Svizzera italiana

1 *Centre for Organisational Research · Istituto di economia politica*

Universität Zürich

1 *Institut für Hausarztmedizin*

1 *Institut für Epidemiologie, Biostatistik und Prävention*

Zürcher Hochschule für Angewandte Wissenschaften

(shared PhD position)

1 *Winterthurer Institut für Gesundheitsökonomie*

Institut für Physiotherapie

Unterschriften der Partnerinstitutionen (Projektantrag: Punkt 11)

11 Unterschriften

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

Für den Hauptantragsteller der projektgebundenen Beiträge nach HFKG:

Ort und Datum:

Der/die Projektleiter/in

Luzern, 02.10.2019



Ort und Datum:

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in

Luzern, 05.10.2019



Für die Projektpartner:

Ort und Datum:

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in

.....

.....

Ort und Datum:

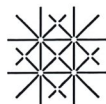
Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in

.....

.....

Der Antrag ist **durch swissuniversities** einzureichen bis spätestens **29. Februar 2020** an folgende Adresse (auf Papier und in elektronischer Version):

- Schweizerische Hochschulkonferenz, Ressort SHK, Einsteinstrasse 2, 3003 Bern
- shk-cshe@sbfi.admin.ch



Universität
Basel

Rektorat

Universität Basel, Rektorat, Postfach 2148, 4001 Basel,
Switzerland

Schweizerische Hochschulkonferenz
Ressort SHK
Einsteinstrasse 2
3003 Bern

Basel, 18. Dezember 2019 / Häg

**Projektgebundene Beiträge 2021-24 nach HFKG
Bestätigung Eigenmittel im Projekt "Swiss Learning Health System - SLHS"**

Sehr geehrte Damen und Herren

Die unterzeichnende Rektorin und der Vizerektor Forschung bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

Mit freundlichen Grüssen

Prof. Dr. Dr. h.c. Andrea Schenker-Wicki
Rektorin

Prof. Dr. Torsten Schwede
Vizerektor Forschung



Directorate

Jürg Utzinger, PhD
Director


E) juerg.utzinger@swisstph.ch
T) +41 61 284-8129

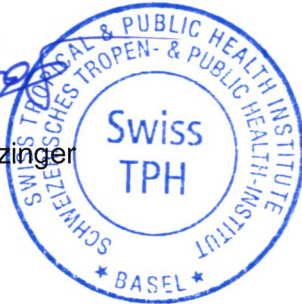
Schweizerische Hochschulkonferenz (SHK)
Ressort SHK
Einsteinstrasse 2
3003 Bern

Basel, 18. Dezember 2019

Projektgebundene Beiträge 2021-2024
Bestätigung Eigenmittel im Projekt Swiss Learning Health System - SLHS

In Ergänzung zum Schreiben der Universität Basel vom Dezember 2019 und als assoziiertes Institut der Universität Basel, bestätigt der unterzeichnende Direktor mit seiner Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel seitens Swiss TPH zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.


Prof Dr. Jürg Utzinger



11 Unterschriften

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

Für den Hauptantragsteller der projektgebundenen Beiträge nach HFKG:

Ort und Datum: Der/die Projektleiter/in
.....

Ort und Datum: Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in
.....

Für die Projektpartner: Universität Basel

Ort und Datum: Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in

Prof. Dr. Dr. h.c. Andrea Schenker-Wicki

Bern, 6.7.2020
.....

A. Schenker-Wicki
.....

Ort und Datum: Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in
.....

Der Antrag ist **durch swissuniversities** einzureichen bis spätestens **29. Februar 2020** an folgende Adresse (auf Papier und in elektronischer Version):

- Schweizerische Hochschulkonferenz, Ressort SHK, Einsteinstrasse 2, 3003 Bern
- shk-cshe@sbfi.admin.ch

Für die Projektpartner:

(For the project partner:)

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

(The signing rectors, presidents and directors confirm with their signature to provide the under item 10 guaranteed own resources and to ensure sustainability, and thus the longer-term financing beyond the ERI period 2021-2024.)

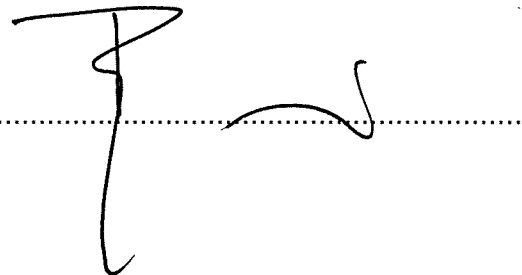
Scuola universitaria professionale della Svizzera italiana (SUPSI)

Ort und Datum:
(Place and date:)

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in
(The rector, president, director)

Prof.  Franco Gervasoni

26.11.2019, Manno



Für die Projektpartner:

(For the project partner:)

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

(The signing rectors, presidents and directors confirm with their signature to provide the under item 10 guaranteed own resources and to ensure sustainability, and thus the longer-term financing beyond the ERI period 2021-2024.)

Université de Neuchâtel

Ort und Datum:
(Place and date:)

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in
(The rector, president, director)

Prof. Dr. Kilian Stoffel

Neuchâtel, le 2 décembre 2019



Für die Projektpartner:

(For the project partner:)

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

(The signing rectors, presidents and directors confirm with their signature to provide the under item 10 guaranteed own resources and to ensure sustainability, and thus the longer-term financing beyond the ERI period 2021-2024.)

Università della Svizzera italiana (USI)

Ort und Datum:
(Place and date:)

~~Der/die Rektor/in~~
~~Der/die Präsident/in~~
~~Der/die Direktor/in~~
(The rector, president, director)

Prof. Dr. Boas Erez

Lugano, 5-12-2019


.....

Für die Projektpartner:

(For the project partner:)

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

(The signing rectors, presidents and directors confirm with their signature to provide the under item 10 guaranteed own resources and to ensure sustainability, and thus the longer-term financing beyond the ERI period 2021-2024.)

Universität Zürich

Ort und Datum:
(Place and date:)

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in
(The rector, president, director)

Prof. Dr. Michael Hengartner

Zürich, 26.11.2019

Michael Hengartner

Für die Projektpartner:

(For the project partner:)

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

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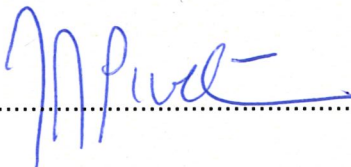
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)

Ort und Datum:
(Place and date:)

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in
(The rector, president, director)

Prof. Dr. Jean-Marc Piveteau

Winterthur, 27.11.2019



Für die Projektpartner:

(For the project partner:)

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

(The signing rectors, presidents and directors confirm with their signature to provide the under item 10 guaranteed own resources and to ensure sustainability, and thus the longer-term financing beyond the ERI period 2021-2024.)

University of Lausanne

Ort und Datum:

*Lausanne,
2/12/2019*

Der/die Rektor/in
Prof. Dr. Nouria Hernandez

N. Hernandez

Für die Projektpartner:

(For the project partner:)

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

(The signing rectors, presidents and directors confirm with their signature to provide the under item 10 guaranteed own resources and to ensure sustainability, and thus the longer-term financing beyond the ERI period 2021-2024.)

Berner Fachhochschule

Ort und Datum:
(Place and date:)

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in
(The rector, president, director)

Prof. Dr. Herbert Binggeli

Bern, 29.11.2019



Berner Fachhochschule
Prof. Dr. Herbert Binggeli, Rektor
Falkenplatz 24
3012 Bern

Für die Projektpartner:

(For the project partner:)

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen sowie die Nachhaltigkeit und damit auch die längerfristige Finanzierung über die BFI-Periode 2021-2024 hinaus zu sichern.

(The signing rectors, presidents and directors confirm with their signature to provide the under item 10 guaranteed own resources and to ensure sustainability, and thus the longer-term financing beyond the ERI period 2021-2024.)

Universität St. Gallen

Ort und Datum:
(Place and date:)

Der/die Rektor/in
Der/die Präsident/in
Der/die Direktor/in
(The rector, president, director)

Prof. Dr. Thomas Bieger

8.12.19
St. Gallen

Th Bieger