SHK ǀ CSHE ǀ CSSU ǀ CSSA

Schweizerische Hochschulkonferenz
Conférence suisse des hautes écoles
Conferenza svizzera delle scuole universitarie
Conferenza svizra da las scolas autas

221/15

Projektgebundene Beiträge 2017-2020 nach HFKG

Projektantrag
4. Dezember 2015 (revision 21. January 2016)

(einzureichen durch swissuniversities bis Ende Februar 2016)

Projekttitel: *Swiss Learning Health System (SLHS)*
A national platform for health systems and services research,
policy and practice

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

Das übergeordnete Ziel des *Swiss Learning Health System (SLHS)* ist die kontinuier-liche Integration von wissenschaftlichen Grundlagen in das Gesundheitssystem sowie die wissenschaftsbasierte Erarbeitung von Lösungsansätzen für gesundheitspolitische Fragestellungen. Das SLHS stellt dazu geeignete Mechanismen im Sinne eines lernen-den Gesundheitssystems in Interaktion der Akteure aus Wissenschaft, Politik, und Pra-xis zur Verfügung.

Konkretes Projektziel ist die Errichtung einer nationalen *Plattform für Gesundheits-system- und Versorgungsforschung, Politik und Praxis*. Träger dieser Plattform ist ein schweizweites akademisches Kompetenznetzwerk, welches im Rahmen eines Sta-keholder Netzwerks mit Akteuren aus Politik und Administration, Nichtregierungsorgani-sationen sowie der Privatwirtschaft kooperiert.

In direkter Anlehnung an das „Forschungskonzept Gesundheit 2013-2016" des Bun-desamtes für Gesundheit (BAG) und der Forderung der Schweizerischen Akademie der Medizinischen Wissenschaften (SAMW) zur Stärkung der Versorgungsforschung ver-folgt das SLHS drei breit angelegte Ziele:

1) Etablierung eines *Brückenmechanismus zwischen Forschung, Politik und Pra-xis*,
2) Förderung des Aufbaus *wissenschaftlicher Kapazitäten für Gesundheitssystem- und Versorgungsforschung*,
3) Management von **standardisierten Gesundheitsinformationen**.

Konkret soll dies durch die Anwendung von acht spezifischen Mechanismen erreicht werden.

2 Beantragter Bundesbeitrag 2017-2020

4'400'000 CHF (yearly 1'100'000 CHF)

3 Anfangs- und Enddatum der beantragten Projektfinanzierung (Beginn frühestens 1.1.2017, Ende spätestens 31.12.2020)

01.01.2017 – 31.12.2020

4 Projektleiter/in – Ansprechpartner/in für die SHK bzw. das SBFI

Name	Stucki
Vorname	Gerold
Titel	Prof. Dr. med.
Adresse	Universität Luzern Seminar Gesundheitswissenschaften und Gesundheitspolitik Frohburgstrasse 3, Postfach 4466, 6002 Luzern
Telefon	041 229 56 30
E-Mail	gerold.stucki@unilu.ch

5 Projektkoordinator/in, sofern nicht identisch mit dem/der Projektleiter/in

Name	
Vorname	
Titel	
Adresse	
Telefon	
E-Mail	

6 Beteiligte Hochschulen bzw. universitäre Institutionen und andere Partner

a. Kantonale Universitäten:

Universität Basel: Schweizerisches Tropen- und Public Health Institut (assoziiertes Institut)

Université de Neuchâtel

Università della Svizzera italiana

Universität Zürich

b. Eidgenössische Technische Hochschulen:

c. Öffentlich-rechtliche Fachhochschulen:

Scuola universitaria professionale della Svizzera italiana

Zürcher Hochschule für Angewandte Wissenschaften

d. Pädagogische Hochschulen:

e. Andere zur Gesuchseingabe berechtigte Institutionen nach HFKG (Dok. 207E/13):

f. Andere:

Swiss School of Public Health+ (SSPH+)

Schweizerische Akademie der Medizinischen Wissenschaften (SAMW)

Schweizerische Akademie der Geistes- und Sozialwissenschaften (SAGW)

Institut für Hausarztmedizin und Community Care, Luzern (Kantonale Ärztegesellschaft Luzern)

Swiss Paraplegic Research (SPF), Nottwil (Ausseruniversitäre Forschungsinstitution)

ICF Research Branch, at SPF Nottwil
in cooperation with the German Cooperation Centre for the Family of International Classifications in Germany (at DIMDI; WHO Collaboration Centre)

IMECCHI (International Methodology Consortium for Coded Health Information)

Cochrane Suisse

Interface, Luzern (scientific consultancy)

sottas works, Fribourg (scientific consultancy)

7   Projektbeschreibung

Project description

7.1   **Ausgangslage, Problemanalyse** *(Hintergrund, spezifische Probleme, die das Projekt lösen soll)*

Starting point, problem analysis *(background, specific problem the project aims to solve)*

Swiss strategic policy framework "Health 2020"

Modern health systems in high resource countries such as Switzerland face enormous challenges because of population ageing and a steady transition from communicable to non-communicable diseases. Creative policy and practice responses are essential to ensure the fitness-for-purpose, effectiveness and efficiency of the health system. In anticipation of these challenges, the European Regional Office of the World Health Organization (WHO) and the **Swiss Federal Office for Public Health (FOPH)** have set out strategic policy frameworks called **"Health 2020"** (1) that, in the Swiss case, identify quality of life, fair opportunities, service quality and transparency as key goals for the policy agenda. The FOPH has also identified a range of specific challenges to these goals that include improved governance, new service and financing models, patient empowerment, fair access to services, increased use of modern information technology and information standards, and development of the workforce.

Need to develop health services research

In its "Research Concept 2013-2016" (2), the **FOPH** has emphasized that developing Swiss research capacity in **health services research** is essential to achieving the strategic goals of Health 2020, pointing out that currently health services research is virtually non-existent in Switzerland. In a subsequent report commissioned by the FOPH, the Swiss Academy of Medical Sciences (SAMS) comprehensively analysed the situation and identified the need to develop health services research as a third approach, complementing biomedical and clinical research in the broader landscape of the health sciences (see Annex 1, Figure 1 at the end of this document).

In light of this situation, the report calls for two actions: 1) the development of a targeted funding mechanism by the Swiss National Science Foundation (in June 2015 the Federal Council initiated such a National Science Foundation research program in healthcare); and 2) the coordination of research and research capacity by means of a facilitating national service infrastructure.

Need for a 'learning health system'

Switzerland is not alone in this. Facing similar challenges to its health system; the Institute of Medicine (IOM) in the United States has pointed to deep systemic problems that limit the capacity of the health system to respond to these challenges (3). In particular, the IOM has pointed to the fragmentation of the health delivery system and the structural inability for high quality research evidence to keep pace with the need for better information to guide clinical decision making in practice. This is seen in part as a policy challenge – structuring the overall health system to develop and apply the best evidence – but also as a matter of ensuring that health researchers are responsive to health research needs at the level of practice. This has led to the call for a 'learning

health system' – a system in which the health research agenda can be more collaboratively developed to be responsive to, not merely the unchangeable demographic and epidemiological transitions, but to the need for a coherent, 'seamless' and dynamic flow of information across the health system. Facilitating this flow in information, at the levels of policy, research and practice, creates a continuous learning process that matches research need – as identified by health stakeholders, including patients – and research results. This in turn can enhance a culture of shared responsibility creating a learning environment that links all 'actors' in the health system – patients, health care providers, insurers, researchers and health policy makers – in the common cause to improve the nature and practical applicability of high quality health evidence.

The notion of a learning health system responds to the realization that health systems 'learn' when they can rely on cyclical dynamics to identify issues, systematize relevant evidence, present alternative actions, select the best action, implement the change, observe its consequences and, if necessary revise and reshape the response. Problems that are identified and scrutinized – whether they are systemic concerns at the policy or health systems level, or more discrete and individualized problems in clinical practice – can in this way be practically resolved in light of the best available evidence. In this way the health system 'learns'. This is a matter, in the first instance, of research dissemination and 'knowledge transfer', but it is also, and more crucially, a matter of an argumentative dialogue in which all stakeholders are brought together, not only to identify and understand the critical issues, but also, collaboratively, to identify alternative responses and select the best of these for implementation, in light of a realistic and feasible implementation strategy.

In order to successfully respond to the challenges that the Swiss health system faces now and in the future, the University of Lucerne in collaboration with the four partner communities,

1. SSPH+ together with partner universities of its university network,

2. partners from the universities of applied sciences,

3. partners from primary care, and

4. partners from the Swiss Academies,

proposes to develop an enhanced learning health system strategy by means of a **national platform for health system and service research, policy and practice.**

7.2   **Projektinhalt** (*Detaillierte Darstellung des Projekts*)

Project content (*detailed description of the project*)

THE SWISS LEARNING HEALTH SYSTEM (SLHS) PLATFORM: PRIORITY ACTIONS AREAS AND MECHANISMS

The proposed Swiss Learning Health System (SLHS) is a collaborative initiative of four partner communities,

1. SSPH+ together with partner universities of its university network,

2. partners from the universities of applied sciences,

3. partners from primary care, and

4. partners from the Swiss Academies,

that will directly address the challenges that the Swiss health system will face in the coming decades, by initiating a national platform for sustainable health system research agenda-setting, problem-solving, knowledge implementation and capacity building (see Annex 2 for a detailed list of the four partner communities and respective institutions).

The SLHS will integrate the best research evidence and information on optimal health services delivery practices with proven collaborative mechanisms and strategies for issue identification and, through a participatory dialogue, solution selection and implementation planning. Learning will be encouraged throughout the health system and enhanced by means of a collection of dialogue-based interactive mechanisms, described below, that together fully integrate health policy, health services and health systems research. The SLHS's conceptual approach incorporates the Research Concept 2013-2016 of the FOPH, SAMS's Concept for Health Services Research, the WHO's health systems framework, the concept of a learning health system as promulgated by the Institute of Medicine of the United States National Academies and the tools of implementation science.

The SLHS will act as a national health research and health policy agenda-setting, problem-solving, knowledge implementation and capacity building infrastructure. Towards its establishment the founding academic institutions are requesting from SUK a start-up funding for 4 years from 2017-2020. It is envisioned that the SLHS, from 2020 onwards will become self-sustainable thanks to yearly, unrestricted educational grants by the members of the envisioned stakeholder network involving actors from the governmental, non-governmental, academic and private sectors.

SWISS LEARNING HEALTH SYSTEM (SLHS) PRIORITY ACTION AREAS

Based on current conceptual frameworks for health systems and services research (See Annex 1, Figure 1) and the subsequent SLHS platform goals, the SLHS will focus on three priority action areas for the first planned period 2017-2020:

1) Bridging research, policy and practice;

2) scientific capacity building; and

3) management of standardized health information.

These three priority action areas are understood to be fully integrated components of the proposed national platform. In effect, the SLHS respond to a coordination challenge in which the basic actors or stakeholders in the Swiss health system cooperatively exploit existing opportunities for synergies for sustainable policies to bridge the research-practice divide. A learning health system not only translates research knowledge into practice, and uses structured methods for implementation into practice; it also creates a research agenda by identifying open questions and developing issues that need to be researched. The proposed platform thus includes both a realistic strategy for issue identification and resolution, and a process by which Swiss research capacity can be developed. Lastly, to ensure the capacity to exploit research results, the platform includes a sophisticated and state-of-the-art informational management mechanism.

The three priority action areas must build on, and augment, the effectiveness of existing structures. This means enhancing learning opportunities that already exist but are not fully exploited. In part the platform depends on enhancing the effectiveness of existing structures and management protocols for health information. By strengthening existing avenues of effective interaction between actors, including feedback loops between research and practice already in place, it will be possible not only to refine research questions that are both practically relevant and timely, but also to ensure that the information that reflects the complete health experience is collected and used throughout the health system.

SWISS LEARNING HEALTH SYSTEM (SLHS) MECHANISMS

1) Bridging research, policy and practice

The challenge that the SLHS addresses is the complex and daunting task of closing the gap between what is known and what is done in practice ("Knowing is not enough; we must apply. Willing is not enough; we must do." – Goethe). Switzerland has some of the best health researchers in the world, as well as a superior health care delivery structure. But these are often not enough to ensure that health care is structured to develop and apply evidence that is not only the product of scientifically rigorous methodologies, but which is also directly relevant to patient needs. The gap between knowing and doing is often reflected in missed public health opportunities in the form of preventable illness and injury, as well as systems-level inefficiency and waste of resources. Health policies are required to address these challenges, but policy-making must be responsive to, and informed by, the best research evidence and information available. Yet for appropriate and relevant health information to be available for policy, it must at a minimum be collected, but as well optimally understood and applied where it can do the greatest good and contribute to practice that yields the best outcomes.

To achieve this goal, the SLHS proposes to initiate eight powerful bridging mechanisms: *1A) Issue Identification and Prioritization, 1B) Evidence Synthesis including Policy Brief* and *Rapid Response Synthesis, 1C) Stakeholder Dialogue, 1D) Implementation Guidance, 2A) Research Scientist Program – PhD Scholarships, 2B) Learning Health System Enhancement Program, 3A) Health Information Standardization,* and *3B) Health Data Warehouse.*

The Swiss Learning Health System
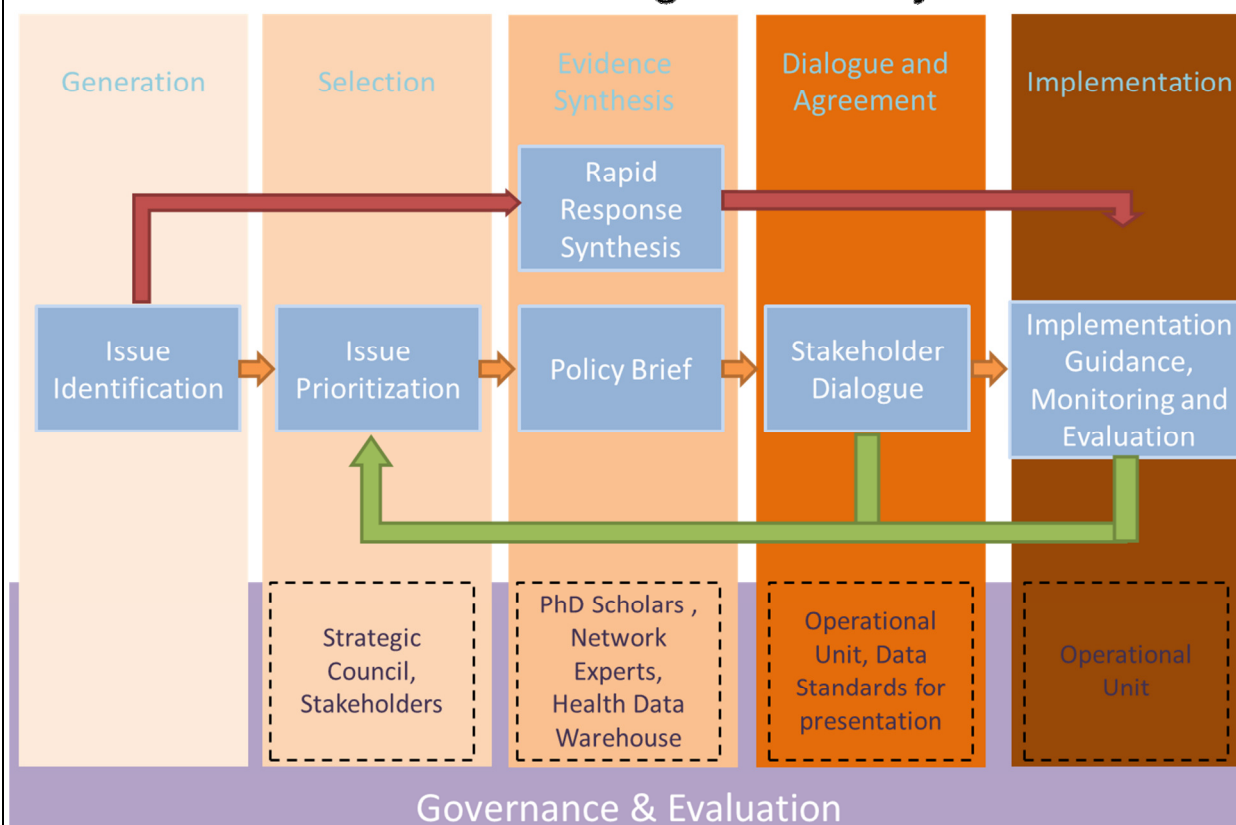
1A) Issue Identification and Prioritization

Issue Identification: In order to identify pressing topics and current or upcoming challenges in health services and health policy, three input streams will be utilized. First, existing health system, policy and practice fora will be visited and screened in scouting initiatives by the platform's partners (members of the Strategic Council, SLHS Coordinators, scientific staff of partner institutions). These existing fora may include scientific and professional meetings such as "Trendtage Gesundheit", SSPH+ retreats, or "Public Health Schweiz" (4;5). Secondly, direct contacts to and dialogues with policy-makers such as governmental representatives and elected officials, government departments, and interest groups will directly input issue identification and inform and influence prioritization of topics. Thirdly, the platform partners themselves will identify and define topics based on their extensive experience and special insights into timely and important issues in health -- including for example 'bottom up' topics from the "Netzwerk Hausarztmedizin" (Network for primary care), issues identified in the Swiss Spinal Cord Cohort Study (SwiSCI) (6) of the University of Lucerne's Department of Health Sciences and Health Policy partner Swiss Paraplegic Research (SPF), and from research in the Swiss Childhood Cancer Registry (7). Upon the launch of the platform a constantly updated *Topic List* will be the basis of prioritizing topics that will then be developed further through the first application of the Evidence Synthesises mechanism and toward Stakeholder Dialogues. The founding basis of this list will be the topics of the PhD scholarships at the partner universities jointly advertised in a call at the beginning of the funding period.

Issue Prioritization: To decide where to start, the SLHS Strategic Council will guide priority issue identification in interaction with all participants in the SLHS from the Stakeholder Network. This will be achieved by using established methods for priority setting, including in particular that of the UK-based James Lind Alliance for research priority setting (8), and under consideration of ethical and legal principles of setting priorities as an essential framework. In this process, the SLHS will ensure that salient social demands, as well as researcher-generated priorities are comprehensively considered and included in a Stakeholder Dialogue (described below) aimed at implementing them in practice or policy.

Example: The SwiSCI cohort study has shown that caregiver burden is one of the main issues people with spinal cord injuries face in their adjustment processes after leaving the clinic and entering a daily routine. Overburdening family and close relatives has been shown to lower household income, increased occurrence of preventable secondary conditions and burn-out or depressive symptoms in family carers and enhanced health expenditures at both individual and health system levels. Similarly, respite care interventions have a proven track record in effectively countering such issues. Discussing ways the health system can effectively identify situations of overburdening and effectively deal with problems caused by care giver burden is a prime example of a learning health system issue.

Once issues have been identified and prioritized, calls for so-called Evidence Synthesis will be issued by the SLHS (Operational Unit) to which all academic partner institutions can reply to and consequently commence with the development of Policy Briefs (leading to a Stakeholder Dialogue) or Rapid Response Syntheses as next mechanisms of the SLHS as described below. An initial, yearly start-up funding provided to partners leading the development of Evidence Syntheses and Policy Dialogues is to be gradually replaced by contributions from stakeholders interested in the SLHS services to sustain operations of the mechanisms beyond 2021.

1B) Evidence Synthesis (Policy Brief and Rapid Response Synthesis)

A prerequisite to issue deliberation and a learning health system is the review of evidence supporting options to target the problems identified. The SLHS will deliver two such evidence synthesis tools, a) the Policy Brief which serves as a basis for a Stakeholder Dialogue, and b) the Rapid Response Synthesis.

Policy Brief: Once the issue for a Stakeholder Dialogue has been identified, the next action is to create a so-called 'policy brief', that is a document that can be distributed in advance to the participants of a Stakeholder Dialogue to prepare for the actual deliberation. The policy brief will be distributed to the participants of a Stakeholder Dialogue a month in advance. Following the structure developed by Lavis and colleagues (9), a policy brief is a document that:

a) describes the problem at stake by explaining all the relevant contextual factors;
b) presents a number of evidence-based solutions to the problem and for each possible solutions explains relevant aspects including the expected benefits, eventual harms, and the costs; and
c) identifies barriers and facilitators to the implementation of each solution.

Rapid Response Synthesis: The health service landscape in Switzerland is constantly changing and spontaneously disclosing gaps in services or supplies. Quickly developing health service demands are not always identified, or identified in a timely manner. It is anticipated that for most health system requirements, a 'Stakeholder Dialogue' will be the best mechanism for addressing service gaps in a manner that, over time, will be able to foster sustainable learning processes and to make them transparent. Yet when acute needs arise, the Dialogue may not be agile enough to respond meaningfully or quickly enough to address the evolving health situation.

Unlike Stakeholder Dialogues, where the relevant stakeholders engage in a deliberation over the best course of action, Rapid Response Syntheses will identify and synthetize the best course of action by examining current evidence and possible solutions. The best course of action will be identified through a top-down approach, thanks to the active participation of the members of the network of academic institutions involved in SLHS and SSPH+, one that represents the full range of competencies with respect to scientific disciplines and the functions of the health system (see Annex 3 and list of competencies of the academic institutions involved in the SLHS).

While the action of 'issue identification' will specify issues that require more time-limited planning, execution and implementation of responses, the SLHS will implement "Rapid Response Synthesis". The synthesis document will include a summary and synthesis of the existing evidence of the identified problem and options for targeting the problem, as well as an implementation guide with issue specific implementation considerations, implementation monitoring and evaluation guidance.

Examples: An unexpected and sudden influx of refugees challenge the capacities of the Swiss health services allocated to screen new arrivals for infectious diseases and to tend to all health care needs. Much needed resources in terms of personnel, essential medicines and medical equipment need to be found, distributed and their effective use coordinated. The SLHS could be tasked to develop a Rapid Response Synthesis of evidence answering these issues, for instance what health professionals are needed, what essential medicines, what interventions need to be administered. The Synthesis would in addition offer implementation guidance and monitoring mechanisms. The level of detail and completeness of the Synthesis depends on the amount of time given for its development.

A long-standing problem in Switzerland is the availability of primary care doctors. This shortage has been discussed and analysed from many angles, in various fora, with political interests arguing strongly for a means for a truly comprehensive and clear evaluation and deliberation of options. One problem identified is the trend of medical students choosing specialities rather than opting to become a primary care doctor in the community. A Policy Brief could be developed by the SLHS's independent, scientifically founded network that draws on the collective expertise of its partners and delivers a comprehensive document as the basis for a Stakeholder Dialogue of all relevant partners who reached agreement on implementing options to solve the problem of specialisation (by introducing incentives to students choosing the primary care educational track).

For further examples of policy briefs, see Lavis et al (2009) (http://www.health-policy-systems.com/content/7/S1/S13).

1C) *Stakeholder Dialogue*

Research evidence is essential for health policy development, and evidence-informed health policy making is now widely recommended for its value in implementing the best available research data. The process of decision-making in healthcare is essentially participatory, as it puts into play different stakeholders who have to interact and agree on the identification and implementation of a best course of action. But this interaction is not an easy task, as it can be negatively influenced by institutional constraints, time issues, pressures from interest groups, conflicting values and social forces and, last but not least, by a lack of communication skills and procedural ethics (rules for guaranteeing integration of minorities, compensation of power-asymmetries and comprehensive representation of perspectives and interests) in argumentation and negotiation. As a consequence, there is a global failure to translate research into practice and policy.

The SLHS aims to implement a mechanism to assist evidence-informed health policy making known as 'Stakeholder Dialogue'.

The concept of Stakeholder Dialogue has been promoted as a policy tool by Lavis and colleagues (9) at McMaster Health Forum (https://www.mcmasterhealthforum.org). The Stakeholder Dialogue proposed here borrows from the model conceptualised by Lavis and colleagues, but is augmented by applying models from communication sciences and specifically from argumentation theory. This model will be refined by insights from the SLHS health sciences and health policy expertise, discourse ethics and law.

A Stakeholder Dialogue takes the form of a structured communication process that implements deliberative dialogue where two or more stakeholders work collaboratively towards common understanding and reach agreement. It structures the communication process among the stakeholders in three stages, in order to fulfil pre-conditions of successful decision-making. More specifically, following a readapted version of the approach by van Eemeren and colleagues (10), these stages are as follows:

a) The confrontation stage: stakeholders have to agree on the issue at stake in the decision-making and establish if and where they have a disagreement over the best course of action.

b) The argumentation stage: each stakeholder has to support their positions to enable other stakeholders to understand and appraise them, and eventually to express their doubts or concerns.

c) The conclusion stage: stakeholders evaluate the extent of agreement on a specific course of action, or the next steps required to reach this agreement.

Participants are encouraged to adhere to the following guiding principles of non-discrimination to enhance the likelihood of a free and unbiased flow of discussion:

1.*Freedom rule:* Parties must not prevent each other from advancing standpoints or from casting doubt on standpoints.
2.*Standpoint rule:* A party's attack on a standpoint must relate to the standpoint that has been advanced by the other party.
3.*Relevance rule:* A party may defend a standpoint only by advancing argumentation relating to that standpoint.
4.*Starting point rule:* A party may not falsely present a premise as an accepted starting point nor deny that a premise represents an accepted starting point.

5. *Usage rule:* A party must not use formulations that are insufficiently clear or confusingly ambiguous and a party must interpret the other party's formulations as carefully and accurately as possible.

The format will be further developed based on practical experience gathered by running the Dialogues and valuable feedback gained from participants.

Running the dialogue: On the day of the dialogue stakeholders will be guided by a moderator in reaching agreement on the best solution (in regard to ethics, efficacy and efficiency) to solve the issue at stake. The dialogue will start with a short preparatory section where stakeholders will be instructed on the communication rules of structured deliberation. The moderator will guide the dialogue by directing the process, by stimulating participants to confront their views and by facilitating confrontation over differences of opinion. The dialogue will close by deciding whether a) there is agreement over a course of action or b) there is no agreement and either i) there is a need of a second Stakeholder Dialogue to foster agreement or ii) more research is needed as there is a lack of evidence to agree on a best solution. When outcome i) occurs, the SLHS will engage stakeholders in structured negotiation to solve the difference of opinion. When outcome ii) occurs, the SLHS will inform the research agenda of the different partners with issues identified during the Dialogue.

Overall, the Stakeholder Dialogue is a most promising mechanism, both for identifying actions that will successfully put research results into the main decision-making areas in healthcare – from policy, service delivery and financing, professional practice to the education of the workforce and health information collection and dissemination – and identifying issues for a research agenda that matches the actual needs of the health system, patients, service and clinical care providers, payers and other relevant actors.

Example: Projections from the World Health Organisation (WHO) show that healthcare systems need to prepare for the increasing numbers of patients experiencing non-infectious chronic health conditions. A main strategy for Switzerland, identified during the annual conference of the Swiss School of Public Health (SSPH+), involves the creation of comprehensive information and care programs run by teams of non-physician experts in disease self-management, disease prevention and health promotion to assist people and families with chronic diseases. The main questions for decision-making include: who should be part of these teams? with what responsibilities? what training would these teams need and which institution should provide it? What would the implementation steps be for setting up these teams nationally?

The identification of this topic would lead to the creation of a policy brief collecting evidence from the literature on whether and how this issue has been addressed in Switzerland or in other countries. On the basis of the evidence collected, the policy brief would suggest a maximum of three solutions to the issue and an analysis of barriers and facilitators to the implementation of each solution in the Swiss context.

On the day of the Stakeholder Dialogue, stakeholders (including physicians, nurses, social workers, health educators, representatives of patients and their families) would be invited to decide on the best options with the aim of reaching agreement. The dialogue could end in three ways: 1) All stakeholders agree on one option (so that the next step would be to create an implementation plan under the guidance of the SLHS); 2) stakeholders are not in the position to decide, as there is a lack of evidence (and researchers are informed about the need to investigate this issue further); or 3) the dia-

logue ends with disagreement about the best option and a second dialogue will be planned where stakeholders will be invited to reflect on the nature of the disagreement and to engage in negotiation.

1D) Implementation guidance

Essential for a learning health system is the evaluation of change or implementation. The third mechanism of the SLHS monitors the implementation efforts led by stakeholders having prioritized issues raised either in a full Stakeholder Dialogue or based on a Rapid Response Synthesis. The SLHS platform experts on implementation will issue implementation considerations within the Evidence Synthesis documents and as part of a Stakeholder Dialogue Summary. A survey is administered by the SLHS Operational Unit half a year, and one year after the Stakeholder Dialogue when purposeful implementation efforts have been triggered. Collected data is analysed and presented back to relevant stakeholders as part of a true learning health system cycle. For this activity, the SLHS will rely on existing frameworks for evaluating practices and policy in healthcare (11; 12).

2) Scientific capacity building

The success and sustainability of a SLHS presupposes a focused development of research capacity in health systems, informed by the need to be able to address challenges using a national platform for sustainable health systems and services research that bridges policy, research and practice. This in turn presupposes a new kind of health research scholar, one who understands health systems and service research as a co-operative endeavour involving multiple stakeholders and which demands potentially new synergies of skills and expertise, including in particular implementation science. The availability of well-trained and capable research scientists, with a working ability to understand and structure research in the intersection of practice, policy and research is essential for establishing a learning health system.

To meet this capacity building challenge, the SLHS proposes two mechanisms:

2A) Research Scientist Program – Joint SLHS-SSPH+ PhD Scholarships

The first is a research scientist program to systematically train PhD candidates in the range of skills presumed by the SLHS including the unique opportunity to be actively involved in the conduct of the SLHS mechanisms, namely Evidence Syntheses (Policy Briefs and Rapid Response Synthesis) and Stakeholder Dialogues (see 1B and 1C). The PhD program is at the heart of the scientific capacity building efforts of the SLHS.

To build on the highly successful past investments of SUK, SSPH+ and SLHS will jointly lead this program. In the framework of the SSPH+ PhD Programs (currently two, namely health economics and public health) with a range of offers in the field of health systems, establishing a complimentary third pillar with a health systems and services track will be highly efficient and further strengthen the very interdisciplinary SSPH+ PhD programs. The SLHS grant will allow to complement the SSPH+ PhD programs with a joint SLHS-SSPH+ PhD scholarship program for 20 PhD scholars, with 10 being funded by the participating partners and 10 with the SUK funds. Two PhD positions will be located at each partner university (see Annex 4) with the exception of the University of Lucerne that will host 8 PhD positions. SSPH+ will, in alignment with the Strategic Council, coor-

dinate the competitive assignment of these PhD positions to applicants from the partner institutions. This incorporation into existing SSPH+ structures acts as a guarantee for the PhD programs success. Following the structure of the European Commission's Marie-Curie PhD program (13) and the successful model of the SSPH+ PhD Program, these scholars, despite their different academic or national backgrounds, will pursue their PhD work under a common framework of quality standards and procedures at the partner universities but coached as an interdisciplinary cohort of SSPH+ PhD scholars. The SLHS will further strengthen the interdisciplinary scientific exchange of the PhD scholars conducting research in interrelated fields at the different institutions.

The SLHS-SSPH+ PhD scholars will have access to the entire SSPH+ educational programs and platforms and to educational courses offered by the graduate schools of the participating universities. With complimentary courses tailored to the needs of the health system and services pillar, all SLHS-SSPH+ PhD scholars get the opportunity to develop a common understanding of this field and the learning health system. The educational resources already available at the participating academic institutions in combination with the offers of SSPH+ programs provide a strong preparation for the PhD scholars. The *SLHS-SSPH+ PhD program curriculum* will be developed under the guidance of the SLHS Strategic Council.

As part of the SLHS cooperation, SSPH+ will facilitate the promotion of PhD candidates from universities of applied sciences. PhD candidates from universities of applied sciences must fulfil the same requirements and acquire the same core competences in the methodology needed for the PhD project as candidates from universities. These requirements include:

– Supervision by a PhD committee led by a University professor who serves as primary promoter and the possibility for scientists at universities of applied sciences to serve either as second promoter (in case of a "Habilitation"- qualification) or co-promoter (in case of a PhD qualification);
– The PhD committee will ensure compliance with each university's PhD regulations, so that the PhD scholars progress as defined in the PhD research plan, and assess the quality of the PhD work in regular evaluations (at least once a year);
– A PhD progress report will be submitted to the responsible coordinator at the SLHS Operations Unit once a year;
– One central work package of each PhDs thesis project plan must be the development of either a *Policy Brief* or of a *Rapid Response Synthesis* and assistance in the preparation of a *Stakeholder Dialogue*;
– Attendance of SLHS courses according to the *SLHS-SSPH+ PhD program curriculum*.

All SLHS-SSPH+ PhD scholarships will be advertised in a joint call at the start of the program. The partner universities will define the topics of their respective PhD positions. These topics thus form the basis for the Topic List of potential topics for Evidence Syntheses and Stakeholder Dialogues.

In time, the research scientist program may be supplemented by a young investigator program in which the most promising PhD scholars can be encouraged to expand their training and acquire more in-depth knowledge and a scientific track record on a particular aspect related to the learning health system.

2B) Learning Health System Enhancement Program

Secondly, a Learning Health System Enhancement Program will supplement existing PhD programs and curricula with expertise related to the principles of a learning health system, and in particular the basis for communication between research, policy and practice. To this end, the SLHS will conduct short educational courses in protocol development and research seminars and conferences that showcase research on specific topics, including the prioritization and the implementation of results into practice at different levels of the health system. In time, participating universities will create and implement interdisciplinary teaching modules directly focusing on the three policy areas of the SLHS, perhaps using as case studies successful outcomes of the SLHS in practice. The goal here is to develop and promote a common language for all actors in the learning health system.

3) Management of Standardized Health Information

According to the WHO, health information is a fundamental 'building block' of health systems and the production, analysis, dissemination and use of reliable and timely information are preconditions for the successful operation of a health system at all levels – policy, research and practice (see Annex 1, Figure 2 and http://www.wpro.who.int/health_services/health_systems_framework/en/). A country's research capacity fundamentally depends on the availability of valid and reliable health information; but the same is true for clinical practice and evidence-informed policy development. Because health information serves multiple health systems actors, and since data users have different needs and requirements, it is essential that health information is managed in ways that it becomes accessible for multiple actors for multiple purposes.

Thus, an important prerequisite for health services research is standards for the structure and content of data, including structured entry points to existing data sources, as well as the application of appropriate methods for the analysis of coded patient and health system data. These standards need to be suitable for the collection of new data, as well as the transformation of existing data into a standardized reporting format.

The third important goal of the SLHS, therefore, is the development of national data standards for structured reporting and, where appropriate, the collection of new multi-purpose health information. Ultimately, data is to be made understandable, accessible and comparable for interpretation by relevant stakeholders in Swiss health policy and practice. This is fundamentally a collective goal as it is impossible for any single researcher to be able to overcome the barriers in acquiring relevant and comparable health information. What is required is the integrated participation of all SLHS academic institutions, as well as the additional resources of the WHO, with the long standing and proven collaboration with the University Lucerne in the development of international classifications, and the ontological know-how of the University of Neuchâtel.

Essentially, there are two components of the goal of making standardized health information available and accessible for health systems research, policy and practice: i) health information standardization, and ii) a data warehouse.

3A) Health Information Standardization

Towards the first objective, the SLHS will propose and develop national data standards in collaboration with the WHO, suitable to comprehensively describe both the health and functioning of persons and populations and the components of the health system as a foundation for sustainable decision-making in the Swiss health system. The SLHS is conceptually grounded in the view that information about individual and population health includes but also extends beyond basic medical and biological information. The WHO's International Classification of Functioning, Disability and Health (ICF) was specifically developed to collect the essential information needed to comprehensively describe and understand health and health systems (WHO, 2001). This includes information about the lived experience of a person, how a person's health plays out in their lives, and how a person's health in interaction with the person's physical, interpersonal and social environment helps or hinders the individual to live the kind of life, and achieve the goals and aspirations that each individual seeks. The SLHS's on-going collaboration with WHO and its Classification, Terminology, Standards team ensures that the SLHS will be able to contribute to the development of data standards central to health services and systems research, both in terms of the classification of disease entities (with the development of the ICD 11, projected for 2017) and the application of ICF both for descriptive and measurement purposes. This will include mapping frequently used clinical measurement instruments and patient-reported outcomes to national data standards.

It should be emphasized that with the SLHS, Swiss medical societies across medical specialties have a unique opportunity to be directly involved in the development of data standards for health conditions and functioning for which they are national experts. This is possible because of their collaboration with the SHLS and through their relevant international umbrella organizations in official relation with the WHO. Developed at the University of Lucerne in collaboration with WHO, measurement instruments will be equated on a common metric for a comparison of "health improvement units" along the continuum of care, across health interventions, health conditions and hospital service areas and other relevant differentiations. The SLHS will also be able to assist researchers in the selection of suitable measurement instruments for the assessment of meaningful outcomes (or outcome indicators or parameters) and give guidance in the transformation (or coding) of previously collected data in a standardized format based on the Swiss data standards and a systematic inventory of existing indicators. Here, a strong collaboration with the Swiss Health Observatory, the Federal Statistics Office as well as health and accident insurance companies will be sought.

On the other hand, from the perspective of WHO, work on Swiss data standards coordinated by the SLHS will provide a unique opportunity for collaboration in a system wide implementation of WHO ICF-based data standards, serving as a model for other countries.

Example: There is an increasing need to include functioning information in the development of diagnoses related groups (DRGs), or functioning related groups (FRGs). It is widely recognized introducing prospective payment systems and SwissDRG, has meant that health care services are inadequately described and costs are not necessarily covered, even with an efficient use of resources (as in rehabilitation settings or in cases of disability instead of co-morbidity). This leads to financial pressure on health care providers and in extreme cases to an under provision of necessary care. In such cases the extension of DRGs could provide a useful target for improving case-mix systems (14) and to efficiently allocate financial resources.

3B) Health Data Warehouse

Data that is not available is data that cannot be used, for any purpose. Key to the SHLS goal of providing tools for the enhancement of communication between policy, research and practice in the Swiss health system is access to relevant and useable health data. This requires standardization and the capacity to make data comparable that has been collected from a variety of health settings, registries and administrative sources by a variety of actors using a variety of data collection tools and methods. In addition, disparate data sets needs to be linked and information from various sources aggregated.

The SLHS will, supported by its four partner communities (see Annex 2), identify and update an inventory of data sources for health services and systems research, such as clinical registries and cohort studies, national panels and surveys, hospital and insurance data, and government statistics. This entails identifying legal challenges in accessing protected data and possible ways to accommodate these based on the experience and best practice of the SLHS partners. The SLHS will promote the health database integration as outlined in the 2013 Manifesto by Public Health Switzerland (15). In collaboration with the Swiss Health Observatory, FOPH, the SSPH+ network, and other organizations, the SLHS will facilitate the establishment and maintenance of clinical registries and cohort studies. Relying on expertise developed for example in Lucerne, the SLHS will assist researchers in data source selection, mathematical linkage and methodologies to analyse these generally complex and often multi-level data sets. As a SLHS service, the expertise of the Health Data Warehouse will also be open to the public.

Example: In developing cost-effective care models, patient information must be recorded over the whole spectrum of care, from diagnosis and treatment to follow-up care and rehabilitation. This requires a link of different data sources, including physician-level data and hospitalization records, health and social insurance data, and background characteristics of the individual (ideally with a history of health records and use of health care services), always adhering to ethical and legal criteria of protection of individual health data. The SLHS together with its collaborating partners will inform researchers about the available data sources and will provide guidance on the use of appropriate tools how the relevant data sources can be linked, e.g., based on direct linkages or probabilistic matching methods. A prerequisite for a successful linkage is the availability of standardized information and efficient tools to handle big data, which will be provided through mechanisms of the data warehouse (15).

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

Goals *(What are the goals of the project and how the project's success be measured and shown?)*

The greater aim of the Swiss Learning Health System (SLHS) is the continuous integration of scientific foundations into the health system as well as the research based development of solutions to health political challenges. The SLHS offers appropriate mechanism in the sense of a learning system in interaction with actors from science, policy and practice.

The specific project objective is to establish a national platform for health system and service research, policy and practice. Carrier of this platform is a nationwide Swiss network of academic expertise and competency that will cooperate within a framework of a stakeholder network with actors from policy and administration, non-governmental organizations as well as the private sector. In direct reference to the 'Research Concept 2013-2016' of the FOPH and the demand for strengthening health services research by the SAMS *the SLHS pursues three main and broadly defined goals:*

1) Establishment of a bridging mechanism between research, policy and practice;

2) promotion of the development of scientific capacities for health systems and service research; and

3) management of standardized health information.

Specifically, these three goals are to be achieved by applying eight mechanisms: Issue Identification, Evidence Synthesis including Policy Brief and Rapid Response Synthesis, Stakeholder Dialogue, Implementation Guidance, Research Scientist Program – PhD Scholarships, Learning Health System Enhancement Program, Health Information Standardization, and Health Data Warehouse.

As we know, since measuring the direct impact of implementation efforts in policy or the health system at large is impossible the best option is to measure proxies outcomes. *The success of applying the SLHS mechanisms in discretely defined projects and their targets will be measurable* by: a) the number of Evidence Syntheses with a target of 20 in 4 years, b) the number of Stakeholder Dialogues with a target of 8 in 4 years, c) the number of graduated PhDs and number of PhD thesis respectively, d) the definition of national data standards for structured reporting and for the collection of new multi-purpose health information, e) the existence of accessible expertise and information in the Health Data Warehouse. We can thereby differentiate between process indicators and content indicators, which are defined as milestones and deliverables in section 7.4.

7.4 **Projektorganisation und Zeitplanung** *(Detaillierte Darlegung der Projektstruktur, Art der Zusammenarbeit und der Zeitplanung; Milestones)*

Project organisation and timelines *(detailed description of the project's structure, type of collaboration and time planning; milestones)*

Governance

The SLHS is organized as a national 'information and service infrastructure'. Its organization includes the following:

1) An **Operational Unit** *hosted by the Department of Health Sciences and Health Policy at the University of Lucerne that coordinates the programs and activities of the SLHS.*

The Operational Unit is led by a Professor of the Department of Health Science and Health Policy and it is composed of two positions for scientific staff with PhD (Coordinators) and one office assistant (40-50%).

The Operational Unit is responsible for:

i) monitoring progress and evaluating the project outcomes as well as for the reporting as required by the funder;

ii) coordinating the calls of Evidence Syntheses in close cooperation with the Strategic Council;

iii) administering the Stakeholder Dialogues;

iv) coordinating the development of the Health Information Management Tools in cooperation with the academic partners of the expert network;

v) contributing to the further expansion of the Expert Network database of SSPH+ and the existing Expert Network databases of the partners by administering the SLHS Expert Network with its meta-level connection to the partners' networks;

vi) coordinating the PhD scholarship program in close cooperation with those responsible at the SSPH+ and with those responsible at the Graduate Schools of the participating Universities. 30% of one coordinator position will be specifically assigned to the management of the joint SLHS-SSPH+ PhD Scholarship program under the guidance of SSPH+; and

viii) assisting the SLHS Strategic Council in communicating with partners, including the wider circle of non-signatory partners.

In the SSPH+ PhD Program, the Unit will be a member of the leading board with the responsibility to strengthen the SSPH+ PhD program tracks in the core themes of SLHS.

SLHS Governance model
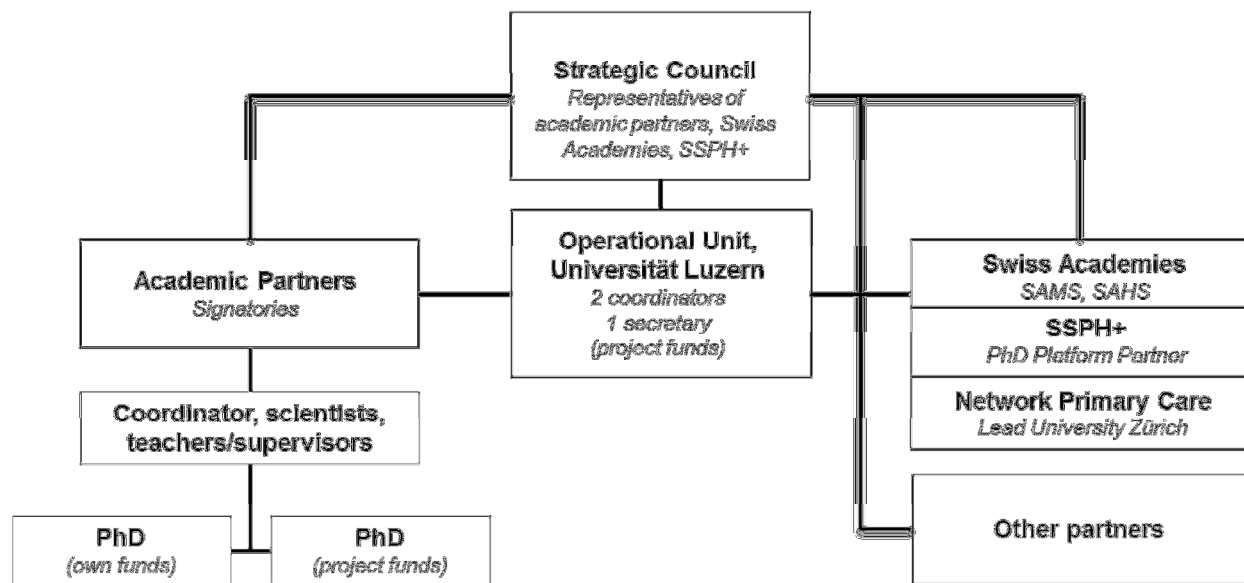
2) *A **Strategic Council** including representatives of the founding network that will dynamically develop and guide its activities and whose members will be elected by the members of the SLHS based on transparent terms of reference.*

The Strategic Council is made up of one representative of the participating academic institutions each (7 Universities and Universities of Applied Science) and representatives of the SSPH+, SAMS, and the Swiss Academy of Humanities and Social Science (SAHS). The Council will convene for a constituting meeting during the Kick-off meeting of the SLHS in 2017 and thereafter meet in person once a year to coordinate its work. In 2020 it will contribute to the joint SLHS event of all partners to evaluate progress and successes of the SLHS in the first operational phase 2017-2020 and to inform the development of the funding and operational plan 2021-2024.

The Council is responsible for:

i) the supervision of the SLHS mechanisms in cooperation with the participating universities and universities of applied science;

iI) the prioritization of the *Issue Topic List*;

iiI) formulating the calls for *Evidence Syntheses;*

iv) deciding (based on applications to those calls by the partner academic institutions) on how to produce *Evidence Syntheses* under the leadership of a qualified scientist from the expert network;

v) contributing to the development of the *SLHS-SSPH+ PhD program curriculum* including the selection of existing SSPH+ courses and other offers of the academic partner educational courses;

vi) giving guidance in the development of the SLHS specific tracks in the SSPH+ PhD Scholarship Program; and

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

The composition of the Strategic Council will guarantee coordination, complementarity, and the strengthening of synergies of SLHS and the activities of its four partner communities,

1. SSPH+ together with partner universities of its university network,

2. partners from the universities of applied sciences,

3. partners from primary care, and

4. partners from the Swiss Academies.

3) New SLHS Expert Network

In applying the SLHS platform's mechanisms within its Priority Action Areas a continuous stream of new and well established contacts of and within the partner institutions will traverse through the SLHS and its mechanisms. Standard parameter information on, for instance, line of expertise, contact links and other relevant information to the SLHS and all partners will be documented. The SLHS Expert Network will serve as a meta-level connection to existing expert network databases of the SLHS main partners, including SSPH+, Universities of Applied Sciences, Netzwerk Hausarztmedizin, SAMS, and SAHS and the information gathered as an additional resource to these databases. The SLHS Expert Network will be further expanded to include additional experts from FOPH, the GDK, SUVA, and large health insurers. This will enable SLHS and all users to increasingly draw on a broader and yet specialized network of experts to help inform, contribute to and expand its operations. In particular, all employees of the SLHS partners that are registered with the Expert Network databases of the partners can be called upon or act as teachers in the SSPH+ PhD courses and in assisting the development of SHLS Policy Briefs and rapid Response Synthesises.

4) Roles and responsibilities of scientists at the partner institutions

a) **Coordinators at the partner institutions** (see Annex 2) are responsible for:

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

ii) coordinating the Policy Briefs and Rapid Response Syntheses by PhDs and senior expert scientists at the partner institution; and

iii) 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 of issues arising to previously developed Policy Brief, and Implementation guidance).

b) **_Scientist and teacher at the partner institutions_** are responsible for:

i) supervising PhDs;

ii) teaching as lecturers to PhDs of the SLHS-SSPH+ Scholarship Program; and

iii) giving expert advice to PhDs developing Policy Briefs and contributing to Rapid Response Syntheses.

Cooperation with existing and new networks

Apart from the close collaboration with SSPH+ as the key partner of the SLHS-SSPH+ PhD Scholarship program and the expanded SLHS Expert Network, the SLHS has a direct association to other partner communities, namely

1. partners from universities of the SSPH+ University network,

2. partners from the universities of applied sciences,

3. partners from primary care, and

4. partners from the Swiss academies.

In addition, there is an association with _Public Health Schweiz_ and the planned project _Strategy to Counter Skilled Staff Shortages._

Relation of the SLHS to SSPH+

1. To fully capitalize on the network and core competencies of SSPH+, the PhD program track in the SLHS relevant domains will be fully integrated and coordinated under the lead of SSPH+. The PhD Scholars of the SLHS will form a cohort within the SSPH+ third pillar programs, namely health systems and service research. This is similar to the EC Marie Curie model, which aims to provide a coherent set of courses and to foster the interdisciplinary scientific exchange of the PhD scholars from different institutions. Scholars will benefit from the interrelated and complimentary courses offered in the SSPH+ PhD program pillars of public health, health economics and the SLHS relevant third track in health system and service research.

2. The SLHS expands the SSPH+ Expert Network database toward the SLHS specific expertise. The SLHS will also make direct use of the database in the context of the SSPH+ for the development of the Policy Briefs and Rapid Response Syntheses.

3. Like all SLHS partners, SSPH+ will also provide a forum for the identification of issues to be included in the SLHS process. SSPH+ will collaborate closely with SLHS in the planning of the annual SSPH+ retreats which is a platform established as well for the identification and discussion of relevant issues.

With members of the SSPH+ directorate in the Strategic Council of the SLHS and through the close collaboration with the SLHS Unit, the complimentary activities and objectives of SLHS and SSPH+ will be fully coordinated.

Relation of the SLHS to Public Health Schweiz

It is envisioned that Public Health Schweiz will provide a forum for the identification of issues to be included in the SLHS process. It is also envisioned that Public Health Schweiz will support the nomination of experts for the SLHS Stakeholder Network.

The alignment of activities is coordinated by the Strategic Council of the SLHS and the Zentralvorstand of Public Health Schweiz, where SSPH+ is represented as well.

Relation of the SLHS to the 'Netzwerk Hausarztmedizin' (Network for primary care)

The strengthening of basic health services in the form of primary health care and community care is an important concern of different current initiatives in the health sector. Accordingly, the network for primary care will take an important position within the framework of the SLHS activities. The 'Institut für Hausarztmedizin' (Institute for Primary Care) of the University of Zurich is thus a founding member of the SLHS. It represents the relevant expertise in the SLHS and coordinates the communication and cooperation with the Network for primary care. The institute has many years' experience in health services research in the context of primary care delivery and has an innovative and structured data collection program at its disposal. Furthermore, there is a new Assistant Professorship for health service delivery research at the institute.

For example:

1. The SLHS Expert Network can rely on the expertise established in Network for Primary Care and the Institute for Primary Care.

2. The Network for primary care will provide a forum for the identification of issues to be included in the SLHS process.

The alignment of activities is coordinated by the Strategic Council of the SLHS and the Institute for Primary Care for the Network for Primary Care.

Relation of the SLHS to the planned network 'Strategie gegen den Fachkräftemangel in den Gesundheitsberufen' (Strategy to Counter Skilled Staff Shortages)

An issue as pressing as strengthening of primary care is the future shortage of qualified health care personnel and will be a central theme of current discussions and initiatives. With the structured methodology of the Stakeholder Dialogues the SLHS intends to contribute to the interaction of research, policy and practice. Therefore, the SLHS will consider the results and activities of the 'Strategy to Counter Skilled Staff Shortages' and work together with its 'Competence Network Health Workforce (CNHW)'.For example:

1. The SLHS Expert Network can rely on the expertise established in the CNHW for the development of the Policy Briefs and Rapid Response Syntheses about the Strategy to Counter Skilled Staff Shortages.

2. The experts and project leaders involved in the CNHW will consider what project results of the activities of the CNHW will be included in the SLHS process.

3. The experts involved in CNHW will take part in Stakeholder Dialogues of the SLHS.

The alignment of activities is coordinated by the Strategic Council of the SLHS and the steering committee of the CNHW.

Core competencies of the partners

Accompanying this application is a summary of the partners core competencies (see Annex 3). From this it becomes clear that the core academic network possesses the relevant access points and competencies in relation to the different functions of the health system referred to in the WHO concept of health system building blocks (see Annex 1, Figure 2). In establishing this academic network attention was paid to the fact that especially for the sectors health policy, law and economics the specifics of the Swiss regions are represented in the selection of partner institutions.

Time planning (including milestones, work packages, and possible continuation beyond 2020)

Year	Work package description	Milestones & Deliverables
2016	**_Organisation_** Establishment of _Strategic Council_ and processes. Establishment of initial core of _the Operational Unit_ (pre-funding of half of a position by the University of Lucerne). _Prioritization_ of first topics for the SLHS process from topics proposed by the SLHS partners (co-applicants). Joint announcement of the **SLHS-SSPH+ PhD-Scholarships.** Call for _Evidence Syntheses._	_Governance and Operations Guide_ available. Initial core of _the Operational Unit_ working _Topics List_ established as a living document and used by the Council. Recruitment of PhD-Scholars (Proposals reviewed; Competitive selection) Assignment of _first Evidence Syntheses_ projects to partner institutions.
2017	**_Organization_** Establishment of _Operation Unit_ (Coordinators and processes). Collection of contact information for the _SLHS Expert Network._	2 SLHS Coordinators and one Office Assistant starting their work. _SLHS Expert Network_ information used by the _Council_ and partners responsible for _Evidence Synthesis._ Contact information shared and compared with and linked to Expert databases of partners.

Development and installation of *Issue Identification* mechanism including list of fora and events to be scouted and contacts in policy, research and practice to be consulted.	Issues identified by partners and within relevant fora (i.e. *SSPH+, Public Health Schweiz, Netzwerk Hausarztmedizin, Swiss Academies*, and *Competence Network Health Workforce (CNHW)*.
Continuous update of *Topic List*.	*Topics List* established as a living document and used by the Council.
Establishment of a formal prioritization mechanism by the Council.	At least one topic selected using the formal mechanism.
Expansion of the Stakeholder Network of partners from policy, administration, non-governmental organizations as well as the private sector through members of the *Strategic Council*.	Comprehensive Stakeholder Network established.
Implementation of cooperation.	SLHS kick-off meeting at the University Lucerne including a constituting meeting of the PhD cohort.
	Involvement of the SLHS in meetings and activities of *SSPH+, Public Health Schweiz, Network primary care*, and *Competence Network Health Workforce (CNHW)*.
Acquisition of external funding in cooperation with the *Stakeholder Network*.	External funds available

	Evidence Synthesis; Stakeholder Dialogue	
	Development of *Policy Briefs* and planning and administration of two *Stakeholder Dialogue* in 2017 for issues defined by the *Strategic Council.* Optimization und specification of the process based on this experience.	First 2 *Policy Briefs* developed, first 2 *Stakeholder Dialogues* held (2/8).
	Joint SLHS-SSPH+ PhD Scholarship Program	
	Expansion of the SSPH+ PhD programs with a health systems and services *PhD curriculum*, including identification of suitable courses offered within the existing SSPH+ PhD programs and courses and of suitable courses offered by the partners of the network (co-applicants). Development of additional SLHS-courses specific to learning health systems and health services research.	*SLHS-SSPH+ PhD scholarship program curriculum* available. Common SSPH+ PhD program rules (criteria, benefits, ECTS requirements etc.) adopted for health systems and services PhD.
	Involvement in ongoing *Policy Briefs*, *Rapid Response Syntheses, and Stakeholder Dialogue*.	PhDs assigned to *Policy Brief* or *Rapid Response Synthesis* and *Stakeholder Dialogue* according to *Topic List*.
	Start of the joint *SLHS-SSPH+ PhD Scholarship Program*.	PhD scholars enrolled at their Universities and attending first courses. Participation in SLHS-SSPH+ PhD kick-off meeting.

PhD progress evaluation.	First PhD evaluation at the partner institution (co-applicants) according to their respective procedures held. PhD progress report to the responsible coordinator at the Operations Unit.
Scientific publication of Evidence Syntheses	First Evidence Syntheses developed by PhD scholars published
Health Information Management Tools Establishment of a _Task-Force Standards_ for the development of national data standards with the participation of relevant actors in science, policy and practice.	Task-Force Standards established.
1) Development of standards for reporting of person-centered health information based on WHO classifications (ICD, ICF, ISCHI) and existing national indicators. The goal is the standardization in a language that both an expert and the wider general public can understand as well as in a format suitable for health system and service research. 2) Development of exemplary 'maps' (qualitative and quantitative _cross-walk_) between common clinical measurement instruments and so-called _patient-reported outcomes_ and the national data standards using a methodology developed at a _ICF Research Branch_ in cooperation with WHO. 3) Definition of a set of indicators for the comprehensive description of the Swiss health system based on the systematic inventory of existing indicators and data.	Detailed work plan to develop reporting standards, exemplary 'maps', and for the definition of indicators available.

2018	**_Organization_**	
	Systematic expansion of the _Stakeholder Network_.	
	Maintenance of _Issue Identification_ list of fora and events. Continued scouted in policy, research and practice.	Continued Issue identification.
	Continued development of _Topic List_ including issue prioritization.	Updated _Topics List_ available including issue prioritization.
	Acquisition of external funding in cooperation with the _Stakeholder Network_.	External funds available
	Evidence Synthesis; Stakeholder Dialogue	
	Implementation of further _Policy Briefs_ and _Stakeholder Dialogues_.	2 Policy Briefs developed, 2 Stakeholder Dialogues held (4/8).
	Joint SLHS-SSPH+ PhD Scholarship Program	
	Involvement in ongoing _Policy Briefs_ and _Rapid Response Syntheses_.	
	Participation in courses offered by the SSPH+ and the partner institutions.	
	Participation in SLHS health system research specific courses.	
	PhD progress evaluation.	Second PhD evaluation at the partner institution (co-applicants) according to their respective procedures held.

PhD progress report to the responsible coordinator at the Operations Unit. |

		Scientific publication of Evidence Syntheses	Evidence Syntheses developed by PhD scholars published
		Health Information Management Tools *Task-Force Standards*: systematic development of national *Reporting Standards* for the most important health conditions in cooperation with the FMH professional society based on relevant experience of the *ICF Research Branch* (part of a WHO collaboration centre) with international professional organizations in the further development of the ICD (ICD-11 as successor to the ICD-10). Establishment of a second *Task Force Data Warehouse,* under consideration of all relevant actors in science and practice. Development of a systematic inventory of existing data sources comprised of cohort studies and clinical registries, national surveys, clinical and insurance data, statistics, etc. as a first step.	*Task Force Data Warehouse* established. Systematic inventory of existing data sources available.
2019		**Organisation** Development of a sustainable funding concept in cooperation with the *Stakeholder Network*. The goal to secure funding of the SLHS beyond 2021. Maintenance of *Issue Identification* list of fora and events. Continued issue identification in policy, research and practice. Continued development of *Topic List* including issue prioritization.	Funding concept available. Continued Issue identification. Updated *Topic List* available including issue prioritization.

	Evidence Synthesis; Stakeholder Dialogue	
	Implementation of further *Policy Briefs* and *Stakeholder Dialogues*.	2 *Policy Briefs* developed, 2 *Stakeholder Dialogues* held (6/8).
	Joint SLHS-SSPH+ PhD Scholarship Program	
	Involvement in ongoing *Policy Briefs* and *Rapid Response Syntheses*.	
	Participation in courses offered by the SSPH+ and the partner institutions.	
	Participation in SLHS health system research specific courses.	
	PhD progress evaluation	Final PhD evaluation at the partner institution (co-applicants) according to their respective procedures held. PhD progress report to the responsible coordinator at the Operations Unit.
	Scientific publication of Evidence Syntheses	Evidence Syntheses developed by PhD scholars published

	Health Information Management Tools	
	Task-Force Standards: Continuation and finalization of work on the systematic development of national *Reporting-Standards* for the most important health conditions.	National *Reporting-Standards* available
	Task Force Data Warehouse: Establishment of mechanisms to prepare data for analysis, to link these and to make them available for health system and service research, taking the 2013 Manifesto by Public Health Switzerland into account. Development of Methodological- Guidelines for the evaluation of coded health information. .	Mechanisms to prepare data for analysis available
2020	**Organization**	
	Joint SLHS event of all partners to evaluate progress and successes of the SLHS in the first operational phase 2017-2020 and to inform the development of the funding and operational plan 2021-2024.	Meeting held; Evaluation report available
	Maintenance of *Issue Identification* list of fora and events. Continued scouted in policy, research and practice.	Continued Issue identification
	Continued development of *Topic List* including issue prioritization	Updated *Topics List* available including issue prioritization
	Preparation of the second phase, 2021-2024, funded by contribution stakeholder contribution from 2021 onward.	Funding and operational plan for the period 2021-2024 available

	Evidence Synthesis; Stakeholder Dialogue	
	Implementation of further *Policy Briefs* and *Stakeholder Dialogues*.	2 *Policy Briefs* developed, 2 *Stakeholder Dialogues* held (8/8).
	Joint SLHS-SSPH+ PhD Scholarship Program	
	Finalization of the publication of the thesis projects.	20 PhD thesis finished Final PhD graduation event
	Scientific publication of Evidence Syntheses and experiences with Stakeholder Dialogue and Implementation Guidance	Special issue case study collection of Evidence Syntheses and description of Stakeholder Dialogues, implementation guidance and outcomes.
	Health Information Management Tools *Task-Force Standards*: Continuation/Finalization of work on the systematic development of national *Reporting-Standards* for the 100 most important health conditions. *Task Force Data Warehouse:* continuous update	
2021ff	Independent continuation of the SLHS sustained on one hand by the academic expert network (real money) and on the other hand by the *Stakeholder Network* (funding of the *Operations Unit*, the *Stakeholder-Dialogue* including the *Evidence Synthesis* and *Implementation Guidance,* and, if fundable, the *Post-Doc Positions* and *PhD Scholarships*).	

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

Sustainability *(How are the activities to be continued after the end of the project funding?)*

The SLHS with its Priority Action Areas responds directly to the report of the SAMS to the FOPH on strengthening health services research and research capacity by means of a facilitating national service infrastructure. In addition, it is clear that the central topics of the SUK for the funding period 2017-2020 will continue to be of paramount importance beyond 2020. One central argument for the necessity of sustaining the SLHS will be its proven ability to have continuously and effectively addressed these topics in the initial funding period. The SLHS will have done this in the following main ways:

1) The SLHS will have established a **national health research and health policy agenda-setting, problem-solving, knowledge implementation and capacity building infrastructure** at universities and universities of applied science that has been explicitly designed to continuously absorb relevant issues from society and the health system into the SLHS and to communicate its policy, systems and service recommendations back into the learning health system.

Monitoring and evaluation of implementation efforts by stakeholders after the evidence synthesis and deliberation phases as well as of the SLHS mechanisms themselves will guarantee that lessons learnt are fed back into the platform by means of refinement and optimization of processes and structures.

It is envisioned that sustained funding by stakeholders to the SLHS will be fuelled by this successful interaction and output and the systems and service relevant impact of its programs. The ultimate goal is then to establish a funding stream by involved stakeholders, for instance paying for the organisation of a stakeholder dialogue including preparation (Evidence Synthesis) and follow-up (Implementation Guidance, Monitoring and Evaluation).

2) The **SLHS comprehensive, all university-type encompassing SLHS-SSPH+ PhD-Scholarship program** will have promoted the development of scientific capacity in health system and service research.

On an operational level all SLHS participating partners commit to continue funding of at least one PhD position at their institution and to actively continue to contribute to and within the SLHS Strategic Council and the SLHS Expert Network and in this capacity help in the development of Evidence Synthesises, Stakeholder Dialogues and PhD course teaching.

3) The SLHS will have directly campaigned for the central issue of **shortage of qualified professionals in health care**. The SLHS links it efforts with the application *Strategy to Counter Skilled Staff Shortages*, for instance, by making the mechanism of the Stakeholder Dialogue or the announcement of Rapid Response themes with reference to the topic. The same applies for the promotion of Primary care. To this end it can be expected that the SLHS Strategic Council will have prioritised topics in this regard for concrete Stakeholder Dialogues and Rapid Response Syntheses. The interface between both programs will be guaranteed by the Institute for Primary Care and the University Zurich as well as through the membership of the Scuola universitaria profession-

ale della Svizzera italiana (SUSPI) and the Zürcher Hochschule für Angewandte Wissenschaften (ZHAW) in the SLHS.

4) The development of a broad and ***comprehensive SLHS Expert Network*** for a successful interaction between research, policy and practice in the health sector will include partners from universities and universities of applied science and from within the Universities (medical, law, social and cultural science as well as economic faculties) as well contacts in health policy, health services, systems and infrastructures such as insurers. This will enable the SLHS to increasingly draw on a broader and yet specialized network of experts to help inform, contribute to and expand its operations and the Expert network in itself will continue to cross-fertilize and initiate leaning health system interactions utilizing the SLHS platform.

Berücksichtigung der Kommentare aus dem Evaluationsbericht der Projektskizzen *(Nachweis der auf Grund der Evaluation der Projektskizze verlangten Ergänzungen und Empfehlungen des Hochschulrats)*

Consideration of comments from the evaluation report of the project proposals *(Demonstrate the required complementation due to the evaluation of the project proposal and the recommendations of the University Council)*

"The complementarity to the Projects of the SSPH+ is to be emphasized more clearly"

SLHS and SSPH+ are highly integrated and fully complementary, which is also guaranteed through the governance structure with the SLHS leader as the representative of University of Lucerne in SSPH+, SSPH+ as a member in the governance structure of SHLS, and SSPH+ in the lead of the joint PhD program proposed in the SHLS. The SLHS grant will lead to the expansion of the successful SSPH+ PhD programs with the interrelated third pillar in health systems and services. The integrated governance will omit redundancies promote synergies, and optimize the use of resources. The joint SLHS-SSPH+ PhD Scholarship Program's success will be guaranteed by its integration into the established and successful PhD program framework of the SSPH+.

Following the structure of the Marie Curie PhD program funded by the European Commission (13), SLHS-SSPH+ PhD scholars will be a distinct interdisciplinary cohort of PhD scholars with interrelated interests, enrolled at the partner Universities. In line with one of the SLHS main goals, to strengthen health system and service research capacity in Switzerland, young academics are promoted to participating institutions with an outstanding track record in teaching. PhD scholars of the new SSPH+ PhD program pillar in health systems and services will profit from the interrelated and complementary courses and seasonal schools offered by SSPH+ as an outstanding centre of teaching excellence in these interconnected fields of public health, health economics and health systems and services. In addition, SLHS will contribute academic trainings and courses to the SSPH+ programs teaching specific skills in health system and service research methods and in the development of Policy Briefs, Rapid Response Syntheses and Stakeholder Dialogues. PhD scholars will thus enjoy the benefit of learning from a much wider spectrum of topics, scientific techniques and methods in health research. Consequently, SSPH+ doctoral program and the Health Sciences PhD program of the University of Lucerne are developing a collaboration contract to officially recognize each other's courses and allow PhD scholars in both programs to attend all courses free of charge and to enhance the exchange of respective expertise.

Beyond this, the SLHS Expert Network meta-level connection and expansion of the SSPH+ Expert Network database and to those of the other partner communities will be an added value.

"Unclear is, why a centre of competence should be developed in Lucerne when a part of this competence is already available in Basel"

SSPH+ (with its Directorate office in Zurich) and SHLS are complementary networks and with close collaborations and synergies (also see above). SHLS will not duplicate SSPH+ competencies nor vice versa. Instead, the collaboration and the assignment of responsibilities to SSPH+ will be to the benefit of both networks of competences, which

have indeed thematic overlap. Mutual representation in the boards of both networks serves as a foundation of collaboration.

In addition, the new special bridging competency of the Stakeholder Dialogue mechanisms developed at the University of Lucerne, currently being further developed on the international level, will contribute a unique service structure expertise currently non-existent in the Swiss public health landscape. Furthermore, the University of Lucerne is working in collaboration with the WHO ICF Research Branch on standardized reporting and documentation of health data using WHO classifications adding further specialized expertise to the SLHS platform.

"The reference to Project no. 3, is to be highlighted more, to avoid redundancies"

The SLHS aims to offer courses in health system and services research to young academics in a structured PhD Scholarship program involving all partners. The academic teaching services will serve a wide range of candidates from many scientific and professional backgrounds, including those of the health professions. It is however not the aim of the SLHS to educate or train health professionals in their respective medical disciplines.

In addition to the PhD Scholarship program open to all qualified candidates, the scouting initiatives in relevant national health fora will help unearth central topics of the Swiss health system, including those of health professional education and on the job training or coaching. These scouting initiatives will also highlight existing efforts to tackle evident challenges and the SLHS Strategic Council will initiate a dialogue with those involved that will ultimately lead to the development of a Rapid Response Synthesis and a corresponding Stakeholder Dialogue that can help systematically address the problems and possible solutions at hand. In addition, the SLHS mechanism and their services are open to be used for an issue deliberation initiated from within the KFH project. These mechanisms thus automatically establish mutual links and collaborations to the KFH project proposal rather than redundancies.

"To hand in are statements about the continuation of the project by the participating institutions (except Lucerne)"

All SLHS participating partners will continue funding at least one PhD position at their institution and will in addition actively continue to contribute to and within the SLHS Strategic Council and Expert Network and in this capacity help in the development of Evidence Synthesises, Stakeholder Dialogues and in the continuation of PhD course teaching.

8   Antrag auf projektgebundene Beiträge, aufgeschlüsselt nach Rubriken

Application for project related contributions, broken down by category

	2017	2018	2019	2020	Total
Personnel costs (local custom gross wages)	1'007'000	1'007'000	1'007'000	1'007'000	4'028'000
Material costs	93'000	93'000	93'000	93'000	372'000
Total	1'100'000	1'100'000	1'100'000	1'100'000	4'400'000
Material cost subcategories: • Equipment and Facilities	0	0	0	0	0
• Utilities	0	0	0	0	0
• Specifically rented rooms	0	0	0	0	0
• Congress and travel costs	83'000	83'000	83'000	83'000	332'000
• others	10'000	10'000	10'000	10'000	40'000

9 Aufteilung des projektgebundenen Beitrages auf die Projektpartner

Breakdown of the project related contributions by project partner

University / In-stitution	2017	2018	2019	2020	Total
Swiss TPH (associate of Universität Basel)	100'000	100'000	100'000	100'000	400'000
Universität Luzern	500'000	500'000	500'000	500'000	2'000'000
Université de Neuchâtel	100'000	100'000	100'000	100'000	400'000
La Scuola universitaria professionale della Svizzera italiana (SUPSI)	100'000	100'000	100'000	100'000	400'000
Università della Svizzera italiana (USI)	100'000	100'000	100'000	100'000	400'000
Universität Zürich	100'000	100'000	100'000	100'000	400'000
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)	100'000	100'000	100'000	100'000	400'000
Total	**1'100'000**	**1'100'000**	**1'100'000**	**1'100'000**	**4'400'000**

10   Zugesicherte Eigenmittel der einzelnen Projektpartner

Guaranteed own resources of the single project partners

University / Insti-tution	Real money*	Virtual money**	Total	The amount „virtual money" is defined as follows
Swiss TPH (associate of Universität Basel)	240'000	160'000	400'000	Rooms, inventory, technical equip-ment, personnel costs
Universität Luzern***	960'000	1'440'000	2'400'000	Rooms, inventory, technical equip-ment, personnel costs
Université de Neuchâtel	240'000	160'000	400'000	Rooms, inventory, technical equip-ment, personnel costs
La Scuola universitaria professionale della Svizzera italiana (SUPSI)	240'000	160'000	400'000	Rooms, inventory, technical equip-ment, personnel costs
Università della Svizzera italiana (USI)	240'000	160'000	400'000	Rooms, inventory, technical equip-ment, personnel costs
Universität Zürich	240'000	160'000	400'000	Rooms, inventory, technical equip-ment, personnel costs
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)	240'000	160'000	400'000	Rooms, inventory, technical equip-ment, personnel costs
Total own re-sources	**2'400'000**	**2'400'000**	**4'800'000**	

* The annual own resources in form of "real money" of in total 2'400'000 CHF will be provided by the participating project partners. In doing so each of the participating universities and universities of applied sciences have commited themselves to make one doctoral student position available for 4 years.

The calculated costs for the doctoral student positions are oriented on SNF salary scales and normal salary standards for doctoral students of the involved institutions. This applies to ensure salary equality between the involved institutions. The salary scales are estimated for a four year employment on a full-time basis. The calculation is based on an average calculation of SNF doctoral student annual gross salaries 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 correspond to percentage rates in the involved cantons and the local salary standard for doctoral students.

** The annual own resources in form of "virtual money" of in total 2'400'000 CHF will be provided by the academic project partners. It is assumed that on average own resources in the range of 160'000 CHF will be provided by each university and university of applied sciences respectively. Concretely, this relates to the participation of Professors as well as teaching and research staff in prioritizing, planing and supervision of SUK and external fund financed *Evidence Syntheses (Policy Briefs and Rapid Response Syntheses)* and the provision of according rooms and material means. The University of Lucerne with its three faculties will participate with „virtual money" in total of 1'440'000 CHF.

*** The University of Lucerne provides a disproportionately high number of own resources in the category of "virtual money". The part of own resources in the category "virtual money" exceeds the amount of own contribution of the category "real money" at the University of Lucerne. This is due to the fact that the University of Lucerne provides a higher amount of resources, especially based on the fact of tasks and support in the coordination and development of the whole project.

11 Zusammenfassung Finanzierung

Summary of funding

	2017	2018	2019	2020	Total
Project related contribution SBFI	1'100'000	1'100'000	1'100'000	1'100'000	4'400'000
Own resources of the project partners	1'200'000	1'200'000	1'200'000	1'200'000	4'800'000
Other contributions by the government (e.g. SNF, KTI)					
Third party contributions	100'000	100'000	200'000	200'000	600'000
Total	**2'400'000**	**2'400'000**	**2'500'000**	**2'500'000**	**9'800'000**

12   Unterschriften/Signatures

Die unterzeichnenden Rektor/innen, Präsident/innen und Direktor/innen bestätigen mit ihrer Unterschrift, die unter Punkt 10 zugesicherten Eigenmittel zu erbringen.
(The signing vice chancellor, president, director confirms with signature to provide the under item 10 guaranteed own resources.)

Für den Hauptantragsteller der projektgebundenen Beiträge nach HFKG:
(For the main applicant of the project related contribution HFKG)

Universität Luzern

Ort und Datum: Der Projektleiter
                                                            Prof. Dr. Gerold Stucki

....

Ort und Datum: Der Rektor
                                                            Prof. em. Dr. Paul Richli

....

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.
(The signing vice chancellor, president, director confirms with signature to provide the under item 10 guaranteed own resources.)

Universität Basel: Schweizerisches Tropen- und Public Health Institut

Ort und Datum: Der Direktor
                                                  Prof. Dr. Jürg Utzinger

....

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.
(The signing vice chancellor, president, director confirms with signature to provide the under item 10 guaranteed own resources.)

Université de Neuchâtel

Ort und Datum: Die Rektorin
                                                        Prof. Dr. Martine Rahier

....

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.
(The signing vice chancellor, president, director confirms with signature to provide the under item 10 guaranteed own resources.)

Università della Svizzera italiana

Ort und Datum: Der Rektor
                                                                    Prof. Dr. Piero Martinoli

....

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.
(The signing vice chancellor, president, director confirms with signature to provide the under item 10 guaranteed own resources.)

Universität Zürich

Ort und Datum: Der Rektor
                                              Prof. Dr. 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.
(The signing vice chancellor, president, director confirms with signature to provide the under item 10 guaranteed own resources.)

Scuola universitaria professionale della Svizzera italiana

Ort und Datum: Der Direktor
                Prof. Franco Gervasoni

....

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.
(The signing vice chancellor, president, director confirms with signature to provide the under item 10 guaranteed own resources.)

Zürcher Hochschule für Angewandte Wissenschaften

Ort und Datum: Der Rektor
                                                    Prof. Dr. Jean-Marc Piveteau

....

SHK I CSHE I CSSU I CSSA

Schweizerische Hochschulkonferenz
Conférence suisse des hautes écoles
Conferenza svizzera delle scuole universitarie
Conferenza svizra da las scolas autas

221/15

13   REFERENCES

Background

1. Federal Office of Public Health (FOPH). *The Federal Council's health-policy priorities. Health2020.* Bern, 2013.

2. Federal Office of Public Health (FOPH). *Forschungskonzept Gesundheit 2013 – 2016.* Bern, 2012.

3. Institute of Medicine (IOM). 2013. *Best care at lower cost: The path to continuously learning health care in America.* Washington, DC: The National Academies Press.

Issue Identification and Prioritization

4. Trendtage Gesundheit. Website. http://www.trendtage-gesundheit.ch/de/ueber_uns/Trendtage_Gesundheit (accessed 29.9.2015).

5. Swiss Public Health Conference. Website. http://www.public-health.ch/logicio/pmws/publichealth__publichealth__de.html (accessed 29.9.2015).

6. Post MW, Brinkhof MW, von Elm E, Boldt C, Brach M, Fekete C, Eriks-Hoogland I, Curt A, Stucki G; SwiSCI study group. *Design of the Swiss Spinal Cord Injury Cohort Study.* Am J Phys Med Rehabil, 2011.

7. Swiss Childhood Cancer Registry. Website. http://www.childhoodcancerregistry.ch/ (accessed 29.9.2015).

8. James Lind Alliance. Website. http://www.jla.nihr.ac.uk/ (accessed 29.9.2015).

Evidence Synthesis and Stakeholder Dialgoue

9. Lavis JN, Boyko JA, Oxman AD, Lewin TJ, Fretheim A. *SUPPORT tools for evidence-informed health policymaking 8STP) 14: organising and using policy dialogues to support evidence-informed policymaking.* Health Research Policy and Systems, 7 (Suppl. 1.), 2009.

10. Eemeren, F.H. van, & Grootendorst, R. *A systematic theory of argumentation: The pragma-dialectical approach.* Cambridge: Cambridge University Press, 2004.

Implementation Guidance

11. Kingdon JW. *Agendas, Alternatives, and Public Policies*. 2nd Ed. Pearson, 2013.

12. Jann W, Wegrich K. *Phasenmodelle und Politikprozesse: Der Policy Cycle.* In: K. Schubert, N.C. Bandelow (Eds.), Lehrbuch der Politikfeldanalyse (pp. 71-104), München, 2003.

Research Scientist Program – PhD Scholarships

13. *Marie Skłodowska-Curie actions - Research Fellowship Programme*. Website. http://ec.europa.eu/research/mariecurieactions/ (accessed 29.9.2015).

Management of standardized health information

14. Madden RC, Marshall R, Race S (2013). *ICF and casemix models for healthcare funding: Use of the WHO Family of Classifications to improve casemix*. Disabil Rehabil 35(13):1074-1077.

15. *Bessere Gesundheitsdataen für eine effizienteres Gesundheitswesen*. Public Health Schweiz (Hrsg.) Manifest veröffentlicht im Rahmen der Public Health Konferenz 2013 am 15./16. August 2013 in Zürich. http://www.public-health.ch/logicio/client/publichealth/file/130816_Manifest_Gesundheitsdaten_D_def.pdf (accessed 1.10.2015)

14   ANNEXES

ANNEX 1

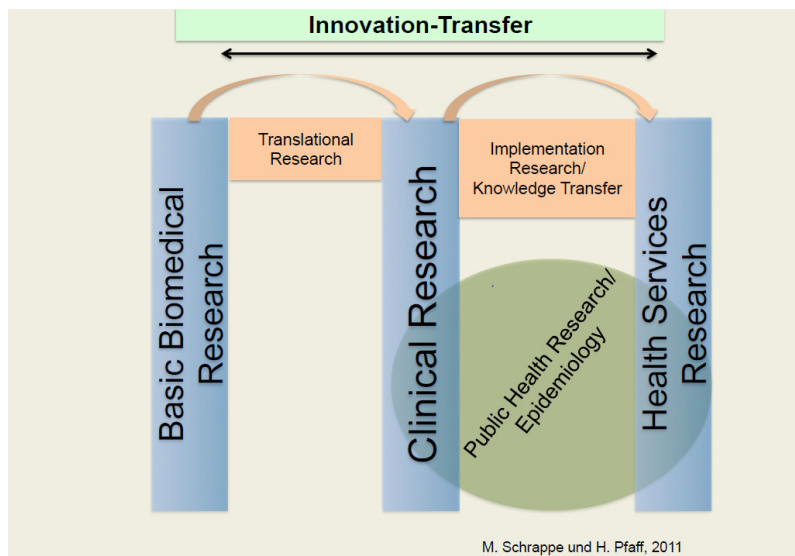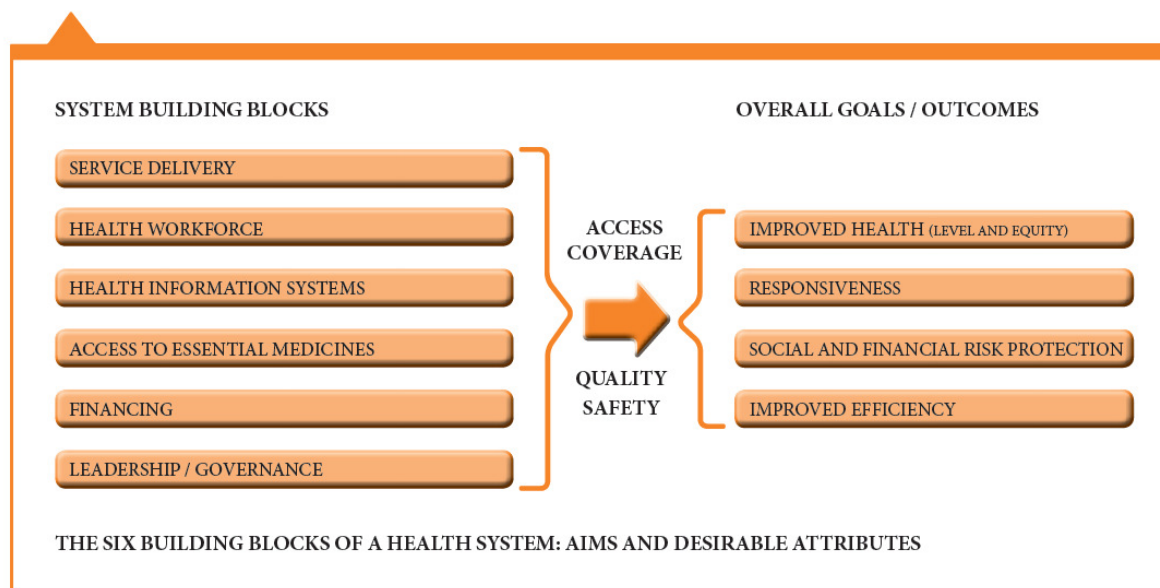Figure 1: The three sectors of health research

Figure 2: The WHO Health Systems Framework

World Health Organization. MONITORING THE BUILDING BLOCKS OF HEALTH SYSTEMS: A HANDBOOK OF INDICATORS AND THEIR MEASUREMENT STRATEGIES, 2010.

ANNEX 2

Partner communities

SSPH+ together with partner Universities of its University network

Universität Luzern,
Universität Basel,
Université de Neuchâtel,
Università della Svizzera italiana (USI),
Universität Zürich

Partners from the Universities of Applied Sciences

La Scuola universitaria professionale della Svizzera italiana (SUPSI)
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)

Partners from Primary Care

Universität Zürich, Institut für Hausarztmedizin

Partners from the Swiss Academies

Schweizerische Akademie der Medizinischen Wissenschaften (SAMW)
Schweizerische Akademie der Geistes- und Sozialwissenschaften (SAGW)

Partners by institution

Universität Luzern (Host University)

Department Health Sciences and Health Policy (Host Department)
Kultur- und Sozialwissenschaftliche Fakultät
Partner of SSPH+
Coordinator SLHS: Prof. Dr. med. Gerold Stucki

Center for Health, Policy and Economics
Kultur- und Sozialwissenschaftliche Fakultät
Coordinator SLHS: Prof. Dr. Stefan Boes

Institut für Unternehmensrecht und Zentrum für Recht und Gesundheit
Rechtswissenschaftliche Fakultät
Coordinators SLHS: Prof. Dr. Franco Taisch / Prof. Dr. Bernhard Rütsche

Zentrum für Religionsverfassungsrecht
Theologische Fakultät
Coordinators SLHS: Prof. Dr. Adrian Loretan

Universität Basel

Swiss Tropical and Public Health Institute
Partner of SSPH+
Coordinator SLHS: Prof. Dr. Jürg Utzinger

Université de Neuchâtel

Institut de droit de la santé
Faculté de droit
Partner of SSPH+
Coordinator SLHS: Prof. Dr. Olivier Guillod , Prof. Dr. Dominique Sprumont

Institut du management de l'information
Faculté des sciences économiques
Coordinator SLHS: Prof. Dr. Kilian Stoffel

La Scuola universitaria professionale della Svizzera italiana (SUPSI)

Dipartimento Scienze Aziendali, Sociali e Sanitarie (DEASS)
Coordinator SLHS: Prof. Dr. Luca Crivelli

Università della Svizzera italiana (USI)

Instituto di Economia Politica (IdEP)
Facoltà di scienze economiche
Partner of SSPH+
Coordinators SLHS: Prof. Dr. Massimo Filippini

Centre for Organisational Research – Organization and Management Theory (CORe)
Facoltà di scienze economiche
Coordinator SLHS: Prof. Dr. Alessandro Lomi

Centre for Organisational Research – Health and Public Management (CORe)
Facoltà di scienze economiche
Coordinator SLHS: Prof. Dr. Marco Meneguzzo

Universität Zürich

Institut für Hausarztmedizin
Medizinische Fakultät
Coordinator SLHS: Prof. Dr. med. Thomas Rosemann

Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)

Departement Gesundheit
Institut für Physiotherapie
Coordinator SLHS: Prof. Dr. Astrid Schämann

School of Management and Law
Winterthurer Institut für Gesundheitsökonomie
Coordinator SLHS: Prof. Dr. Urs Brügger

Other partners

National organizations

Swiss School of Public Health+
Coordinator SLHS: Prof. Dr. Nino Künzli

Schweizerische Akademie der Medizinischen Wissenschaften (SAMW)
Coordinator SLHS: Dr. Michael Röthlisberger

Schweizerische Akademie der Geistes- und Sozialwissenschaften (SAGW)
Coordinator SLHS: Dr. Markus Zürcher

Extra-university research institutions

Institut für Hausarztmedizin und Community Care, Luzern
in coop. with the Dep. of Health Sciences and Health Policy, University of Lucerne
Coordinator SLHS: Dr. med. Christoph Merlo

Swiss Paraplegic Research
in coop. with the Dep. of Health Sciences and Health Policy, University of Lucerne
Coordinator SLHS: Prof. Dr. Jerome Bickenbach

WHO collaborations

ICF Research Branch, Nottwil
in cooperation with the German cooperation center for the family of international classifications in Germany (at DIMDI)
at Swiss Paraplegic Research
Coordinator SLHS: Prof. Dr. med. Gerold Stucki

ANNEX 3

CORE COMPETENCIES OF THE NETWORK PARTNERS
The Swiss Learning Health System (SLHS)
A national platform for 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 (CORe) (USI)

Unit Health and Public Management

Instituto di Economia Politica (IdEP) (USI)

Dipartimento economia aziendale, sanità e sociale (DEASS) (SUPSI)

Center for Health, Policy and Economics (Universität Luzern)

Zentrum für Gesundheit und Recht (Universität Luzern)

Zentrum für Religionsverfassungsrecht (Universität Luzern)

Institut de droit de la santé (Université de Neuchâtel)

Swiss School of Public Health+

Winterthurer Institut für Gesundheitsökonomie (ZHAW)

Meso-level *(Service Provision and Payment Financing)*

Dipartimento economia aziendale, sanità e sociale (DEASS) (SUPSI)

Centre for Organisational Research – (CORe) (USI)

Unit Organization and Management Theory

Institut für Unternehmensrecht (Universität Luzern)

Department of Health Sciences and Health Policy (Universität Luzern)

Institut für Hausarztmedizin und Community Care Luzern

SPF (Unit for Rehabilitation Services & Care Research) (in cooperation with UniLU)

Institut für Hausarztmedizin (Universität Zürich)

Institut für Physiotherapie (ZHAW)

Winterthurer Institut für Gesundheitsökonomie (ZHAW)

Micro-level (Clinical Care)

    Institut für Hausarztmedizin und Community Care (in coop. with UniLU)

    Institut für Physiotherapie (ZHAW)

    Institut für Hausarztmedizin (Universität Zürich)

Cross-cutting functions of the health system

Health interventions (Health intervention assessment - evidence and impact)

    Department of Health Sciences and Health Policy (Universität Luzern)

    Center for Health, Policy and Economics (Universität Luzern)

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

    Department of Health Sciences and Health Policy (Universität Luzern)

    Institut du management de l'information (Université de Neuchâtel)

    ICF Research Branch, WHO FICI (at Swiss Paraplegic Research, Nottwil)

    SPF (Unit Health Communication and Knowledge Transfer) (in coop. UniLU)

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

    Dipartimento economia aziendale, sanità e sociale (DEASS) (SUPSI)

    Institut für Physiotherapie (ZHAW)

    Winterthurer Institut für Gesundheitsökonomie (ZHAW)

2) Competencies in relation to disciplinary scientific perspectives

Health Policy and Economics

    Centre for Organisational Research (CORe) (USI)

    (Unit Health and Public management)

    Instituto di Economia Politica (IdEP) (USI)

    Dipartimento economia aziendale, sanità e sociale (DEASS) (SUPSI)

    Center for Health, Policy and Economics (Universität Luzern)

    Winterthurer Institut für Gesundheitsökonomie (ZHAW)

Law and Health-Management

    Dipartimento economia aziendale, sanità e sociale (DEASS) (SUPSI)

    Centre for Organisational Research – (CORe) (USI)

    (Unit Organization and Management Theory)

    Zentrum für Recht und Gesundheit (Universität Luzern)

    Institut für Unternehmensrecht (Universität Luzern)

    Zentrum für Religionsverfassungsrecht (Universität Luzern)

SPF (Unit Disability and Law) (in cooperation with UniLU)

Institut de droit de la santé (Université de Neuchâtel)

Winterthurer Institut für Gesundheitsökonomie (ZHAW)

Health Services Research

Department of Health Sciences and Health Policy (Universität Luzern)

Institut für Hausarztmedizin und Community Care (Universität Luzern)

SPF (Unit for Rehabilitation Services & Care Research) (in cooperation with UniLU)

Institut für Hausarztmedizin (Universität Zürich)

Institut für Physiotherapie (ZHAW)

Winterthurer Institut für Gesundheitsökonomie (ZHAW)

Clinical Care Sciences

Institut für Hausarztmedizin (Universität Zürich)

Institut für Physiotherapie (ZHAW)

Schweizerische Akademie der Medizinischen Wissenschaften (SAMW)

Health Information, Health Communication and Implementation Sciences

Department of Health Sciences and Health Policy (Universität Luzern)

ICF Research Branch, WHO FIC (at SPF, Nottwil)

SPF (Unit Health Communication and Knowledge Transfer) (in coop.with UniLU)

Institut du management de l'information (Université de Neuchâtel)

Public Health, Social and Preventive Medicine

Swiss Tropical and Public Health Institute (Universität Basel)

Ethics & Law

Zentrum für Recht und Gesundheit (Universität Luzern)

Institut für Unternehmensrecht (Universität Luzern)

Zentrum für Religionsverfassungsrecht (Universität Luzern)

SPF (Unit Disability and Law) (in cooperation with UniLU)

Institut de droit de la santé (Université de Neuchâtel)

ANNEX 4

PhD Scholarships in Health System and Services Research
Goal
- 20 PhD scholarships; first cohort from to 2017 - 2020
Financing
- 10 scholarships: own resources, as listed below ("real money")
- 10 scholarships: matched funding SUK application

Universität Luzern

2 **Department Health Sciences and Health Policy**
Prof. Dr. Stefan Boes
Prof. Dr. med. Gerold Stucki
1 **Zentrum für Religionsverfassungsrecht**
Prof. Dr. Adrian Loretan
1 **Zentrum für Recht und Gesundheit**
Prof. Dr. Bernhard Rütsche

Universität Basel

1 **Swiss Tropical and Public Health Institute**
Prof. Dr. Jürg Utzinger

Université de Neuchâtel

1 **Institut du management de l'information**
Prof. Dr. Kilian Stoffel

Scuola universitaria professionale della Svizzera italiana (SUPSI)

1 **Dipartimento Scienze Aziendali, Sociali e Sanitarie (DEASS)**
Prof. Dr. Luca Crivelli

Università della Svizzera italiana (USI)

1 **Instituto di Economia Politica (IdEP)**
Prof. Dr. Massimo Filippini

Universität Zürich

1 **Institut für Hausarztmedizin**
Prof. Dr. med. Thomas Rosemann

Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)
(shared PhD position)

1 **Winterthurer Institut für Gesundheitsökonomie**
Prof. Dr. Urs Brügger
Institut für Physiotherapie
Prof. Dr. Astrid Schämann