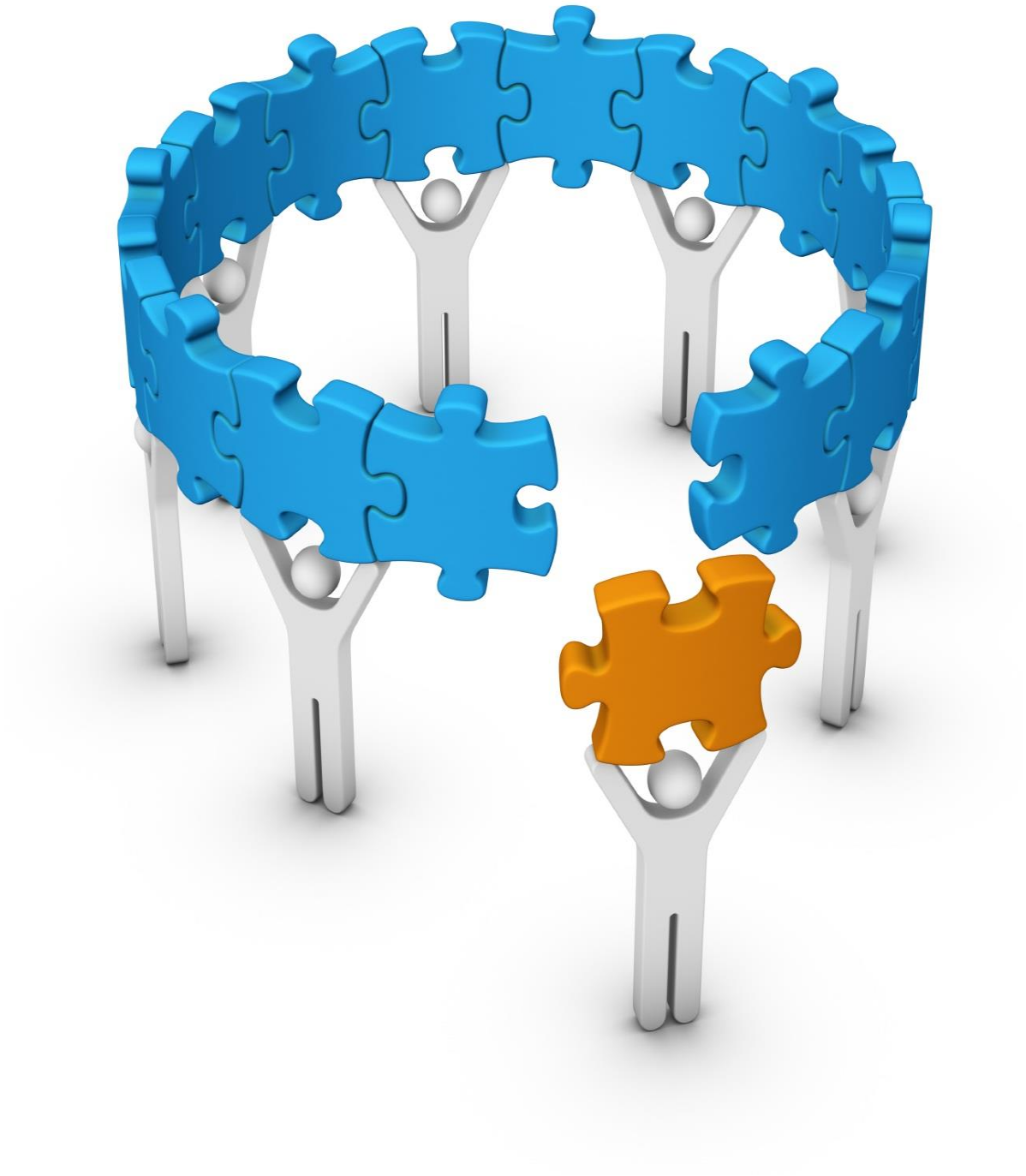

Social Innovation as Valuation and Outcome Category of SNSF Funded Research

Proposal for SNSF

Zentrum für Soziale Innovation

March 2021

Social Innovation as Valuation and Outcome Category of SNSF funded Research

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1) INTRODUCTION

Our proposal aims to trace contributions of research funded by SNSF to social innovations, and to systematise these contributions in a valuation framework. In addition, we aim to identify to what extent contributions to social innovation in SNSF-funded research projects are possible at all, and where further support measures, either provided by SNSF or from outside (e.g. by the universities), could create an added value that could not be tapped so far.

We assume that our approach can potentially add an important valuation and outcome category to SNSF funded research.

With our approach we first of all refer to research question No. 2 ("national and international exchange of knowledge") stipulated by SNSF in its *"Invitation to Submit Study Drafts: Analyzing the "Value of SNSF-funded research"* from 6th October 2020. One of our central starting points is that knowledge gain resulting from research is a product of constant and dynamic exchange between researchers and other stakeholders involving a multitude of iterative and incremental steps, which are not done in isolation, but build on or are influenced by past or parallel contributions.

We want to provide also an answer to the question asked by SNSF to *what extent and how do SNSF funded researchers facilitate access to and development of new knowledge through knowledge exchange?*, with a particular emphasis on exchange between the domain of research and the domains of business, society, environment and culture. We further aim to provide an answer to the raised questions *„to what extent and how is knowledge obtained by exchange and encouraged through SNSF funding taken up, utilized and further developed in Swiss academia, business, society, environment or culture? Which kinds of benefits can be observed?"* Thus, we want to explore with our proposal the extent to which interactions with non-academic stakeholders have already found their way into the actual research process in projects funded by the SNSF, i.e. have not only taken place afterwards - in the sense of an ex-post dissemination of the results. Here, the 'productive interactions' (Spaapen and Drooge, 2011) concept comes into play.

The **scope of our analysis** is the identification of contributions to social innovations from various disciplinary and inter-disciplinary projects from all domains, funded by SNSF in the years 2015 - 2018.

With this approach, we consider the fact that contributions to social innovations are not restricted to SSH research, but can also come from projects in the domain of life sciences or natural and technical sciences. We are particularly interested in interdisciplinary constellations, which also involve SSH actors (inter-disciplinarity). Moreover, we also pay special attention to transdisciplinary research (transdisciplinarity).

As already noted, we are aware that contributions to social innovation are only one of several impact dimensions of research. However, it is a potentially important impact dimension that has hardly been robustly empirically researched up to now. This is also partly due to the apparent vagueness and the epistemological fuzziness of "social innovation". We therefore do not approach this study with a naive concept of social innovation, but try to introduce clearly distinguishable criteria for identifying social innovation into the research design. Please find more information on this in the next chapter.

However, we would also like to take up an implicit aspect that resonates in the first question postulated by the SNSF[1], namely how the interplay between open, hardly restricted research and the demand for social relevance is shaped, which is characterised by dynamic processes of value creation within academia and beyond. In other words: is the freedom offered by SNSF sufficient to achieve the research objectives and the intended contribution to social relevance, or is additional support needed (and if so, what kind of support) to create a comprehensible

[1] SNSF (2021), Invitation to Submit Study Draft: Analyzing the "Value of SNSF-funded research", p. 2f.

social added value. Or is this added value created in any case by the existence of other, external structures and measures that the SNSF-funded researchers can use? We point out that this complex of questions is placed in the context of research-led contributions to social innovation.

2) RATIONALE, BACKGROUND AND RESEARCH QUESTIONS

In the mission statement of the conference *'Impact of Social Sciences and Humanities for a European Research Agenda – Valuation of SSH in mission-oriented research'*, organised under the Austrian EU Council Presidency in late 2018, the former ERC President Helga Nowotny calls SSH researchers to re-think the transformative relationship between science and society. *"Scientific research is about transformation – how to enable it, or how to avoid it. It is about the transformation that society is undergoing as much as about the transformative power inherent in knowledge and policies based on social science knowledge …Transformative science must be transformative in a double sense: wanting to exert influence in society but also open to be influenced by society and its needs"* (Nowotny et al, 2019, p. 8).

Against the background of this statement, social innovation could potentially become a more important anchor point and impact dimension for research in the future (Bornstein et al., 2014). The engagement with innovation as a phenomenon that not only changes economic practices, but also social practices, could also contribute to a changing role of research from a pure analytical one to an active co-shaping role (see also Howaldt, 2019).

Both the scientific as well as the research policy debate on social innovation has gained in importance over the past 15-20 years. On one hand, some proponents see social innovation as an opportunity to free themselves from their defensive stance towards discourses revolving around valuation and impact of science and research. On the other hand, there are also findings indicating that research has so far paid quite little attention to the development of social innovation, particularly in terms of empirical productive interactions (Howaldt, 2019; Schuch, 2019; Brundenius, 2017; Cunha and Benneworth, 2013).

Our main hypothesis is, that social innovation as a transversal topic seems to have increasingly moved from the margins of research to the centre of it, although research funding still seems to lag behind this development. However, the published findings are still inconclusive and, above all, there is a lack of larger empirical studies. We also face a problem of measuring the contribution of scientific research to social innovation. Conceptual and epistemological uncertainties appear to be too great and, as a result, we still know too little about the relationship between the work of research communities and the topic of social innovation.

This is where the project proposed by us comes in.

We believe that our approach is innovative and could boost the discourse on the relationship between social innovation and research. However, we also know that the approach is risky in the sense that the results of the study may not confirm our hypothesis and thus may not be very beneficial for the further development of how to value research through the lens of social innovation. But even that would be an important gain in knowledge and would help to reduce speculation and assumptions.

Our research objectives are

*First***,** to identify scope and scale of SNSF funded projects that deal with social innovation research or the development of social innovation

*Second***,** to assess the extent of contribution of funded SNSF projects to the development of social innovations, their productive interactions with non-academic stakeholders and/or beneficiaries and the operational or epistemological limits, and

*Third***,** to critical reflect and structure the value of social innovation as potential valuation and outcome category of research.

With this project, we aim to pursue the following research questions:

1. How often and how is social innovation as a research topic approached in SNSF-funded projects?
2. What is the contribution of SNSF funded research to the development of social innovation? How far does it go and where are the limits? What role do productive interactions play within the research process?
3. Is social innovation a suitable starting point for the valuation of, in particular, but not only SSH research?

We describe our analytical approach in chapter 3. In 3.1 we start with a rough overview on our research design. Then we aim to operationalise the term "social innovation" in 3.2 and position it in research processes in 3.3 in order to make it analytically applicable to our study. In Chapter 4 we provide our multi-method approach in detail and the subsequent Chapters we inform about the expected outputs, the timeline, the budget, our team etc.

3) ANALYTICAL APPROACH

3.1 Research Design

Figure 1 provides an overview of our suggested research design. It includes qualitative and quantitative approaches and combines standard methods of empirical social research with new approaches.

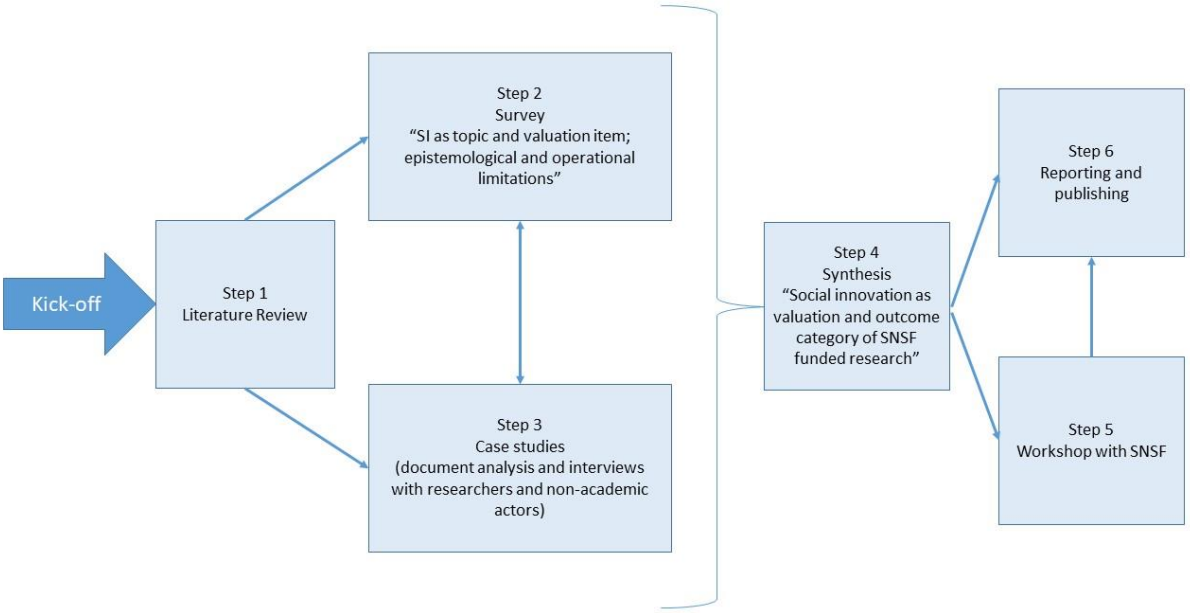
Our research design is divided into 7 steps:

Step 0 is considered to be a necessary pre-step, and basically consists of a kick-off meeting with SNSF to clarify mutual expectations and define data requirements.

Step 1: Conduct a literature review to distil the essential characteristics of social innovation and apply them in a distinctive way for further empirical research. This review does not start from scratch, but has already been started in preparation of this proposal, building on the comprehensive literature review by Howaldt et al (2014), to which ZSI contributed.

Step2: Conducting a survey aimed at principal investigators of projects funded by the SNSF between 2015 and 2018. The survey's focus is on (i) the perception and importance of social innovation for their own research work, (ii) the epistemological and operational limits of social innovation in SNSF research projects, (iii) the role of productive interactions in contributing from the side of research to the development of social innovation and, (iv) identification of support measure to tap and further exploit the added value of scholarly contributions to social innovation development This survey offers a first empirical approach to our research topic.

Figure 1: ***Overview on the Research Design***



Step 3: Based on the survey (Step 2), in which we also will ask for the willingness to be interviewed by our research team, we want to analyse in detail about 45 cases in which social innovation was a topic in SNSF-funded projects. We aim to analyse around 15 projects from SSH, 15 from STEM and 15 from life sciences (LS). Firstly, we will use the final project reports (if they are provided by SNSF) for content-analysis. Secondly, we will conduct a guideline-based interview with the PIs and thirdly, we also aim to conduct an interview with the main identified "practice partner" (if available) to also get the view from the practice partners on the potential value of research for the development of social innovation. This will be another 20 interviews in addition.

Step 4: In this step, we triangulate the results from the survey and the case studies to identify inconsistencies and framing. A special concern is to trace the so-called 'productive interactions' (if available) and the degree of their presence in the various phases of the respective research projects through the different methods. In a synthetic summary of the findings, we furthermore aim to answer the question to what extent social innovation and, if so, under which framings, is (or is not) suitable for the valuation of SNSF funded research. Based on the empirical findings, we will prototype impact chains for this specific impact dimension. Furthermore, we aim to identify indicators which - in different phases of the research process - are suitable to make the contribution of SNSF funded research to social innovation comprehensible. However, we would like to point out that with this study we do not intend to develop an evaluation framework but a valuation framework.

Step 5: In this step we invite the SNSF to discuss the results with us. The results are summarised in a report. In addition, a valuation concept will be drafted. We also intend to publish the results in a scientific or scholarly journal (Step 6), which, however, will happen after the end of the project due to its short duration.

A detailed description on the methodological procedures is provided in Chapter 4.

3.2 Analytical dimensions of social innovation

As stated above, our core aim is to explore and eventually, if possible, demonstrate the value of SNSF funded research by focusing on social innovation contributions as an example of one of several potential "impact dimensions". By placing the analytical value creation concept of social innovation in the centre of our study, we aim in particular to analyse corresponding processes and mechanisms of knowledge creation through SNSF funding. Such an approach could potentially add an alternative and innovative view on the value that SNSF adds through its funding. Potential effects of social innovation can appear in society, in culture, business, but also in interaction with the environment. Therefore, we take in our research design also the perceptions of the contributions of research to the development of social innovations from the perspective of non-academic partners into account.

The term "social innovation" is not new and not undisputed. It can be traced back to the early 19th century (Godin, 2012). References are made to eminent scholars such as Gabriel Tarde (Howaldt, Kopp and Schwarz, 2015), Karl Polanyi or Joseph Schumpeter (Moulaert et al., 2013; Howaldt and Schwarz, 2010), but until today there is no commonly shared understanding of social innovation. Likewise, there are only first attempts of integrating social innovation in a comprehensive innovation policy theorem (Howaldt et al., 2014).

Also the conditions under which social innovations develop, flourish and finally increase their social impact are still far from being crystal-clear (Howald, 2019). Lizuka (2013) argues that the scope of social innovation suffers from a number of conceptual overlaps. Pol and Ville (2009) mentioned that some analysts consider social innovation not more than a buzzword, which would be too vague to be usefully applied to academic scholarship. It needs to be mentioned, however, that Pol and Ville were opposing this dismissive attitude. They themselves provided several inspiring arguments for a meaningful and research-guiding epistemological concept of social innovation. Also Moulaert et al. (2013) argue that the term 'social innovation' is often over-simplistically used as a buzzword by laypersons, but has analytical substance for researching social change in society.

When we speak about social innovation, we explicitly refer to the definition that was developed in the SI-DRIVE project funded by the EC under FP7, defining social innovation *as a new combination or figuration of practices in areas of social action, prompted by certain actors or constellations of actors with the goal of better coping with needs and problems than is possible by using existing practices. An innovation is therefore social to the extent that it varies social action and is socially accepted and diffused in society.*[2]

This definition has a few important properties that provide epistemological and analytical orientation, which we also use for the analytical purposes (e.g. text mining) of our proposed project. These properties are summarised in Table 1 and discussed further below in detail.

Table 1: ***Analytical dimensions to identify social innovations***

Analytical dimensions	1. Social innovation results in a *changed social practice* (= object of a social innovation). 2. A social innovation must be *new in a specific context or for a specific actor.* 3. A social innovation is *developed to fulfil a social purpose* in that sense that it aims to better cope with needs and problems than is possible by using existing practices 4. Social innovations are *intentionally solution-oriented and prompted by actors or a constellation of actors*. They do not

[2] http://www.si-drive.eu/; accessed on 12 November 2020.

just happen and they are not the same as social change, but they can contribute to it.

5. A social innovation is more than an idea and must be *put into practice* (i.e. difference between idea, invention and innovation in analogy with techno-economic innovation)

First of all, the definition aims at changing *social practices* and not per se of producing or using a new technology. In our understanding the expression *"new practices in areas of social action"* sounds presumably vague for a definition that struggles for exhaustion, because *"social action"* refers probably to all sorts of human action and interactions (also with the environment and artefacts; see Degelsegger and Kesselring, 2012).

Secondly, the definition does not include all social practices, but is limiting them to *new* social practices without, however, offering a measurement indication, how 'new' a novelty can be in order to be labelled a 'social innovation'.[3] But like in 'classical' innovation research, most innovations are only relatively new to a specific context or actor and not uniquely new; what is new in a certain context could be a 'normal' practice in another. Absolute new innovations might be more exciting than those diffused to new contexts (e.g. new to the firm or new to a specific part of a society), but it is the diffusion which contributes mostly to the overall changes in economy respectively society.

Thirdly, the definition postulates that social innovations have foremost a *'social purpose'* or in other words (Pol and Ville, 2009) should explicitly refer to some sort of human welfare enhancement. The term *"social purpose",* especially in combination with the *'goal of better coping with needs and problems than is possible by using existing practices'*, might sound irritating or even daunting to many scientists, because of its normative stance. What a social purpose is and what is good or even better depends on many aspects, not at least of interests, power and ideology. As (social) scientists, we are reflexively alerted when we are confronted with normative statements. Critical questioning is what sets us apart. In order to save the honour of the chosen definition, it must be said that - in contrast to some other definitions of social innovation, which postulate the 'good' (i.e. the just cause) almost as a teleological goal – the definition which we use does not prescribe a normative postulate. The way we read the definition, it only points to improved solutions or social practices, which of course can also have their downsides, because interests can be very different. What fits nicely to one social group, might be seen as cutback or deterioration by another. Also rebound effects of social innovations can occur.

Another problem with the term *"social purpose"* is that also business innovations rightfully claim to meet a social need or – perhaps more likely - 'a social want'[4]. The often used argument that the underlying intention (on the one hand an interest in profit generation and on the other hand an interest in satisfying a sometimes difficult to define social need that overall contributes to human welfare enhancement) as the decisive differentiating factor, falls too short in our opinion. This argument is also often used to differentiate social entrepreneurship from 'normal' entrepreneurship. It seems to us more decisive that some social innovations simply do not require any market logic and can life without business and that some businesses are too distant from the pretence of human welfare enhancement. In practice, however, there is numerous overlapping and intersection between the sets of social and business innovation (see also Pol and Ville, 2009), which we would consider an epistemological shortcoming, but probably an empirical fact.

[3] The European Innovation Survey, for example, which is targeting companies, always asks about innovations in the last three years.

[4] Businesses also create the 'social wants' themselves through clever marketing and advertising strategies.

Fourthly, social innovations focus on the provision of solutions to improve social practice. Judgments on the value of social scientific research for society vary even among social scientists (Reale et al., 2017). While social sciences and humanities scholarship is often committed to do research for the good of society, the interest of researchers is often not oriented towards producing usable results, let alone actual solutions, but rather to raise awareness and influence society to create capabilities of self-understanding in different contexts (Reale et al., 2017; Benneworth, 2015; Nussbaum, 2010).

The intentional *solution-orientation*, however, helps us to isolate the object of social innovation and to distinguish it from 'normal' social practice and social change. As outlined before, the provision of a solution to a certain problem needs to be new in a specific context, otherwise it would not be an innovation. We have to be aware that most innovations are small in the beginning. Many remain small and many are just incremental. Social innovation is not social change. Social innovations can contribute to social change, but social change does not necessarily need social innovation.

Our applied definition of social innovation also calls for *an agent or actor*, who kicks-off and promotes a social innovation and thus contributes to some sort of social change (be it limited or extensive). The presence of an agent helps us not to lump every social phenomenon together. Said definition of social innovation postulates clearly that a social innovation has to be *intentional* and *prompted by certain actors or constellations of actors*. Contrarily, we would talk about social change if the observed changes in society are not directly intentional or at least cannot be traced back to certain agents or if the agent's landscape becomes blurred and unclear, or when the phenomenon already became a dynamic of its own.

The problematic epistemological issue with the important reference to an *actor or a constellation of actors* is, that in theory this can be everybody. While the measurement of techno-economical innovation is usually confined to business (Oslo Manual of the OECD), there is no restrictive indication, who potentially could be an actor for social innovation. This is due to the nature of social innovation, which can be prompted by NGOs, companies, social entrepreneurs, social groups, public administrations, policy-makers or even researchers. That does not make the operationalisation and measurement of social innovation any easier. Moreover, the widespread focus in the social innovation discourse on heroic individuals and especially on social entrepreneurs[5] might have meant that many scientists did not feel addressed by such a perspective, especially if they operate more in structuralist and institutionalist schools of thought.

Fifthly, a social innovation must be more than just a brilliant idea; at the very end it must be *put into practice*. Like any innovation, also a social innovation needs to be accepted.

Contrary to techno-economical innovations, which are diffused in businesses or parts of it, social innovations are diffused in society or parts of it. The scale of social acceptability and use may vary from case to case, but this applies to techno-economical innovations too. Some social innovations target only local groups of a few people, while others potentially address thousands.

To conclude, we would argue that the building blocks for a social innovation theorem are in place. There are still epistemological shortcomings and especially problems related to operationalisation and measurement, but in general, we would not see an insurmountable epistemological barrier that stands in the way of a fruitful debate between science and social innovation.

[5] The definition of Dees (1998) on the role, which a social entrepreneur plays as change agent in the social sector, is a good example for this individual-centred approach. In the agency work of Ashoka such commendable individuals are often in the centre of promotion too.

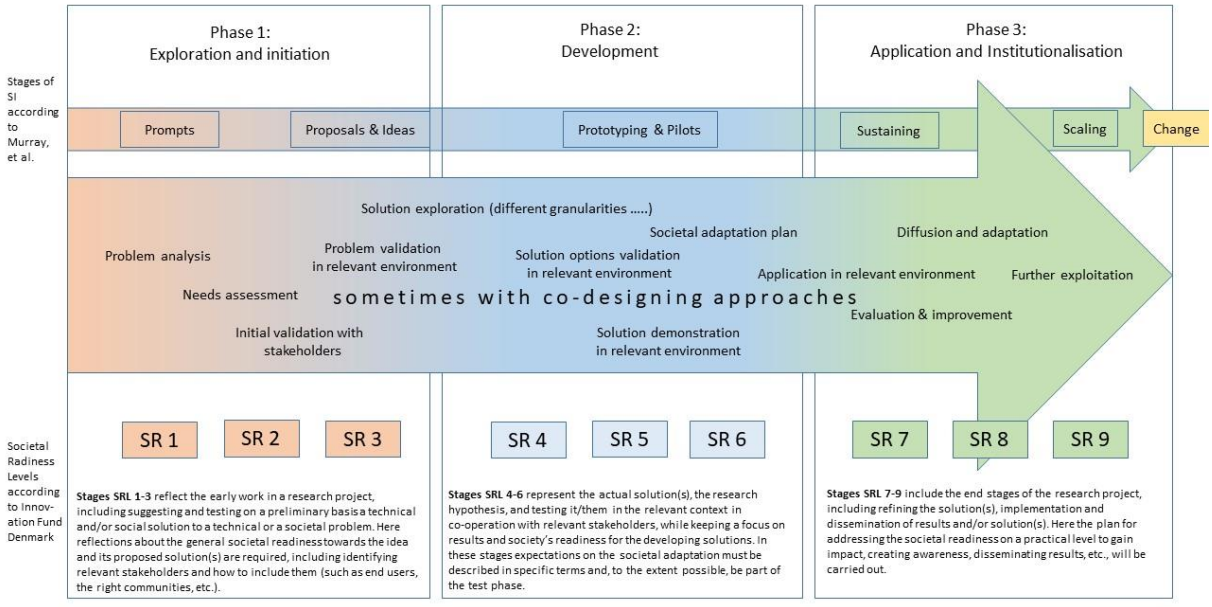
Since we understand research as an upstream process that might lead to innovations or not, we are not approaching the contribution of research to social innovation from its end but from its scientific inputs, as shown in the next subchapter.

3.3 Locating social innovation approaches in research processes

Research contributions to any innovations, regardless of whether we speak about techno-economic innovations or social innovations, are usually at a preliminary stage. They are one input among others. In principle, the scholarly contribution to social innovations is no different from the scholarly contribution to techno-economical innovations. In both cases, they precede the actual applications, which are usually outside the domain of scientific research. Research funders often refer to TRLs (technology readiness levels) and increasingly also to SRLs (societal readiness levels) to make clear that the contributions of research precede the actual innovation and are intertwined in many ways. Not every innovation is necessarily based on scientific input, but it is undisputed that our society and economy are increasingly permeated by technology and knowledge, and at least for some sectors, such as the pharmaceutical industry, scientific and technological progress is an indispensable driving force for innovation. Whether and to what extent this also applies to social innovation is the empirical subject of this study. In contrast to the large-scale empirical investigation conducted in the SI-Drive project, which, based on identified social innovations, traced back towards the contribution of research, we choose a supply-side approach. We investigate what research funded by the SNSF itself contributes or would like to contribute more to the development of social innovation.

In order to operationalise this, we try to localise points of intersection with social innovation in the different research processes, whereby so-called productive interactions with non-academic partners play a special role. The assumption behind this is that transdisciplinarity-based research attaches particular importance to the development of social innovations (Moulaert et al. 2013).

*Figure 2**: R&D phases and procedures for social innovation research***



We use the 6-stages model of social innovation of Murray et al. (2010) and the societal readiness level (SRL) concept of the Danish Innovation Fund, to track down and identify social innovation intersections in research processes and phases. Here we distinguish three main R&D phases and several operational R&D procedures, assuming that social innovation research funded by SNSF is mainly concentrated in the first two phases (see Figure 1).

In combination with the properties identified for social innovation (see Table 1), we will operationalise these phases and procedures into analytical categories to identify and trace the intersection, contribution and stage of SNSF funded research to social innovation.

We assume,

- Firstly, that research contributions to social innovation funded by SNSF in its capacity as a fundamental science fund will become primarily be visible in phases 1 and 2
- Secondly, the research procedures are not necessarily linear as the figure suggests
- Thirdly, not every single research process shown in the figure necessarily has to be applied - we rather expect various combinations and omissions of individual process steps
- Fourthly, not each project will certainly lead to a social innovation, just as very few scientific and technological projects lead directly to techno-economic innovation
- Fifthly, we will survey so-called productive interactions (Spaapen and Drooge 2011) in relation to all identified process steps and place them in a functional relationship (e.g. needs assessment; co-development; testing; access to those affected; application; dissemination etc.)

The level of productive interactions between researchers and non-academic stakeholders respectively beneficiaries or practice partners is a key aspect of our study. Especially during the last years, participatory approaches and support programmes that promote productive interactions with non-academic actors in research (Schäfer and Kieslinger 2016; Shirk et al. 2012; Howaldt and Schwarz 2010), have strongly contributed to a more active role of researchers that goes beyond the transfer of expert knowledge into social practice. Participatory research approaches, often operationalised through co-design approaches, should rather lead to mutual learning and skill development of all involved actors to enhance their ability to determine and reflect (Howaldt 2019).

Shirk et al. (2012) differentiate five ways of participation of non-academic actors in research:

a) contractual projects (professional researchers are commissioned by non-academic actors)

b) contributory projects (non-academic actors collect data for scientific projects)

c) collaborative projects (non-academic actors not only collect data, but also help refine the study design, analyze data and / or disseminate results)

d) co-created projects (which are designed jointly by researchers and non-academic actors and for which at least some of them are actively involved in aspects of the research process), and finally

e) collegial contributions (where non-academic actors carry out independent research and share their results with researchers).

To clarify the different levels of "science-society interactions", we use the following terms:

1) *Participation*: Non-academic actors take part in research. E.g., being recruited in trials, completing questionnaires, participation in interviews and focus groups.

2) *Engagement***:** Information and knowledge about research is provided and disseminated. E.g., dissemination of research to non-academic actors (via media, social media), raising awareness of research through media, science festivals and open days at universities and research centres.

3) *Involvement*: Non-academic actors are actively involved in research. E.g., through identifying research opportunities, agenda setting, members of project advisory and steering groups, co-developing information or materials, undertaking interviews with other non-academic target groups, or even carrying out research.

By means of surveys and the case studies we will identify and classify the 'productive interactions' in question in order to find out what function they have in research processes and what contribution they might make to the development of social innovations, if any. If promising, we include them in our attempt to develop a valuation framework.

4) METHODOLOGY

4.1 Overview on the Multi-Method Approach

Our research design, depicted in Fig. 1, aims at mobilising an integrated process where each applied method is linked to processes or results of preceding steps. The structure of the overall multi-method approach suggested by us is schematised in Figure 3.

Figure 3: ***Multi-method approach***

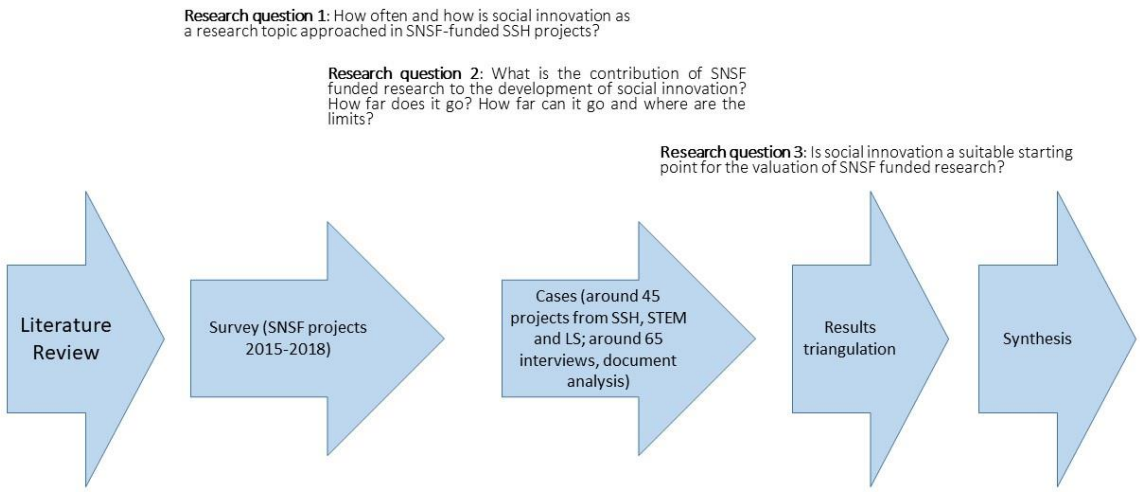


Table 2 below provides a short summative outline of the methods we would like to apply before describing our approach in detail.

*Table 2**: Overview on the applied methods***

Methods	Activity	Source	Expected results
Literature review	Focus on most recent literature dealing with the measurement of social innovation and the application of SRLs in valuation and evaluative approaches.	Journal articles (Research Policy, Int. Journal of Social Entrepreneurship and Innovation, Social Innovations Journal etc.), books, but also evaluation studies and grey literature	Development of a robust classification of social innovation and its location in research processes by means of an applicable taxonomy. This systematization serves as a basis for text mining and the following work steps.
Survey	Survey on (i) the perception and importance of social innovation for own research work, (ii) its epistemological and operational limits in SNSF research projects, (iii) the existence, role and location of productive interactions in research processes and (iv) identification of support measure to raise the added value of scholarly contributions to social innovation development	All funded SNSF projects (2015-2018) (exact sample tbd. with SNSF)	Better understanding of how social innovation - is perceived or used as research topic and/or approach; - is assessed or already used for valuation of own research for accountability purposes; - reaches its epistemological and/or operational limits in SNSF projects - uses which sorts of productive interactions in the different phases of the research processes - and what would be necessary to further tap the potential of scholarly contributions to social innovation development
Interviews / qualitative cases	Online interviews with principal investigators from 45 SNSF projects from SSH, STEM and life sciences dealing explicitly with social innovation as well as with their practice partners respectively clients (if available). For the preparation of interviews, the project proposals and final reports will be analysed to gain a robust understanding of each case.	Sample (n= 45) of all funded SNSF projects with explicit social innovation relation identified through the survey (sated consent to the interview was given); Interviews (n= 65 max.) with 45 principal investigators and additional 20 interviews with their practice partners (if consent is provided)	Gaining detailed knowledge about - scope of social innovation research - contribution of research to the development of social innovation and analysis of pathways - identification of milestones and critical incidents in the research process with regard to the development of social innovations and the role of productive interactions for them - limits of contribution (in operational and epistemological terms) - use of social innovation as an outcome and valuation category for accountability purposes
Triangulation and synthesis	Interpretative synthesising of the obtained findings from the multiple methods in internal workshops together with the	All findings obtained from the different methods.	Identification of strengths, weaknesses and contradictions through a comparative overview of the results obtained from the multi-method approach. The validated results are used to establish a concept

	involved team members under the supervision of the Team Leader.		framework for assessing the value of funded research by the SNSF in terms of its contribution to the development of social innovations.
Presentation of findings	Presentation of the findings to SNSF	Experts invited by SNSF	Transfer and discussion of the gained insights.
Workshop	Workshop with SNSF to discuss and structure the value of social innovation as potential valuation and outcome category, in particular but not exclusively for SSH.	Management of SNSF and experts invited by SNSF	Assessment whether or not (and if so with which particular features) contributions of SNSF research to social innovations can be meaningfully classified and structured for the purpose of valuation of research.

Each methodological step is presented in detail below.

4.2 Literature Review

We already have a good overview on the literature, which was also used for this proposal, so we would like to focus on two aspects in particular: first, current literature on measuring social innovation, and second, current literature on the operationalization of the SRL for analytical and evaluative purposes. In addition to published literature in journals, we will also use current book contributions and grey literature (e.g. evaluation reports).

The purpose of the literature review is to further ground our understanding on the research topic and to feed-in the gained knowledge in the development of a robust classification of social innovation and its location in research processes by means of an applicable SRL taxonomy. This systematization serves as a basis for the following work steps.

4.3 Survey

To better understanding of how social innovation

- is perceived or used as research topic and/or approach;
- reaches its epistemological and/or operational limits in SNSF projects
- is developed by using which sorts of productive interactions
- is assessed or already used for valuation of own research for accountability purposes;
- and to identify, what further support measures would be necessary to further tap the potential of scholarly contributions to social development

we are launching a survey to all funded and concluded SNSF projects between 2015 and 2018 (sample to be discussed with SNSF).

After ZSI has developed the questionnaire, it will be made accessible to SNSF for review.

To ensure comprehensibility, consistency and a logic structure of the online survey, *a cognitive pre-test* (Prüfer and Rexroth, 2005) will be performed with five people from the target population of the survey and the survey will subsequently be adapted according to the findings of these cognitive pre-tests.

The finalised survey will be set-up online with the survey tool LimeSurvey. Based on the database of the SNSF, a personalised link to the online survey will be sent out to the PIs of all completed projects funded by SNSF between 2015 and 2018. This personalised link (token) allows tracking who responded while ensuring the anonymity of the answers given by the respondents. To ensure a high response rate, at least **two reminders** will be sent out to those

who have not answered yet. The data collected on LimeSurvey will be saved on the servers of ZSI ensuring data protection in line with the **GDPR** (personal data and collected data are saved separately).

The data analysis will be done through **descriptive and inferential statistics**. Tables and graphs will illustrate the main findings.

To provide an example of a battery of questions, we show below some questions, which refer to the perception of social innovation at the organizational level (highly aggregated), the treatment of social innovation in teaching and research at the organizational level (low aggregated), as well as the limits of social innovation research and possible ways to support academic contributions to the development of social innovation. These sample questions will of course need to be revised and supplemented by questionnaire batteries that relate to the other questions mentioned above that we want to use in the survey.

Excursus: Example of a battery of questions

1. *How would you assess the current significance of social innovation in the self-image or self-representation of your university/research organisation (overall level) as a whole?*

   Suggested answer categories:
   - *Social innovation is an important topic.*
   - *Social innovation is a niche topic.*
   - *Social innovation as a topic has almost no significance overall.*
   - *I don't know*

2. *Is social innovation a topic your institute deals with in its research?*

   Suggested answer categories:
   - *Yes, often*
   - *Selectively, but then already mostly as a central theme*
   - *Selectively, but then predominantly only as a marginal topic*
   - *As good as never*
   - *I don't know*

3. *Is social innovation a topic your institute deals with in teaching?*

   Suggested answer categories same as above.

4. *Has your institute cooperated with practice partners in the development of social innovations in the last 12 months?*

   Suggested answer categories: yes, no, do not know

5. *Are there concrete support measures on the part of your university or faculty that help you collaborate with practice partners to develop social innovations?*

   Suggested answer categories: yes, no, do not know
   If the answer is "yes" to the latter question, the following further questions could unfold:

   1) There is a cooperation platform where practice partners can regularly report their needs for support of social innovations.
   2) There is a small university or faculty fund through which we can finance our participation in the development of social innovations.
   3) We are allowed to work with students in our courses on the development of social innovations with practice partners.
   4) We can participate in the development of social innovations through research projects financed by the university.
   5) The university or faculty management encourages us to work with practice partners on the development of social innovations.
   6) Inquiries from practice partners regarding the development of social innovations are actively approached by the university or faculty management.
   7) Our work on the development of social innovations with practice partners is positively supported by the university in the context of career promotion and performance assessment.

8) Our work on the development of social innovations with practice partners is used by the university/faculty for PR purposes.
9) Social innovation development projects with practice partners are taken into account in our performance reporting.
10) Other - please specify:

Suggested answer categories: yes, no, do not know

We could also work in addition with Likert questions, such as:

The concept of social innovation is epistemologically unhelpful for gaining new insights, which is why it has no special status in the academic world.

Suggested answer categories:

- *Agree very much*
- *Majority of votes in favor*
- *Largely disagree*
- *Do not agree at all*
- *No opinion*

As mentioned above, this example of potential questions is not exhaustive and covers by now just a few of the aspects scrutinised in this proposed study.

4.4 Case Studies and Interviews

Our qualitative case study approach is based on two methods:

1. Online interviews with principal investigators from 45 SNSF projects dealing explicitly with social innovation as well as with their practice partners respectively clients (another 20 interviews if available).
2. For the preparation of interviews, the project proposals and final reports will be analysed to gain a robust understanding of the case.

The 45 cases are selected from a population of projects whose principle investigators (PIs) have given us the prospect of an interview in the course of the online survey (see above). Whether the selection among the positive responses is random or categorical is still to be determined after the cases have been viewed and in agreement with the SNSF.

We use the document analysis (final reports, project proposals and CVs if available) to prepare for the interviews, but also to analyse the research contributions to the development of social innovations mentioned therein, the importance of productive interactions for them, the epistemological and operational boundaries, and any points that point to the assessment of the value of social innovation as a research contribution.

The online interviews (either by telephone, skype, gotomeeting, webex or zoom) will be conducted in English, or German or French, depending on the preference of the interviewees. Informed consents are obtained from all interview partners in advance.

With this qualitative approach, we would like to explore the object of investigation in detail. Our focus is on:

- scope of social innovation research
- contribution of research to the development of social innovation and analysis of pathways
- identification of milestones and critical incidents in the research process with regard to the development of social innovations and the role of productive interactions for them
- limits of contribution (in operational and epistemological terms)
- use of social innovation as an outcome and valuation category for accountability purposes

In order to gain a comprehensive picture, however, we will not only question the PIs on the basis of a pre-tested interview questionnaire, but also – as far as available and as far as consent is given – their main practice partners or "stakeholders" in the selected projects (additional 20 interviews).

The protocol after the end of each interview will also record what interviewers find remarkable about the interview. These memos or minutes usually contain important information for interpreting the conversation. For the thematic analysis of the records, coding processes will be used. In addition, selected text passages that appear to be particularly important for answering the questions are further scrutinised.

4.5 Triangulation and Synthesis

In triangulation, different methods or perspectives are applied to the same phenomenon or different types of data are used to research a phenomenon in order to compensate for the weaknesses of the other with the strengths of one approach. Both approaches are combined in our proposed evaluation design. By triangulating the results of the methods applied in course of our research design, we aim to achieve a higher validity of the research results, to reduce systematic errors and to get a richer picture of the empirical reality.

The obtained findings are triangulated in the form of an interpretive synthesis in internal workshops together with the involved team members under the supervision of the Team Leader. The broad methodological expertise of our team is well suited for such a complex analytical procedure.

The aim is twofold: firstly, we aim to identify the strengths, weaknesses and contradictions of our findings through a comparative overview of the results obtained from the multi-method approach. Secondly, the validated results are used to establish a concept for assessing the value of funded research by the SNSF in terms of its contribution to the development of social innovations.

This concept is the actual result of the research proposed here. It is not merely a theoretical concept, but an empirically tested one, albeit with an open outcome. Ideally, it serves as a tool to determine the value of publicly funded SNSF research for the development of social innovations, or at least to provide clear starting points on how and where such an added value can or cannot be identified.

It should be noted again, that our project proposal centres primarily on the identification of the value of research for a specific impact dimension (i.e. contribution to social innovations) and not directly on its impact. In the few cases when we talk about effects of research, we consciously differentiate the term "outcome", which characterises the intended and usually shorter-term effect of an intervention (e.g. a project or a programme) on its often diverse target groups from the term "impact". The latter refers to the intended and non-intended usually long-term positive or negative effects to the target group(s) and beyond. Attributions from research to impacts are fuzzy and difficult to trace and value (if at all). Although our approach is experimental, but basically serves to develop a practical application to identify the value of SNSF funded research for social innovation, our research approach does not examine the impact of the scrutinised social innovations.

4.6 Presentation of findings and Workshop with SNSF

Depending on the readiness of SNSF we propose to

a) present the findings of our study to SNSF managers and/or to

b) organise a workshop with SNSF to discuss and further structure the value of social innovation as a potential valuation and outcome category of research funded by SNSF.

While the presentation serves the transfer and discussion of the gained insights with the SNSF management, the workshop serves to assess together with SNSF experts whether or not (and if so with which particular features and under which limitations) contributions of SNSF funded research projects to social innovations can be meaningfully classified and structured for the purpose of valuation.

If possible, we would appreciate communication with responsible persons from Division 1, 2 and 3, selected members of the National Research Council, the strategy services, the Committee on Interdisciplinary Research, etc.

5) DATA

We concentrate on projects funded by SNSF between 2015 and 2018. At the request of the SNSF, we can also include programmes that may be of relevance in the context of our study due to their mission-oriented, interdisciplinary, use-oriented approach and/or their focus on societal impacts as well as on the dialogue between scientists and society. The following programmes could be considered here: NRP, Sinergia and BRIDGE under "programmes" as well as Agora under "science communication". The sample strategy will be agreed with SNSF.

6) OUTPUTS

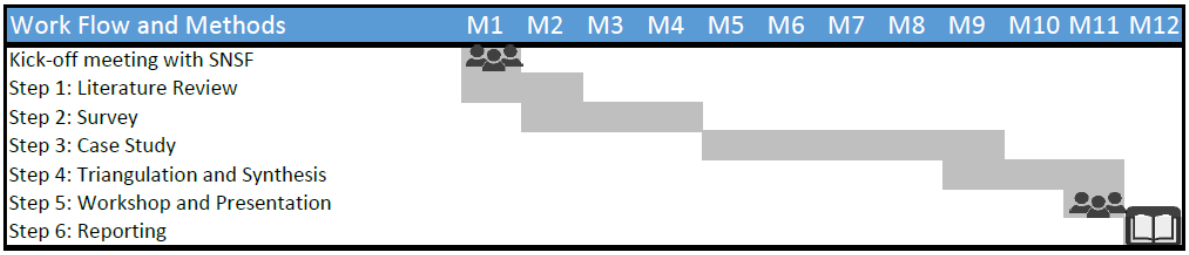
We suggest three outputs:

1. Final project report including an executive summary; information about research questions, methodology and data constraints; chapter on results and on conclusions (approx. 20 pages without annexes)
2. A concept for assessing the value of research funded by the SNSF in terms of its contribution to the development of social innovations (5 to 10 pages; serves also as input for the proposed workshop with SNSF)
3. An article submitted to a scientific journal on the research questions, the underlying theory and the empirical results. Due to time constraints, this article submission cannot be done during the project's duration. It is therefore not considered part of the contract.

7) TIMELINE

We are prepared for a timely start of the project in March 2021. As stipulated by the ToR a presentation of the final results is foreseen in January 2022. The project ends with a delivery of the final report in February 2022. The following figure provides an overview about workflow and timeline.

Figure 4: ***Timeline***



8) BUDGET

We calculate for the proposed work a lump sum budget of 96,000.00 CHF (around €89,200). The calculation is based on an average daily rate of CHF 750.

The distribution of the budget along the work flow is approximately as follows:

Literature Review:	8 days	6,000
Survey	20 days	15,000
Case Study (incl. 65 interviews etc.)	77 days	57,750
Triangulation and Synthesis	6 days	4,500
Workshop and Presentation	4 days	3,000
Reporting	8 days	6,000
Project Management	5 days	3,750

9) TEAM

ZSI (Centre for Social Innovation) is a private non-profit innovation research organisation with officially recognised common public interest. As applied social scientific institute, it contributes to mitigating social challenges by providing scientific evidence for decision-making and by developing and piloting concepts for implementation of interventions in different policy areas and societal fields. The institute has strong competences in evaluation, participatory research and outreach to society.

ZSI was and is Austria's most successful social scientific research institute in the European Union's Framework Programme for Research and Development since FP5 until HORIZON 2020. The main funders and clients are several Austrian ministries, municipalities, EC, OECD, ILO, World Bank, other public bodies and NGOs.

ZSI's key activities are clustered in three dedicated units:

- **i)** Research Policy and Societal Development (incl. transformative research; techno-globalisation; R&D internationalisation; Science Diplomacy; STS; evaluation and foresight),
- **ii)** Work and Equal Opportunities (incl. migration and integration research; ageing; innovative labour market policies and inclusion, social entrepreneurship),
- **iii)** Technology and Knowledge (incl. participatory technology assessment; citizen science; science-society dialogue; bio-based socio-economic solutions).

ZSI has a strong record in supporting, analysing and evaluating research and innovation policies. It hosts the "Austrian Platform for Research and Technology Policy Evaluation" (www.fteval.at), whose members are firstly all ministries dealing with RTI in Austria, the major RTI funding agencies and a couple of evaluation providers.

ZSI has a long record of successful evaluations including project evaluations, programme evaluations, policy portfolio evaluations and institutional evaluations.

A main task and concern of ZSI is

- To analyse and explore change (potentials) within contemporary socio-ecological framework conditions (system design)
- Research and identify fair alternatives to foster sustainable development embedded within our planetary boundaries (social and socio-technic innovations; overcoming 'imperial lifestyles')
- Participatory development of technologies and innovations
- Evaluating interventions and their social outcomes.

The team proposed by ZSI is experienced in conducting robust and use-oriented studies for research funding agencies and R&I policy makers, is sound in applying the proposed multi-method approach and has comprehensive and detailed knowledge about social innovation and the impact discourse of science and research.

We declare no potential conflicts of interest!

The team consists of

Mag. Dr. Klaus Schuch is expert on techno-globalisation, R&I policies, and evaluation. Klaus is director and senior scientist at ZSI (Centre for Social Innovation), Austria.

Since May 2012, Klaus is also managing director of the Austrian Platform for Research and Technology Policy Evaluation.

Klaus is and was engaged in a large number of national and international projects. From 2009 to 2012 he analysed the Austrian R&I policy and its implementation under ERAWATCH and since 2015 he is national correspondent for the EC's R&I Observatory. In 2007 he was scientific expert of the CREST Working Group on internationalisation in S&T and in 2012 member of the external expert group of the European Commission to advice on the European R&I-internationalisation strategy. In 2016/2017 he was delegated to the ERAC Working Group on Impact Measurement. He is also Austrian delegate to the European RTD Evaluation Network and was member of the COST Scientific Committee (2016-2019).

Klaus was chief organiser of two pertinent conferences organised under the Austrian EU Council residency in the second semester of 2018:

- *Impact of Social Sciences and Humanities for a European Research Agenda – Valuation of SSH in mission-oriented research.* Austrian Presidency of the Council of the European Union Conference. Vienna, 28-29 November 2018. More than 300 participants.

- Impact of Research and Innovation Policy at the Crossroads of Policy Design, Implementation and Evaluation. Austrian Presidency of the Council of the European Union Conference. Vienna, 5+8 November 2018. Largest international conference on RTI policy evaluation in Europe with around 300 participants

2006-2014 Klaus lectured 'monitoring and evaluation' and – as of 2014 – 'techno-globalisation' at the Department of Development Studies at the University of Vienna. He also taught at the Vienna University of Economics and Business, the Danube University Krems, the University of Applied Sciences Vienna and at the University Linz (topics: evaluation; regional technology policy; methods of empirical social research). He is lecturer in several international summer schools and taught evaluation in the post-graduate SOQUA-course addressing young social scientists.

Klaus is the Team Leader for this project.

Dr. Mag.ª Stefanie Konzett-Smoliner studied sociology at the University of Vienna (Austria) and the University of Ottawa (Canada) from 2005-2010. From 2012-2015 she conducted her doctoral studies at the University of Klagenfurt (Austria). Since 2009 she is researcher in the field "work and equal opportunities" at the Centre for Social Innovation (ZSI), Vienna, Austria. Research foci include migration and integration, education and labour market research as well as multivariate data analysis. Stefanie Konzett-Smoliner is project leader in various international and national research projects in the field of education and labour market research with specific foci on matters of diversity and inclusion.

Since 2013, Stefanie is also lecturer on statistics and quantitative methods at the University of Applied Sciences for Management and Communication, Institute for Human Resources and Organisation. She also lectured statistics and quantitative empirical social science methods at several summer and winter schools.

She also received training at the Essex Summer School in Social Science Data Analysis, Main course: Selection and Strategic Models and Multilevel Models with Applications, as well as in Mannheim, Germany, GESIS training: Agent Based Modelling and Logistic Regression Models and at the ECPR Summer School in Methods and Techniques with the main course on Social Networking Analysis (SNA).

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DI Dietmar Lampert is senior researcher at the ZSI and expert on STI policy and evaluation, scientometrics, and foresight. He has a background in computer science and international development studies and joined the Centre for Social Innovation (ZSI) in 2007 to strengthen the team responsible for evaluating S&T policy and impact assessment.

Since then, Dietmar has been employing a wide range of quantitative and qualitative methods in more than 30 international and national projects and evaluation endeavours. He has been involved in stakeholder consultations since 2009, be it straight-forward citizen consultations or complex multi-year endeavours that employed a variety of foresight methods. He co-formed and now leads the bibliometrics team at ZSI that has implemented more than 20 projects, including patent analysis, SNA (social network analysis), interactive data visualisation, and advanced data science methods. His present research interests include foresight, scientometrics, open science indicators, impact monitoring and evaluation, visualisations and visual data exploration.

Laure-Anne Plumhans, BA, is junior researcher at ZSI. She has a background in Political Sciences and European Affairs, and has a MSc in Socio-Ecological Economics and Policy from the Vienna University of Economics and Business. After graduating from her bachelor in European Studies, Laure-Anne acquired professional experience in European Affairs through traineeships at both the European Parliament and an advocacy group. This experience enabled her to connect her research interests to the reality of policy-making. Since she joined ZSI, Laure-Anne has been working on science diplomacy and international science cooperation projects, and thus has a good understanding of the research landscape in the EU. Special interest goes out to the way science can help addressing societal challenges by producing societally meaningful research. She has focused her personal research on sustainable development and its intersection with social inequalities. Throughout her academic and professional experiences, Laure-Anne developed valuable qualitative research skills. Moreover, she has carried out interviews and survey projects for the International Service Facility of the European Commission.

Utku B. Demir, BA, has joined the ZSI as a junior expert in quantitative methods, including machine learning. He is a master's student in political science and also continuing a bachelor's degree in mathematics at the University of Vienna. He is academically focusing on the critical theories of digitalization with the reflection on algorithmic governmentality, surveillance, profiling and anticipation. His interest areas are political theories, quantitative research methods, statistics and probability theory, as well as mathematical modelling. Allocated to the research policy & development department at ZSI and building on his prior methodological experience, he has become part of the data science team in mid 2020. He is mainly engaged in bibliometric studies, quantitative analysis, data visualisation, NLP/topic modelling methods, and rapid software prototyping.

10) LITERATURE

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