SI-DRIVE
Social Innovation: Driving Force of Social Change

METHODOLOGY:
Guidelines for Defining and Describing Social Innovations

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1 INTRODUCTION

The methodological approach adopted for SI-DRIVE ensures cyclical iteration between theory development, methodological improvements, and policy recommendations. Two mapping exercises at the European and the global level were carried out: initial mapping captures basic information of more than 1,000 actual social innovations from a wide variety of sources worldwide. Subsequent mapping focused on well documented social innovations, leading to the selection of 82 cases for in-depth analysis in the seven SI-DRIVE policy areas. The results of the global mapping and the in-depth case studies were analysed on the ground of the developed theoretical framework, iteratively informed by the results of the two empirical phases, moving towards a theory of Social Innovation and leading to first typology approaches. As a third element, the theoretical and empirical results were discussed in two rounds of policy and foresight workshops and stakeholder dialogues. All these central pillars carefully considered different policy fields (Education and Lifelong Learning, Employment, Environment and Climate Change, Energy Supply, Transport and Mobility, Health and Social Care, Poverty Reduction and Sustainable Development) as well as cross-cutting dimensions (e.g. gender, diversity, technology), cross-sector relevance (private, public, civil society sectors) and future impact.

From a methodological point of view, this report will reflect the research concept of SI-DRIVE (chapter 2) and the related methodological approach for theory and policy development (chapter 3). It will reflect the lessons learnt (chapter 4) on the basis of the methodological review done in the state-of-the art report (Schröder et al. 2014, Deliverable 2.1). The following chapters will focus on methodological remarkable specific issues for describing social innovations: underlying explicit and implicit business models (chapter 5) and first approaches for a Social Innovation Typology (chapter 6). Chapter 7 will reflect the policy and foresight methodology in detail. Chapter 8 will summarise the methodological implications and its found solutions.

2 SI-DRIVE'S RESEARCH OBJECTIVES AND MAIN METHODOLOGICAL CHALLENGES

Social Innovation – Driving Force of Social Change", in short SI-DRIVE, is a research project aimed at extending knowledge about Social Innovation (SI) in three major directions:

1. Integrating theories and research methodologies to advance understanding of Social Innovation leading to a comprehensive new paradigm of innovation.
2. Undertaking European and global mapping[1] of social innovation initiatives, thereby addressing different social, economic, cultural and historical contexts in twelve major world regions.
3. Ensuring relevance for policy-makers and practitioners through in-depth analyses and case studies in seven policy fields, with cross European and world region comparisons, foresight and policy round tables.

SI-DRIVE involved 14 partners from 11 EU Member States and 11 partners from other states of all continents, accompanied by 13 advisory board members, all in all covering 30 countries globally. Research is dedicated to seven policy fields covering the main European societal challenges (such as economic crises, climate change, energy supply and transition, demographic change, technological developments, education and lifelong learning, unemployment, social exclusion, and poverty):

- Education and Lifelong Learning
- Employment
- Environment and Climate Change
- Energy Supply
- Transport and Mobility
- Health and Social Care
- Poverty Reduction and Sustainable Development.

The outcomes of SI-DRIVE cover a broad range of research dimensions, impacting particularly in terms of changing society and empowerment, and contributing to the objectives of the Europe 2020 Strategy.

Research subject

Social Innovation is a ubiquitous concept which is increasingly and divergently discussed and promoted in different world regions (see e.g. Howaldt et al. 2016a). Although the status of social innovation activities and initiatives is varying there is a growing awareness in all parts of the world. The Europe 2020 Strategy as well as its specific Flagship Initiatives (esp. Innovation Union) clearly stipulate the importance of Social Innovation to successfully cope with recent societal challenges. Similar to the European Commission (EC), many governments of European Member States, other states of the world (e.g. Australia, Canada, China, Colombia, New Zealand, and the USA) and UN organisations acknowledge Social Innovation as an essential innovation policy of the future.

Starting point of SI-DRIVE is the different understanding of Social Innovation and a missing theoretical framework ("Social Innovation is a term that almost everybody likes, but nobody is quite sure of what it means"; Pol/Ville 2009, p. 881), underlined by the main findings of the policy review of Social Innovation in the EU: "Although social innovations pop up in many areas and policies and in many disguises, and social innovation is researched from a number of theoretical and methodological angles, the conditions under which social innovations develop, flourish and sustain and finally lead to societal change are not yet fully understood both in political and academic circles." (Jenson & Harrisson 2013, p. 5)

Additional to this unclear definition and conditions Social Innovation has to be interconnected to a new perspective on innovation as such. Against the background of the findings in innovation research (see e.g. Howaldt et al. 2014) and the clear emergence of paradoxes and confusion in prevailing innovation policies, the question arises whether the

[1] Coming from geography and cartography the term "mapping" is used in social sciences more and more for data gathering and graphical (special, content related) analyses and presentations in the sense of giving an overview over concepts, contents, and processes. Also within the geography science community a broader definition of "mapping" than a just spatial carto graphing is appearing (cf. Ball & Petsimeris 2010).

technology-oriented innovation paradigm that has been shaped by the industrial society is not becoming increasingly less functional. This sort of fundamental change process involving the entire institutional structure and the associated way of thinking and basic assumptions can be interpreted in terms of the development of a new innovation paradigm (Howaldt & Schwarz 2010). This approach opens up fundamentally new perspectives on recognized problems and thus simultaneously unlocks new possibilities for action, especially in the light of the basic confusions and paradoxes in innovation policy at present. This new paradigm is characterized by three key categories: (1) The innovation process opening up to society, (2) its orientation by the major societal challenges, and (3) a stronger recognition of non-technological innovations geared to changing social practices (FORA 2010; Howaldt & Schwarz 2010).

Methodological challenges

Looking at the research subject and the main objectives of SI-DRIVE it becomes evident that there has to be a close **interrelation between theoretical and empirical research, feeding policy development (challenge 1)**. Therefore a sound theoretical ground had to be elaborated: Starting with the Critical Literature Review (Howaldt et al. 2014) a general depiction of how Social Innovation resonates within the wider frameworks of existing innovation theory and research, the concepts and perceptions of social change and of societal and policy development were setting the ground for the further empirical work.

Against the background of increasing complex and diverse societal challenges the contribution of social innovations to systemic or transformative change is not only increasing and becoming more and more relevant in the last years but also appearing in different understandings, manifestations and performances. To gather all kinds of social innovations and the different understandings and concepts a comprehensive definition of Social Innovation was delivered, integrating the whole variety of initiatives. Social Innovation as a subject of research is a **ubiquitous concept with different understandings all over the world** (**challenge 2**).

Against this background different methodological approaches had been checked for SI-DRIVE. Based on the methodological review of relevant empirical methods as such, methods in innovation studies and social innovation research, and foresight methods (Deliverable 2.1, Schröder et al. 2014) the central methodological answers to these two main challenges led to a sound (and continuously improved) methodology (chapter 3). This description is followed by a condensed review of the chosen methodology and the lessons learnt in respect to the chosen quantitative and qualitative methods, and the state of the art in (social) innovation studies and foresight methods (chapter 4). Chapter 5 is reflecting an important future related feature of Social Innovation, mainly based on the results of the case studies, also reflecting on additional promising concepts: business models in and for social innovations. Based on the global mapping and the case studies first typologies are describing and systemizing Social Innovation in chapter 6. Final guidelines for making policy recommendations and foresight for Social Innovation are revealed in chapter 7. The concluding chapter 8 reflects the methodological challenges and answers of SI-DRIVE.

3 SI-DRIVE METHODOLOGY

Central issue for the SI-DRIVE methodology is the development of a sound theoretical framework for Social Innovation. So based on the unclear concept and definition of the research subject of Social Innovation the methodology had to contribute to the theory development during the course of the four year project.[2] Therefore the respectively developed theoretical framework so far was the reference point for each of the two empirical phases.

3.1 THEORETICAL FRAMEWORK

Social Innovation is a ubiquitous phenomenon, characterised by a high variety, diversity and plurality of concepts and understanding. Therefore, the SI-DRIVE approach is going beyond a narrowed normative and social entrepreneurship perspective. The widely seen former strong focus on social entrepreneurship and "doing something good for society" excluded other key aspects and the potential of a comprehensive concept of Social Innovation and its relationship to social change (Howaldt et al. 2016, p. 108).[3] SI-DRIVE elaborated (building blocks of) a theory of social innovation by integrating existing theories and research methodologies to advance understanding of Social Innovation - leading to a comprehensive new paradigm of innovation.

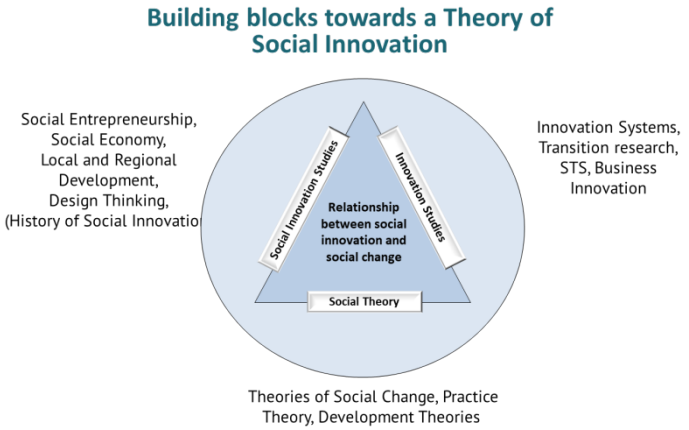


Figure 1: Building Blocks towards a Theory of Social Innovation

The starting point of the development of the theoretical framework was a review of existing theories relevant for Social Innovation (Howaldt et al 2014): Social Theory, Innovation Studies and Social Innovation Studies form the three building blocks (including the main approaches of each block) for developing a Social Innovation Theory and the relationship of Social Innovation to social change (see figure 1). Based on this critical literature review of existing theories, Howaldt et al. (2016a) developed a theoretical framework for the empirical mapping of social innovations based on mainly five pillars relevant for the methodological design and the structure and content of tools (mapping interview, case study template):

(1) eight research propositions
(2) a comprehensive definition of social innovation
(3) five key dimensions
(4) differentiation between the macro (policy fields), the meso (practice fields) and the micro level (initiatives)
(5) mechanisms of social change.

Research propositions and foci of SI-DRIVE

The critical literature review opened the view on a theoretically sound concept of Social Innovation grounded in theories of social change, innovation studies and social innovation research. Based on the results of the critical literature review eight first research propositions were elaborated and became the basis for the empirical work of the global mapping.

[2] Beside SI-DRIVE the project TRANSIT (http://www.transitsocialinnovation.eu) has developed a middle-range theory on transformative social innovation, using another methodological approach. (e.g. Haxeltine et al. 2017; see chapter 4.2)
[3] "What is needed is a differentiated perspective of the role of social entrepreneurs within the different phases of the social innovation process and the cross-sector collaboration with actors from the different societal sectors (private, public, universities, and civil society)." (Howaldt, Kaletka, and Schröder, 2017: 95).

Research Focus 1: Concepts and Understanding
Social innovations in the perspective of SI-DRIVE encompass new practices – concepts, policy instruments, new forms of cooperation and organisation – methods, processes and regulations that are developed and/or adapted by citizens, customers, politicians etc. in order to meet social demands and to resolve societal challenges in a better way than existing practices. The emergence of such new social practices, including patterns of imitation and adaptation, was subject to research of SI-DRIVE.
In this perspective, research was focused on analysing the process of invention, implementation (introduction to a context of use), diffusion and institutionalisation of new social practices in different areas of social action. A great deal of attention was devoted to better understanding the relationship to technological innovation as well as innovation oriented at creation of economic rather than social value.

Research Focus 2: Ambivalence
Referring to both the normative and analytical concepts of Social Innovation (cf. Howaldt et al. 2014, Critical Literature Review of SI-DRIVE) highlights the importance of identifying to whom a social innovation is "desirable" – whose objectives and whose demands are being met and whose objectives and demands are being overlooked. This difficulty is reflected in heterogeneous and conflicting interests in different societal sectors, e.g. in civil society (Scoppetta et al. 2014). We also have to consider *"unforeseeable social side effects"* (Howaldt & Schwarz 2010) of social innovations. Their impact may differ according to different actors or groups of actors and there may be winners and losers of social innovation, e.g. according to *"different perspectives of development"* (e.g. Western against native). Establishing a new social practice can mean – using a Schumpeterian term – 'creative destruction' (Schumpeter 1976, pp. 81) of another previously dominating social practice. In this regard, the empirical research put more emphasis on analysing the ambivalence of the outcomes of Social Innovation (i.e. social side effects, unforeseeable consequences, different perspectives), also in relation to actors' intentions.

Research Focus 3: Process Dynamics
Considering the experiences in the field of technological innovation a pending task would be thinking towards a concept of Social Innovation Assessment, as one aspect of policy recommendations to be developed.
The successful implementation and/or active dissemination of a new social fact *usually* follow targeted intervention but can occur also through unplanned diffusion (Greenhalgh et al. 2004) – how much this is the case was subject to research.
From this perspective one of the main objectives of the empirical work of the SI-DRIVE project was analysing the process dynamics of Social Innovation (idea –implementation – social practice – institutionalisation).

Research Focus 4: Relation to Social Change
While social and economic problems identified in public discourse are increasingly prompting a call for extensive Social Innovation, the relationship between Social Innovation and social change remains a largely under-explored area in the social sciences as well as government innovation policies. To better understand the relationship between Social Innovation and social change we have to analyse the mechanisms of social innovation processes (e.g. imitation and social learning).
Special attention will be devoted to Social Innovation as a mechanism of change residing at the micro and meso level. In the context of the broad debate surrounding sustainable development and necessary social transformation processes (Geels & Schot 2007) the question of the relationship between social innovations and social change arises again. To better understand this relationship we have to analyse the social embeddedness of any innovation in a dense network of innovation streams.
Taking into account the micro-foundation of social change we had to analyse how processes of social change can be initiated which go beyond the illusion of centralist management concepts to link social innovations from the mainstream of society with the intended social transformation processes.

Research Focus 5: Governance
To understand the modes of governance of social innovation, one focus should be on networks, including social networks, and their actor constellations, modes of cooperation and communication channels.
The literature review has provided starting points of how diverse modes of governance might be according to the mode of innovating. For example, governance structures might differ according to the intention or purpose of actors (i.e. the formation of a strategic alliance to communicate interests, to have access to various resources in the process of innovating/ community of practice, etc.). As with innovation management within firms, the role of employees and the governance of employee involvement in innovation processes at the work place is a central question. Concepts

such as frugal and reverse innovation originating from the global south describe alternative innovation logics (downscaling and innovations diffusing from the global south to the global north) with supposedly different governance structures that need to be understood to grasp the variety of types of Social Innovation and vice versa. As a conclusion relating to the diverse forms of governance we suggest studying the specific governance in different types of social innovation processes and assess the particularities as compared to other innovation processes.
To develop an integrated understanding of the role of various actors in Social Innovation, a broader concept is needed that appreciates social entrepreneurship but also takes account of other actor types.

Research Focus 6: Actors
The different roles and functions of actors will be studied by SI-DRIVE. Especially in comparison to social entrepreneurs, there is an under-representation of the various other actor types and their specific impulses and impacts as generators of Social Innovation. As a conclusion, different types of actors and their roles in the generation and spread of social innovations will be discussed.
Furthermore, a research focus on diverse actor types relates – again – to the issue of adequateness and transferability of existing concepts. While actor constellations in innovative environments have been conceptualised by triple and quadruple helix models, there should also be openness towards the potential of developing new conceptual models describing actors' relations and functions in social innovation.

Research focus 7: Drivers and Barriers
In order to establish a systemic view upon Social Innovation, it is suggested to put an additional research focus on the drivers and barriers of Social Innovation - including the influence of power, the role of conflict, and the relation to inequality.
Various concepts reflected in this report have been helpful to understand drivers, barriers and governance of innovations and because of their pertinent clarity they are also widely diffused in political programs and strategies to support innovation.
There is a lot to learn from these concepts for scholars of Social Innovation and it should be thoroughly tested, in how far concepts of innovation studies are applicable to study the systemic dimension of Social Innovation and thus are of relevance for better understanding of particular drivers, barriers and governance.

Research Focus 8: Civil Society and Citizen Empowerment
We have to put a strong focus on the role of civil society (citizens, NGOs, social movements, communities) in the innovation process. In particular, we should analyse how the social innovation cases in SI-DRIVE have diffused and whether this facilitated the empowerment of citizens.
However, given the fact that SI-DRIVE is a research project of global reach, the conception of what is considered as civil society might need adjustment to the specific contexts of the diverse world regions. Alongside civil society, the social economy is an environment equally often mentioned as an important source of Social Innovation. It is thus suggested to pay particular attention to the environments of civil society and the social economy in order to understand their particular distinctions. Studying these distinctions is of special relevance for public decision makers, as it provides the relevant background against which supporting infrastructures can be developed. So the research focus was to understand the particular distinctions of these areas/fields, especially related to the set-up of supporting infrastructures for social innovation.

Definition of Social Innovation

The comprehensive definition of Social Innovation is focusing on "*new social practices* defined as a new combination or new configuration of social practices in certain areas of action or social contexts, prompted by certain actors or constellations of actors in an intentional targeted manner with the goal of better satisfying or answering needs and problems than is possible on the basis of established practices; at the end socially accepted and diffused (partly or widely) throughout society or in certain societal sub-areas, and finally established and institutionalised as social practices. This working definition also foresees that, depending on circumstances of social change, interests, policies and power, successfully implemented social innovations may be transformed, established in a wider societal context and ultimately institutionalised as regular social practice or made routine" (Howaldt et al. 2016b, pp. 4).

Because of this new and comprehensive definition a comparable structure of the methodological instruments was chosen mainly based on this definition of Social Innovation and the developed key dimensions.

Macro, meso and micro level

Based on the definition of SI-DRIVE the project differentiated between the macro level of "policy fields" and the meso level levels of "practice fields" and related "projects/initiatives" (micro level):

- seven "policy fields" based on the main European societal challenges were identified: Education and Lifelong Learning, Employment, Environment and Climate Change, Energy Supply, Transport and Mobility, Health and Social Care, and Poverty Reduction and Sustainable Development.
- "practice field" is a general type or "summary" of projects and expresses general characteristics common to different projects (e.g. micro-credit systems, car sharing).
- "project/initiative" is a single and concrete implementation of a solution to respond to social demands, societal challenges or systemic change (e.g. Muhammed Yunus' Grameen Bank which lends micro-credits to poor farmers for improving their economic condition, different car sharing projects or activities at the regional-local level).

The differentiation of three levels into policy fields, practice fields and initiatives helped formulating clear and comprehensible recommendations to policy-makers incorporating the specifics of fields relevant for their own perspective and their own aims (see SI-DRIVE EU Policy Briefs 2015 and 2017, https://www.si-drive.eu/?page_id=3421). It hence also helped with putting a first pattern on the comprehensive dataset featuring 1005 cases. Based on this categorization, it was possible to not only formulate policy recommendations but also to access empirical findings built on the analysis of data for each policy field in a first step and their comparison in a next step). Comparing results from policy fields helped to access their specifics and differences, but also their commonalities and interrelations (see figure below). The latter also reflect the high diversity as well as the connectedness of socially innovative initiatives. Without a division into policy fields, these links between different themes and the underlying links between different social needs and societal challenges would not have been taken into account in a reasonable manner.

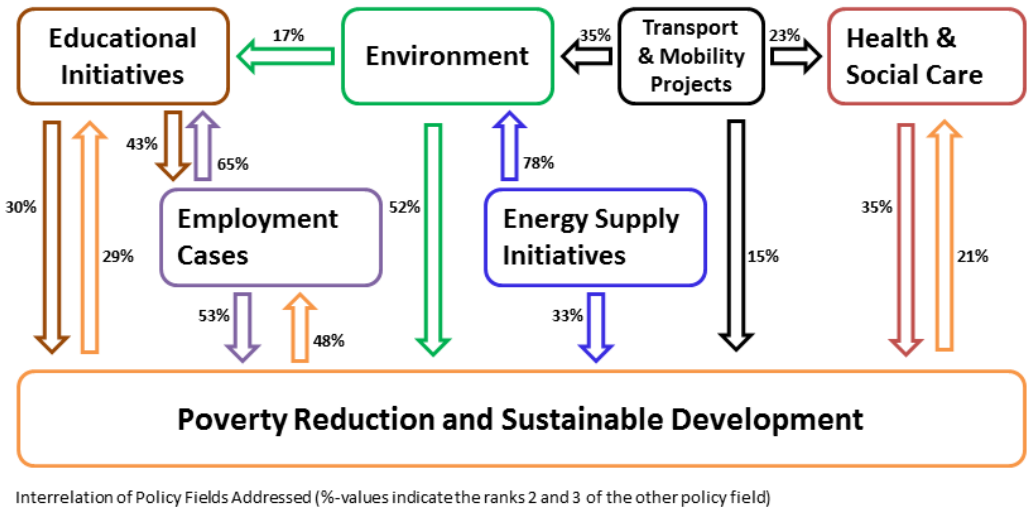


Figure 2: Interrelation between the seven policy fields of SI-DRIVE

Based on the mapping of the first empirical phase, subcategories were added to achieve an even better and more in-depth understanding of differences and specifics. While policy fields reflect a top-down perspective oriented towards a political operationalization, the sub-category of 'practice fields' is strongly related to the objectives and activities of initiatives. They "are clusters of social innovation activities around a specific topic or target group." (Oeij et al. 2017, p. 1). Combining policy fields and practice fields provided the basis for analysis on different levels, hence for different perspectives important for different stakeholders coming from the different sectors of society.

Apart from the macro and meso levels, the micro level perspective on initiatives was important as it opened the doors for the in-depth case-study analyses which led to additional findings on individual and shared challenges, drivers, mechanisms etc. These findings were then fed back and put into relation with the respective meso and macro levels. Hence, taking the micro level into account helped to improve understanding of the superordinate levels by comparative analyses of single initiatives within a practice field and beyond by comparisons across practice fields and even policy fields.

Following the iterative approach of SI-DRIVE, feeding theoretical constructs with findings from analysis of empirical data, the division of practice fields was also subject of improvements based on empirical results. .

Key dimensions

The main theoretical frame for mapping and analysing social innovation cases are the operationalization of the comprehensive definition of Social Innovation through five key dimensions:

1. concepts and understanding (analytical concept: social practice)
2. addressed to social demands, societal challenges (and systemic changes, if feasible)
3. resources, capabilities and constraints including capacity building and empowerment and conflicts
4. governance, net-working and actors (functions, roles and sectors) for social change and development
5. different phases of the process dynamics (mainly: mechanisms of diffusion: imitation, social learning; relationship to social change).

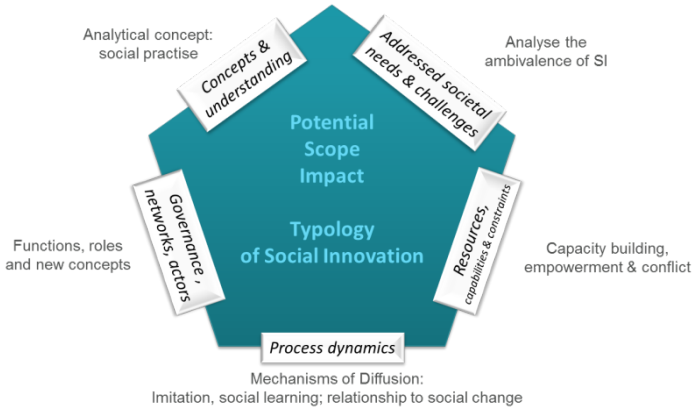


Figure 3: Key Dimensions of Social Innovations

Mechanisms of social change (based on Wilterdink 2014)

In a fifth perspective the process of social innovations is characterised by **mechanisms of social change** (Howaldt & Schwarz 2016, pp. 59, based on Wilterdink 2014): learning, variation, selection, conflict, competition, cooperation, tension and adaption, diffusion, planning and institutionalisation of change.

1. **Learning**: Evolutionary theories (Dosi 1982; Nelson & Winter 1982) in social sciences stress the cumulative nature of human knowledge. Actors realize mistakes, apply new ideas and engage in processes of learning, which results in tacit and codified new knowledge (Cowan et al. 2000).
2. **Variation**: Variation can range from 1) new (collective) ideas to 2) single innovation projects which introduce novelty and hence variation. Ad 1) Collective ideas are the cause and consequence of social change. The spread of beliefs, values, value systems, of fashions, of **religions**, of cultural symbols, of rules of behaviour. Ad 2) Single innovation projects are on the one hand incremental innovation projects that innovate along a given trajectory; on the other hand, radical innovations that deviate from the trajectory and may lay the ground for a new trajectory.
3. **Selection**: This incorporates processes of adoption, diffusion and imitation, but also processes of **decline** and death of initiatives.
4. **Conflict**: Group conflict has often been viewed as a basic mechanism for social change; these **include** revolutions, but also minor conflicts. Social change in this view is the result of the struggle between a predominant class and a dominated class which strives for (radical) change. (conflict model of society by Ralf Dahrendorf)
5. **Competition**: seen as a powerful mechanism of change as competition makes it more likely to **introduce** innovations in order to have competitive advantages.
6. **Cooperation**: Although competition as a driver dominates theories that put individualism, individual utility at the fore, where social change is the results of individuals pursuing their self-**interest**, other strands of

literature have shown that cooperation (e.g. literature on innovation systems, game theory) or altruism (e.g. Ernst Fehr) also lay the basis for human action.

7. **Tension and adaptation**: In structural functionalism social change is seen as an adaption to some tension in the social system. E.g. a gap between fast-changing technology and necessary **associated** institutional change of some type (see W. Fielding Ogburn)
8. **Diffusion of (technological) innovations**: Some social changes results from innovations adopted in society, may be technological invention, scientific knowledge, but also new beliefs, ideas, values, religions, in short ideas. High uncertainty, most innovations disappear, those that survive follow an S-curve of adoption (cf. Geroski 2000).
9. **Planning and institutionalisation of change**: Social change may result from goal-directed large scale planning, by governments, bureaucracies, and other large scale organisations. The wider the **scope**, the more the competencies needed, the more difficult to reach goals and the more likely that unforeseen events interfere. Planning implies institutionalisation of change, but institutionalisation does not imply planning (Wilterdink 2014). Included here are changes in the organisation of the state, interstate relations, laws and directives, programmes etc.

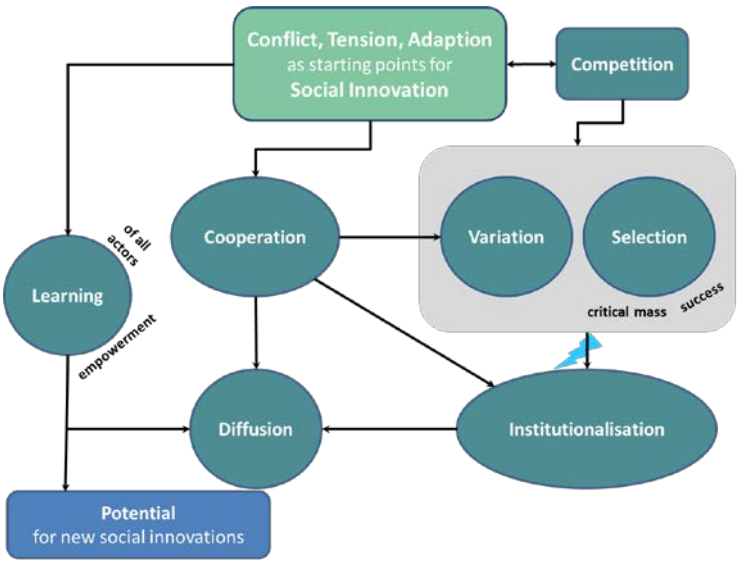


Figure 4: Mechanisms of social change

To illustrate some of these mechanisms, *learning* is e.g. illustrating the mechanisms of cumulative knowledge improvement, capacity building and empowerment: Within mutual learning processes social innovators and other actors of the initiatives realise mistakes, apply new ideas and engage in processes of learning, leading to tacit and codified new knowledge (Cowan et al. 2000). *Selection* incorporates processes of adoption, diffusion and imitation, but also processes of decline and death of initiatives. *Institutionalisation* could be a planned or unplanned or even an unintended process, in congruence or in contrast with existing institutions, interfered with unforeseen events.

Focusing on the dynamic interrelation between social innovation, the practice field and various mechanisms of social change the guiding meta-question for the case studies of SI-DRIVE was: Does Social Innovation actively use, reflect or contribute to the mechanisms of social change as defined in the SI-DRIVE project? The subsequent overview illustrates that this meta-question can be answered with yes. The case studies reveal a first insight in mechanisms of social change showing the relevance of cross-sectoral cooperation and mutual learning for empowering the social innovation actors, variation and selection is mainly depending on or dominated by public or system players, leading to policy field specific possibilities and restrictions for diffusion and dissemination.

Cross-Cutting Themes

Research in SI-DRIVE was also framed by a systematisation of cross-cutting themes the levels looked at (micro, meso, macro): (1) Information and communication technologies (ICT) and social media; (2) social entrepreneurship and social economy, social enterprises; (3) gender, equality and diversity; (4) demographic change; (5) migration; (6) empowerment; (7) human resources, knowledge; (8) governance and (9) others.

The mapping of social innovations around the world and across all policy fields underlined the importance of these cross-cutting themes (see figure below). Whereas other - hence undefined - cross-cutting themes where only named for 5.7% of the mapped initiatives, the vast majority of initiatives put their focus on one or more of the themes. The definition of key dimensions and connected cross-cutting themes therefore paved the way for accessing the issues guiding Social Innovation worldwide.

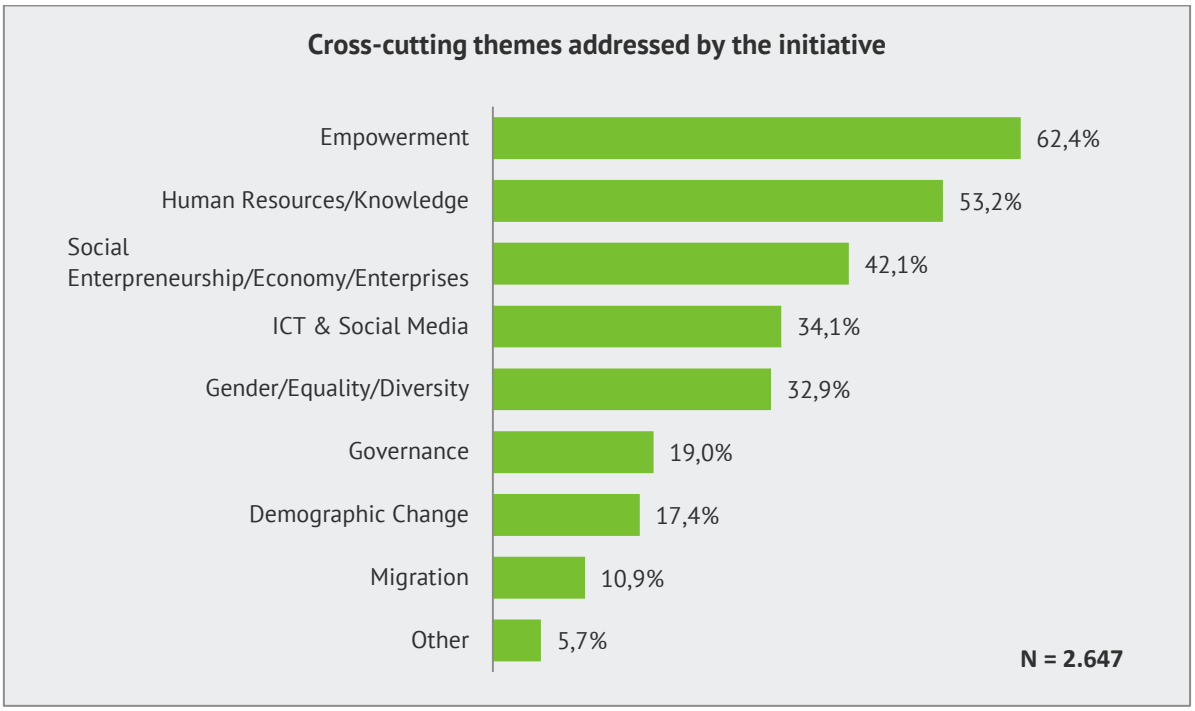


Figure 5: Cross-cutting themes

Especially *empowerment*, *human resources and knowledge* and *social entrepreneurship, social economy and social enterprises* revealed their importance as themes guiding the practice of innovators. However, these themes are not only important for understanding the perspective of initiatives. As they represent the links to practice, they also reflect the various perspectives and interests of stakeholders, hence the societal needs and the specific elements of Social Innovation for producing solutions to them. Their relevance for the world of Social Innovation also shows that more abstract, sometimes even global, societal challenges are also taken into account by innovators, being incorporated in their practice of innovating, providing solutions and sometimes addressing or even triggering systemic change. SI-DRIVE's continuation of the BEPA perspective on social needs, societal challenges and systemic change (BEPA 2014, p. 8) can thus also be found in the themes drawing through the different fields of socially innovative activities looked at.

The cross-cutting themes helped defining the practice fields within the policy fields which ideal-typically reflect the objectives as well as the activities. At the same time, the cross-cutting themes do not only cross-cut the policy-fields but also the practice fields. Especially themes relevant for initiatives' viability but also themes like empowerment are reflected in different practice fields per policy field. The interwoven character of the connection between policy fields, practice fields and cross-cutting themes does also explain the definition of practice fields with a main focus on a single cross-cutting theme, linked to the overarching topic of the policy fields. ICT and social media, for instance, are in the core of practice fields assigned to Education and Lifelong Learning and Health and Social Care. The presence of topics as cross-cutting themes and as the main topic of practice fields does, however, not reveal a weakness of SI-DRIVE's methodological approach. It rather reflects the awareness of innovators for such cross-cutting themes which are sometimes one relevant topic in a bunch of themes and sometimes in the core of a solution. Keeping an eye on these cross-cutting themes and future or currently evolving topics is hence the key to access the world of Social Innovation for not only researches, but policy-makers, practitioners and stakeholders at the same time.

Additional Research Dimensions

Beneath the already described additional research dimensions relevant for the methodology (empirical research and analysis) were:

- **Sectors of society:** public, private business, and civil society (including NGOs)

- **Global Regions (Cultural Background):** Europe (North, West, East, South – Member States / Non-member States) and other world regions: Russia, North and South America, Australia / New Zealand.

3.2 METHODOLOGICAL DESIGN

The methodology and work plan was oriented at the three main directions of SI-DRIVE:

(1) The elaboration of a theoretical framework of Social Innovation in relevance to challenges of social change
(2) The empirical analysis of existing social innovation initiatives and projects to describe a typology, a framework to identify, classify, set-up and scale-up social innovations to become a driving force of social change
(3) The theoretically and empirically based articulation of future oriented policy recommendations, reflecting also the potential, drivers and constraints of Social Innovation in times of economic and financial crisis, to scale-up social innovations and to foster and support methods and means to overcome and achieve social change. In order to achieve a high level of practical relevance, the policy recommendations were developed in a participative manner (including project internal partners and external policy makers).

Against the background of the described research subject, its objectives and the related main methodological challenges SI-DRIVE conducted an *explorative* inventory of a growing and varying area, reflecting the diversity, broadness and usability of Social Innovation; proving the variety of actors and their interaction and exploring the systemic character and concept of Social Innovation. The SI-DRIVE methodology was constructed as an iterative research process characterised by two empirical phases based on and feeding the three central research pillars of SI-DRIVE: theory, methodology and policy. The tools and instruments were elaborated and structured by the illustrated main elements of the theoretical framework, improving the social innovation theory development by empirical evidence in two stages.

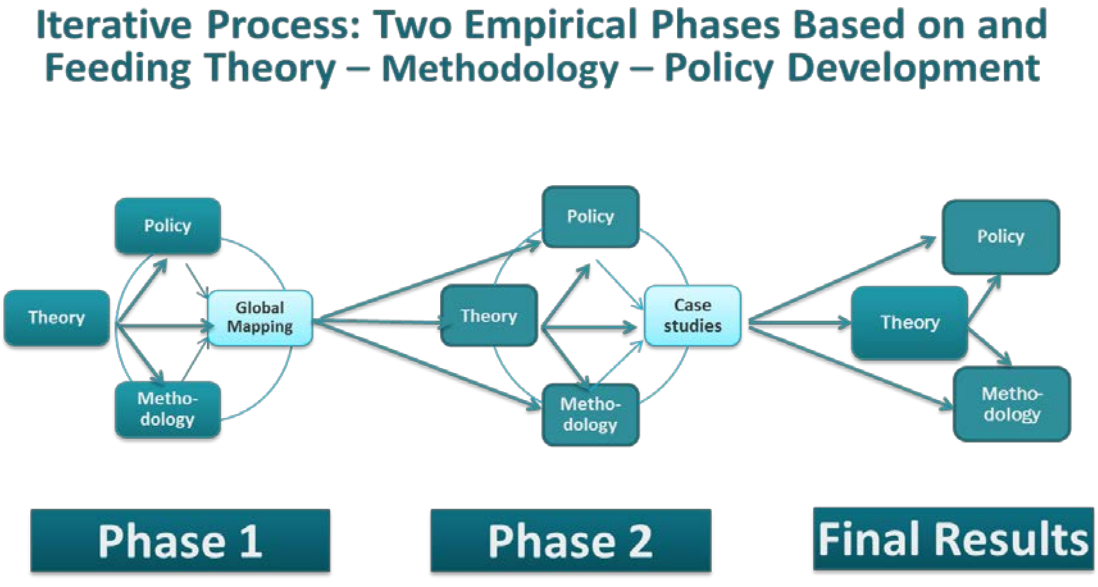


Figure 6: Continuously Updated Research Cycle

Based on the theoretical and methodological results of the first project phase (theory and methodology framework development) the two main empirical phases were defined:

(1) **Mapping 1 (global or baseline mapping of social innovation):** state of the art reports, report of regional strategies, selection of 1,000 and more cases for a SI database

Step in between: Selection of the most important practice fields and related cases for the in-depth case studies. Therefore relevant additional information about the cases have been gathered by the policy field leaders in cooperation with the related partners.

(2) **Mapping 2 (case studies):** in-depth case studies focusing on a deepening of the quantitative results of mapping 1 (mechanisms of social change, actors and networks, process dynamics, typology of social innovation), based on a selection of more than 80 cases.

Therefore the empirical phase with its different quantitative and qualitative research methods is embedded in the SI-DRIVE *cyclical approach* in the form of a double *iteration loop* continuously improving theory, methodology and policy after two empirical stages. Starting with a first theoretical and methodological as well with a first policy and foresight framework, this was laying the ground for the contents and methods of the first empirical phase. The empirical results fed in the improvement of these three pillars, laying the ground for the second empirical phase: the in-depth case studies. In the end, the results of both empirical phases fed into the final theory and methodology report as well as in the policy and foresight recommendations of SI-DRIVE.

With regard to the research interests and the methodology described above, it is evident that a quantitative analysis can only provide initial evidence for questions regarding the ambivalence and process dynamics of Social Innovation and the impact achieved. Conclusions can be drawn on the general motives and the ambitions of the initiatives' actors. But as far as societal impact or social change is concerned, this question has to be more precisely answered by conducting qualitative in-depth case studies which do not only take a single initiative into account but which also reflect on the practice field the initiative is operating in (see the distinction between the macro, meso and micro level of investigation).

Thus, the chosen triangulation and combination of quantitative and qualitative methods has also a sequential aspect: While the quantitative approach is more appropriate for the mapping and analysis of 1,000+ social innovation cases, the qualitative methodology is more relevant for the in-depth case studies (but based on the quantitative analysis of the first empirical phase).

In its iterative construction the SI-DRIVE methodology is *deductive* in the sense that a sound theoretical framework is building the ground and structure for the empirical research (mapping phases). But it is as well *inductive* by improving the existing theoretical framework through empirical evidence (see figure below).

According to e.g. Saunders et al. (2007) the inductive approach is used to collect data and develop a theory as a result of the data analysis, the deductive approach is used to develop a theory, and then design a research strategy for testing that theory. SI-DRIVE is integrating both perspectives: Combining deductive and inductive research will enable SI-DRIVE cross-validation and refinement of the research propositions proposed in the project.

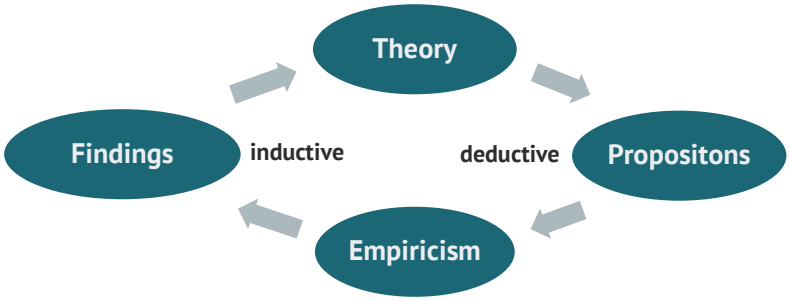


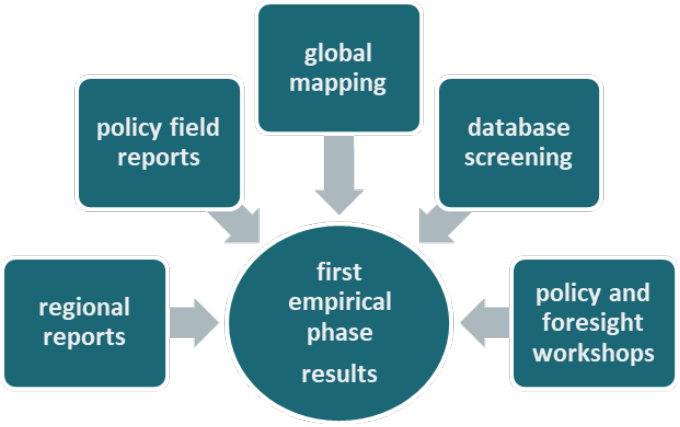
Figure 7: Deductive and inductive approach

Starting with the preliminary theoretical, methodological, and policy and foresight framework the first empirical phase was conducted by desk research and standardised mapping (including open questions): a global mapping of Social Innovation by a comparative analysis of 1.005 cases worldwide, seven policy field reports, a global regional report, an

external database screening, and eight first policy and foresight workshops. The results of these research activities were exploited to the improvement of the three pillars (theory, methodology and policy) and set the ground for the second empirical phase: the in-depth case studies of 82 social innovations. Finally, the results of both empirical phases led to a summarizing comparative analysis in each of the policy fields and to the final theoretical framework, the final methodology and the final policy and foresight recommendations of SI-DRIVE.

3.2.1 First Empirical Phase (Mapping 1)

As already mentioned the chosen methods for the two subsequent empirical phases were qualitative and quantitative. As a first empirical activity, the mapping was conducted in seven major policy fields (education and lifelong learning, employment, environment and climate change, energy supply, transport and mobility, health and social care, and poverty reduction and sustainable development). The first empirical phase was supplemented by policy field related state of the art reports and policy and foresight workshops as well as a trend study of social innovation in world regions (beneath Europe including Australia/New Zealand, Western and South-East Asia, North and South Africa, North and South America, Russia).



Thus, SI-DRIVE mapped cases gathered from the whole world of social innovation (about 3.000 partner organisations within 1.005 initiatives) reflecting both, geographical areas and policy fields - incorporating the diversity and plurality of concepts and understanding, objectives and actors and their diverse roles within a social innovation process.

In detail, the first empirical phase was consisting of four elements, each having a different focus:

1. Policy field reports: focusing on policy field related challenges and contexts of social innovation practices (practice fields) (Schröder et al. 2015; van der Torre et al. 2015; Budde et al. 2015; Boonstra et al. 2015; Butzin et al. 2015; Boelman et al. 2015; Millard et al. 2015)
2. Regional report: focusing on general regional social innovation strategies (Boelman & Heales 2015)
3. Data collection for creating a social innovation database of 1,000+ initiatives: focusing on a worldwide collection of SI cases (projects/initiatives clustered by practice fields) (Howaldt et al. 2016a)
4. Social Innovation Database screening: focusing on already existing databases and making existing cases accessible.

The methods and tools for this research phase were planned in a synergetic, complementary way. There were no overlaps between the different activities, because each component is focusing on a different perspective; together they led to a first comprehensive picture of Social Innovation, by combining different perspectives and foci. The reports (regional, policy fields) and the databases (global mapping and external databases) gave mutual inputs to each other, synergies were guaranteed by the responsible policy field leaders and regional delegates. For instance, the policy field reports (and global mapping) informed the regional report (as a kind of summary from a regional perspective of the policy fields) and the external databases were used for the case selection for the global mapping of SI-DRIVE. As relevant cases of the social innovation database screening were integrated in the global mapping, the cases of the mapping survey illustrated the policy field reports. Furthermore, the results of the policy reports were (partly) used for the regional report. As the data collection survey of the global mapping is a quantitative description of social innovation initiatives, the policy field reports contextualize the relevant European challenges and the social innovations' "answers" to them. The regional reports are summarizing the social innovation strategies within the global SI-DRIVE regions from a regional perspective. The external social innovation database screening was a resource of already listed social innovation cases SI-DRIVE used for the global mapping.

For each of the field activities a template for research activities was developed:

1. Regional report: a framework describing content and structure of the report (finally reflected in the content structure of the report)
2. Policy field reports: a framework describing content, structure and activities for report (finally reflected in the content structure of the report)
3. Social Innovation database screening: a summarising template fulfilled by the partners
4. An online questionnaire (lime survey) for the global mapping: a net based survey with standardised and open questions and detailed instructions (see enclosed document in the attachment).

While the desk work (reports and database screening) was mainly done by an agreed common document structure with some explanations and examples, the global mapping of social innovation initiatives was prepared more in detail. The selection of cases for the survey of the global mapping was based on the definition and the five key dimensions of SI-DRIVE (already described before) gathering social innovation cases at different, but all stages of the social innovation process: from ideation and interventions over implementation and imitation/diffusion to impact and establishment of new social practices, conducting social change. The partners were advised to gather as much as possible the whole plurality of social innovation cases based on the SI-DRIVE definition.

Basis for the data collection was a survey template (consisting of about 50 standardised - quantitative - and open ended - qualitative - questions). The online survey was designed with electronic drop down menus, pop up and help features for each of the standardised and open questions (see survey template in the attachment). Based on the definition of Social Innovation and structured by the five key dimensions the following indicators and variables were investigated (see table below).

Dimension / Indicator / Variable	Standardised Question	Open Question
Basic Information		
Country of main representative/contact person of the project	X	
Gender of the main representative person	X	
Key Dimension: Concepts and Understanding		
Innovative solution / character		X
Key Dimension: Social Needs / Societal Challenges		
Practice Field	X	X
Sectors involved in the Practice Field	X	X
Ranking of Policy fields	X	
Cross-cutting-themes	X	
Societal level(s) the project is addressing	X	X
Key Dimension: Resources, Capabilities, Constraints		
People: employees, volunteers, external advisers, other involved persons	X	
Budget and Funding	X	
Drivers	X	
Barriers / Strategies to overcome barriers	X	X
Key Dimension: Actors, Networks, Governance		
Project partners: Country, sector, type, type of main support	X	
Main implementing body	X	X
Addressed target group		X
Involvement of users/beneficiaries	X	X
Coordination and management structures and objectives		X
Relation to a social movement, policy programme, umbrella organisation, network	X	X
Key Dimension: Process Dynamics		
Year the project started	X	
First motivation/trigger for initiating the project	X	
Current project stage	X	
Country/Countries the project is currently implemented	X	
Transfer and scaling	X	
Outcome		X
Spread/diffusion		X

Table 1: SI-DRIVE Mapping: Dimensions / Indicators, Variables

The mapped cases are the basis for the interactive SI-DRIVE database on the SI-DRIVE homepage (https://mapping.si-drive.eu) and the Atlas of Social Innovation (https://www.socialinnovationatlas.net), the latter will be also used for the collection of further social innovation projects and initiatives in the future.

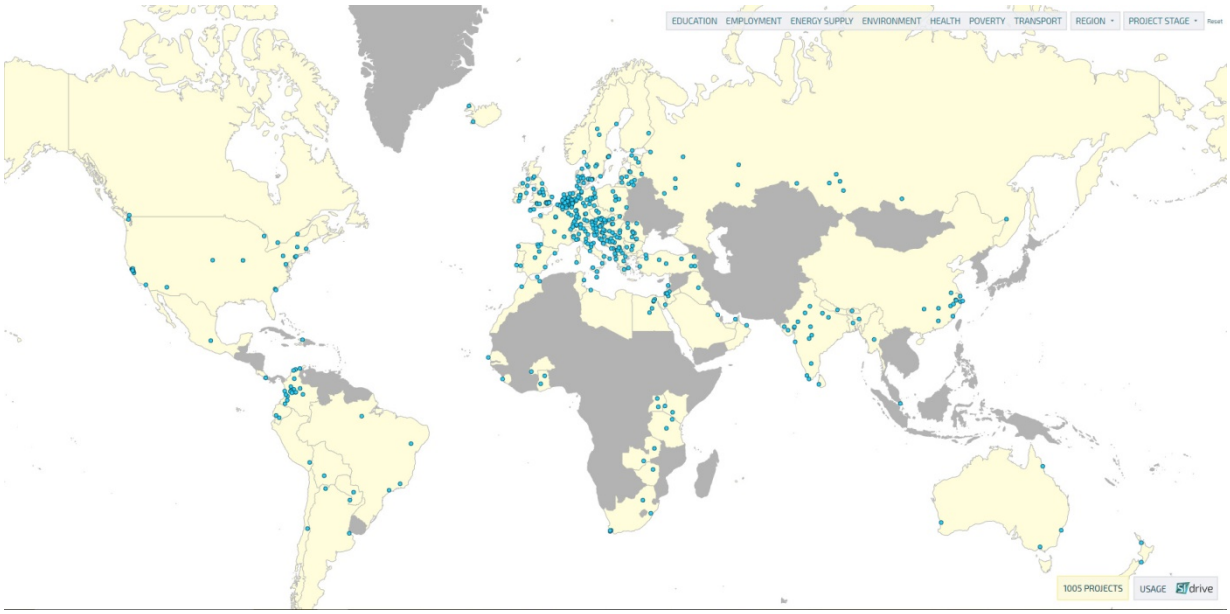


Figure 8: Visualisation of SI-DRIVE's global mapping

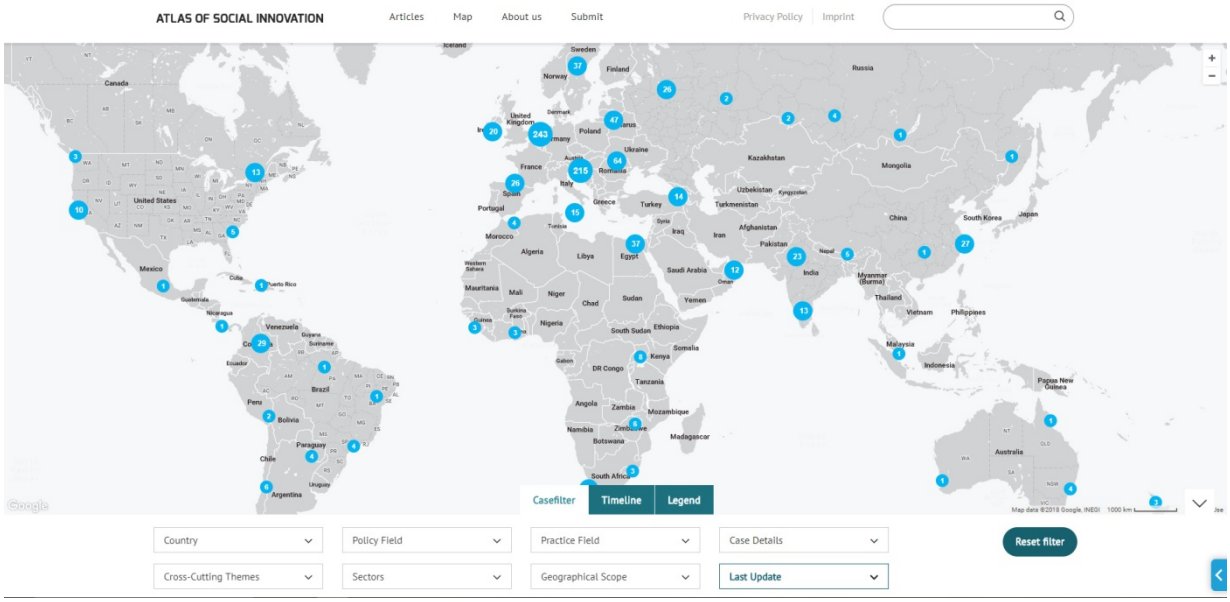


Figure 9: Visualisation of SI-DRIVE's global mapping in the Atlas of Social Innovation

The collection, selection and integration of cases in the template were done by the project partners, organised by the policy field work package leaders. In addition to the mapping of social innovation initiatives the policy field leaders and partners had a look at cases in already existing and relevant databases to be integrated. Third sources for the collection of cases were databases and cases of other European Social Innovation projects SI-DRIVE is cooperating with very closely: namely TEPSIE, TRANSIT, SIMPACT, and CASI.

A main question appearing from the broad variety of possible cases based on the SI-DRIVE definition and theoretical framework was: What is a case?

1. A case is defined by, has to fit to the working definition of SI-DRIVE (mainly: novelty of the social practice, better and new practice and first diffusion in society).

2. A case has to be described by the five key elements of SI-DRIVE: social innovations should be described by all of the five key dimensions (if not, it is not useful, because of the underlying theoretical framework proposed in SI-DRIVE and the qualitative and quantitative analysis proposed).
3. Based on these preconditions finally a case is what the experts of the regions (project partners, advisory board members) define as a relevant social innovation case (project or initiative and related social practice: see distinction described above and see explanations in the survey template).

Despite the fact that a case had to correspond to SI-DRIVE's definition, the mapping may be biased due to the experts' understanding of social innovation, their knowledge and the dependence of publicly available information on social innovation cases. However, the given framework (critical literature review, questionnaire) and the already obtained activities (policy field and regional reviews) led together with the methodological instruction to a *common* comprehensive understanding and view on the world of social innovation.

However, the selection and collection of the cases for the global mapping was an **open and structured** one. Every social innovation initiative from the perspective of the regions, what is defined and seen as Social Innovation in the global regions, countries by the experts involved in SI DRIVE was gathered. That means that by a given survey template (mainly structured by the key dimensions, policy fields and cross-cutting themes, being open for additional policy fields and cross-cutting themes than the predefined ones) the regional responsible partners and experts of the SI-DRIVE consortium (including the advisory board members) collected and described social innovation cases of their areas within the given template. Finding an agreement on shared criteria for social innovation cases was a major hurdle as researchers also had various understandings of what Social Innovation is, which is reflecting the formerly tackled challenge to create a comprehensive definition. As the world of Social Innovation features a high diversity of approaches and themes, a wide definition and a broad discussion on criteria were key to a successful mapping leading to new knowledge.

Background for this procedure is that we wanted to be open for what is defined and seen as Social Innovation all over the world in its different facets and appearing. Starting with this open approach the different meanings and approaches of Social Innovation in the world could be collected, not excluding and segregating any existing approach (one of the main objectives of SI-DRIVE was to clarify what is meant by Social Innovation and to develop a consistent typology of Social Innovation).

But this open approach did not mean that everything could be collected. By the given common structure for the description (especially the key dimensions) the cases have to fulfil a minimum of requirements to be comparable over world regions and policy fields. Within this structure there was given leeway for additional main structural elements that are not covered by the recent concept. The global mapping survey was more like a descriptive case collection, open for a broad range of Social Innovation but described in a comparative way - ensuring space for qualitative descriptions *and* a quantitative comparison.

To ensure that the global selection and collection of 1,000 and more cases would lead to a comprehensive global picture the selection was informed by policy fields and global regions. However, being an EU funded project and the major number of partners placed in Europe there was a strong focus on Social Innovation in Europe added by a significant number of non-European cases. Having in mind the global distribution, the identification and selection of initiatives followed predominantly the principle of **diversity given by contextual, theoretical framework related criteria**! Mainly the policy field partners and leaders as well as the regional delegates decided which and how many cases were relevant. So in the end there were a diverging numbers of cases in each of the field's matrix of policy fields and global regions.

Number of cases concerning global areas and policy fields

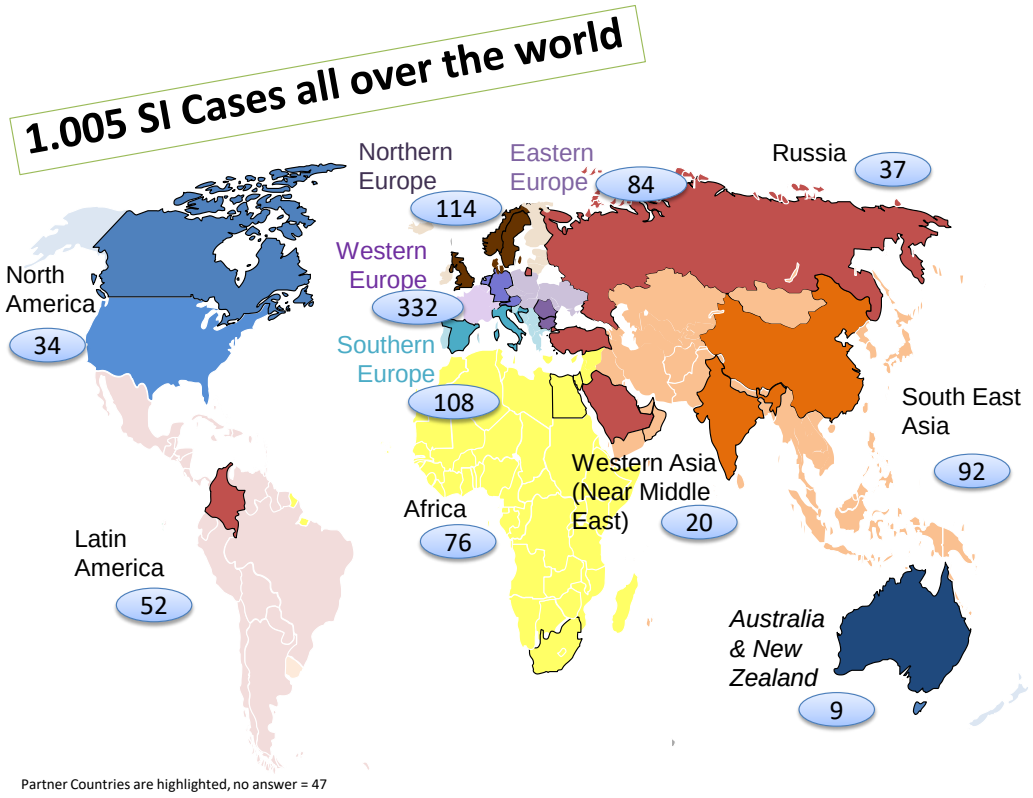


Figure 10: Worldwide Mapping of SI-DRIVE (Region, where the social innovation was implemented)

3.2.2 Second Empirical Phase (In-depth Case Studies)

The focus of the second empirical phase was on qualitative research focusing on the dynamic interrelation between social innovation, the practice field and various mechanisms of social change. Therefore the guiding meta-question for the case studies of SI-DRIVE focused on mechanisms of social change: Does Social Innovation actively use, reflect or contribute to the defined mechanisms of social change (see chapter 3.1) Can we identify other, additional mechanisms?

All the listed mechanisms are reflected in the five key dimensions, but putting a focus on social change. Related to the five key dimensions of SI-DRIVE the main focus of the case studies is on Governance, Networks and Actors as well as on Process Dynamics, mainly asking which changes appear and by what/whom they are driven (see also the related research foci listed in chapter 3.1). Within these focused key dimensions and mechanisms of change factors of success (and failure) were given high importance as well.

The degree of social change was also considered: diffusion in society, degree of institutionalisation, and importance of the practice field and initiative for everyday life and local communities.

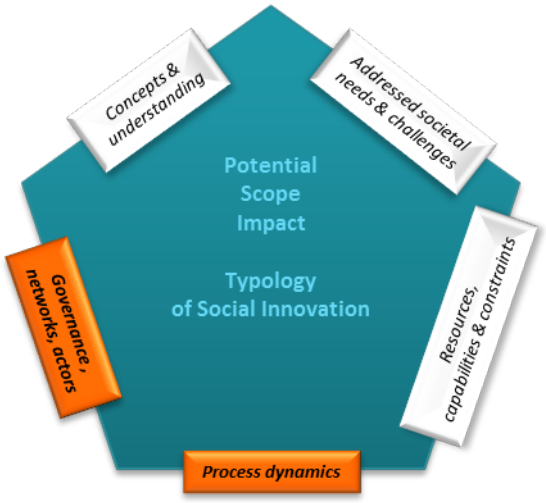


Figure 11: Case studies focusing on governance, networks, actors and process dynamics

Therefore, the main objectives of the case studies are aiming at a better understanding of

- The **processes and dynamics** of social innovation in relation to social change (institutionalisation, diffusion and imitation of social practices)
- The **functions and roles of actors and networks** for the development, diffusion, imitation and institutionalisation of social innovations
- Including the identification of **critical success (and failure) factors**, leading to social change.

The methodological design consisted of two levels for the selection and analysis of cases:

(1) Selection of the relevant **practice fields** (about 2 or 3 in each policy field)
Main criteria: importance for the policy field, already leading to social change
Main interview partners: different kind of representatives of the practice field, e.g. associations, interest groups, politicians, leaders, etc. - representing the Social Innovation Ecosystem or sectors (public, private, civil society, and science)
additional documented material, documents analysis.
(2) Selection of **social innovation initiatives** related to the chosen practice field (about 4 to 5 cases in each policy field)
Main criteria: connection and contribution of the initiatives to a practice field.
Main interview partners: people who were *actively* involved in developing the social innovation initiative, project organisers/participants/actors, users and beneficiaries – representing the Social Innovation Ecosystem or sectors (public, private, civil society, and science), complemented by additional document analysis.

Because the individual case studies can only illustrate the main issues in a given **practice field**, the analysis draw on cases from different contexts and ultimately can only be considered as one input to understanding the practice field. Thus, it is important to point out that these case studies are not necessarily fully representative in a statistical way of a given practice field. This is especially so given that the practice field itself is a conceptual construct, albeit based on the expert judgement of SI-DRIVE partners who have detailed knowledge of the social innovation landscape and context in their country/region and who have selected case studies to illustrate this.

All in all a selection of about ten cases were planned within each of the policy fields, ending up at 82 case studies. The cases were nominated on the background of a given framework and the partners' knowledge and experience. Beneath practical points like access to and willingness of the initiatives to participate and a general regional variety the following aspects were taken into account:

- For the **selection of the practice field**: The (strategical) relevance for the policy field, a higher number of already realised social innovation cases, their differentiation and spread within the practice field, and an advanced development phase of these cases (already in the implementation, impact phase).
- For the **selection of the related cases**: The selected cases should already be highly developed (implementation or better impact phase, embedded in networks, movements or umbrella organisations), and be representative for the practice field showing its variety in terms of social demands and regions.

Against this background the cases were selected from the existing mapping data base. If there was a new important case of high interest (not in the database) there was the possibility to add at least one or two additional cases per policy field. Because the global mapping stressed that social innovations often comprise more than one policy field, overlapping cases were checked and finally assigned by the policy field leaders to the most relevant policy field.

The template developed for the case studies had a common, but flexible structure (see Annex 9.3). This means that the main topics and the related main questions had to be reflected, additional questions helped to structure the deepening of topics appearing as relevant from the interviewees or interviewers perspective, and from the particular context of the initiatives, the actors of the social innovations or practice fields.

While the case study inquiry followed the context and perspective of a single initiative, the structure of the case study reports, see deliverables D4.3 (Schröder et al. 2017a), D5.3 (Oeij et al. 2017a), D6.3 (Schartinger et al. 2017), D7.3 (Ooms et al. 2017), D8.3 (Butzin et al. 2017), D9.3 (Heales & Green 2016), and D10.3 (Millard et al. 2017) started with the practice field as the overarching context for the related case studies, bundling and summarising the results of the

different related cases, illustrating the practice field, summarising the given topics (reflected in the single case studies).

Therefore the structure of the template for the case study inquiry was the other way round as the template for the case study reporting:

1. The **case study inquiry** (**bottom-up**: initiative perspective as the starting point) opened the interview with the perspective of the initiative, leading to the overarching perspective of the related practice field in the end: focusing on the context of the concrete initiative (starting with the idea, passing the development process and ending with the impact perspective) → leading to and completed by the practice field context (integration of the initiative in the broader practice field background, conclusions, institutionalisation).
2. The final case study report, in contrast, follows the **reporting template** (**top down**): the context of the practice field was the starting point, providing the overarching perspective and examining the main issues of social change. The structure grouped the cases within each practice field at the beginning, and then - after the detailed description and illustration of each case - goes on to draw practice field conclusions. The report finishes with some overarching policy field conclusions drawing on these practice field analyses with their constituent cases.

Prior to the case study analyses, other relevant information from the first phase mapping, as well as broader secondary research results (including information about the practice field), were integrated into the case study interview template. For the case study fieldwork and analysis, a common agreed structure across all the seven policy fields was developed, including the case study template, a qualitative comparative analysis questionnaire, and reporting template.

Within the case study template the questions do not vary much between the case level and the practice field level, but the answers related to the questions were elicited to reflect the different levels. For instance, in a more mature case and practice field, there may be a wide set of competitors establishing a social practice for a relatively long time period, such as in car sharing. In possible contrast, a less mature case or practice field that is still in its infancy (although still relevant to examine), competition may be very variable and different in quality or limited overall. The concept of a social practice is fulfilled when there is already a relatively well developed set of different cases, when the original initiators of the first social innovation projects may already be difficult to identify, and where variations, iterations and further innovations on top of the original initiatives have already been applied. A social practice may also be shown by a bundle of initiatives (institutionalised in a practice field), that have different business models, with a variety of services and types of users and beneficiaries, as well as incremental differentiation between different cases.

The following procedure was characterising the case study performance in each of the seven policy fields:

1. Extraction of the given information from the mapping database and integration into the reporting template, interview guide for the specific initiatives.
2. Search for additional documented materials (internet, literature, etc.) and integration of the results in the template as well.
3. Selection and inquiry of key persons for the practice field and the related cases.
4. Interviews, group discussions, site visits etc. (of relevant actors of the initiative)
5. Reporting within the given template (see Annex 9.2) (integrating all the information of the database, interviews and group discussion in one template).
6. Qualitative Comparative Analysis (QCA) questionnaire (as a ground for the comparative analysis study across all policy fields in a subsequent stage)
7. Summarising reporting document (see Schröder et al. 2017, Oeij et al. 2017, Schartinger et al. 2017a, Ooms et al. 2017, Butzin et al. 2017a, Heales et al. 2017, Millard et al. 2017a).

Based on these instructions and the interview template 82 case studies were conducted in 22 practice fields:

	Practice fields	Cases analysed	Realised cases in total
WP4	Reduction of Educational Disadvantages	9	18
	New learning arrangements, interactive education	6	
	Digital inclusion with new and virtual learning environments (for disadvantaged groups)	1	
	Quality improvement of the formal education system (teacher recruitment)	1	
	Strategic partnership education and economy (transition management, labour market needs)	1	
WP5	Youth unemployment and other vulnerable groups	5	10
	Social entrepreneurship & self-creating opportunities	2	
	Workplace innovation & working conditions	3	
WP6	Repairing, Reusing and Recycling	5	10
	Alternative and Sustainable Food (incl. sub-field Reducing Food Waste)	4	
	Individual Cases	1	
WP7	Energy Collectives	4	7
	Local Production of Energy	1	
	Providing examples and inspiration	2	
WP8	Shared Car Usage	5	9
	Mobility of Vulnerable Groups	4	
WP9	E/M Health	6	15
	Integrated Care	4	
	New Models of Care	5	
WP10	Income Support	4	13
	Community Capacity Building	5	
	Displacement and Refugees	4	
Total		82	82

Table 2: Overview of case studies in SI-DRIVE's work packages

3.3 SUMMARY

Main objective of SI-DRIVE was to develop a sound theoretical framework for Social Innovation characterised by a unique systemic approach to analyse social innovations against a comprehensive societal background incorporating the predominant cultural and historical contexts as well as the determining governance models. Therefore, a theory development (as realised in the SI-DRIVE approach) is going further than previous concepts which are concentrating on gathering examples of successful practices aiming at delivering concepts and methods of and for successful social innovations. Other empirical analyses focus on successful local or regional models of Social Innovation (e.g. done by the SI-DRIVE partner CRISES , WILCO – Welfare Innovations at the Local level in favour of Cohesion) or on specific areas or sectors (such as LIPSE, Learning from Innovation in Public Sector Environments; or INNOSERVE, Social Platform for Innovative Social Services). Again, mainly successful models are in the centre of interest, conducted and explained by *case studies*. Within the last years mapping approaches could be found in a growing number of research projects on Social Innovation: Pelka/Terstriep (2016) listed 17 European projects using different types of mapping, aiming on specific target groups and aspects like citizen engagement (TEPSIE) or economic underpinning (SIMPACT), management framework (CASI) or incubation (BENISI), the identification of innovative service practices (INNOSERVE) or focusing on the public (LIPSE) and third sector (CRESSI, TSI, ITSSOIN).

To overcome the limitations of a pure case study approach SI-DRIVE's iterative theory development is based on a methodology combining the results of subsequent empirical phases *mapping* the world of Social Innovation by combining quantitative and qualitative methods. For the first time a set of more than 1,000 social innovation cases all over the world was sampled by SI-DRIVE, covering different world regions and policy fields (Howaldt et al. 2016a).

SI-DRIVE is fundamentally reflecting this by its comprehensive working definition of Social Innovation and the collecting procedure of the global mapping. Although the database is explorative and not representative in a statistical way the 1,005 social innovations are representing Social Innovation in its broad variety and diversity across the world regions looked at by SI-DRIVE. The methodological combination of this quantitative data with qualitative reviews of the state-of-the art in the policy fields and the world regions´ strategies is proving the reliability and validity of the data, esp. by the in-depth case studies of the second empirical phase 2.

Due to the *explorative* character of the SI-DRIVE empirical research and the *openness* for diverse understandings and concepts of Social Innovation it was not intended to conduct a statistically representative survey, based on a random sample.[4] Because we do not know the main unit or basic population, a representative sample is not feasible. In the end, SI-DRIVE is aiming at a theoretical framework and typology defining and characterising the world of social innovation, based on context examined empirical evidence, delivering a sound ground for further research and practices.

Again, with regard to the research interests and the methodology described, it is evident that a quantitative analysis can only provide initial evidence for questions regarding the ambivalence of Social Innovation and the impact achieved. Conclusions can be drawn on the general motives and the ambitions of the initiatives' actors. But as far as societal impact is concerned, this question was more precisely answered after in-depth case studies which did not only take a single initiative into account but which also reflect on the practice field the initiative is operating in.

Taking into account the case study results, the comparative analysis of the 1,005 cases mapped cases in SI-DRIVE's database, the results of the state of the art reports and the regional report and the policy and foresight workshops gave a comprehensive picture of Social Innovation in general and in the seven policy fields. From a methodology point of view four main outcomes gave the ground for this comprehensive picture and analysis of Social Innovation in SI-DRIVE:

(1) State-of-the Art Reports of the seven policy fields, Regional Report of twelve world regions involved in SI-DRIVE (beneath Western, Eastern, Northern and Southern Europe including Australia/New Zealand, Western and South-East Asia, North and South Africa, North and South America, Russia).
(2) Global Mapping of 1,005 social innovation initiatives all over the world (Mapping 1)
(3) 82 in-depth case studies (Mapping 2).
(4) 16 policy and foresight workshops (2 international round tables and 14 policy field workshops).

[4] The only guarantee to draw statistically representative conclusions for a population is to take a (random) sample of the relevant population. Therefore, one needs to have a clear characteristic of the population and its societal and geographical distribution and allocation.

4 METHODOLOGY REFLECTION: LESSONS LEARNED FROM SI-DRIVE

Within Part B of the methodology review (Deliverable D2.1, Schröder et al. 2014) the state-of-the art of the main relevant methodologies (quantitative and qualitative research, case study methods, mapping techniques, innovation methods, and data analysis) for SI-DRIVE was reviewed on the background of social sciences, innovation and foresight studies, and the methodology already conducted in social innovation projects of the European 7th Framework Programme. On this background the selected SI-DRIVE methodology, instruments, and tools for mapping 1 (global mapping) and mapping 2 (case studies and inherent techniques) were chosen and justified. Mainly focusing at that time on the first empirical phase (global mapping) the case study concept (due to the iterative approach) was rudimentary at this stage. Using the results of the first empirical phase and the following upgrade of the theoretical framework this was the background for the conception of the in-depth case studies (mapping 2) and its methodology and methods, instruments, tools.

Reflecting the methodological state-of-the art relevant for the SI-DRIVE concept, it was important to enhance, justify and ground the empirical framework and methodological approach by developing a multi-method mix, including quantitative and qualitative methods with theoretically based tools and templates for empirical data collection and analysis. The results of the critical methodology review became the background for data collection and the analytical framework, ultimately delivering unified data collection protocols, guidelines and templates for the survey as well as case study and observations, protocols and guidelines for data analysis in general, and case studies, in particular.

The following reflection of the results of the first methodology report will mainly refer to the lessons learnt by doing the empirical research within SI-DRIVE following the reviewed areas of the first deliverable:

1. State of the art of relevant empirical methods: focusing on quantitative and qualitative research and its combination, including case study research in social sciences, semi-structured interviews, participatory observation methods, focus groups, and data analysis methods concerned (focusing on QCA)
2. State of the art methodologies used in social innovation projects: analysis of EU Research Framework projects (mainly focusing on mapping and case studies)
3. State of the art methods used in innovation studies, mainly in relevance to case studies and foresight foreseen in SI-DRIVE
4. State of the art mapping of foresight methodology (expert panels, scenario method, Delphi techniques and others)
5. Other relevant methodologies: innovation biographies.

4.1 RELEVANT EMPIRICAL METHODS

Most disciplines, including Social Innovation, do not associate with a single theoretical perspective. Researchers look towards the positivist, interpretive, and critical approaches that find their basis on fundamental research epistemologies (e.g. Orlikowski & Baroudi, 1991 and Straub et al. 2004). Positivist studies test theory with an aim of increasing predictive understanding of a phenomenon with formal propositions, quantifiable measures, hypothesis testing, and sample inferences from the stated population (Straub et al. 2004). Interpretive methods produce an understanding of the system context and associated process (Walsham 1995). Critical researchers tend to assume that social reality is historically established and is reproduced by people, who can consciously change their social and economic circumstances, but their ability to do so is constrained by various social, cultural, and political dominations (Myers 1997). The SI-DRIVE research is thus positivistic, interpretive and critical, given its iterative and cyclical research approach that is deductive and inductive, relevant for the research community, practice and policy, and also foresight. Therefore, a mix of qualitative and quantitative research methods has been considered for this project.

While the exact constitution of both qualitative and quantitative methodologies varies between researchers, there is agreement on their fundamental meanings and practical implications. Quantitative methods are suitable for research seeking to assign figures to observation, or reach universal statements (Brynard & Hanekom 1997), often based on (random) samples and looking for representativeness. In contrast, the qualitative and context reflecting approach relies on interview data, documents, and observations to understand and explain social phenomena (Myers 1997).

Combining quantitative and qualitative research allows confirmation of data, as in triangulation, develops analysis resulting in richer data, and encourages new ways of thinking (Johnson et al. 2007). This combination is often referred to as multi-strategy (Bryman 2004), multi-method (Brannen 1992), mixed methodology (Tashakkori & Teddlie 2008), or mixed method (Creswell 2007). For SI-DRIVE, the multi-method definition was considered most suitable, which has its own emerging worldview, vocabulary, and techniques (Creswell 2007; Johnson et al., 2007). It is defined as the research, where data is gathered and analysed, and findings are integrated to draw inferences using qualitative and quantitative approaches in a single program of inquiry. The chosen iterative methodology of SI-DRIVE is reflecting the combination of quantitative (global mapping survey) and qualitative methods (desk research, document analysis and case studies), triangulating data from several sources (literature and document analysis, desk research, mapping, and case studies) in a final analysis.

Quantitative Approach *(Mapping 1005 cases in SI-DRIVE)*

Quantitative approaches are objective, and help establish a basis of behaviour towards issues being addressed within a study. They allow data accumulation in a controlled environment to prevent any out of scope attribute from being considered. Apart from being reliable and objective, quantitative research can be carried out on a large scale, facilitating collection of desired data from a bigger population (Balnaves & Caputi, 2001). Such data is sourced from surveys, laboratory experiments, formal and numerical methods (Kapoor 2014; Myers 1997). Quantitative-positivist research is one of the most time-honoured ways of studying human behaviour and technology use (Jayasingh & Eze 2009). It is rich with knowledge capable of explaining socio-technical phenomena for research and business practices across different industrial settings. The initial analysis of data collected from the SI-DRIVE survey (1005 cases) was analysed using SPSS to understand the spread of innovative solutions across different world regions and categories identified in the survey. Such data analysis techniques are employed to enable researchers to address interrelated questions in a single methodical analysis by allowing simultaneous modelling of the extant relationships between different variables (Kapoor 2014; Gefen et al. 2000). This quantitative approach was combined with content analysis to theme the qualitative and descriptive content gathered from the survey.

The quantitative approach was very important, to get a global overview of the similarities and differences of social innovation initiatives. It helped to integrate a huge number of data and to analyse it, and it was an important milestone not only for the project as such, the theory and policy development but also served as a profound basis for selecting and conducting the case studies.

Qualitative Approach *(In-depth Case Studies of SI-DRIVE)*

Qualitative approach is appropriate when research concerns an unknown or lesser-known phenomenon, or is examining complexities in depth, or cannot be conducted experimentally, or in cases where variables have to be identified (Marshall & Rossman, 1995). Case study methodology has been a popular qualitative approach in the social sciences, and has maintained a long history across various disciplines (Creswell 2007). It is an empirical inquiry investigating present phenomena in real-life context, particularly in the absence of boundaries between a phenomenon and the context (Yin 2009). The single case study is relevant when representing a revelatory critical case for testing a formulated theory (ibid.). In contrast, multiple case studies are preferred when the research is either descriptive, or testing/building a theory. Mostly grouped under qualitative research, case studies employ both qualitative and quantitative research methods that offer in-depth revelations for targeted cases.

While case studies are often critically acknowledged for a lack of systematic procedures and accused of generating biased results, they are appreciated for incorporating multiple data sources that strengthen the validity of the results (Ridenour & Newman 2008). They allow researchers to focus on the targeted case, whilst maintaining a holistic and real world perspective for analysing individual life cycles, accumulative group behaviour, organizational and managerial processes, social changes in the neighbourhood, international relations, industry related issues, public policies, public relations, and so on (Yin 2014). Researchers warn that case study analyses can become complex with excess comparisons being introduced amongst participants of a single case, amongst different cases, and amongst different participant groups across different cases (Ritchie et al. 2013). SI-DRIVE followed a cumulative approach to gather the required information from available sources to fuel the investigation. The in-depth case study methodology involved data collection using semi-structured interviews, participant observations, and focus group discussions. The data analysis so far is added by a Qualitative Comparison Analysis (QCA), which results will be published in 2018.

Qualitative interviews can be structured, semi-structured, or unstructured (Yin 2009). The semi-structured interview is a common method of research used in the social sciences, also used in SI-DRIVE - based and structured by the theoretical framework, mainly the five key dimensions (global mapping) and the mechanisms of social change (case studies). To successfully accumulate the required information on the targeted social innovation cases for SI-DRIVE, it was important to interact directly with the people involved in the implementation and regulation of these cases - encouraging discussions in an *information sharing* kind of environment to attain credible results. Often the information obtained from semi-structured interviews will (and did in SI-DRIVE) provide not just answers, but also the reasons and content for those answers (Rabionet 2011). The entry criterion was focussed on clearly identifying the relevant stakeholders, capable of providing the required information for the 82 shortlisted social innovation cases for SI-DRIVE. Collecting data from multiple sources (like in SI-DRIVE: integrating the results of the global quantitative mapping, and document analysis in the template for the case studies) helps minimize interviewee bias and increases the depth and quality of information being gathered (Collins et al. 2005). Thus, the aim was to include multiple stakeholders with different backgrounds/perspectives to offer in-depth information on each case. The exit criteria was set at identifying the point when sufficient information concerning the cases was gathered, with any further search only yielding repetitive information, hence seizing the data acquisition process.

The qualitative approach was successfully completing and further developing the quantitative data with more context related information on success factors (and failure), networking and actor constellation development, process dynamics and the related mechanisms of social change. This delivered an excellent basis not only for the theoretical framework development, but also for the mapping different business models, typologies and policy implications for social innovations.

SI-DRIVE: Mixed Research approach (deepening quantitative global mapping with qualitative in-depth case studies)

The successful implementation and dissemination of a new social fact usually follows targeted intervention, but can also occur through unplanned diffusion (Greenhalgh et al. 2004). Empirical research in SI-DRIVE emphasises on analysing the ambivalence of the outcomes of social innovations (i.e. social side effects, unforeseeable consequences, different perspectives) in line with the actor intentions. One of the main objectives of the empirical work undertaken in the SI-DRIVE project was analysing the process dynamics of social innovation (idea – invention-implementation-impact-institutionalisation). The methodology for SI-DRIVE follows an iterative research process, characterised by two empirical phases based on three central research pillars of the project: theory, methodology and policy.

The first empirical phase led to the global mapping of Social Innovations, which involved comparative analysis of 1005 social innovation cases across the globe, seven policy field reports, a global regional report, external database screening, and eight policy and foresight workshops. An important methodological step was the classification of practice fields combining similar social innovation initiatives. The relevant partners identified a first set of practice fields for their policy fields, undertaking investigations on initiatives in their countries and existing databases: discussing, classifying and selecting the most important practice fields. A predetermined classification relevant practice fields was done, being the ground for selecting and analysing cases and data. This resulted in deductively derived practice fields leading to an outcome where some policy fields either found that their practice fields were not validated empirically; and there was a need retrospectively to change the practice fields (combining some fields, selecting priorities). In other instances, deductive and inductive iterations were combined to identify practice fields, which was highly successful as it resulted in the identification of robust and distinct practice fields using all data from the outset. The methodological process proved the potential of the practice fields as this helped shaping the classification of levels by empirical data. However, taking into account the following second empirical phase, it became evident that the developed classification and distinction of practice fields have to be further discussed and improved from the policy field overarching perspective, finding overlapping practice fields.

In the second empirical phase in-depth case studies were undertaken across the seven policy fields of SI-DRIVE. Qualitative research in this second empirical phase was focussed on the dynamic interrelation between social innovations, the practice fields and various mechanisms of social change. Both empirical phases led to the comparative analyses for each policy field. Therefore it became evident that the chosen multi-method approach with a starting quantitative focus opening for the whole world of Social Innovation combined with a further deepening qualitative enhancement of carefully selected case studies based on the quantitative data and enriching the picture with a context related upgrade (on dynamics, processes and mechanisms) has proven the chosen methodological

approach, leading to excellent and empirically verified results for the theoretical development, policy recommendations and not at least: for guidelines for defining and describing social innovations.

4.2 METHODOLOGIES IN SOCIAL INNOVATION STUDIES

Given that the concept of Social Innovation is relatively unclear and there is no commonly accepted definition, the theoretical and methodological critical literature review (as starting points of SI-DRIVE: Howaldt et al. 2014, Schröder et al. 2014) undertook a revision of theoretical and methodological approaches, quantitative and qualitative research methodologies and tools currently used in social innovation research. The focus was on social innovation research projects from the EU's 5th, 6th and 7th framework programmes for research. These projects cover a wide variety of policy fields across different member states and have been developed from varied theoretical frames (see Schröder et al. 2014, chapter 4.2).

4.2.1 Overview of Methodologies used in Social Innovation Research

The European social innovation research projects have addressed a wide range of questions concerning - theoretical underpinnings of social innovations (example projects: TRANSIT, TEPSIE, EFESEIIS); specific policy fields such as welfare and poverty (example projects: RECOWOWE, WILCO, IMRPOVE); social inclusion and cohesion (example projects: Include-ed, ITSSOIN), young people (example projects: Citispyce, Society); and economic underpinnings (example projects: GUSTO, SIMPACT). Other areas of focus include sustainable futures, role of social innovation in public sector reforms, and - not to forget theory development of SI-DRIVE and TRANSIT on. Almost all projects adopt a mixed-methods approach, combining quantitative and qualitative methods and tools, and draw on a range of theories related to building and analysing frameworks for Social Innovation. Predominantly, the baseline studies use critical literature review, policy analysis, and secondary analysis of existing data and theoretical frameworks. They formulate research questions or hypotheses as a basis for their research problem. The majority of these projects incorporate case studies, and combine secondary analysis of existing data with new qualitative research. In some cases, the emphasis is on mapping a relatively large sample of social innovations. In highlighting the comparative aspect, some projects include historical dimensions to analyse the dynamics and development of social innovation in specific fields.

The case study approach in these projects offers contextual practical knowledge about social innovations in a specific research field. Comparison between different cases on national and European levels was undertaken in most projects. Case studies typically use semi-structured/open interviews with stakeholders and experts. Many projects also held focus group discussions in their empirical phases. In many instances, projects combined case studies with other methods such as action research and peer/participatory research (e.g. Aiken 2017; Biekart 2017)[5], lab experiments, and observation. These research projects typically produced policy recommendations, social innovation indicator sets and practical tools, or theoretical diversification. Recent projects are however showing increased usage of creative/digital media for dissemination of their research findings.

The review of the European Research Framework projects showed that they lack a clear description of case selection in their methodological explanations. However, where available, the rationale for selection of cases is based on theoretical underpinnings of the project. Diversity in the selection of cases is expected to allow through investigation of different aspects of theory or phenomena under consideration. An appropriate geographic spread is also essential. It has however been observed that case studies in many projects are selected predominantly from the countries/cities where the research partner institutions are located, suggesting issues related to convenience sampling. Pragmatic considerations, such as necessary language skills, networks and contacts that determine the feasibility of research are also considered critical in the case selection process. Along with diversity in research objectives and policy fields, there are also variations in the unit of analysis and what constitutes as a case for each project. For some it was a region, (a part of) a city, in others a neighbourhood, and for the rest, it was a specific social innovation project. This diversity is in line with the general methodological obstacle that cases and case studies are differing in their construction because they comprise distinctive forms for different objectives. Because of different subjects and objects

[5] For instance, research on communities can be done by qualitative participatory research (i.e. action research) in order to access the micro level (e.g. needs) in a community (Aiken 2017). Action research can also be a promising tool for fostering civic innovation (Biekart 2017).

for case studies and their necessary relation to the given context this variety in case study construction is demanded. Therefore for e.g. Yin 2014 depicts case studies more as a research strategy than a fixed, defined method. However, this leads to the problem that empirical results of different studies / projects based on case studies are hardly comparable.

Most projects developed a template for partners to collect data, which was essentially a list of questions including open-ended questions concerning nature of the case, outcomes and impact, and closed questions for gathering data in a standardised format for the classification of cases. The actual data collection method was primarily qualitative with in-depth interviews and focus groups, but there was also extensive usage of secondary data and existing literature. Depending on the scale and scope of the case study, some included surveys and ethnographic/observational approaches. In selection of the cases, it was assumed that the partner institution has the expertise on the subject, and locally, was in the best position to identify the social innovation cases. Networking and snowball sampling were used to gather information on cases. Increased usage of comparative analysis was also observed in case study research. However, most projects offered very little information on the methods employed to conduct such analysis. The projects compared and validated data emerging from case study research against their theoretical underpinnings and findings from other existing research. Thematic analysis was also evident across many studies.

Some of the social innovation research projects used the mapping approach (see Pelka & Terstriep 2016 and the description below), which has been interpreted differently across these projects. It is mostly used for identification of innovations in a defined geographic area. For example, the TEPSIE project published a report called 'mapping citizen engagement in the process of social innovation'. This presented a conceptual framework outlining the ways in which citizens could be involved in the generation of social innovations. On the other hand, another project, ITSSOIN, referred to mapping as the objective for investigating country-specific configurations of the third sector. In another instance, the project CASI was based on mapping more than 400 (sustainable innovation) cases all over the European member states.

The review of European social innovation projects had significant implications for SI-DRIVE:

1. Previous projects did not give too much information about the adopted methodology, newer studies are encouraging transparency. In this interest, SI-DRIVE conducted this report on its methodological approach.
2. Case selection based on theoretical criteria and pragmatism is standard practice. However, researchers should be wary of convenience sampling and guard against choosing cases only in geographical proximity to the partner institutions. Having partners and advisory board members in 30 countries SI-DRIVE has a unique degree of coverage, reflected different regional contexts all over the world.
3. Selection of cases for in-depth case studies is based on experiences of previous social innovation projects. To help the work package leaders identified the final 82 cases for SI-DRIVE, based on the main practice fields in the policy fields, deriving from the 1,005 cases.
4. The (theory driven) case study template was designed to collect standardized factual information, alongside open questions to gain deeper insights and ensure consistency across multi-country, multi-policy field studies.
5. Data from multiple sources yielded rich information. In addition, key informants reviewing the case study report, and justifying connections between original evidence and final conclusions further ensured the validity of the findings.
6. It is important to include an analysis plan. In SI-DRIVE the theoretical framework delivered both the indicators for the empirical work and the determined variables for comparison between cases, exploring and applying logic models, etc.

As already described, some policy fields faced the dilemma of social initiatives aligned to different practice fields. Such overlaps appear because the innovative solutions were having a holistic approach across different practice and policy fields (e.g. education and employment). Such complexities resulted in taking a more iterative approach for selecting the final cases and assigning them to the appropriate practice fields (within the policy fields and across). Although different representatives (associations, interest groups, politicians, leaders, etc.) of the social innovation ecosystem and sectors (public, private, civil society, and science) were targeted, the case studies merely focused on members actively involved in developing the social innovation initiatives, project organisers, participants, actors, users and beneficiaries were contacted in the next.

Individual case studies can only illustrate the main issues in a given practice field, and are not necessarily fully representative for it. Thus, the SI-DRIVE analysis draws on cases from different contexts for understanding the main and representative practice fields appearing from the global mapping. Each policy field studied about ten social innovation cases from the existing mapping database, in detail. The case selection was determined on the basis of the given framework and partners' knowledge and experiences. Access to the case, and willingness of the social initiatives to participate were taken into account. Cases were examined for their progress and shortlisted only if they were either in the implementation stage or evaluating impact, alongside being embedded in networks, movements, or were a part of umbrella organisations. The cases were characteristic for the practice field, demonstrating variety in terms of social demands and geographic spread. The template developed for the case studies had a common, but flexible structure. Apart from key questions, additional questions helped identify and understand topics relevant from the interviewee/interviewer perspective, for the actors of social innovation or practice fields.

In designing the template for case study interviews (see Annex 9.3), information from the mapping phase and secondary research were integrated. A common structure was agreed for case study fieldwork and analysis across the seven policy fields. The questions at the case level and the practice field level were similar, but the answers were elicited to reflect the differences between them. For instance, a mature case/practice field may have a wide set of competitors given its establishment as a social practice over a significant time period, such as in car sharing. In contrast, a less mature case/practice field with lesser and variable competition will have a less established contour. Relevant information was extracted from the mapping database and integrated into the reporting template to develop an interview guide for the social innovation cases. Careful selection and inquiry of key persons for the practice fields and associated innovation cases was carried out. Interviews, group discussions, site visits etc. with the relevant actors of different initiatives were undertaken. All information from database, interviews and group discussion was integrated into one document and reported within the given template. A dedicated questionnaire for Qualitative Comparative Analysis was completed to establish grounds for a comparative analysis across policy fields.

The case study inquiry followed a bottom-up approach that not only gathered information from the interviewees on the social initiative, but also on the related practice field. The data was collected on the idea, development, and impact of the initiative, also including the practice field perspective that was interested in integration of the initiative in the broader practice field and its institutionalisation. Contrastingly, the reporting structure followed a top down approach, where to begin with, the reports had to focus on the practice field, providing an overarching perspective of the major issues of social change. The report begins with grouping of cases within each practice field with detailed illustration of each case, and finishes with overarching policy field conclusions drawing on practice field analyses. ^

Spotlight on EU funded projects

As already summarised above, EU-funded research projects on Social Innovation build on different methodological approaches coping with the challenges for research in this field (see chapter 4.5). In this sub-chapter three projects and their notable methodological approaches are discussed in relation to the experiences of SI-DRIVE.

SIMPACT's methodological approach

The international research project SIMPACT was looking at the aspects influencing the impact of social innovations for society and economy as well as its potential for "empowering vulnerable groups in society" (Pelka & Terstriep 2016, p. 4). In order to achieve this aim, SIMPACT featured several methodological approaches in order to create a variety of results and outcomes. In addition to a qualitative mapping of social innovations and the analyses of cases, some of the project's major outcomes relevant from a methodological point of view are found in its discussion of business models (e.g. Rizzo et al. 2015, pp. 24; see also chapter 5) based on the examination of economic underpinnings, implications for impact assessment (Dhondt et al. 2016, see also chapter 4.2.2) and the advancement of foresight tools (esp. based on the Delphi method).

For the qualitative sample, 94 cases were collected. These cases were then used for different analytical steps: while all cases were part of a comparative meta-analysis, 60 cases were analysed as case-studies which provided a deeper look into the field. These case-studies were either done as business case-studies or as social innovation biographies, featuring a particularly deep analysis based on narrative interviews (Terstriep et al. 2015, pp. 14). The project demonstrated the potential of a multi-level analysis for a research field which is still young and subject to exploration. SI-DRIVE's iterative and multi-method research approach also built on a variety of tools in order to explore the world

of Social Innovation. Experiences made in SIMPACT as well as cases from its mapping were supportive for the analytical work in SI-DRIVE. While SIMPACT had a strong focus on economic underpinnings of innovations that are focused on "vulnerable and marginalised groups in society" (ibid., p. 10), SI-DRIVE created broader new intelligence on a quantitative level as well as on the qualitative level along its five key-dimensions because of its wider approach to Social Innovation. Results of both projects can be seen as complimentary on several levels as e.g. SI-DRIVE's measurement of drivers and barriers for social innovation initiatives and the results of SIMPACT help completing the picture of enablers and hurdles for innovation of social practices. The same is true for SIMPACT's focus on context based on the classification of welfare regimes, leading to a typology of 'Social Innovation Regimes' (Castro Spila et al. 2016). Here, it put another but similar emphasis on cultural and political contexts as SI-DRIVE did by creating this typology: both projects realized the importance of context and environment. This also led to complementary results, taking different levels into account.

Basically similar to SI-DRIVE, SIMPACT also involved relevant actors from other sectors than academia in the course of the project. But, while the direct involvement of externals into SI-DRIVE had a stronger focus on policy recommendations and the foundation of analyses, for its small-scale stakeholder experiments (based on the Delphi-method) SIMPACT involved "expert intermediaries such as welfare organisations, relevant public bodies, networks of support organisations and associations of marginalised and vulnerable groups" (SIMPACT n. d.) with the aim of linking the project and its models to practice.

CRESSI's methodology

Similar to the perspective of SIMPACT, CRESSI is focusing on economic conditions under which social innovations seeking to improve the life of disadvantaged groups can flourish (Houghton Budd et al. 2015, p. 3) Different to SI-DRIVE, CRESSI's working definition of Social Innovation is rather restricted to "solutions (products, services, models, markets, processes) at different socio-economic levels that intentionally seek to change power relations and improve human capabilities, as well as the process via which these solutions are carried out" (ibid.). This definition is, therefore, not aiming at the comprehensive picture of Social Innovations around the world in an understanding of SI-DRIVE. Moreover, CRESSI's focus is lying on one major manifestation of Social Innovation: solutions for marginalized groups. Such an approach complements the more holistic perspective of SI-DRIVE as it is contributing further specific in-depth intelligence to the knowledge base on Social Innovation. Starting from this working definition and based on three theoretical approaches (social grid by Beckert, further elaborated in the project; Sen's capability approach; Mann's account of social powers) (Von Jacobi et al. 2015, pp. 3), the project analysed cases of Social Innovation, also taking historic examples into account (Chiappero-Martinetti et al. 2017). This sampling procedure is adding a perspective to research on Social Innovation which was not part of SI-DRIVE's mapping. While the latter was more focused on creating a comprehensive picture of Social Innovation in the present with a focus also on outlooks, CRESSI also puts a strong emphasis on historic developments – realizing an ex-post perspective. However, the mapping of SI-DRIVE did also feature social innovation cases which already started in earlier decades and even centuries (e.g. *Wood Street Mission* in the UK, founded 1869). But such cases were not pivotal to any analytical steps due to their long history. Beyond the analysis of cases and their contexts CRESSI also has a particularly strong emphasis on policies and their meaning for Social Innovation and the project's theoretical foci in EU member states with also a comparative analytical approach (see CRESSI deliverables in the category 'Public Policy and Social Innovation'; e.g. Edmiston 2015). Together with SI-DRIVE's policy recommendations, roundtables and dissemination activities CRESSI's comprehensive perspective on policies across Europe helps understanding and supporting the role of politics and policy programmes. Furthermore, as CRESSI asks for economic underpinnings, the project also looks at the measurement of impact and indicators for (Social) Innovation (see chapter 4.2.2).

TRANSIT's methodological approach towards transformative social change

Similar to SI-DRIVE, one of TRANSIT's main aims is the further development of theory on Social Innovation. The project's approach towards the research topic is a focus on transformative change, heading at a middle-range theory. Its methodological design, building on 12 propositions and a relational framework (Haxeltine et al. 2017), hence also needed to give the development of theory adequate leeway. Under the umbrella of the core research proposition that Social Innovation is contributing to wider transformative change (Pel et al. 2017, p. 2), the project's working programme also featured an iterative approach. Pivotal to this research design for TRANSIT is the aim to create interplay between theorizing and empirics based on "empirical case studies as well as reviews of relevant literatures

[…]" and a "meta-analysis [...] of a large set of in-depth interviews of […] cases" (Haxeltine et al. 2016, p. 26). Also similar to SI-DRIVE and also important to TRANSIT's aim of developing theory is its open approach, featuring a broader definition as well. Transformative Social Innovation is therefore referred to "as a non-linear interaction between these levels [micro, meso, macro - ed. note] of change and innovation"[6] (Avelino et al. 2014, p. 4). While a working definition is part of theorizing without question, its design is essential for working iteration loops between theory and empirics. An overall closed or narrow definition would be more suitable for a strictly deductive approach, testing hypotheses linked to a theory.

Again similar to SI-DRIVE, a classification of different fields was also utilized for TRANSIT's research. Whereas SI-DRIVE divided into seven policy fields for its macro perspective, TRANSIT focused on projects "in health & well-being, food & agriculture, energy, transport, water, finance" (ibid) for its meso perspective on System Innovations. Hence, both projects did also put a focus on three different levels. But while SI-DRIVE focused on policy fields, practice fields and initiatives as well as on societal challenges, systemic change, and social needs, TRANSIT focused on "Game Changers", "System Innovations" and "Social Innovations" based on the MLP perspective (Haxeltine et al. 2013) in its early stages (ibid.). However, although TRANSIT's perspective is (partially) lying on other levels, it is also benefitting from the systematization provided by classifications giving structure to the empirical work.

4.2.2 Assessment and Impact Measurement

From the perspective of SI-DRIVE's definition, a core element of Social Innovation is "that it varies social action, and is socially accepted and diffused in society (be it throughout society, larger parts of it, or only in certain societal sub-areas)." (Howaldt et al. 2014) In order to detect established social innovations measuring the impact of initiatives which strive to achieve the aim of changing practices is therefore key. Moreover, BEPA (2014, p. 23) mentions a total of "four reasons" for undertaking a measurement of social impact:

- "a need to prove that social innovation is an effective and sustainable way to respond to societal needs"
- "justifying the allocation of public money as well as attracting other sources of public and private financing"
- "evidence-based policies require ex ante evidence of the expected impact of the actions involved"
- "social innovations [...] could open the way to developing a new competitive advantage for European economies".

Tools for measuring social impact are diverse. They are featuring different methods, address different sectors and purposes; they focus on different time spans, are complex or less complex and look on different forms of impact. Furthermore, these tools are developed by different actors (e.g. universities, consultancies) which – of course – pursue specific aims (e.g. Grieco et al. 2015). The selection of possible tools shown below is therefore exemplary rather than exhaustive. Moreover, it presents opportunities for further research in relation to SI-DRIVE's findings and experiences. This is underlined by a strong recommendation of social innovators (within the case studies and on conferences of SI-DRIVE), to find specific social innovation related measures showing the impact of their initiatives to policy makers and founders.

SIMPACT's impact measurement toolkit

As already mentioned before, the SIMPACT project did also feature an approach towards impact assessment of social innovations. This approach is building on an ex-ante perspective which separates it from some other tools and methods presented in this sub-chapter (e.g. Societal Readiness Levels with a focus on the current status, see description below). Dhondt et al. (2016a, p.60) emphasize the importance of impact assessment for "social innovators, social investors and policymakers, because most of the times when an impact assessment is not used, processes are less rational, manageable and difficult to reconstruct". For the purpose of improving such processes, a toolbox for these three groups was being elaborated (see Dhondt et al. 2016). It is built on the interconnected steps of "goal

[6] The full definition is more complex: "In its initial phase, the TRANSIT project used the MLP perspective to conceptualise different levels of transformative social innovation. Social innovations were conceptualised as new services, practices or ideas at the micro-level of 'niches'. System innovation was conceptualised as change at the meso-level of 'regimes'. Game-changers were conceptualised as exogenous developments at the macro-level of the 'landscape'. We conceptualised transformative social innovation as a non-linear interaction between these levels of change and innovation, and introduced 'narratives of change' as a particular communication between these different levels" (Avelino et al. 2014, p. 4).

formulation; developing the relationships between inputs, outputs and outcomes; determining the role of stakeholders to achieve the objectives; calculating the impact; and deciding on the social innovation" (Dhondt 2016a, p. 57; see figure below).

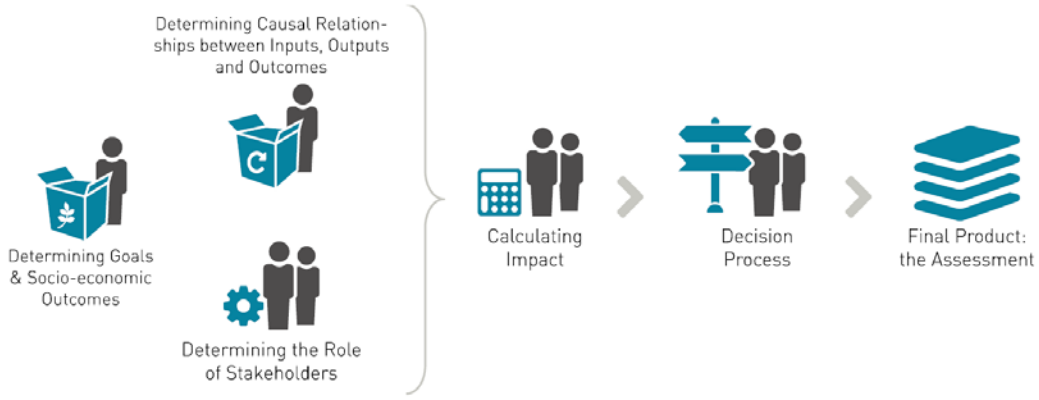


Figure 12: Five steps for ex-ante impact assessment of SI (Dhondt et al. 2016a, p. 57)

For each step, several more or less established approaches for impact measurement were selected and discussed with a focus on different groups of assessors and assesses. This approach provides a supportive tool for actors in social innovation ecosystems. As SI-DRIVE highlighted throughout its research and in its policy recommendations, support for social innovations is a crucial factor driving their success. SIMPACT came to a similar conclusion (Terstriep et al. 2015, pp. 2) and hence, their toolbox for impact measurement addressing a variety of actors from different sectors is an important contribution for achieving more support as this toolbox can help decision makers understanding the potential of Social Innovation (see Dhondt et al. 2016a, p. 9). This adds to SI-DRIVE's measures of creating awareness amongst policy-makers with its policy recommendations and roundtables.

CRESSI's perspective on impact measurement

CRESSI's focus on solutions for marginalized groups also demands a focus on impact of social innovations for these groups. As part of this perspective a toolkit for impact measurement has been elaborated (Von Jacobi & Chiappero-Martinetti 2015). Based on the project's conceptual framework with its three main theoretical pillars CRESSI looked for "(1) a clear focus on agency and empowerment", "(2) a multilevel logic" and "(3) a multidimensional perspective" (ibid., p. 2. But while SIMPACT's resulting toolkit aims at a wider audience summarizing, providing and evaluating tools, CRESSI elaborated its own measurement tool for its own project's specific focus on social innovations for marginalized groups in societies. Together with insights of SI-DRIVE's analysis of cross-cutting themes related to tackling marginalization (esp. 'Empowerment', 'Gender, Equality and Diversity', and 'Migration') and policy fields with a particularly strong focus on vulnerable groups (esp. Poverty Reduction and Sustainable Development) CRESSI's approach towards impact measurement contributes to a more complete picture in specific thematic areas of Social Innovation. The same is true for the investigation of current indicators and the further elaboration of own indicators planned by CRESSI and related to its framework (see van Beers et al. 2015).

Make-It's impact assessment framework

Apart from projects explicitly focusing on the topic of Social Innovation, other projects with a link to this research subject also focus on social impact. One example is provided by Make-It, a project focusing on how "the role of Collective Awareness Platforms […] enables the growth and governance of the Maker movement, particularly in relation to Information Technology, using and creating social innovations and achieving sustainability" (Menichinelli & Ustarroz Molina 2018, p. 15). For measuring the potential and actual impact of maker initiatives and for using the generated results for "better understand[ing] such impacts of the Maker movement" (Millard 2018, p. 211) a framework was elaborated during the course of the project (Millard et al. 2017b). The impact measurement is building on a questionnaire with nine sections and a total of 47 questions ranging from types to ambitions and actual achievements. For the achievements, the tool is taking a wide selection of relevant indicators into account: forms of governance, organisation and behaviours are part of it just as well as social, economic and environmental value creation on the

societal level. The collected data are then due to quantitative and qualitative analyses (Millard 2018, p. 213). In general, especially the elements for assessing achievements and for collecting information on ambitions of Make-It's tool are also very relevant for measuring in a wider approach of social innovations beyond the maker movement. Maybe combined with SI-DRIVE's typological building blocks and its classifications (e.g. practice fields) a holistic approach for measuring impact of social innovations can be very promising taking Make-It's framework as a point of reference.

CASI management framework

The assessment of innovations is also tackled by CASI and its management framework. The project does not solely look at Social Innovation but also on technological innovations under the umbrella of sustainable innovation. For assessing sustainable innovation (and therefore also sustainable social innovation) CASI developed a framework (CASI-F) through which "the impacts of innovative practices, as well as of specific technological and social innovations" (Popper et al. 2017, p. 14) can be assessed and managed. CASI-F was developed in order to address and strengthen actors of the quadruple helix (coming from "business, government, civil society, research/education"; ibid., p. 15) confronted with sustainable innovation initiatives. The framework is based on the analyses of more than 500 case studies and also pilots conducted together with innovators. CASI-F is built on five major principles ("responsible governance", "practical advice orientation", "multiple sources of knowledge", "multi-level perspectives and transitions", "multi-systemic sustainability assessment and management"; ibid., p. 19ff). The framework itself consists of five steps: (1) "protocols and tools for sustainability relevance and scanning", (2) "protocols and tools for multi-criteria analysis and assessment", (3) "protocols and tools for critical issue analysis and assessment", (4) "protocols and tools for multi-level advice management", (5) "protocols and tools for action roadmaps management". CASI's framework provides an advanced toolbox for assessing (and managing) sustainable Social Innovation. Supporting actors of the quadruple helix is in line with SI-DRIVE's findings in regard to the importance of support, discussing the need of working ecosystems (e.g. SI-DRIVE Policy Declaration; SI-DRIVE 2018, p. 227). As CASI-F does also provide a framework for managing sustainable innovations, it also provides intelligence for not only assessing but also directly supporting innovations. While CASI-F has stronger focus on societal challenges (related to: "climate action", "environment", "resource efficiency", and "raw materials"; ibid., p. 28) its framework can still be of relevance and helpful for actors with a stronger focus on more specific needs of smaller target groups.

Societal Readiness Levels

While impact measurement of socially innovative projects is important for assessing their relevance for large scale social change, it is also important to access the current societal impact status of social innovations. SI-DRIVE, hence, already took the stage of innovations into account leading to a classification relevant for the typological building blocks (see chapter 6). But in this context, societal readiness levels (SRL) are a relatively new tool for categorizing projects related to their impact.

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Similar to other adaptions (e.g. systems readiness levels; see e.g. Sauser et al. 2006), the concept of **Societal Readiness Levels** (SRL) builds on the concept of **Technological Readiness Levels** (TRL) initially used as milestones for assessing the current status of technological developments by the NASA. SRL were defined for assessing the respective current status of societal implementation of (social) innovations, projects, products etc. The categories can help researchers, policy-makers, practitioners and all kinds of supporters detecting needs in a current status of societal readiness. As a relatively new approach for evaluation the status of implementation, SRL are suggested to supplement the assessment of innovative activities with another perspective beyond TRL and "societal acceptability" (Morazzo et al. 2016, p. 208). In a relatively new approach, Innovation Fund Denmark specified and formulated SRL and is already using them for assessment (Innovation Fund Denmark, 2017).

The wording of SRL used and defined by Innovation Fund Denmark show a close connection to TRL used by NASA and other organisations (for comparison of TRL and SRL, see table below). Whereas a direct transfer of criteria for the maturity of technologies to the assessment of suitability for societal implementation might not be appropriate at all, basic principles appear to be fruitful. TRL have a strong focus on testing and prototyping across the different levels.

When it comes to Social Innovation, prototyping might not always be possible to the same extend as with a new technology. While technologies are often limited in their target-groups and possible usage, socially accepted and successfully implemented Social Innovations are the result of varying process dynamics with specific mechanisms of change and various – sometimes highly dynamic and unforeseeable - pathways. Moreover, adaption and diffusion take creative and sometimes spontaneous routes, also not completely foreseeable for testing. Furthermore, when innovative practices are intended to institutionalize and diffuse on the large superordinate level of society, valid testing becomes particularly challenging[7]. However, despite the variety and dynamic character of Social Innovation, assessing its status based on criteria for technology can still be helpful. As SI-DRIVE's quantitative mapping and qualitative case studies revealed and validated[8], initiatives around the world are especially confronted with funding-challenges. Assessing the status of a Social Innovation can help funders to recognize critical points in development and specific needs related to the milestones. Whereas a variety of tools for measuring social impact is already available (e.g. Grieco et al. 2015), not only funders but also stakeholders in general would be provided with an instrument for accessing information on the current status of a project with a societal focus already in the development phase.

Level	Technological Readiness (NASA 2009)	Societal Readiness (Innovation Fund Denmark)
9	"Actual system proven through successful mission operations "	"actual project solution(s) proven in relevant environment"
8	"Actual system completed and qualified through test and demonstration"	"proposed solution(s) as well as a plan for societal adaptation complete and qualified"
7	„System prototype demonstration in an operational environment."	"refinement of project and/or solution and, if needed, retesting in relevant environment with relevant stakeholders"
6	"System/subsystem model or prototype demonstration in a relevant environment. Demonstration that the results can be applied outside a laboratory context."	"solution(s) demonstrated in relevant environment and in co-operation with relevant stakeholders to gain initial feedback on potential impact"
5	"Extension and elaboration [...]. May include empirical studies, measurements and baselines, internal validation of approach and results [...]."	"proposed solution(s) validated, now by relevant stakeholders in the area"
4	"Component and/or breadboard validation in a relevant environment, and performance verifying predictions. "	"problem validated through pilot testing in relevant environment to substantiate proposed impact and societal readiness"
3	"Analytical and experimental critical function and/or characteristic proof of concept."	"initial testing of proposed solution(s) together with relevant stakeholders"
2	"Technology concept and/or application formulated."	"formulation of problem, proposed solution(s) and potential impact, expected societal readiness; identifying relevant stakeholders for the project."
1	"Basic principles observed and reported. Problem is defined"	"identifying problem and identifying societal readiness"

Table 3: Comparison between technological and societal readiness levels

Experience from SI-DRIVE revealed a high diversity of innovations, approaches, mechanisms and development paths. Measuring the status of social innovations therefore requires taking this variety into account. As technological innovations are often realized by business, providing resources and knowledge, social innovations are done by actors and actor-constellations coming from very different sectors and contexts with different ideas, approaches and interests. While professional social entrepreneurs or for-profit companies build on sound business-models, initiatives from civil society often put a stronger focus on their mission. The latter might change their concept in later stages when financing needs to shift from donations or start-up funding. Projects incorporating a bunch of different actors might face conflicts based on incompatible interests, ideas or approaches. Such initiatives might take completely different development paths not only in regard to the organisation or group itself but also in regard to their projects. Thus, assessing social innovations according to milestones might sometimes need a more open approach than

[7] Basically it is possible to use society for experimentation as Eckel (1978) already suggested in the 1970ies describing the social experiment which could involve politics. However, such experiments would require a long time-span and the commitment of higher authorities, while meeting essential criteria of research-ethics could be a major hurdle.

[8] Other research projects such as SIMPACT already revealed funding as a crucial challenge for socially innovative initiatives (Pelka & Markmann 2015, pp. 40). SI-DRIVE's unique quantitative mapping validated these former qualitative findings on a larger scale (Howaldt et al. 2016a).

assessing technological developments. Using SRL should therefore incorporate attention and openness for the various and sometimes non-linear (or not even intentionally iterative) development paths of real-life social innovations. Regarding this aspect, chapter 5 of this report provides deeper insights as it is presenting different business models which illustrate one major aspect of the high diversity.

Key Performance Indicators

Measuring and assessing the status and capabilities of socially innovative initiatives can also be done building on indicators used for measuring the performance of industrial organizations. A new approach currently in development is featuring 'Key Performance Indicators' with a focus on complex industrial processes. These indicators are developed in the project 'Coordinating Optimisation of Complex Industrial Processes' (COCOP).

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For the project Coordinating Optimisation of Complex Industrial Processes (COCOP), Key Performance Indicators (KPI) "are defined as quantifiable and strategic measurements that reflect an enterprise's critical success factors. KPIs are very important for understanding and improving manufacturing performance, both from the lean manufacturing perspective of eliminating waste and from the corporate perspective of achieving strategic goals. Social dimension KPI's consist of two types: Process-oriented and results-oriented KPI's (impacts)." (COCOP 2017a, p. 6)

While COCOP's main focus is on the industry-sector, it is also taking social innovation into account. They are seen as a factor for „successful plant-wide optimisation[s]" (COCOP 2017, p.3) together with technological innovations. Their potential for coping with societal challenges and social needs, for successful co-creation and for a change of practices is the reason for their consideration. (ibid) This makes the KPI's basically interesting for adaptions outside of industry or, more general, economy.

In difference to assessing and evaluating the status of initiatives by looking at milestones as done with the societal readiness levels described above, such indicators provide a deeper impact related look into processes and results. Results and experiences of their development and application to processes in industry might be fruitfully transferred also to social innovations happening outside of this branch. A relatively easy adaption might be possible for social enterprises, especially when their organisational structure is particularly similar to those of traditional business organisations with a focus on profit and a strong dependency on complex processes. But also initiatives run by public actors or civil society might benefit from experiences made in industry.

4.3 METHODS USED IN INNOVATION STUDIES

Although Social Innovation appears already in the 18th and 19th century (see European Commission 2017, chapter 2) recent research on Social Innovation emerged about twenty years ago in response to the missing social dimension in the then dominant economics of innovation. Social innovation research[9] did not emerge from the established scientific disciplines, and was mainly driven by people from civil society outside academia, finding solutions to problems in society, without necessarily focusing on technology. As a consequence, research on Social Innovation has adhered to methods and approaches invented in the use context, instead of drawing on latest scientific methods; this affects its quality and scientific recognition. In an attempt to bridge the gap between social innovation research and the rich body of theoretical underpinnings and methodological approaches, SI-DRIVE reviews the literature on different traditions of innovation studies and relates it to social innovations. The methodological state-of-the-art for innovation studies is far more advanced than social innovation research, and the latter can benefit from revisiting innovation studies and incorporating their methods in future social innovation research - and combining both perspectives in a new innovation paradigm fostered by the theoretical framework of SI-DRIVE (Howaldt et al 2014).

[9] For the historical perspective of Social Innovation see European Commission 2017, chapter 2.

Methodologies in Innovation Studies

Research and innovation have become major targets of public policy over the past decade. With increasing public resources being invested in them, the need for justifying these public investments has grown. Policy research has emerged as a distinct approach to innovation studies with its own methodological repertoire. Evaluations employ a highly differentiated spectrum of quantitative and qualitative methods to anticipate ex ante or demonstrate ex post the efficiency, effectiveness and appropriateness of policy interventions aimed at fostering research and innovation. Over past years, the objective of policy programmes has become more systemic to not only enhance the quality and quantity of research and innovation, but also contribute to higher-order policy goals such as competitiveness, employment, sustainability and other major societal challenges.

For systematic quantitative and statistical analysis, and to extract meaningful insights from a range of individual studies, it is important to agree on common standards and definitions concerning the investigation/research. In 1992, the OECD published its first Oslo Manual (OECD 1992), which compiled commonly agreed definitions and standards for indicators and data collection. This laid grounds for systematic comparative indicators and statistics on innovations. Large-scale statistical surveys (Community Innovation Survey) opened up the possibility of conducting systematic innovation analyses at company, sector, regional and national levels. This made statistical and econometric analysis possible, which was essential for enhancing the credibility and legitimacy of innovation studies as the basis for policymaking. Initially, a linear conception of measurements was introduced, focusing on input indicators, such as R&D expenditures, personnel and capital investment in R&D. This was then complemented by accounting intermediate outputs, e.g. related to scientific publications or discoveries, patents and innovative products. A richer set of innovation indicators was produced based on surveys and integration of relevant data into comparable indices for use in benchmarking exercises across countries. Measurement was spread beyond inputs and outputs to measure process performance in knowledge-based network economy, where ecosystems of innovation played a crucial role as early predictors of output performance.

Despite efforts to establish quantitative, statistical approaches, the qualitative, case-based research remains an essential element of innovation studies for understanding the local specificities and embedded activities. A critical concern for case-study research has been the generalizability and extraction of crosscutting insights from a range of case studies. This is resolved using systematic comparative analysis based on theory for framing the case-study selection process and informing the case-study design. Instead of relying on case-specific narratives, this approach looks at systematically identifying the differences and similarities between individual cases, against the backdrop of a thoroughly developed theoretical framework and associated hypotheses.

The introduction of advanced information technology extends the scope and depth of innovation studies. Large-scale samples can now be easily analysed using quantitative methods. Accessing large-scale online databases (Thomson ISI, Scopus etc.) offers an understanding of comprehensive bibliometrics and patent analysis. Social media and big data are now considered promising data sources. Network analysis has emerged as a novel method to describe the evolution of linkages in large and small case-related datasets. Mining tools allow systematically analysing text sources such as publications, newspaper articles and interview transcripts. Experimental and action research have a long tradition in sociological and anthropological research, and they are now becoming prominent in innovation studies. This is of major relevance to research on Social Innovation where experimentation combined with real-time monitoring and assessment promises to advance quickly along the learning curve in face of complexity. Moreover, Social Innovation is often taking place at the intersection of science and practice, and thus relying on engagement of actors and stakeholders. Experimental approaches are popular where complexity makes top-down planning impossible. Given the multitude of methods available, many innovation studies combine both qualitative and quantitative methods. Large-scale surveys are underpinned by case studies, which are often complemented by network analysis and document mining. Linking different data sources and analysis methods requires interpretation of research findings gathered from different perspectives using different methods (i.e. the triangulation done in SI-DRIVE).

Qualitative case-study research

Descriptive and inductive narratives are a common approach to case study research in historical innovation studies (e.g. Bijker et al. 2012). They build on generalized patterns and determinants of an innovation, and recompose these building blocks for individual cases. Examples include innovation journeys (Van De Ven et al. 1999), innovation biographies (Butzin 2013), and actor-network theory (Callon 1991). Complementary to the micro-level approach is the

research assuming structural and institutional conditions as its starting point. Case-study research, under this umbrella, typically assumes structural and institutional conditions for reconstructing innovation cases.

Actor-centred perspectives are often combined with institutional analysis to understand the evolution of innovations, and associated socio-technical and system changes. This is the central ambition of SI-DRIVE, and thus a combined behavioural and structural/institutional approach to case study research is particularly promising. Many approaches combining macro and micro-level perspectives have been developed in innovation studies over the recent years. A first such example is Technological Innovation Systems analysis (e.g. Heckert et al. 2011) that draws on functionalist interpretation, particularly useful for studying early phases of transformative innovations. It helps understand the emergence of institutional support environment for a technology that is instructive for social innovation from a methodological point of view. Also interested in the transformative impact of technologies is the multi-level perspective in transition studies (e.g. Smith et al. 2010) that builds on a three-tier framework at behavioural, institutional and contextual levels.

A systematic selection of cases is essential in case-study research to ensure that the main dimensions of innovations under study are informed by a sound taxonomy and typology of innovation archetypes. A framework combining behavioural and institutional perspectives helps to establish a common grid for data collection and ensure clear implementation across a large team. Systematic qualitative case-study research has to be conducted across a sufficiently large number of case studies in a comparable manner using similar analysis tools and interpretative building blocks. The case results are then to be compared across research questions/hypotheses, taking into account their inherent similarities and differences. Case-oriented research can also be conducted with the intention of having an influence on the subject concerned, in this case the social innovation initiatives. Experimental and action research approaches are suitable here. With social innovations, this approach is particularly relevant, because a social innovation aims to change/improve social practices. There are many different support tools for qualitative case-study research, covering both quantitative and qualitative methods. If large numbers of cases are being analysed, statistical and econometric methods can be applied. Bibliometrics and patent analyses can be used to underpin case-study research using quantitative data. Network analysis can help understand relationships between actors in comprehensive case studies involving many stakeholders. Text-analytical tools can support the identification of patterns in text-based sources. Qualitative case study research can be enhanced by quantitative tools, both for analysing individual cases and for comparative purposes.

4.4 FORESIGHT AND RELATED FUTURE-ORIENTED TOOLS

Foresight is the systematic consideration of possible futures, and involves systematic attempts to analyse the future of technology, innovation and society. In policy terms, it combines thinking, debating and shaping the future (European Commission 2002). Foresight and future oriented analysis do not predict the future, but establish anticipatory practices and policies (Schaper-Rinkel 2013). In the recent years, foresight has evolved into a set of applications addressing the systemic and demand-side policies (Georghiou & Harper 2011). These applications require common vision between all stakeholders. There is an increasing trend to use foresight methods and future-oriented tools to anticipate broad societal future challenges and support policymaking (Weber et al. 2012). These can be used to examine the long-term issues and challenges associated with specific innovations, understand the possible future operating environment, and how social innovators and policy makers might respond to such environment. Foresight and Future-oriented Technology Analysis cover technology foresight, technology forecasting, technology road mapping and technology assessment (Rader & Porter 2008). It combines tools from quantitative methods such as bibliometrics and modelling, and qualitative and participatory methods such as focus groups and scenario building (Porter et al. 2004). Commonly used methods include extrapolation and megatrends, futures workshops, brainstorming, Delphi surveys, questionnaires, and SWOT analysis. Less frequently used methods include road mapping, modelling and simulation, back casting, stakeholders mapping, bibliometrics, morphological analysis, citizen panels, relevance trees, multi-criteria analysis and gaming.

Because the foresight and policy workshops of SI-DRIVE were inspired by expert panels, Delphi method and the scenario technique these two methods will be reflected a bit more in the following paragraphs. This is also done because these methods are of high relevance for future research in Social Innovation mainly by integrating policy

makers and experts in the further development by expert panels and Delphi surveys, with the positive side-effect to consider Social Innovation in policy making much more, enrich and update their knowledge of Social Innovation.

Expert Panels

The expert panel is a frequently used method in foresight, and is based on the idea of eliciting expert knowledge. They are typically groups of 12-20 individuals, who are given 3-18 months to deliberate on the future of a given technology, application area, or an economic sector (see Joint Research Centre European Commission 2007). Foresight is a participatory, discursive activity that is based on the best available expertise. It allows in-depth interaction and networking between different scientific disciplines and areas of expertise that would otherwise be difficult to organise. Panels are used for the generation of inputs and the interpretation of outputs. Most importantly, it allows including influential individuals (panel members) and change agents as foresight ambassadors in support of panel's findings. In a foresight process, expert panels gather and synthesise relevant information, stimulate new insights and visions of future possibilities, create new networks, diffuse the foresight results to wider constituencies, and influence follow-up action.

Panel members bring their own interests and biases to the table, as expertise in a given area normally means that an individual has some stake either financially, professionally, or politically, etc. Thinking creatively about possible future developments is challenging, and popular approaches include brainstorming and scenario writing. Panels should be wary of presenting wishful scenarios, and their recommendations should be based on available data and plausible projections of existing/past trends. SWOT analyses (e.g. Teece 2017) and trend analyses are therefore commonly used. Expert panels can bring together different types of players, such as, innovators, sponsors, policymakers, academic researchers and/or users to foster an environment where diverse stakeholder views can be brought together freely. In addition to technical qualifications, personal characteristics of participants have a powerful influence on panel outputs. Panel members should be capable of engaging in divergent thinking, and persevere in the face of inherent challenges involved with creative work. Creativity involves intrinsic risks, requiring panel members to develop new products/processes without apprehensions of failure. Panels are to be effectively facilitated to maintain motivation, resolve conflicts, and prevent dominance from certain individuals. For creativity to occur, the facilitator is to ensure that the structure and culture of work environment, and the human resource practices are in order. Expert panels cannot produce a statistically significant outcome. Their results do not reflect the response of a larger population. The panels usually consult through surveys, meetings or conferences to gather opinions from wider participants. However, the final outcomes represent synthesised opinions of the panel.

Delphi Method

The Delphi method (e.g. Linstone & Turoff 2011, Häder & Häder 2014) is based on structural surveys and relies on participants' (experts) experience and knowledge. It yields both qualitative and quantitative results and draws on exploratory, predictive and normative elements. Delphi is a method for structuring a group communication process, not a method aimed at producing consensus. These have been widely used in technology foresight studies and in identifying and prioritising policy goals. The Delphi method is systematic, interactive, and future-oriented where experts answer questionnaires in two or more rounds. After each round, the experts receive anonymous summary of participant forecasts. They are then encouraged to revise their earlier answers in light of the replies from their peers. During this process, the range of answers will decrease and the group will converge towards a set of common answers. Delphi is based on the assumption that forecasts from a structured group of experts are more useful than those from unstructured groups.

Delphi can help gather opinions of a larger group of experts. It is also helpful in cases with less evidence about the developments and where experts do not share/explain their real opinion. It is conducted anonymously. The number of respondents can be small. The Delphi method is mainly used when long-term issues (up to 30 years) have to be assessed. It is useful for looking at emerging developments where there is no empirical database, where external factors are likely to have a determining effect and where social arguments may dominate economic or technical considerations. The target audience is usually defined as anyone interested in information about the future; the major users thus tend to be companies, research institutions, ministries, journalists, teachers, students and pupils. This formalised and traceable method has credibility with policy-makers. The panel of respondents includes experts from different areas, such as academia, business, government, associations and other participants competent in the field of subject. Delphi-Survey is a group communication process that gives participants the opportunity to think in depth and

gather information between rounds. A Delphi clearly highlights whether there is consensus on an issue or not. However, they are time consuming and expensive, the consensus obtained in the second round is often artificial, and the converging opinions are often regarded as facts. As Delphi studies are not suitable when there are no agreed themes, and when discussing alternatives is the major target, this method is not useful for SI-Drive. However, because of the lacking consensus across different approaches to Social Innovation Fossati et al. (2017) suggest the use of Delphi for sampling cases of Social Innovation involving experts.

Scenarios

A scenario is a story, illustrating visions of possible future or its aspects. It is perhaps the most emblematic foresight or future studies method. Scenarios are not predictions about the future, but are simulations of possible futures. They are used as an exploratory method or a tool for decision making, mainly to highlight the discontinuities from the present and reveal the available choices and their potential consequences. They are used in different processes to support policymakers and technology strategists (Groves 2013) and for strategic foresight in business environments (Ringland 2010). The public sector relies mainly on scenario methods for defining planning activities (e.g. defence planning) and delineating alternatives for policies. Industry uses scenario methods to develop business strategies. In foresight projects, the scenario method is a policy analysis tool that helps describe a possible set of future conditions. Scenarios can be used to improve planning capacity, enrich strategic public policy decisions, and to also guide major capital investments. To be effective, a scenario must be plausible and not have any built-in inconsistency capable of undermining its credibility. They help structured thinking, stimulate creativity and break from the conventional obsession with present and short-term problems. One of their purposes is to support decision-makers in acquiring knowledge and anticipate the future context in which they have to act. For scenarios to be used effectively, the participants must be convinced that the process is sound, relevant and adds value. Scenarios are used to analyse the impact of different decisions. Decision makers, external experts, and individuals with valuable perspectives are involved in the scenario development process.

One possible approach developing scenarios is dividing the process into six steps. Step 1 starts from the inside out with a specific decision or question, then build out towards the environment to identify the focal issue. In determining the focal issue, it is important to set a specific time horizon for scenarios and deal explicitly with the range of uncertainties that might characterise the long-term future. The next step identifies the key drivers that influence the listed key forces at macro and micro-level. Micro-environmental key forces have a direct influence on the focal issue. Macro-environmental key forces are broader and possibly global. They relate to social, technological, political, economic and environmental forces that might have an impact on the focal issue. The third step ranks the driving forces on the basis of importance of the focal issue identified in step 1, and the uncertainty surrounding those factors and trends. The results of this ranking exercise helps identify the axes along which the scenarios can be constructed in step 4. Step 5 develops a number of internally consistent storylines that project all lessons learnt throughout the process, incorporating elements of both desirable and undesirable futures within different scenarios. In the last step, the scenarios are analysed to arrive at strategic implications for a particular decision (e.g. Schröder et al. 2014, pp. 64ff).

Although scenarios are widely used thanks to their potential for foresight, as shown above, their outcome is sometimes not fully exploited as they can be mistaken as future predictions. This misconception hinders its adoption and use. Scenario building can follow both normative and exploratory approaches. Normative scenarios start with a view of a possible future and look backwards to see if and how it can grow out from the present. Exploratory scenarios start with the present and move forwards by questioning the implications of possible events outside familiar trends.

Conclusion

Although SI-DRIVE did not apply the expert panel and the Delphi method extensively some elements of these tools were taken over in the composition of the policy and foresight workshops and its iterative operationalisation. Experts and policy makers were engaged in reflecting the theoretical framework and the results of both empirical phases. This was done in two stages or phases, after the global mapping and the case studies. And it was done twice within each of the seven policy field and within an overarching international policy round table. Within the workshops different foresight scenarios were discussed, internal with the partners and with the external experts and policy makers. The involved experts and policy makers constituted also a stakeholder group, not only reflecting the results and elaborating possible policies and policy scenarios but ensuring dissemination and integration of the SI-DRIVE

outcomes in their everyday work. However, as already said in the introduction, these methods are a good way to push Social Innovation within the world of policy field related experts (esp. in fields like education and lifelong learning and employment where the concept and potential of Social Innovation is not aware and recognised. Scenario technique might be also a tool for the social innovation initiatives to foresee different possible futures and developments of their initiative, integrating all the needed stakeholders, find new strategies and looking for sustainability and institutionalisation.

In conclusion, foresight methods can be used to develop social innovation assessment tools by including a wide range of expert on the panel. Foresight processes can be used to explore the drivers and barriers for building up an ecosystem that allows social innovations to evolve. Scenarios on the future of social innovation in different policy fields can help understand the dynamics of cross-scale interaction in complex systems, and their relation to the innovation that drives social change. To drive social change in a complex environment, social innovations create new pathways by combining different elements influenced by initial conditions and contexts they involve in. Debating the possible futures for social innovations can help shape their future pathways. Foresight tools can also help to bridge the gap between social innovation practitioners and social innovation research. Especially scenarios with a broader time-horizon can identify areas of tension and areas of consensus.

Social innovations will undergo the reconstruction of the whole social process of interactions and interventions, influencing factors and mechanisms. SI-DRIVE was delving into research with presuppositions, where a sound theoretical framework is guiding the empirical research phases. Based on the working definition, the key dimensions, the research foci and the mechanisms of social change derived from the critical theoretical review, global mapping was structured and collected quantitative and qualitative data guaranteeing the reflection of the given heterogeneity of social innovations. The quantitative data from 1005 cases were not looking for statistical representativeness, but led by the theoretical framework and the derived research foci, it was gathering a representative overview of all the relevant social innovation types and concepts across the world. The case studies and the related policy field reports together with the results of the global mapping served the ground for follow-up policy and foresight workshops for the seven policy fields. This explorative, multi-method approach of SI-DRIVE, combining quantifiable data collection with qualitative methods for the discovery, description, systematisation, and understanding of social practices within specific societal sphere and policy fields led to a first classification via practice fields and first attempts for a typology of Social Innovations. For the final reporting SI-DRIVE refers to the results of state-of-the art reports, global mapping, case study analyses and the policy and foresight workshops to be compared and synopsised for all policy fields.

4.5 OTHER LESSONS AND RECOMMENDATIONS

The quality of data submitted in the database (global mapping) and reporting (case studies) is challenging due to not available or different deepness of information. This is a typical problem of creating databases using a large number of diverse cases and limited access to information in some cases or for specific variables. However, the submitted data in SI-DRIVE were sufficient for the mapping and the case study analysis, especially because of the common and necessary theory based dimensions, indicators and variables: The methods used to design the database were sound as they had not only already proved their capabilities in social innovation research but also as they were based on the theoretical approach of SI-DRIVE (specifically, the five key dimensions). The execution, however, was slightly challenging. The structure of the mapping questionnaire and the case study template strictly followed the theoretical framework (again, esp. the key dimensions and also the mechanisms of social change). This deductive approach forced the partners conducting the survey and the case studies by following the theoretical structure. While this was often remarked as a kind of ‚artificial' data classification, not following the inductive or practical perspective of the single initiatives, it helped to maintain comparability by sticking to a common framework.

Analysis tools were introduced and used by the partners, such as SPSS and EXCEL for the quantitative Analysis (global mapping), and NVivo, MAXQDA and QCA for the qualitative analysis (case studies). For instance, NVivo was used to support textual analysis in a quantitative way, to validate and assist in identifying important words, synonyms, texts and text linkages in the case studies. Thus, limitations of quantitative and qualitative research were overcome by combining the qualitative with quantitative data. The in-depth case studies offer enriching information on individual cases explaining the process dynamics or mechanisms of social change, and the quantitative analysis gave a more

representative picture of the world of Social Innovation as well as cross-correlations between relevant independent and dependent variables.

5 BUSINESS MODELS OF SOCIAL INNOVATION

Success of social innovations is to a great extent related to explicit diffusion strategies and business models, which are important for planning the sustainability and scaling of such initiatives. The SIMPACT project with its focus on economic underpinnings also had a focus on business models. Komatsu et al. (2016) derived a collection of ideal types (see spotlight). By adopting new modes of thinking, new business models, tools and techniques, a sustainable implementation system can be achieved. In some cases, social innovations and their decentralized, small-scale or circular business models are forced to compete with incumbent business models of mass production and mass retailing. In dealing with competition in the consumer market, a shift in attention has been observed from resource availability to consumers and non-professional actors. This shift, associated with variation in value systems, threatens traditional business models and forces incumbents to consider new business models. Some of the social innovation cases initially identified in SI-DRIVE do not operate anymore because they have either been acquired by their competitors (e.g. integrated into public institutions like Talent Scout in the Education policy field), or have undergone radical changes to survive in the market (e.g. Uber), or have seized operation completely (JAKOM). One of the reasons identified for their complete failure is a weak business model: *„In all case studies there are several projects in the respective country mentioned that have not survived. As a reason for their failure the innovators identify a lack of or weak business model. **Sustainable business models** and clear communication strategy are the two success factors underlined by the social innovations"* (Butzin et al. 2017, p. 13). Spread and diffusion are integral parts of such business models. However, careful observation of the SI-DRIVE cases indicates that they lacked clear goals and definitions for success.

Spotlight: Business Models based on SIMPACT's results

Based on its multilevel and comparative analysis of cases and its theoretical framework, the SIMPACT project also led to the elaboration ideal-typical business models. Komatsu et al. (2016) present four models with a focus on actors and social value:

- **Beneficiary as Actor**, where the target group is involved in the production of a commercial good
- **Beneficiary as Customer**, where the target group can buy the product or service for a low price
- **Beneficiary as User**, where the product or service is provided for the target group free of charge
- **Community Asset**, where mutual benefit is created based on the contributions of the community itself.

In all of these models, social value is being created – either for the target group or by itself based on different levels of involvement. From the perspective of SI-DRIVE all of these models are very relevant types of possible business models. But as SI-DRIVE's focus on Social Innovation is wider than SIMPACT's focus also models with a traditional for-profit approach and no major attention for creating social value have to be taken into account.

SI-DRIVE shows that especially social innovation changing existing systems has to become an integral part of new business models (see chapter 6.2.2 Typology: Social Change through system innovation). Organizations are focusing on researching ways of engaging local stakeholders to find business model solutions that are acceptable by all. A successful business models for a social innovation is expected to bring positive rewards for the target group being catered (disadvantaged/unemployed, and so on), the customer (established institutions/businesses and so on accepting services/products from the target group) and the social innovators. Working business models and clear communication strategies have been identified as the two critical factors underlining the success of most social innovations. The business model and communication strategy are critical factors, and so is the capacity to change and adapt an innovative solution to changing conditions and demands. A sound diffusion strategy is an essential influential factor across sustainable business models. Integration of ICT within business approaches plays a critical role, making it an important prerequisite for wider innovation diffusion. Initiatives that faced failure attribute it to the lack of strategic thinking.

In the following chapters the different business model approaches and appearances within the seven policy fields are summarized and discussed. Detailed information could be found in the deliverables D4.3 (Schröder et al. 2017), D5.3 (Oeij et al. 2017), D6.3 (Schartinger et al. 2017), D7.3 (Ooms et al. 2016), D8.3 (Butzin et al. 2017), D9.3 (Heales & Green 2017), and D10.3 (Millard et al. 2017).

Business models in Education

Moving onto the business models observed across education-related innovations, one across Germany corresponds to a *local barter business model (Tausche Bildung für Wohnen / Exchange Education for Habitation)*. In a particular context, young people from migrant backgrounds are offered free accommodation in exchange for them teaching disadvantaged children in the local community. To make social innovations more sustainable, complementary businesses and economic models are needed that include interrelation to labour markets and inventions in complementary areas. For instance, in the aforementioned context, financially supporting the host families offering accommodation to young people did not only overcome child labour, but also empowered women economically, and improved the local economy (Hospedaje Estudiantil en Familia, Student Lodging with Families). Implementing business models capable of imitation or transfer to other social innovations are important from the initiator's perspective in the interest of other actors and involved institutions. Often acceptance, awards and non-monetary support constitute as the essential ingredients for a social innovation, but are not entirely sufficient; professional management and an effective business plan are critical prerequisites for its survival. The barter business model serves as a good example of demand-related approach, where different social demands are combined to arrive at a sustainable solution. Diffusion of social innovations is driven by expressed or assumed demands of specific disadvantaged groups. Although complementary innovation is not always required, its supporting role has been recognized across some cases for sustaining and diffusing innovative solutions. Also, initiatives with stable business models tend to become less sensitive to external funding sources by gaining financial independence - not only in the Education but also all other policy fields.

Business models in Employment

Although the cooperative structure is perceived as a barrier by some social innovators, it can be good for a business model based on social values with non-profit criteria. Business models centred on quality, warmth, and non-profit have been developed based on the *differentiated cooperative business model*. Across some of the youth employment-related innovations in the UK, a business model, partly an NGO *charity model* based on the mix of voluntary and paid services has been identified. Many are looking to develop social enterprises as business models. Across employment related innovations, some initiatives are interested in extension, as opposed to the wider diffusion of Xiezhi's accommodation (see case study report Oeij et al. 2017a) and *employment model as a new business model*. In social innovations targeting young entrepreneurs, technology plays a critical role. It receives specific attention within target groups interested in working from different geographical locations. Technology is expected to increase efficiency and effectiveness, whilst facilitating new bottom-up and decentralised forms of collaboration, to help configure new business models. Practically, all job roles have been slightly altered by the Internet and social media over the past two decades, and these alterations have been rapid owing to the constantly changing business models. Some innovators support employee-driven innovations, where ideas from multifunctional and multidisciplinary teams are combined with new earning opportunities. Such initiatives are grouped under the *employee-driven business models* aimed at increasing employee engagement, whilst empowering employees to use new dimensions of an innovation (technical and service innovations). The core teams are expected to have thorough knowledge of new information and communication technologies, whilst the marketing and sales teams are required to be capable of using these new opportunities for commercial purposes. With such knowledge, employees will be capable of developing sustainable ideas for new business models, critical for new workplace innovation.

Business models in Environment

In assessing innovations related to Environment and Climate Change, it becomes apparent that there are several barriers standing in the way of alternative sustainable food production and their successful distribution. These initiatives emphasize on the need for massive and significant changes by primary producers such as farmers, fishermen, and members of rural communities in their overall thinking, technology, education and community. This will influence their willingness to adopt new business models, tools and techniques required for the success of their undertaken initiatives. These business models can be thought of as *complementary innovations*", that will enable primary producers to look at their rural business model as potentially a progressive solution, preventing them from being stuck in their traditional ways. Sometimes improvised business models will help them identify the opportunities that come with new technology and education, which are currently perceived as something exclusive for urban communities. As a consequence, positive outcomes of improvised personal farming and fishing practices on the wider community will become evident.

Cases related to environment and climate change have also hinted at the strong presence of system innovation. For a particular case that is tackling the serious problem of diminishing wild Atlantic salmon population (North Atlantic Salmon Fund NASF), one of the key elements of their innovative solution is to rebuild the wild salmon economy by associating fish survival to sustainable rural enterprises that have been created by *specifically designing new business model solutions*. These new business models, targeted at the rural population; and the efforts of the North Atlantic Salmon Fund (NASF) are successfully helping in restoring salmon stocks. In designing the new business models for those whose livelihood depended on commercial fishing, the ones causing problems were turned into actors of change. Empowerment is thus a critical element behind bringing real change in social practices concerning environmental problems such as extensive salmon fishing. NASF organizes studies and involves local stakeholders to encourage dialogue and find business model solutions that are acceptable by all. This has resulted in the introduction of new and diverse fishing knowledge, which has not only restored salmon stocks, but has had a significant impact on the socioeconomic values across different regions. Another positive aspect of such models is enhanced awareness amongst people about the aforementioned problem, and reassurance that it can be successfully tackled.

Although several initiatives have been found addressing the topic of food waste, spreading awareness, and offering potential solutions, one particular initiative, 'Iss mich' (or: Eat Me) appears to be one of the first undertakings that has developed *a comprehensive business model addressing food waste*. The Viktualia award by the Austrian Federal Ministry of Agriculture hints at more of such undertakings addressing the aforementioned issue. However, they are all rather recent, often short-term and, and mostly regional. To control the annual wastage of tons of food in Austria, Iss mich initiative operates on corporate social responsibility to collaborate with a charity providing for young mothers with no employment history. Waste is either transformed to premium products or upcycled for prolonged durability complementing high standard processes for catering rescued food, or delivering convenience products from rescued food. This *(circular economy) business model* has contributed to the economy in terms of employment and reintegration, and resulted in massive reduction of food wastage.

The concept of such a circular economy is rapidly gaining momentum across various European political and business agendas, is an interesting business model approach as well. In contrast to the present linear, take, make, and dispose economy, the circular economy represents a development strategy that enables economic growth whist optimizing the consumption of organic and technical resources. Business models for resource efficiency are particularly important, and in the near future, the most important circular economy activity is expected to relate to changing business models for resource efficiency.

Business models in Energy Supply

Following the changes in global and European energy policies, the system is transitioning from a central, fossil fuel dominated system to a renewable and decentralized energy based system. The energy markets in the European countries are liberalised, and thus, the governments have less influence over the energy companies. With this transition, consumers are moving ahead from being passive consumers and are now producing their own energy. With greater competition between the bottom-up energy collectives and incumbents and higher local energy production (energy cooperatives), the incumbents find their business models at threat. Therefore, social innovations as new *cooperative business models* are being developed. For instance, the core business model of a Swedish wind turbine organization (Qvinnovindar, Women of Wind Energy) is based on cooperative working method, which has been built on group strength. Their business model concentrates on local involvement, where the village residents make joint investments. Thus, the local people also enjoy the benefits. However, such business models face a constant risk of conflicting interests between energy suppliers, governments, and the new local energy producers. In such cases, for the sustainability of a business model, financial incentives such as government grants, subsidy schemes, tax exemptions, private funding and so on, can be very useful. Renewable energy initiatives in some of the Austrian, German, and Swedish regions have reported sustainability built upon a sound combination of technological renewable energy solutions, social practices and business models (information, consulting and learning).

Business models in Transport and Mobility

Business models show variations across the *traditional Business-to-Consumer model and the Peer-to-Peer model*. Particularly, amongst car-sharing schemes, there are examples for both business models where prearrangement is always required. On the contrary, core of the carpooling initiatives is peer interaction, where users organise to travel together. This interaction could appear occasionally (with no former prearrangement) or with the help of a carpooling

agency that matches peers based on their ride sharing requirements (destination, times, etc.). There exist some business models, e.g. in car sharing (e.g. Uber), that are aimed at *disrupting the existing business models* of other taxi and car rental businesses. In exploring business models across mobility and transport systems, a leading carpooling giant in the UK represents a for-profit business model that is software only; it treats drivers as self-employed and connects private drivers with citizens. However, with these business models, employment laws about regulating such services are often questioned. This has an important impact on the legal framework regarding technology-based mobility services in the UK.

An example of a weak business model comes from a carpooling initiative in Bulgaria, whereby, the target was to make the platform available for free use, gain critical mass of users, and sell banner space for advertisement. The non-profit business model has been in much use with initiatives focusing on mobility and transport. In one instance, the Bulgarian initiators chose to formalize their platform as a stock company, implemented a strategy for marketing using a non-profit business model, for cleaner environment and reduction of CO_2 emissions; they put the social and environmental aspect at the core of the project and started communicating with non-profit organizations and movements with the same values. However, the business model was not as successful. Interestingly, the initiators changed the business model, and sold carpooling solutions to companies and were successful in financing the social and environmental part of their initiative. Carpooling initiatives have followed an initial business model of paid memberships with an aim to achieve a critical mass of members to earn the necessary capital for the social initiative to further develop and expand. However, in such cases, not many people prefer paying for a service. In another instance in the UK, the business model was changed to offer service for free. The strategy was to achieve a higher critical mass of members and offer free memberships, despite no marketing budget. Collaborating with companies and local councils to develop carpooling solutions for them drew in the necessary finances. Early examples of *business models for sharing resources* based on the concept of sharing economy have been witnessed across the carpooling/car-sharing market in the UK.

There are also *commercial business models* in carpooling industry like that of Uber in the UK. It falls in the category of venture capital start-ups, although its growth takes it out of the 'start-up' position and turns it into a leader. The company is funded by investments and by revenues from its services. Implementing a social initiative in this policy field (and in energy supply as well) is not only based on social demands and societal challenges but more often than in other policy field grounded on market and society studies, which are a part of professionally developed strategies that include business model development and communication plans. A further component is openness towards change, and prompt adjustment of the business model in accordance with changing demands.

There is also an *entrepreneurship driven business model* observed across an Indian transport initiative based on women employment, strategized for empowerment of women in the state. Passionate women with certain pre-qualifications are offered financial assistance and necessary private and public collaborations to assure business and technological advancement combined with unconventional revenue models. Some initiatives report that they have no remuneration model. Their strategy revolves around employee performance and key performance indicators, where individual assessment is made against set targets. The business model for another car sharing initiative, officially registered as a social enterprise, revolves around gaining a share of the rides that people book on the platform. Being a non-profit model, the earned revenues are used to strengthen the company, which is community-oriented, working with locals to identify car-sharing demands within their community. The downside of this business model is reflected in the current national policy where car rental companies can fine the person driving the car at the time of causing the fine. However, as car-sharing companies are not official car rental companies, they are not allowed to do that. Thus, the car-sharing company will have to bear the fine. In some cases, people can rent a car for a day and get up to 5-6 fines. This becomes a huge cost for the company bearing a large effect on their business model. As car sharing is not on the prime agenda of most local and national governments, no solution has been developed as such.

Business models in Health and Social Care

Health related social initiatives demonstrate *considerable variation in business models* with the use of, both *for-profit and not-profit models* across initiatives. Analysing the role of competition requires that we separate public from private services, which utilise different business models and therefore, behave in significantly different ways. The business model often has a bearing on the extent to which innovations seek to protect intellectual property. Many (e)health-related innovations have either been patented or otherwise protected in different ways. This is interesting from a social innovation perspective, because it relates to the debate about protecting intellectual property rights. They also

struggle to be recognized amongst potential service-users and wider health system. The difficulty in getting funding beyond pilot stage appears to be a particular problem with the healthcare models. Another type of business model across initiatives in this field operates under limited liability company and therefore, like many private health interventions, works in a context where competition is a factor. This leads to organisations seeking intellectual property rights. Seeking these rights does not appear to be unusual across Health initiatives, where increased competition in the private sector can hinder interoperability of systems.

Profitability of a business model in Health and Social Care (but also in the other policy fields) is an important key to measuring the impact of (technological, economic but also social) innovation. Extensive coverage of the innovation by the media has also been observed to be a key driver of diffusion, increasing demand from service users and helping develop markets. The initiatives that do not have a for-profit business model suffer some financing issues. Whilst there is funding available for start-ups and pilots, there have been problems with sustainability, particularly where health initiatives are not integrated into the wider health system. More work has to be undertaken to find functioning business or funding models that allow the entrenchment of these programs to maximize benefit. Another unique business model observed across health initiatives is that of *joint ventures* (Healthy Kinzigtal). The core innovation is the fact that the company only receives money if there is an actual increase in health of the population.

Business models in Poverty and Sustainable Development

A particular social innovation addressing Poverty and Sustainable Development has developed a new *flexible business model allowing loan payback* (One Acre Fund OAF initiative) during the harvest season, or when the farmer has surplus, rather than the traditional regular repayments. It also includes an insurance service to counter poor weather or other threats, and has overcome sectorial boundaries through product and service bundling, and successfully transitioned from providing free support to paid-for support. Some of the business models for initiatives addressing poverty and sustainable living, for instance, allow farmers to access micro-finance loans that are flexible and integrated with an insurance product. *Micro-financing models* in the agriculture sector are at a setback as regular set payments depend on adverse weather conditions and disease threats that can destroy harvests completely. In Egypt, there exists an unconventional business model that incorporates social and environmental externalities as the basis for increasing competitiveness across the sustainable development dimensions (SEKEM Development Foundation). This model is now becoming more widely adopted in Egypt and across the Arab world. The use of a people centric process is observed across some sustainability initiatives in rural regions. However, this approach takes a lot of time, as many destitute people are slow learners. In such cases, a business model change from fixed stipend payments to piecework payments has shown improvement in the rate and quality of production. Overall, changes in development strategy at the political level can have much of an impact. For instance, the Danish overseas strategy witnessed a shift from the need-based to a rights-based approach. This has political consequences, given that the educational authorities in Ghana became duty bearers and the children became rights holders, as is reflected in the United Nations 2030 Sustainable Development Goals and Agenda.

A Columbian example of social innovation has created a business model that aims for economic sustainability by creating economic circles of production and consumption that do not require external financial resources. This model empowers peasant families, with special focus on women and children, so they can have local and national political influence to have policies that respect and support sustainable family agriculture.

To sum up: unconventional business models could be observed across sustainable initiatives incorporating social and environmental externalities, and maintaining it as the basis for increasing competitiveness in the future. The economic activities, through a set of eco-friendly business companies, are considered important to secure the establishment of social and cultural activities and infrastructures, to secure its continuity and expansion.

Conclusion

Business model is a useful device for providing a concise overview of the important elements making up a functioning and successful initiative. The purpose is to assist in the design of such an initiative, and to ensure it is sustainable over time. Sustainability does not necessarily mean in monetary terms, but should also encompass organisational, human resource, and environmental sustainability. For achieving sustainability in this sense, especially initiatives with a non-profit focus can benefit from using the business model canvas (e.g. Osterwalder & Pigneur 2010). Already top global companies (for instance, GE, Nestlé, and others) are using the canvas to strategize and create new growth engines. The

project SIMPACT already recognized the potential of business model canvas for social innovations (Celi et al. 2015, pp. 9). It is "a popular tool that makes it simple for practitioners to design business models in a creative session" (De Reuver et al. 2013). The business model canvas, as opposed to the traditional and intricate business plans, and its further development are of importance for social innovation initiatives because it helps organizations to undertake structured, tangible, and strategic conversations in the context of new or existing businesses. Start-ups are also using this canvas to arrive at a business model most appropriate for their businesses. The canvas aims at helping organizations move beyond the product-centric approach, whilst encouraging the adoption of a business model approach. It is made up of nine components, comprising of hypotheses for the business model being tested or developed (see table below).

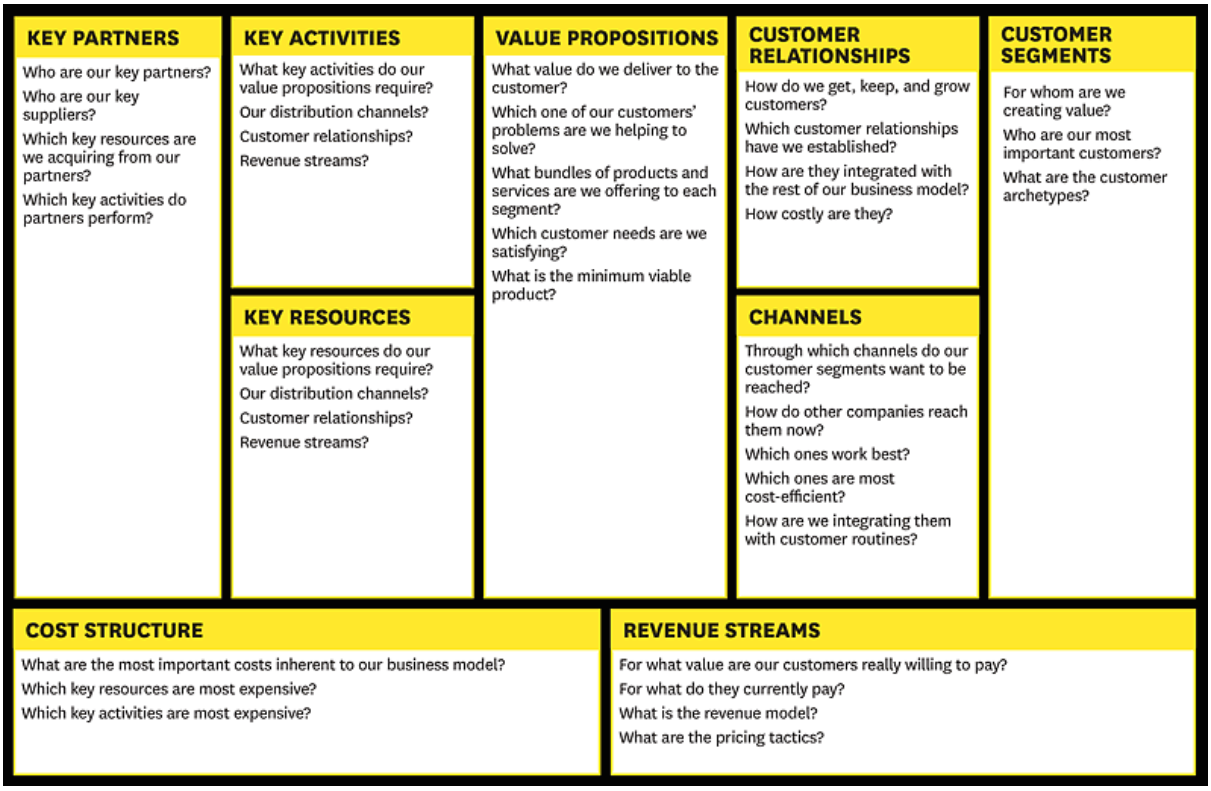


Table 4: Business Model Canvas
(Source: Harvard Business Review: https://hbr.org/2013/05/a-better-way-to-think-about-yo)

However, the model is not without criticisms. It is perceived by some that the standard business models, such as the 'Business Model Canvas'[10] tends to be only useful in traditional market-driven contexts, and does not take into account the issues of process, culture, social need, etc. Neither does the standard business model canvas take account of a dynamic situation, as it is essentially static without flow or feedback. There is much valuable experimentation on business models catering for these deficiencies, including the 'Rainforest Canvas' for visualizing an ecosystem of innovation for a company, organization, or place[11] and the 'My Social Business Model Canvas (MySBM)' for social entrepreneurs to define the economic model of a social project[12]. The construction of a possible hybrid approach, termed here the 'Living Ecosystem Business Model' is as depicted in the figure below. It is labelled a 'living ecosystem' to stress the dynamic interrelationships between elements and their mutual interdependencies. It also attempts to incorporate the idea of flows through the system, and feedback loops and iterations in the same way as are found in living systems.

[10] https://en.wikipedia.org/wiki/Business_Model_Canvas.
[11] https://www.tuzzit.com/en/canvas/rainforest_canvas
[12] https://www.tuzzit.com/en/canvas/my_social_business_model

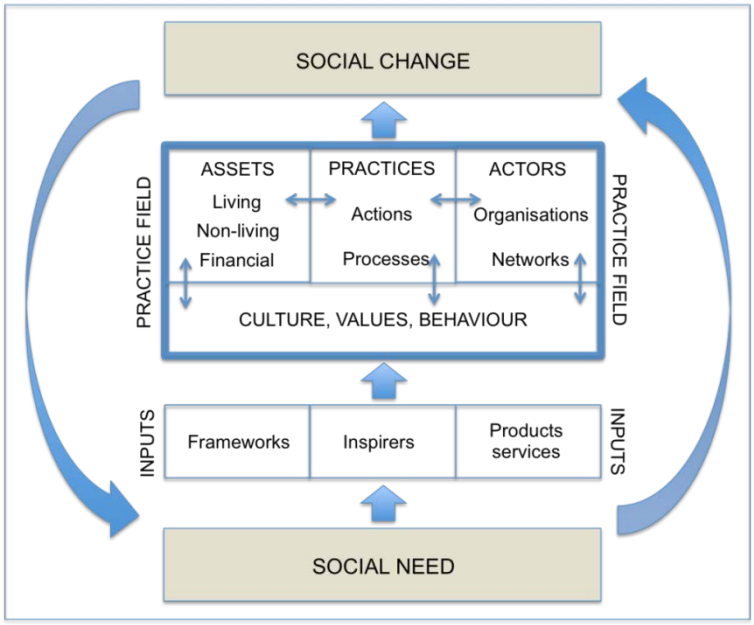


Figure 13: Living Ecosystem Business Model

This living ecosystem business model is based on collaboration of actors from research, public, private and civil sector (setting up social innovation eco-systems) - critical to explore new business models exploiting the potential of social innovation. The basis and the purpose of a social innovation typically emerges from a specific *social need*, societal challenge or required systemic change, at micro, meso, and macro levels. External *inputs* are needed for the initiative to function successfully and be sustainable. These typically include tangible frameworks such as physical and virtual infrastructures, and intangible frameworks such as governance, policy, regulation, and institutions. *Inspirers* refer to other innovations or innovation milieus and practice fields to copy and/or adapt, including role models, good practices, etc. A *practice field* here is a specific practice-based set of social innovations initiatives, practices and processes that focuses on meeting a specific social need, thereby contributing to one or more of societal challenges or policy goals. A practice field is made up of *culture, values, and behaviour* typically overlooked in the standard business models, and normally consists of intangible drivers, barriers and/or guiding frameworks. They can be both formal and informal, the latter often being the most powerful. *Living assets* are people and organic nature, and *non-living assets* are both manmade and natural (inorganic) resources. The *financial assets* are of monetary value, which may be needed to purchase or remunerate external inputs and internal assets. *Practices* refer to specific *actions* required that follow specific *processes* of working/mechanisms and so on. The *actor organizations* are partners and *actor networks* are essential players in the initiative. A *social change* is produced or contributed to, which meets the targeted social need derived from a specific societal challenge or required systemic change at the micro, meso and macro levels..

Analysing mechanisms that determine social change to make social innovation projects successful different indicators could be found: for instance, most social innovations are beneficial for the intended target groups. Upon closer inspection, it is found that the critical drivers and barriers in most cases are related to the initiators, networks, and individuals, with lesser focus on funding or resources. There is an evident difference in the pattern across regions; for instance, the availability of funding receives lesser importance in the wealthier parts of Europe in comparison to the economically weaker European regions, where funding is crucial and conditional. Therefore, in designing and developing business cases, it is critical to account for the target region and its unique circumstances. Many variables, such as the economic system, presence of welfare affairs, role of civic society, and so on, will have to be accounted for, prior to designing and developing unique business models for Social Innovation across different regions with varying circumstances. These elements were examined in detail through the case studies to better understand the social mechanisms as identified in the SI-DRIVE model to offer an explorative direction from a theoretical perspective. The project now has more insights on the pentagon model with the five key dimensions. These five key dimensions can play out differently across different regions, and tackling this regional or context aspect can be identified as a good starting point to devise guidelines for developing exemplary business models for Social Innovation.

6 BUILDING TYPOLOGIES OF SOCIAL INNOVATION[13]

6.1 METHOLOGICAL BACKGROUND AND CONTEXTUALISATION

As already stated before, one of SI-DRIVE's major aims was extending scientific knowledge by building a sound theory for Social Innovation. As the project was guided by an open approach towards this social phenomenon, a wide range of innovations could be found. While having this open approach was essential for building a comprehensive concept applicable for the wide range of very different social innovations with partners from different sectors, in different world-regions and aiming at different societal challenges and social needs, such openness requires systematization in order to cope with the high amount of complexity. In other words: achieving more specificity helps to improve understanding (Schröder et al. 2014, p. 40).

As announced by Schröder et al. (ibid.), the elaboration of typologies for SI-DRIVE had to be built upon a literature review taking other approaches towards typologies for Social Innovation into account. This literature review led to the conclusion that the actual research field of Social Innovation is still lacking comprehensive typologies so far, as Rabadjieva et al. (2017, p. 98) stated. Against this background, typologies of Social Innovation were elaborated based on the findings and experiences of SI-DRIVE. Typologies, in distinction to classifications, address several levels (e.g. Niknazar & Bourgault 2016) and hence are more capable of providing systematization for a theory addressing a wide range in a complex field, such as the theory of Social Innovation. Rabadjieva et al. (2017, p. 100) pointed out, that "typologies meet the three primary criteria of a theory" based on the argumentation of Doty and Glick (1994, p. 233) who demonstrated that, for a theory, "(a) constructs must be identified, (b) relationships among these constructs must be specified, and (c) these relationships must be falsifiable". All of these three key elements of theories are part of typologies (ibid., pp. 233) which made this tool a powerful instrument for coping with the challenges of SI-DRIVE's wide range theory as stated above.

Although Rabadjieva et al. (2017, p. 98) stated a general lack of comprehensive typologies in research on Social Innovation, the activities in SI-DRIVE and the elaboration of own typologies were actually influenced by other approaches of building basic typologies. These endeavours helped understanding what was important to be taken into account. Especially BEPA's outcome and process oriented typology addressing different levels (BEPA 2010), TEPSIE's typology based on initiatives' activities (TESPIE 2014), and SIMPACT's typology with a focus on actors (Rehfeld & Terstriep 2017) played a crucial role. Their review underlined the finding that "social innovations take place at different societal levels" (Rabadjieva et al. 2017, p. 109) as all of these projects focus on a differentiation based on societal levels in one way or another. The most obvious approach incorporating the perspective on societal levels was found with SIMPACT as their perspective on actors was differentiated by three commonly used societal levels: micro ("single impact"), meso ("institutional change") and macro ("social change") (Rehfeld & Terstriep 2017, p. 10). A common finding of TEPSIE and SIMPACT, pointed out for the construction of SI-DRIVE's typologies, was that "Social Innovation activities are adapted to the level approached and make use of different growth strategies in order to spread the activity in question" (Rabadjieva et al. 2017, p. 109). This fundamental finding, together with the perspective of BEPA on social needs, societal challenges and systemic change, can also be found reflected in the key dimensions of SI-DRIVE and the analysis of levels addressed by initiatives in the quantitative global mapping. However, SI-DRIVE's research and analyses also demonstrated the limitations of an assignment to three different levels. The elaboration of typologies of Social Innovation was hence also going beyond the sole perspective on societal levels, led by not only theory but also empirical findings from SI-DRIVE's vast data. (ibid.)

After reviewing innovation studies beyond Social Innovations, a distinction between different types of innovation could be elaborated. Well aware of recent discussions, this distinction, however, is not meant to be the only one possible. In fact, the review revealed a lot of possible approaches with a lot of different perspectives and criteria, ranging from "unidimensional, two-dimensional" to "multidimensional" (ibid, p. 101) classifications. Already existing classifications are featuring, for instance, distinctions by outcome or the degree of novelty. They are also looking at the level of organisations or the objects of innovation. Taking these commonly used distinctions into account, according to the most recent perspective of SI-DRIVE, Social Innovation as a type can be distinguished from

[13] This chapter is based on chapter 7 of the final theory report of SI-DRIVE (Rabadjieva et al. 2017).

"technological innovations", "organisational innovations" and "innovations grouped under 'object of innovation'" (ibid., p. 110) (see table below):

- **Technological innovations** can take various forms and have different degree of novelty. Their main (overarching) purpose is to secure economic growth and productivity. Therefore, it can generally be classified as a broad type of innovation, which can be subjected to further classification. In addition, social change may occur as an outcome from these innovations (e.g. assembly line), even though it is not the main purpose of the innovation. In any other type of innovation technological solutions can also support reaching the desired goal;

- **Organisational innovations** are mostly process oriented ones, meaning that top-down, bottom-up, outside-in and inside-out innovations refer to the process of fostering innovation inside an organisation. They can have different degrees of novelty, however radical and system change is hardly part of their scope.

- Innovations grouped under **'object of innovation'** can also take various forms, but they differ mostly in the degree of change they are aiming at. While Social Innovation can aim at small, middle or ultimate degree of change, sustainable innovation is much more oriented to wider change (radical, systemic change) and frugal innovation on the contrary is very context specific and demand oriented one and therefore more incremental than radical.

- As **social innovations** are characterised by a great variety of implementations, subject to constant change, they could be placed anywhere on a continuum of the described types, depending on the objectives, resources, actors and dynamics of the initiatives. To be clear, an innovation planned as an answer to a social need can end up as a market player with a strong profit orientation (e.g. Uber, Airbnb).

Table 5: Grouping of innovation types at a glance (Rabadjieva et al. 2017, p. 110)

This distinction of innovation types serves as a good basis for typologies of Social Innovation as it demonstrates, firstly, why this type of innovation needs its own specific typologies and as it shows, secondly, which specific elements need to be taken into account. This fundamental distinction therefore is an essential building block of not only the typologies of Social Innovation but also its theory in general.

6.2 BUILDING BLOCKS

Although the typologies of Social Innovation are not a direct part of the project's methodology, they are an important building block for its theory-development. Moreover, based on this theoretical background they are actually belonging to SI-DRIVE's methodological toolset as they are providing a template and a suggested framework for future research activities. The intended outcome, however, is not aiming at major and dominant typologies of Social Innovation applicable for every research project without any changes or openness for further developments. Their value is found in their potential for accessing and systemizing the diverse research field, moreover. This is an important notion especially as a vibrant and dynamic phenomenon like Social Innovation would not allow sticking to notably static typologies or classifications, anyway.

Before the final elaboration of typologies for Social Innovation in SI-DRIVE started, a preliminary classification had to be used in order to systemize the mapping (Schröder et al. 2014, p. 40). This first approach was mainly oriented on the five key dimensions of SI-DRIVE: concepts and understanding; addressed societal challenges, social needs and systemic change; resources, capabilities and constraints; governance, networks and actors; process dynamics (see chapter 3). It also featured the classifications of policy fields, added with the sub-categories of practice fields (meso level) and single initiatives (micro level) in order to give structure to the vast data by creating groups of units for analysis. Additionally, esp. for the comparative analysis "the policy fields [macro level.] [were] [...] considered as an

overarching analytical category relevant in all five dimensions as [were] [...] the world regions." (Howaldt et al. 2016a, p. 15)

As announced by Schröder et al. (2014, p. 72), the elaboration of typologies for Social Innovation in SI-DRIVE built on the results of the first mapping phase (Howaldt et al. 2016a) and the results of the in-depth case-studies. Beyond a focus on the five key dimensions, the construction of typologies building on the findings had to be in line with the five pillars for the methodological design of SI-DRIVE (see chapter 3). While the eight research propositions played an underlying role, the definition for Social Innovation of SI-DRIVE had to be taken into account particularly in order to create typologies reasonably embedded in the project's methodological framework (see chapter 3.1). Furthermore, they also featured the dimension of policy-fields and the linked perspective of societal levels while going beyond this classification used for the quantitative and qualitative mapping phases. In addition to building on these four pillars, a special emphasis on the fifth pillar in regard to social change was taken into account. Although this aspect and the related mechanisms of social change (based on the approach of Wilterdink (2014)) are already part of the key dimension 'process dynamics', they are also related to other dimensions as well (Rabadjieva et al. 2017, p. 111) leading to a position of an overarching theme.

6.2.1 Pre-Typology Classifications

SI-DRIVE's set of typologies is based on its "pre-typology classifications" (ibid., p. 112) of Practice Fields, Cross-Sectoral Dynamic, Innovation Stage and Actor Constellations. Due to the explained pivotal relation between Social Innovation and social change (research pillar 5), these prior classifications are oriented towards:

- **Practice Fields:** The practice fields are seen as an initial approach towards classifying social innovations. They are positioned at the **meso-level** between the **seven policy-fields (macro-level)** and the single **initiatives (micro-level)**. The main focus of this classification is lying on the **output**. Its current state has to be considered preliminary and should not be seen as a fixed grouping of initiatives. Several adjustments and re-groupings were already done in the empirical phases of SI-DRIVE.
- **Cross-Sectoral Dynamic:** Apart from the systematization by societal levels via the Practice and Policy-Fields as well as the single initiatives, social innovations can be classified via their linkage to a sector (in the mapping of SI-DRIVE: **public, private, civil society**). These sectors, however, do not need to be fixed. One the one hand, many initiatives have relations to more than only one sector and on the other hand, the mainly involved actors are sometimes changing over time, leading to a **changing assignment to a sector**. Hence, the classification is not looking at the sectors alone but also at the dynamic process.
- **Innovation Stage:** Social innovations can also be classified according to their current development stage as done in the mapping of SI-DRIVE and the in-depth case study analyses. Here, the differentiation into four distinct stages was selected**: (1) ideation phase** (for initiatives not started yet), **(2) invention phase** (for initiatives transforming their idea into a concept), **(3) testing phase** (for initiatives currently testing their invention), **(4) implementation phase** (for initiatives implementing their solution for the stakeholders), impact phase (for initiatives already creating social impact). This classification, however, is not closing the gap between social innovations and social change as the impact-stage does not mean a determination of social change and is not giving information on the character of this impact.
- **Actor Constellations:** Another suggestion for classifying social innovation based on the findings of SI-DRIVE could be by differentiating between **organisational forms**. This systematization would not aim at assigning the sectors of organisations, as done with the cross-sectoral dynamic, but by looking at the level where a social innovation is happening. It could be happening at the **enterprise-level** (e.g. new forms of business like social businesses), **interprise** (internal to an organisation, e.g. a workplace innovation) or **exterprise** (still on the level of an organisation but added with significant input from the environment).

Table 6: Summary of pre-typology classifications, based on Rabadjieva et al. (2017, pp. 112)

6.2.2 Typological Approaches

Based on the findings of SI-DRIVE, and on the collection of possible classifications in particular, three typologies for Social Innovation were elaborated. Whereas the results and the vast data of SI-DRIVE would even allow for additional typologies, these three mark the starting point.

The typologies are looking at different attributes of social innovations. Hence, although all of them are based on the empirical findings and the theoretical framework of SI-DRIVE they are still distinctive from each other. The following table is offering a first glimpse:

• **Stability of Social Innovation:** based on the biography of a case, featuring three models of growth, leading to three types of formal structures: **(1) highly formal, (2) semi-formal, and (3) weakly formal**
• **Process Dynamics:** building on three dimensions of **(1) relation to policy, (2) mode of interaction, and (3) dynamic,** starting from the practice fields of a policy field
• **Social Change through System Innovation:** main focus on forms of innovating a given system with a set of four ideal-types: **(1) repairing, (2) modernising, (3) transforming, (4) separating**

Table 7: Overview of SI-DRIVE's typologies, based on Rabadjieva et al. (2017, pp. 115)

Typology: Stability of Social Innovation

The first presented typology, focussing on the stability of Social Innovation, is based on three models (Rabadjeva et al. 2017, pp. 115):

- Continuous growth
- Step-by-step or stage model
- Up and down, wavelike, alternating success and failure

As the findings of SI-DRIVE revealed for all of these models, support coming from the environment, especially from policy-makers and funders, plays a crucial role. Their support or lack of support is significantly, if not pivotally, influencing the development-trajectories of initiatives. Initiatives showing **continuous growth** revealed are often linked to active interventions and continuous support by policy-makers and institutions from the relevant contextual settings. When the activities of initiatives are characterised by the **step-by-step or stage model**, the influence of players coming from the environment also plays a crucial role. When there is no growth on certain stages, a lack of support is reflected by this stagnation. Therefore, new support can mean a step forward to a next stage of development. Overall, such initiatives tend to be found as part of a "permissive and enabling environment from policymakers and institutions" (ibid., p. 112). This influence is also key for the growth of initiatives fitting the model of **'up and down, wavelike, alternating success and failure'** as these ups and downs might also be related to either a high amount of support or a lack of support. In general, initiatives characterized by this model are facing a dynamic context with uncertainties influencing their development.

These three models of growth help defining a typology of **formal structure**, containing three ideal-types (Rabadjieva et al. 2017, p. 116):

1. **Highly formal-structural type:** typically quite stable, robust and relatively top-down, closed and embedded in policy and regulation, relatively efficient and can be effective, often characterised by incremental innovation. The main example of the policy field Poverty Reduction and Sustainable Development (PRSD) is the income support Practice Field.
2. **Semi-formal structural type:** mixing both top-down and bottom-up, typically quite stable at the macro level but less so at the micro level, both relatively open and closed, generally robust, relatively effective and can

be efficient, often characterised by a mix of incremental and disruptive/radical innovations. The main PRSD example is the community capacity building Practice Field.

3. **Weakly formal-structural type:** less structured, bottom-up and small scale, typically quite unstable due to fast changing conditions, more subject to tensions and is shock sensitive, relatively open, can be both relatively effective and efficient but also the reverse, often characterised by both disruptive (if not radical) innovation and 'innovation on the go'. The main PRSD example is the displacement, refugees and good governance Practice Field.

Typology: Process Dynamics

The second approach towards a typology of Social Innovation is addressing "the processes or the dynamics of Social Innovation" (Rehfeld et al. 2017, p. 91). This typology is hence looking at the important relation between social change and Social Innovation. It is therefore directly related to the key-dimension 'process dynamics' while it is, furthermore, taking the relationship between social change and Social Innovation into account - one of SI-DRIVE's main foci, represented by the methodological pillar five. In result, this second typology is taking an overarching role. Basically, it is building on two dimensions: **societal field** and **modes of interaction**. Based on this distinction a matrix was elaborated presenting nine different ideal-typical process dynamics (see table below). While the types are anchored in a societal field or domain, this assignment does not necessarily mean that they are only following this particular logic. In fact, when looking at empiricism, "aspects of [...] other societal domains can be found as well" (ibid., p. 92).

Societal field / Implementation	Economy/Market	Civil Society	Politics
Fragmented/Niche	1. Company based	4. Temporary Niche	7. Experimental
Fragmented but partially framed	2. Entrepreneurial	5. Community based	8. Embedded
Societal/Global	3. Disruptive	6. Global movement based	9. Top down

Table 8: Types of Social Innovation from a process dynamic perspective (Rehfeld et al. 2017, p. 92)

These nine different types are not considered to represent all possible types of process dynamics relevant for Social Innovation. They are, moreover, a first summary and typology based on findings of SI-DRIVE, derived from the cases. As their domains are related to Policy Fields and the respective Practice Fields, they can sometimes be assigned to a selection of fields in which they are typically or, at least, often found:

Economy/Market

(1) Company Based
Driven by companies, focus on the internal structure of the organisation; low amount of political support, exchange or common platforms together with other projects ; main drivers are demographic change, shortages in the workforce, economic pressures; especially found in the Practice Field 'Workplace Innovation'; **low level of process dynamics**

(2) Entrepreneurial
Driven by entrepreneurs (esp. social entrepreneurs), focus on economic and social goals; market-driven and competitive; related to networks on all levels; found across several practice fields '; **level of dynamics strongly depends on the (regional, political etc.) context and the ecosystem**

(3) Disruptive
Based on digital business models; disruptive as they act against given political standards or regulations; based in a competitive market; typical for the Practice Field 'Shared Car Usage'; **high level of dynamics due to competition and digitalisation**

Civil Society

(4) Temporary Niche
Limited in time and space; driven by highly engaged actors with a focus on specific social need; related to individual social networks, often supported by volunteers, limited political support; might switch to type 2 or 7 when scaling up, because of entering a market or receiving political support; **often limited in process dynamics**

(5) Community based
Strong focus on self-organization; based on a broader local community, networks lack professionalization; support by local politics; aiming at the local level; relevance of global trends (e.g. trend towards local food); often supported by formal or informal, national or global networks; characteristic for practice fields in Environment and Energy; **high and stable local dynamics**

(6) Global movement based
Adapted around the world; scarce, as civil societies differ; implemented in very different ways, depending on the context; imitation, learning, and adaption as key modes of interaction; process dynamics of a group of linked projects sharing common themes; found in the practice fields 'Community Capacity Building' and 'Integrated Care'; **growing dynamics, limited in scope - with possibly more potential in the future**

Politics

(7) Experimental
Projects based on funding programs, limited time and scope; broad range of activities and certain degree of professionalization due to formal conditions; single and fragmented projects; weak interaction with other projects; examples in the praxis field 'New Models of Care'**; limited dynamics, might become embedded in a Practice Field, then shifting to type 8 (Embedded)**

(8) Embedded
More or less integrated in a specific Practice Field; funding by a government, maybe related to specific calls for new solutions in a certain Practice Field or in the phase of implementation; fragmented in the beginning, strengthening a welfare system when successful; typical examples e.g. in the practice fields of Youth Unemployment, Mobility of Vulnerable Groups, Reduction of Educational Disadvantages; **process dynamics related to the potential of being established in a welfare system**, when professionalized, a shift to type 2 (Entrepreneurial) is possible

(9) Top down
Central (often large-scale) political programmes with incentives, support, nudging, regulation and prohibitions; hierarchical mode of interaction; examples in the practice fields of Income Support and in centralized countries like China or Russia; **process dynamics depend on acceptance and active involvement of the target group**;

Table 9: Types of Social Innovation grouped based on their process dynamics, based on Rehfeld et al. (2017, pp. 92)

Typology: Social Change through system innovation

The third typology of Social Innovation derived from findings of SI-DRIVE is looking at social change through *system innovation*. It is building on the assumption that socially innovative initiatives are often facing a context with a strong formal system. Therefore, this typology is giving the intended and realized output of initiatives a pivotal role. This was especially found in the Policy Fields Education and Lifelong Learning, Health and Social Care, Mobility and Transport, Energy, and Environment. As these are already five out of seven Policy Fields analysed in SI-DRIVE this finding already reveals the importance of formal systems for social innovations. In Education and Lifelong Learning, initiatives are

confronted with highly formalised educational systems whereas initiatives in Health and Social Care are often forced to find access or, at least, opportunities for cooperation with healthcare systems. Similar to these fields, innovations in transport often need to find a way of coexistence with, or even entering, systems of public transport while initiatives in Energy Supply need to cope with existing system for energy supply and environmental initiatives are confronted with systems defining current practices.

The typology for system innovation by initiatives is building upon the findings of the case-study-reports (Schröder et al. 2017, Oeij et al. 2017, Schartinger et al. 2017a, Ooms et al. 2017, Butzin et al. 2017a, Heales et al. 2017, Millard et al. 2017a) and the general recognition of the relevance of systemic change already named in the BEPA typology (BEPA 2010), continued in the global mapping of SI-DRIVE (Howaldt et al. 2016a) and the following analyses. It is consisting of four types:

(1) Repairing Initiatives are 'repairing' the system by filling gaps not tackled by the current practices (e.g. lacking educational programmes or lacking healthcare provision).
(2) Modernising Initiatives aim at a modernization (e.g. by providing new practices towards solidary agriculture) or a supplementation of an existing system (e.g. by adding digital solutions to an existing healthcare-system which could also mean a modernization in the long run).
(3) Transforming Initiatives implicitly or sometimes even actively aim at transforming a system by reaching a critical mass in a society institutionalizing a new social practice (e.g. by providing a new service which is replacing a formerly established one or by creating significant impact on a market like e.g. Uber does).
(4) Separating Initiatives establish new practices outside of the system as the given structures do not allow these new practices to be happening inside of them. Such practices might be a radical alternative to a current system (e.g. self-supply without a relation to the dominant market) or a solution for precarious conditions produced by system-conformity (e.g. self-employment instead of traditional dependant employment).

Table 10: Ideal-types system innovation, based on Rabadjieva et al. (2017, pp. 117)

This typology of social change through system innovation is furthermore building on the assumption that social innovations having a significant impact on a system are confronted with either tolerance, integration, acceptance or combat, prevention, resentment (see figure below):

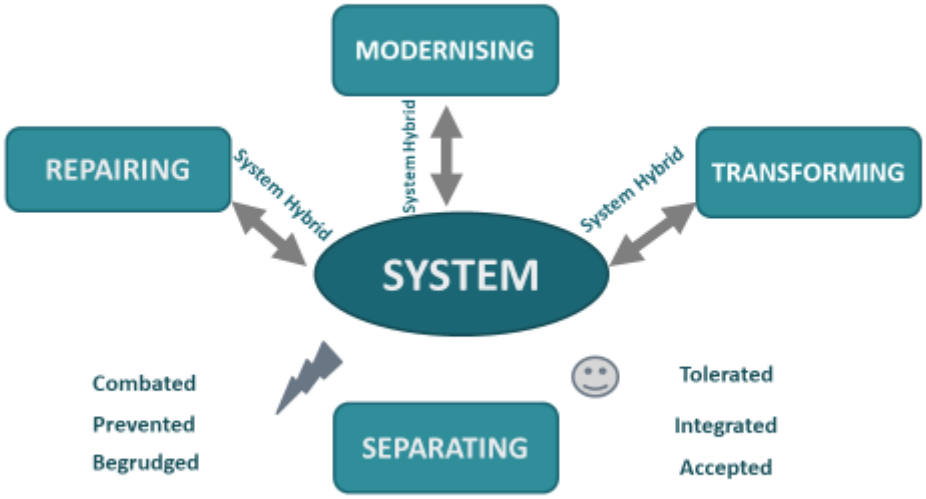


Figure 14: Social Change through system innovation (Rabadjieva et al. 2017, p. 117)

6.3 CONCLUSION

This chapter has shown that while a multitude of innovation typologies with different foci exist, typologies especially focussing on Social Innovation and identifying ideal types remain a niche undertaking. Moreover, existing Social Innovation typologies so far do not pay special attention to the relationship between Social Innovation and processes of Social Change. Based on this observation, the chapter set out to present classifications, such as the Practice Field approach developed during the course of the SI-DRIVE project, and took those as a basis for envisioning building bricks of a typology.

These first contours of a typology have been developed with regard to the theoretical framework (esp. the definition of Social Innovation and SI-DRIVE's key dimensions as well as the focus on the relation of Social Innovation and Social Change) and in line with the broad range of social innovations discovered from the global mapping.

In sum, there are different approaches of typologies of social innovations appearing:

(a) With regard to existing (innovation) typologies, modifying or complementing them. For example, social entrepreneurship can be seen as a special kind of business innovation.
(b) With regard to different central issues (system relevance, static or dynamic in regard to the development stage of the social innovation initiative, leading to Social Change, actor constellation, etc.). The three typological approaches all take one central issue and derive their ideal types in relation to it.
(c) Based on existing classifications, which could be further developed in the direction of a typology. For example, the practice fields classified within the global mapping provide the basis for a more elaborated typology.

From the SI-DRIVE research three approaches for a distinct typology appear:

1. Social Change through system innovation, setting the initiatives in relation to the formal systems of a policy field

2. Stability, development trajectories, focussing on the progress and the structure of social innovations
3. Process dynamics, looking at the mode of dynamics and interaction between politics, market and civil society.

However, all these distinctions have to be seen as first approaches to develop typologies of Social Innovations; they have to be elaborated in further theoretical analyses and research, underlined by empirical evidence and policy strategies. In their current state, they can already help giving structure for research. Together with early approaches from other research projects on Social Innovation, they provide the potential to enhance understanding. A strong potential of the early typological approaches presented in this chapter is especially found in the elsewhere rarely found relation to social change and the linkage to classifications used for systematizing the data and their analysis in SI-DRIVE. As these typologies build on classifications like policy fields and practice fields they already feature a sound and well-tested systematization that proved itself in the research activities. But as these classifications are open for further adjustments, typologies based on them also need to be open for further changes and extensions.

For the methodological framework the elaboration of first typological approaches does not only mean a major outcome based on the discussion on how to build typologies and the determination of a definition. They also have to been seen as a major contribution to the methodological toolset of SI-DRIVE. Of course, typologies cannot be seen as methods on their own. They are multi-level systematizations of complex research subjects linked to theory and empirics. But because of their potential for making a research topic tangible they can support the application of methods and help deciding which form of methodological access is adequate to a specific research field. In this sense, the typologies of SI-DRIVE contribute to the methodological toolset by not being part of it but by being part of a supportive framework.

7 GUIDELINES FOR MAKING POLICY RECOMMENDATIONS AND FORESIGHT FOR SOCIAL INNOVATION

Within the context of the wider ambition of the SI-DRIVE project to analyse and explore how individual social innovations emerge, get generalised and ultimately translate into social change, SI-DRIVE's Foresight & Policy has focused on the role of public administration and policy in relation to these phenomena, both from a retrospective, analytical perspective and from a forward-looking, exploratory perspective. In other words, Foresight & Policy aimed at providing the necessary underpinning for policy advice in two regards, namely:

- Generalised insights on the emerging patterns and determinants of Social Innovation to inform policies that seek to enable and facilitate Social Innovation, and
- Mid- to longer-term future orientations regarding emerging trends and new models of Social Innovation, as a basis for policy strategies.

This ambition required a specific methodological approach, well embedded in the overall conceptual and methodological framework of the SI-DRIVE project. In this chapter, we first explain some conceptual specificities of our future-oriented governance perspective in relation to Social Innovation and Social Change, before looking into the methodology used in the context of WP 11. This serves as a basis for a generalised suggestion on how to explore policy advice on Social Innovation and social change from a forward-looking perspective. The final section provides a brief assessment of the experiences made.

Conceptual background

Recent years have seen a shift in our understanding of the structures and processes shaping change in society, with a departure from the emphasis on government as the key actor of political steering, to governance by a wider set of actors in society, linked to each other in networks that shape change in a distributed manner. Following Rhodes (2007, p. 1246), governance refers "to governing with and through networks", and the characteristics of network governance are the following ones:

- Interdependence between organizations. Governance is broader than government, covering non-state actors. Changing the boundaries of the state meant the boundaries between public, private and voluntary sectors became shifting and opaque.
- Continuing interactions between network members, caused by the need to exchange resources and negotiate shared purposes.
- Game-like interactions, rooted in trust and regulated by rules of the game negotiated and agreed by network participants.
- A significant degree of autonomy from the state. Networks are not accountable to the state; they are self-organizing. Although the state does not occupy a privileged, sovereign position, it can indirectly and imperfectly steer networks.

Social Innovation requires some additional consideration on top of this general perspective on governance. **First** of all, Social Innovation is an ill-shaped object still in search of a clear and unambiguous definition. From a governance perspective, this means that the object of governance is unclear, as are the governance mechanisms to use in order to support Social Innovation (Jessop 1997). To identify policy options for the different policy levels in the field of Social Innovation and to explore future perspectives for Social Innovation it was important to explore what the objects of governance in the area are and how different actors define the scope of governance. Of course, the general definition and framework of Social Innovation as developed by the SI-DRIVE project (based on five key dimensions) served as frame of reference.

Second, the governance of Social Innovation takes place in in a multi-actor setting, but we were nevertheless particularly interested in the role of government and public administration in relation to Social Innovation and social, but of course taking into account the interplay with other actors and stakeholders in the respective policy fields (i.e. social innovators, social entrepreneurs, end users, etc.). Issues of particular interest were, for instance, skill needs in public administration, including the skills for realising social innovations in the context of public administration itself.

Third, the seven policy fields addressed by SI-DRIVE are shaped in a multi-level and multi-domain policy setting, where European, national, regional and local policy actors intervene to varying degrees. As consequence, it is difficult to speak of the role of public administration and policy making as such, but rather necessary to differentiate between levels and domains. In order to underpin our understanding of different role public administration and policy can play in relation to Social Innovation, we recur to the "new synthesis" framework developed by Bourgon (2011). Bourgon distinguishes four vectors of governance, based on the dichotomies between a) state authority/government vs. collective power/governance, and b) societal results vs. civic results. This two-dimensional framework gives rise to four types or modes of policy responses (which correspond to the four quadrants of his framework): compliance, resilience, emergence, and performance. For addressing systemic challenges (such as those typical for many areas of Social Innovation) and triggering social change with the help of Social Innovation, it is necessary to combine different such modes, depending on the specific configuration and point in time. From public administration and policy perspective, this implies that a mix of capacities is needed, depending on context, in order to combine performance, emergence, compliance and resilience.

Fourth, as already indicated under the previous point, time matters. The governance of Social Innovation and social change cannot rely on a static framework but requires taking into account that social innovations pass through a life cycle, which may or may not lead to Social Change. The role of public administration and policy thus needs to change in the course of the life cycle.

Finally, the governance of Social Innovation needs positioning in a future oriented frame. If the ambition is to provide constructive policy advice, it is not sufficient to look retrospectively at the lessons from the past. The future will raise new challenges and requirements, which is why it is not enough from a policy perspective to remedy past deficits. By anticipating future and emerging opportunities, risks and ambitions along the lines of the SI-DRIVE framework, in particular in the seven policy fields but also with regard to Social Innovation in general, the future evolution of and the challenges for Social Innovation is put to the forefront.

The methodology for foresight and policy support developed and tested in the context of the SI-DRIVE project aims to take into account these specific features of Social Innovation when generating generalised and forward-looking advice for public administration and policy, at both the levels of policy fields and for social innovation policy in general.

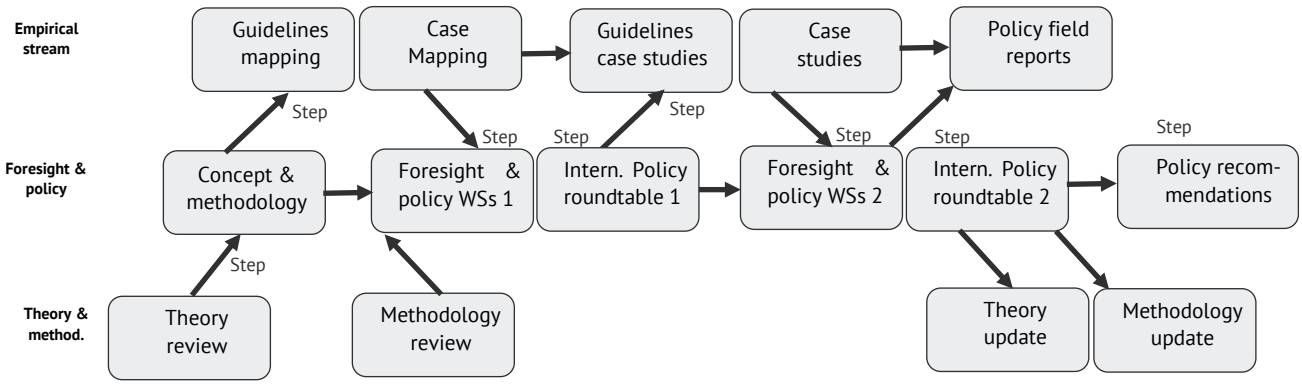
SI-DRIVE methodology

The methodology for foresight and policy was tightly embedded in the overall SI-DRIVE research methodology in order to benefit to the largest extent possible from the theoretical advances and empirical enquiries in the project. It was also synchronised with the two-phase approach of SI-DRIVE, by which a first round of empirical enquiry ("global mapping") was deepened in a second phase ("case-studies"). In particular, important questions were fed into the mapping and case-study research within SI-DRIVE, in order to elicit future-oriented and policy-related aspects in the empirical parts of SI-DRIVE. In turn, the results from the mapping and cases-studies informed the two rounds of foresight and policy workshops, and of international policy roundtables. Insights into the possibilities and limitations of policy with regard to Social Innovation were fed into the policy field-specific reports, as well as into dedicated policy briefs and recommendations.

Reporting on foresight and policy aspects was not restricted to the preparation of final recommendations, but was a continuous activity throughout the entire project, both at the level of policy fields and with regard to crosscutting insights.

Subsequently, the eight steps of the SI-DRIVE foresight and policy advice methodology are sketched, with Figure 15 providing an overview of how the methodology was embedded in other SI-DRIVE activities.

Figure 15: Embedding of foresight and policy work steps in SI-DRIVE



Step 1: Conceptual Framework and Methodological Approach for Foresight and Policy

Based on SI-DRIVE review work and research on theories (Howaldt et al. 2014) and methodologies (Schröder et al. 2014), this first step aimed at consolidating the conceptual framework and methodological approach for foresight and policy. It involved communication of the framework and the approach to all project partners linked to Policy & Foresight in some form in later stages of the project. As Policy & Foresight draws extensively on results from the empirical work packages in order to feed the discussions with policy makers and stakeholders, achieving this shared mutual understanding was crucial, as was incorporating requirements from the different policy fields.

Step 2: Inputs to Guidelines for Mapping of Social Innovation

The mapping of social innovations draws operationally on the inputs from the seven policy fields. The contributions of all policy fields to the mapping were based on a common template for data collection. In order to make sure that foresight and policy aspects are taken on board in the design of that template, Policy & Foresight was closely involved in the design and specification, based on the conceptual framework developed in the previous step.

Step 3: First Round of Foresight and Policy Workshops

Once the mapping and the first round of data collection on cases had been finalised and synthesised in a first version of policy field reports, the first round of foresight and policy workshops was launched. Guidelines in the form of a handbook/manual (Schaper-Rinkel et al. 2015) were provided to all policy field work packages, and the Policy & Foresight team was always involved in the implementation of the foresight and policy workshops in a moderating role. Experts from research, practice and policy were involved in these first-round workshops, with composition varying from policy field to policy field.

The focus of this first set of foresight and policy workshops was on sense-making from the case material. In other words, next to the focus on future-oriented and policy aspect, they also played an important role for better delineating practice fields and identifying patterns across the different empirical cases from the policy and practice fields. More specifically, the following aspects were addressed at the workshops:

- Drivers and motivations
- Ambitions and goals
- Barriers and enablers
- From upscaling, replication, uptake and adaptation to a social innovation ecosystem
- Future policy challenges and ambivalences
- Policy options and recommendations.

Results from this first round of foresight and policy workshops were summarised in synthesis documents for each policy field and an overall synthesis paper (Dhondt et al. 2016b)

Step 4: First International Policy Roundtable

The synthesis of results from the discussions of the first round of foresight and policy workshops were fed as a briefing paper into the first international policy roundtable, which brought together policy makers from regional, national, European international levels. Discussions focused on:

- The aims of Social Innovation
- Integration of Social Innovation in policy approaches
- The impact of Social Innovation
- Instruments to support Social Innovation
- Regional and international differences.

Results from the roundtable were synthesised in an policy field overarching policy brief .

Step 5: Inputs to Guidelines for Case Studies

With the foresight and policy workshops and the first international policy roundtable, the foundation was laid to formulate more specific questions for the subsequent second phase of SI-DRIVE, aiming to deepen our knowledge of Social Innovation and social change through detailed case-studies. As for the mapping, the Policy & Foresight was closely involved in the design of the analytical framework and template for the case-studies in order to make sure that critical aspects of foresight and policy in relation to Social Innovation were taken into account.

Step 6: Second Round of Foresight and Policy Workshop

After the implementation of the case studies, the second round of foresight and policy workshops was implemented. It was following basically the same approach as the first round, but now with a stronger involvement of external experts and stakeholders. The aim of this second round of workshops was to consolidate the findings at policy and practice field levels, and to extract key policy lessons. A differentiated approach was pursued to distinguish lessons for different world regions.

The workshops were informed by the draft policy field reports, and again led to policy field-specific synthesis and a general synthesis of cross-cutting findings.

Step 7: Second International Policy Roundtable

The second international policy roundtable pursued three main aims:

- Validation of our second round of policy and foresight workshop results (based on the empirical results of SI-DRIVE). This meant that the international policy roundtable looked at the summary recommendations coming from these workshops and gave an expert judgement on these results;
- Identification of cross-policy field and cross-country/continent issues and trends in these results;
- Identification which other kind of policy support is needed in the direction of unlocking the potential of Social Innovation, empowering citizen engagement, to foster the possibilities for Social Innovation.

This second international policy roundtable also saw the use of an innovative voting tool (using a smartphone app), in order to elicit priorities in terms of the key questions addressed at the workshop, regarding

- The importance of social innovations for social change
- Social Innovation from a developmental perspective
- Developing a policy support strategy for Social Innovation
- The role of the EU in supporting social innovation

Again, the main findings were synthesised in a summarising policy brief of the roundtable.

Step 8: Lessons learned and policy recommendations

The second international policy roundtable had already paved the way for the main policy recommendations resulting from SI-DRIVE. Ten major recommendations were extracted and summarised in a second policy brief set), and presented at the SI-DRIVE final conference. In order to reinforce the visibility and impact of SI-DRIVE policy-related findings, but also including theoretical and empirical aspects, an SI-DRIVE policy declaration (SI-DRIVE 2018) was prepared as input to wider debates about innovation policy in Europe.

Towards methodological principles for future-oriented policy advice on Social Innovation

Keeping in mind the double ambition of the foresight and policy-oriented work in SI-DRIVE, namely to produce both generalized insights and concrete advice, the experiences made in SI-DRIVE lend themselves to proposing some general conceptual and methodological principles for future-oriented policy advice on Social Innovation. These principles are of course an abstraction from the specific settings of the SI-DRIVE project, where foresight and policy was, conceptually as well as empirically, closely integrated into the overall project design.

Conceptual principles

- Due to the diversity of Social Innovation, a fairly **open and multidimensional analytical concept of Social Innovation** should be used to underpin future- and policy-oriented enquiry. The understanding of Social Innovation differs in different policy context, and the underlying concept must be sufficiently open to take a wider spectrum of views on board. The definition of SI-DRIVE is useful in this regard because it proposes different dimensions of Social Innovation, of which not all need to be present in every example of Social Innovation. It is also open to the frequent case that social innovations are tied to technologies or artefacts, as revealed in many of the case studies and mapped examples of social innovations in SI-DRIVE.
- A **dynamic understanding of Social Innovation** is crucial, in particular if the ambition is – as was in SI-DRIVE – to look at the link between Social Innovation and Social Change. Life-cycle models covering the evolution from local experiments to changes at practice fields or policy field level and to social change turned out to be useful instruments for developing policy recommendations geared to the different stages of development of a Social Innovation.
- **Context matters** for Social Innovation. Policy fields differ significantly in terms of the embedding governance structures and (sectoral) policies (e.g. the relative importance of European policy, or the weight of public sector agents as compared to private or third sector).
- In line with this call for differentiation, it is essential to consider a **variety of policy approaches and roles for public administration and policy**, which allow designing differentiated governance configuration and policy inroads, depending on policy fields, policy levels and phases of the social innovation life-cycle. In SI-DRIVE, the Bourgon approach (Bourgon 2011) turned out to be a useful framework for this purpose.

Methodological principles

- Looking at policy fields (and practice fields) as the main level of empirical, future-oriented and policy-oriented enquiry turned out to be a wise choice. Results were sufficiently differentiated to deliver meaningful insights with regard to concrete policy advice but also offered a fertile ground for generalisation in the form of cross-cutting policy recommendations.
- Such a differentiated approach can of course deliver generalised insights only when paired with a comparative perspective on several policy fields. This turned out to be one of the key success factors of SI-DRIVE, because cross-cutting policy recommendations were rooted in seven different policy fields.
- A future-oriented approach needs to explore several dimensions of potential change:
    - Changes in the context and requirements with regard to (Social) Innovation
    - Emerging and potential future patterns of Social Innovation in space and time
    - The goals, ambitions and motivations of the different actors and stakeholders in Social Innovation, and how these may change over the life cycle.
    - Barriers and enablers of Social Innovation, and how they may either prevent or unleash transformative dynamics.
    - The resources and roles of different actors in overcoming barriers and strengthening enablers (e.g. through novel forms of cooperation), and in particular the roles of public administration and policy.

- The structural and procedural aspects of governance to trigger supportive coalitions of actors and stakeholders.

Ideally, a scenario-based approach to exploring these dimensions should be employed, which – due to resource constraints – could not be implemented at full scale in SI-DRIVE.

- Finally, rather than making clear-cut recommendations, formulating major dilemmas for policy was a promising way of presenting the main policy challenges at stake in relation to Social Innovation. It allows proposing political choices to decision makers, which is particularly important in the case of Social Innovation because of the strong normative dimension by which social innovations are characterised.

Assessment

The foresight and policy work package in SI-DRIVE was experimental in many regards. It introduced elements of foresight to policy research on Social Innovation, which in itself is still an emerging field of research. Key concepts are vague and still in need of deeper empirical investigation. While this may have been a risky endeavour, it turned out to be useful and delivered interesting proposals for policy at the levels of policy fields and for Social Innovation in general. This was possible only due to the tight embedding of foresight and policy oriented elements in the empirical work of SI-DRIVE, and the iterative approach of SI-DRIVE, which allowed refining initial results in a second round of in-depth enquiry. The methodological lessons learned from this experiment provide good foundation for turning future research work on Social Innovation and social change into useful inputs for policy making and the governance of Social Change.

8 IMPLICATIONS FOR A THEORY DRIVEN SOCIAL INNOVATION METHODOLOGY[14]

The verification or falsification of theoretical hypotheses through empirical data is part of almost every methodological handbook of social sciences, including the discussion of its general capabilities, limitations and constraints. This chapter will hence summarize and discuss the final methodological framework of SI-DRIVE. Furthermore, the advantages, the limitations and constraints of the chosen solutions will be reviewed.

SI-DRIVE developed a sound theoretical framework for Social Innovation. Its Social Innovation theory development was characterised by a unique systemic approach to analyse social innovations against a comprehensive societal background incorporating the predominant cultural and historical contexts as well as the determining governance models. Therefore, such a theory development (as realised in the SI-DRIVE approach) had to go further than previous concepts which were concentrating on gathering examples of successful practices aiming at delivering concepts and methods of and for successful social innovations, mainly based on and explained by *case studies*.

To overcome the limitations of a case study approach SI-DRIVE's iterative theory development was based on subsequent empirical phases *mapping* the world of Social Innovation by combining quantitative and qualitative methods.

8.1 THEORY DRIVEN METHODOLOGY: MAIN METHODOLOGICAL CHALLENGES

More and more research projects on Social Innovation (such as SI-DRIVE but also e.g. TRANSIT, see chapter 4.2) aim at developing and sustaining theory. In order to achieve sound theories, methodological challenges need to be discussed for creating an equally sound basis for research. (see Wittmayer et al. 2017, p. 1)[15] Generally, Haxeltine et al. (2017a) underline the importance of reflecting methodological approaches in Social Innovation Research and theory-building. As they are pointing out the selection of adequate tools should be not be made based on "one-shot methodological responses" (ibid., p. 74) but, moreover, should be taking into account the specific needs of a chosen research topic and the specific context. SI-DRIVE's approach towards tackling the specific challenges related to its scope are discussed in this sub-chapter.

SI-DRIVE utilised a protocol to evaluate research propositions, and helped relevant partners to identify good social innovation examples for the project. Therefore the research team was closely involved with the stakeholders in the selected case studies, where exemplary social innovation models and and building blocks for the elaboration of typologies (see chapter 6) were identified. The role of the research team was also to offer expert guidance to the involved initiatives, policymakers, and stakeholders by immersing in their socio-cultural and political setting (Glaser & Strauss 1967). This approach allowed some impact evaluation of exemplary social innovation models identified across different policy areas and cross cutting themes in different socio-cultural, national and political settings, evaluating the relevance of research propositions offered in the project. Furthermore, the multi-method approach allowed the project team to triangulate the data collected from different sources (i.e. literature, secondary sources, case study and survey research).

Nevertheless, as already mentioned in chapter 2, the research objectives, the "undefined" research subject as a **ubiquitous concept with different understandings all over the world** and the close interrelation between theoretical and empirical research, feeding policy development, led to some methodological challenges. Usually, the starting point for empirical research under this conditions is a need to test and verify, establish and develop a framework of a new theory. Therefore, a pure positivistic quantitative approach is less probable, given the fact that there is no consistent empirical base or established tradition to build upon. Focusing on classification and investigation, qualitative approaches can be utilised and hence, adapted to improve theoretical concepts as in qualitative

[14] This summary and conclusion chapter is based on Kaletka & Schröder (2017).

[15] For deeper insights into the methodological challenges discussed taking the perspectives of a variety of research projects into account we suggest taking a look into EPSIR's special issue on methodological challenges (see Wittmayer et al. 2017) which can be accessed via: http://pub.sinnergiak.org/index.php/esir/issue/view/5

comparative analyses. In addition, cyclic development approaches between theory and empirical results can also be beneficial for a better understanding Social Innovation. "To achieve this, careful consideration of a number of key research principles is required in order to build a better understanding of social innovation practices in various contexts, relating practice to policies and social change, utilising a multidisciplinary approach, strengthening the analytical tools, maintaining a cyclic iteration process throughout, and focusing on advancing social innovation for theory and practice." (El-Haddadeh et al. 2014, p. 250)

The described key elements (definition, practice field approach, key dimensions, and mechanisms of social change) form this kind of needed background for the methodological operationalization. To develop a theory of Social Innovation the elaborated theoretical approach so far and its building blocks have to be proved by empirical evidence and a related methodological approach that takes especially care of the huge variety of understanding and manifestations of social innovation activities. This leads to four main methodological challenges and general tensions:

1. The operationalisation of theoretical hypotheses or frameworks into an empirical sound measurement, *interrelation of theory and empiricism*
2. The *limited outrange* of using only quantitative or qualitative methods
3. *Different understandings* of the subject of investigation (social innovation as a ubiquitous concept)
4. The *unknown* main unit or basic population.

Especially the first two challenges can be associated to some core methodological discourses in social sciences (to be found in almost every methodological textbook).

Ad 1) Combining and interrelating theory and empiricism

Operationalising the developed theoretical framework to empirical tools reflecting both the hypothetical frame and the practical implementations of social innovations is one of the main challenges (not only for Social Innovation research but for social sciences as such). Coming to a theory led and inspired common understanding of social innovation a *cyclical approach* in form of an *iteration loop* improving the theoretical concept after subsequent empirical examination/verification is essential. Accordingly, on the one hand the theoretical framework is building the *deductive* ground and structure for the empirical research but on the other hand significant parts of establishing an integrated theory of social innovation are delivered through *inductive* appraisal and improvement of empirically obtained data. Therefore this approach clearly distinguishes from deductive scientific procedures, where empirical research and practice is informed by existing theories only in a top-down manner – and on the other side it differs as well from more practice related approaches, lacking a sound theoretically based concept and framework.

Ad 2) Combining quantitative and qualitative methods

With regard to the research framework and the methodological challenges described, it is evident that a quantitative analysis can only provide initial evidence for some key dimensions, e.g. questions regarding the process dynamics of social innovation and the impact achieved. Conclusions can be drawn on the general motives and the ambitions of the initiatives' actors. But as far as societal impact or social change is concerned, this question will be more precisely answered by qualitative research like in-depth case studies which do not only take a single initiative into account (micro level) but also reflect on the *practice field* (meso level) the initiative is operating in, the processes and dynamics, the critical success factors and intended or accomplished mechanisms leading to social change.

Following El-Haddadeh et al. (2014, p. 255) "the data collection approach should adapt a mixed method approach consisting of quantitative (survey) and qualitative (interview and observation) techniques" leading to a triangulation and combination of quantitative and qualitative methods and their results which has also a sequential advantage. Therefore the quantitative part will be a starting point getting an overview about the variety and different types of social innovation initiatives; these results will be reflected and improve the theoretical frame and then form a new ground for further examination with qualitative methods like in-depth case studies - delivering necessary qualitative in-depth information for the further interpretation of the quantitative data and theoretical concept. This kind of methodology is also open for what is defined and understood as Social Innovation in the world (see ad 3 below), integrating different meanings and approaches of Social Innovation, not excluding and segregating any existing approach and giving leeway for additional structural elements that are not covered by the existing concept.

Ad 3) Different understanding of the subject of investigation

The development of a Social Innovation Theory has to consider a long-lasting approximation of the understanding of what social innovation is about. Therefore a comprehensive and overarching *definition of Social Innovation* giving leeway for different kinds of social innovation initiatives is of high importance. Based on such a common ground social innovation experts could select and interpret cases on the basis of their understanding and the practical implementation in their given context (sector, culture, region, policy field, etc.). This approach is incorporating the diversity and plurality of concepts and understanding, objectives and actors and their diverse roles within a social innovation process across different contextual geographical and policy frameworks and conditions. The balancing act between a too weak orientation due to a comprehensive definition on the one side and a strict normative determination on the other side is bridged by the theoretical building blocks (practice field definition, key dimensions and mechanisms of social change) and their operationalization as orientation and defining the scope of social innovation initiatives.

Ad 4) Unknown main unit or basic population

Reflecting the diversity of Social Innovation and the fact that up to now there is no (sufficient) quantitative database every empirical research on Social Innovation is remaining *explorative* and not representative in a statistical way. Even a comprehensive mapping of Social Innovation in its broad variety and diversity is not leading to *statistical* representative empirical results because of the missing accepted definition and typology and the resulting lack of information on dimensions of the main unit, mentioned above. The methodological combination of quantitative data with qualitative reviews and their triangulation is therefore the only realistic way of proving the reliability and validity of the quantitative data (esp. by the following in-depth case studies). Empirical research based on the *openness* for diverse understandings and concepts of social innovation (based on the definition of Social Innovation) has to have an *explorative* character.

The lack of information on the basic population of social innovations is intensified by the “elusive agency” (Pel et al. 2017a) taken by initiatives. Challenges and needs as well as systemic change can be tackled by various actors on very different levels with very different approaches and perspectives. As there often is no formal framework for tackling challenges, needs or systemic change, agency is taken by an equally often unknown constellation of actors. Based on the experiences made in the TRANSIT, Pel et al. highlight the need of reflecting on the selection of cases. While it might be simple selecting flagship projects that are easy to access and easy to find, many innovations might not be found without digging deep into the field. Pel et al. therefore point at the relevance of elaborating “methodologies in which the principal SI agents are not presupposed, acknowledging that they are often yet to be detechted” (ibid., p. 123). SI-DRIVE’s involvement of regional experts helped realizing a broad selection of cases on a variety of levels and with a variety of approaches and awareness. However, also from the perspective of SI-DRIVE, future research should reflect on the selection and distribution of cases in a sample of an unknown basic population regarding their level of, especially but not only, impact and public awareness. This becomes particularly relevant when comparative analyses are due to be done.

8.2 SI-DRIVE: IMPLICATIONS AND METHODOLOGICAL SOLUTIONS

The methodological implications of the described theory development for Social Innovation are reflected in the implementation of SI-DRIVE. SI-DRIVE’s research challenges for developing (building blocks of) a Social Innovation Theory were aiming at a *comprehensive and systematic analysis of the diverse conceptions of Social Innovation*, focusing on the *main societal challenges* reflected by *different policy fields* and *regional contexts mapping social innovations all over the world*. Against this background SI-DRIVE was conducting an *explorative* inventory of a growing and varying area, reflecting the diversity, broadness and usability of social innovation; proving the variety of actors and their interaction and exploring the systemic character and concept of Social Innovation.

As already summarized in chapter 3.2, the developed methodology was reflecting these theoretical inputs, its demands and the underlying sound theoretical framework (see chapter 3.1) by

(1) an iterative and cyclical approach improving theory after each empirical phase and
(2) combining qualitative and quantitative research

(3) defining a comprehensive frame giving leeway for unknown specifications and phenomena
(4) taking an unknown main unit and basic population into account.

Ad 1) cyclical approach and iteration loops leading to empirical based theory development

SI-DRIVE's *cyclical approach* in the form of a double *iteration loop* was continuously improving theory, methodology and policy after two empirical stages proving, improving and further developing the theoretical framework and forming an ongoing and interrelated *common* understanding of Social Innovation. Starting with a first theoretical and methodological as well with a first policy and foresight framework, this was laying the ground for the contents and methods of the first empirical phase (mapping 1). The empirical results fed in the improvement of these three pillars, laying the ground for the second empirical phase: the in-depth case studies (mapping 2). In the end, the results of both empirical phases will led to the final theory, methodology and policy and foresight recommendations of SI-DRIVE. As already mentioned the operationalization of the theoretical framework to empirical tools was grounded and structured by the comprehensive definition, the practice fields, five key dimensions and mechanisms of social change (see chapter 3). Based on the empirical outcomes of the first mapping results and the improved theoretical framework the second empirical phase focused on additional data for the quantitative results and specific topics (like success factors, social innovation processes, actor constellations and mechanisms of social change).

In its iterative construction the SI-DRIVE methodology was *deductive* in the sense that a sound theoretical framework provided the ground and structure for the empirical research (mapping phases) but as well *inductive* by improving the existing theoretical framework through empirical evidence (see figure 4). According to e.g. Saunders et al. (2007) the inductive approach is used to collect data and develop a theory as a result of the data analysis, the deductive approach is used to develop a theory, and then design a research strategy for testing that theory. SI-DRIVE was integrating both perspectives: Combining deductive and inductive research enabled SI-DRIVE's cross-validation and refinement of the research propositions of the theoretical framework (see research foci related to the key dimensions of SI-DRIVE in Butzin et al. 2014).

Although SI-DRIVE was built on a sound theoretical ground, taking findings from previous and current research into account as well as ongoing discussions and the long tradition of innovation studies (Howaldt et al. 2014), the iterative procedure helped improving the theoretical framework. This was especially true for the concept of practice fields as well as the elaboration of building blocks for a typology of Social Innovation. Based on the findings of SI-DRIVE's first empirical phase, the classification of practice fields was revised. In result, and based on the analysis of policy field leaders, main practice fields for each policy field have been worked out which were then fundamental for the next empirical phase and its in-depth analysis per policy field and per practice field as it provided the necessary classification and assignment. Therefore, the intentional iteration loop after the first empirical phase, feeding theory with additional findings, proved itself essential for the ongoing and empirical sound research process. While the revision and improvement of the practice field classification was mainly done after the first feedback loop, the elaboration of building blocks for a typology of Social Innovation (see chapter 6) was due at the end of the project's life cycle. At this late stage of the project, this important theoretical step for heading towards more sound concepts for Social Innovation was able to benefit from the rich empirical findings of both empirical phases. Hence, the ongoing development of theory was again based on empirical findings and their inductive contributions.

Ad 2: Combining quantitative and qualitative results leading to a sound (new) reflection of the variety of Social Innovation

To prove and improve the theoretical framework SI-DRIVE has chosen a mix of multiple empirical methods to overcome the limits of both quantitative and qualitative methods. Already in the first empirical phase (the global mapping), a mixture of research activities (document analysis, desk research, online survey, database screening) was conducted; and even the quantitative global mapping was enriched by non-standardised open questions to guarantee the collection of different contexts and understandings of Social Innovation.

The methodology for the theory development was grounded on two subsequent complementary and interrelated mapping phases (see ad 1). While mapping 1 was mainly based on a *quantitative* survey mapping 2 improved the results by selected in-depth case studies (*qualitative* approach) chosen from the global mapping 1. This combination ensured to overcome the constraints of each of these methodologies: while quantitative surveys and database analyses are leading to a quantifiable picture based on a numerable amount of cases they mainly lack of context related interpretation; qualitative methods are mainly done by case studies analysing the context of a phenomena, but often confronted with the limited outreach because of single cases. E.g. Myers (1997) and Mingers (2001) argue that

although most researchers conduct either qualitative or quantitative research, some researchers recommend combining them in one study. Furthermore, Stake (1995) notes that qualitative researchers look for understanding the interrelation of the phenomenon, whereas, quantitative researchers are keen on finding the explanation for and controlling the phenomenon. Das (1983 cited in Amaratunga et al. 2002, p. 23) argues that "qualitative and quantitative methodologies are not antithetic or divergent; rather they focus on the different dimensions of the same phenomenon". Therefore the mixed research of SI-DRIVE is a synthesis that overcomes the limitations and combines the advantages of both qualitative and quantitative research.

The potential of SI-DRIVE's mixed methods approach revealed itself in the transition from the first empirical phase to the second one. The variety of findings generated by (not only) quantitative analysis of more than 1,000 cases in the first part of SI-DRIVE's mapping (see Howaldt et al. 2016a) helped shaping the second phase. As described above, classifications like the practice fields were reshaped and revised. But also the vast amount of findings on SI-DRIVE's research dimensions (cross-cutting themes, sectors of society, and global regions/cultural background) was essential to laying the ground for the in-depth analyses of cases. At the same time, qualitative analyses provided access to more specific insights and tangible examples. Without the in-depth analyses of cases the perspective on Social Innovation around the world would have remained rather abstract. Especially recommendations to policy-makers, which were an essential part of SI-DRIVE's work programme, would have been less concrete than they were due to the qualitative empirical phase.

From the qualitative research of the in-depth case studies a more dynamic picture of social innovation processes is showing the advantage of a multi method approach. For instance the mechanism of social change within the policy field Education and Lifelong Learning resulted in a flow chart, pinpointing to the relations of the varying mechanism (see figure 7). *Conflict and tension* can be considered the starting points driving social innovations in Education and Lifelong Learning and are often closely related to the formal system, its gaps and failure. This tension can lead to *cooperation* – which is considered a success factor – not only influencing *variation* and *selection* but further highly relevant for *diffusion* (across regions) and *institutionalisation* (institutionalisation, however, is very much related to the formal education system and has to be recognized as an option rather than a necessity). *Competition* among social innovation initiatives is not of an issue; instead it is related to the formal system.

As such, *diffusion* is not considered a success factor by most of the initiatives; rather it pinpoints to the development stage of a single social innovation and is closely related to institutionalisation. It was noted that a social innovation must reach a certain level of critical mass that would push the social innovation into the direction of diffusion and institutionalisation. However, some of the social innovations do not intend to become institutionalised which reveals the tension that may exist between the social innovation and the system, e.g. financial dependencies vs. the role an initiatives assumes for itself within the boundaries of the formal education system.

Moreover, *learning* is a highly important factor for all actors involved in the social innovation process (as it leads to empowerment) and happens more or less as a side effect. It is also essential for diffusion as it is often based on knowledge gained in the process of innovation. Moreover, learning from different stages and for different actors leads to new potential for additional innovations.

Ad 3) Clear definition giving leeway for different (geographical and policy) specifications and phenomena

One of the main objectives of SI DRIVE was to clarify what is meant by Social Innovation and to develop a consistent typology of Social Innovation. Therefore the selection of the social innovation cases had to be an *open and structured* one. Social innovation initiatives were selected by the experts involved in SI-DRIVE from the perspective of their regions, including what is defined and seen as Social Innovation in their global regions or countries. That means that by a given survey template (based on the comprehensive definition of Social Innovation and mainly structured by the key dimensions, practice and policy fields, being open for additional themes than the predefined ones) the regional responsible partners and experts of the SI-DRIVE consortium collected and described Social Innovation cases of their areas within the given theoretical structure.

While the selection of cases could hence not be representative, it was still giving a strong impression of the research field's diversity. A wide span of initiatives across policy fields and practice fields with not only different motives (e.g. tackling challenges, needs or heading towards systemic change), different business models (e.g. for-profit or non-profit) or different distinct combinations of cross-cutting themes became part of the mapping and were hence due to analyses thanks to SI-DRIVE's open, yet clearly distinctive and precise, definition of Social Innovation.

Ad 4) Explorative reflection of the broad variety and understanding of Social Innovation

SI-DRIVE conducted - *for the first time* - a *quantitative mapping of more than 1,000 social innovation cases all over the world*. This being part of the first empirical phase was supplemented by policy field related state of the art reports (desk work) and policy and foresight workshops as well as a trend study of social innovation in major world regions (beneath Europe including Australia/New Zealand, Western and South-East Asia, North and South Africa, North and South America, Russia). Thus, SI-DRIVE is reflecting both geographical areas and policy fields - incorporating the diversity and plurality of concepts and understanding, objectives and actors and their diverse roles within a social innovation process.

Against the background of an *unknown main unit or basic population* this mapping has to be seen as an *explorative* (not statistically representative) inventory of a growing and varying area exploring the systemic character and concept of social innovation.

For the first time in Social Innovation research a global picture of this phenomenon is giving quantifiable evidence of the status of social innovation initiatives. For instance, based on the differentiation of the BEPA report (BEPA 2010) a clear majority of all initiatives mapped for SI-DRIVE strives to satisfy a concrete social demand (71%) and/or tackle a societal challenge (60%), whereas one of three (32%) try to achieve systemic change. But as figure 6 shows, most of the initiatives do not address one societal level alone but rather different combinations, with a strong focus on specific social needs in most of the policy fields (except for Environment and Climate Change as well as Energy Supply which both have a stronger orientation towards overarching societal challenges). This cross-cutting character of Social Innovation is also underlined by its cross-policy implementation of solutions: Most of the initiatives are related to more than one policy field combining for instance employment and education for comprehensive solutions for the beneficiaries. The policy field of poverty reduction could be seen as a cross-cutting policy field itself, showing holistic oriented solutions by specific combinations with almost other policy fields (Howaldt et al. 2016b, p. 8).

Conclusions: Advantages and Disadvantages, Limitations

Developing a theory for such a ubiquitous and varying phenomenon like Social Innovation with different understandings and appearances needs a suitable methodological approach. The project SI-DRIVE is illustrating how methodological challenges of such a challenging theory development can be solved in an adequate way:

1. The operationalisation of theoretical hypotheses or frameworks into an empirical sound measurement, *interrelation of theory and empiricism*
   - Solution: cyclical approach, iteration loops leading to a common understanding

2. The *limited outrange* of using only quantitative or qualitative methods
   - Solution: combining quantitative and qualitative methods

3. *Different understandings* of the subject of investigation (social innovation as a ubiquitous concept)
   - Solution: overarching but clear definition of social innovation, giving leeway to different policy and geographical/cultural contexts

4. The unknown main unit or basic population
   - Solution: explorative reflection of the broad understanding of social innovation, selection of cases by the involved experts

The solution for all these four challenges are interrelated and are complementing each other, oriented at exploring the broad understanding and the concept of Social Innovation (Howaldt & Schwarz 2010) within its implementation in the empirical research of SI-DRIVE.

Advantages of the described methodology are lying in the iterative improvement and verification loops of theory development based on empirical foundation and clarification. The theoretical building blocks (comprehensive definition, practice fields construct, key dimensions and mechanisms of social change) are setting a sound ground for the empirical examination and validation. The combination of quantitative results with qualitative enhancements (from different sources such as state-of-the art reviews and in-depth case studies) is avoiding the disadvantages of each single method and improving the reliability and validity of the results to a high degree.

Limitations are lying in the research subject itself: the unknown main unit and basic population. In this respect it has to be acknowledged that in SI-DRIVE a case was defined as a relevant social innovation (project or initiative and related social practice field) by the experts of the involved global regions (project partners, advisory board members) based on the guidelines and instructions provided. Despite the fact that a case had to correspond to SI-DRIVE's definition, the mapping may be biased due to the experts' understanding of social innovation, their knowledge and the dependence of publicly available information on social innovation cases. However, the given framework (critical literature review, questionnaire) and the obtained qualitative research activities (state-of-the art reviews, policy field and regional reviews) led together with the methodological instruction to a *common* comprehensive understanding and view on the world of social innovation.

Another limitation could be found in the explorative character of the methodology, not leading to statistical representativity. In literature on statistical methodology, sound knowledge on statistical dimensions of the basic population and its borders is considered a key quality criterion for empirical social research (e.g. Tachtsoglou & König 2017), especially when it comes to representative random samples. Although the theoretical framework and its cyclical and iterative approach SI-DRIVE is going further than previous Social Innovation research and although SI-DRIVE collected for first time a wide-ranging quantitative basis of social innovation cases all over the world the main unit or basic population is still not commonly defined nor registered. However, von der Lippe & Kladroba (2002) point out that those genuine random samples are difficult to achieve in general. Moreover, even if random samples are realized, genuine representativeness could hardly be achieved. This leads to a similar situation between a random sample building on a clearly determinable population and a random sample building on a population that is unclear in its size and statistic. This is also and especially the case with explorative samples that are not random as they are not representative by design.

At first a sound and commonly accepted definition of Social Innovation based on a theoretical framework (Social Innovation Theory) is necessary to define a representative basis for research, to set up a database for representative analyses and to conduct a baseline survey. But anyway, due to the ongoing and rapid development and the high variety of social innovation activities it could be doubted if such a statistically representative research is feasible and desirable. Neither a complete inventory of the whole population nor statistical representative samples seem to be feasible yet.[16] The basic population in its outreach may remain statistically unknown because of the constant changes of the initiatives (not persons are the main unit but initiatives / projects) and the rapid appearance of new solutions. As the character of the new is a distinctive feature of any (social) innovation, their appearance is often not fully foreseeable. Their mapping is hence always limited to a snapshot of the current population in a highly dynamic field. It would be helpful to set up a (European, national, regional) database which should be continuously improved, not only for research but also for exchanging of good practice, ideas etc.

The mapping of cases in SI-DRIVE did not build on a random sample but on an explorative approach. Although it is based on a sample of an unknown population, first explorative empirical findings on characteristics of social innovation around the world were possible, not making any claim to representativeness. However, the value of sound information on a tested population shall not be questioned here. Hence, further research could use the explorative quantitative findings of SI-DRIVE in order to enrich knowledge on the population of Social Innovations around the world, providing a foundation for more representativeness.

Anyway, the results of SI-DRIVE are seen as setting the ground for an ongoing research and methodology development: starting with a first scope and fulfilling it more and more in the direction of representativeness and completeness. The planned *Atlas of Innovation* is therefore a good example: Not able to present a complete picture of Social Innovation in the world SI-DRIVE compiled an Atlas of Social Innovation starting with punctual spotlights (from a regional and policy field background) added step by step with the perspectives of other experts. The "Atlas of Social Innovation" is organized around the different foci of SI-DRIVE's theoretical and empirical research: providing an overview of various types of social innovation in different world regions and policy fields (education and lifelong learning, employment, environment and climate change, energy supply, transport and mobility, health and social care, and poverty reduction and sustainable development) and summarising new intelligence on the diversity of social innovation approaches in different parts of the world used by practitioners, researchers and policy makers; again,

[16] The only guarantee to draw statistically representative conclusions for a population is to take a (random) sample of the relevant population. Therefore, you need to have a clear characteristic of the population and its societal and geographical distribution and allocation.

reflecting the diversity, broadness and usability of Social Innovation, demonstrating the variety of actors and their interaction and exploring the systemic character and concept of social innovation. After a first version, it is planned to further update and supplement the Atlas of Social Innovation in a series of issues (digital and printed) open to contributions of international experts coming from all sectors of society. The whole concept of the Atlas is furthermore oriented towards readers coming from all of these sectors, creating further awareness for and sharing knowledge on Social Innovation.

The ongoing development of methods for research on Social Innovation is added by efforts of building a typology. Building blocks provided by SI-DRIVE (see chapter 6) will help elaborating sound typologies which could then be used for putting systematization on the diverse field of Social Innovation. Such an approach would help upcoming projects having a refined and more explicit perspective on initiatives. While a typology is not a method on its own it can hence support the selection of methodological tools and their usage, however. The importance of having sound theoretical concepts was proven in the life cycle of SI-DRIVE. Adding such theoretical frameworks with solid typologies is expected to have even more advantages.

9 ANNEX

9.1 REFERENCES

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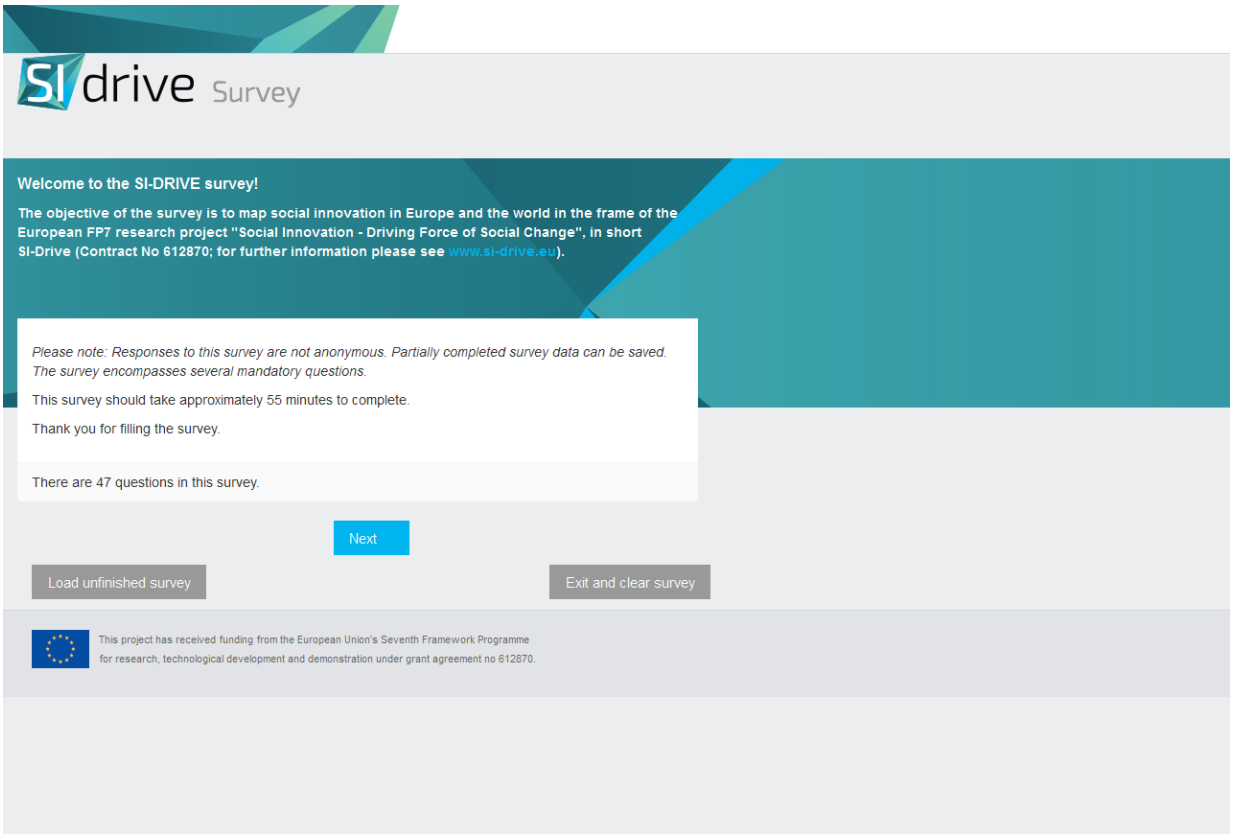
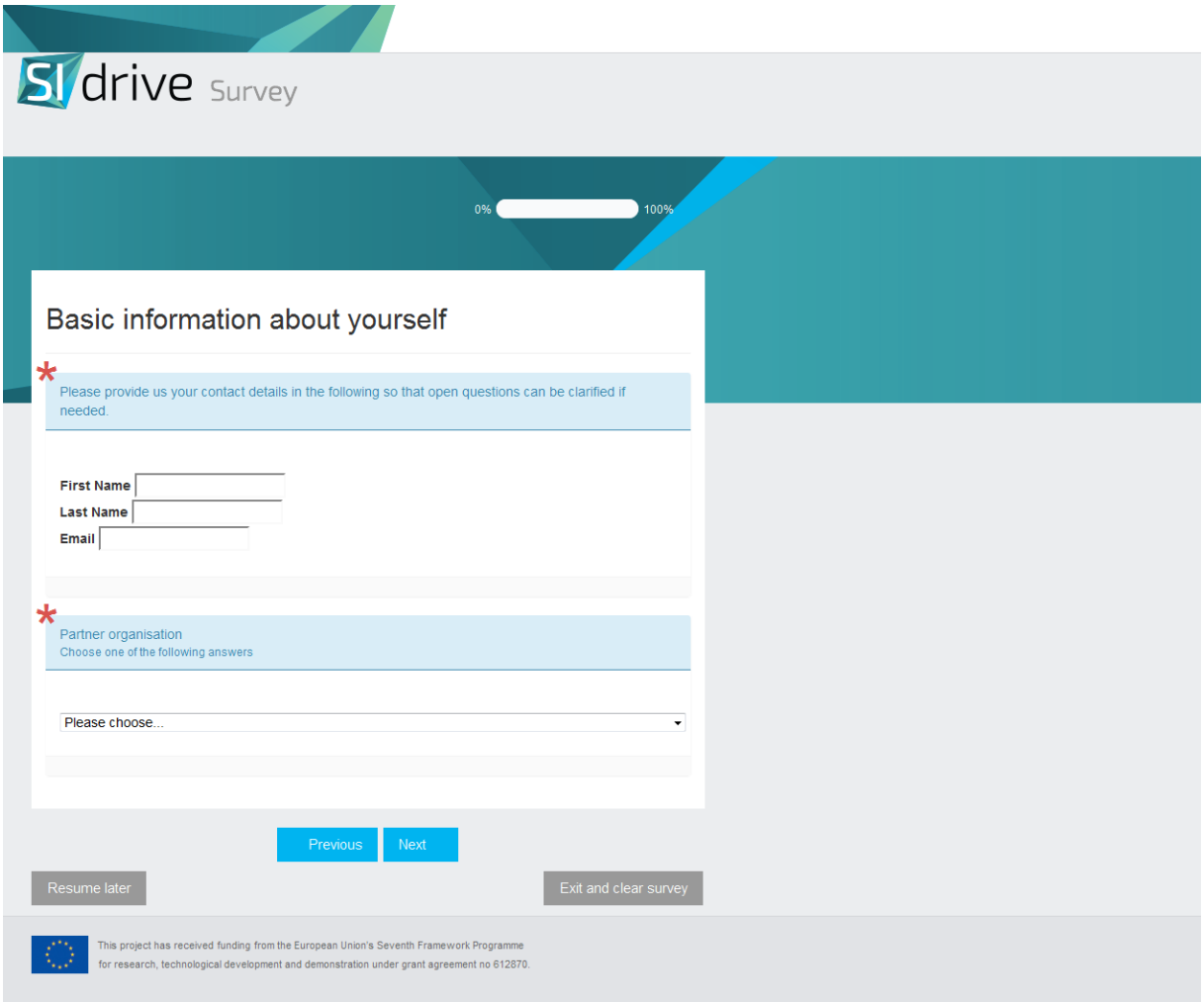
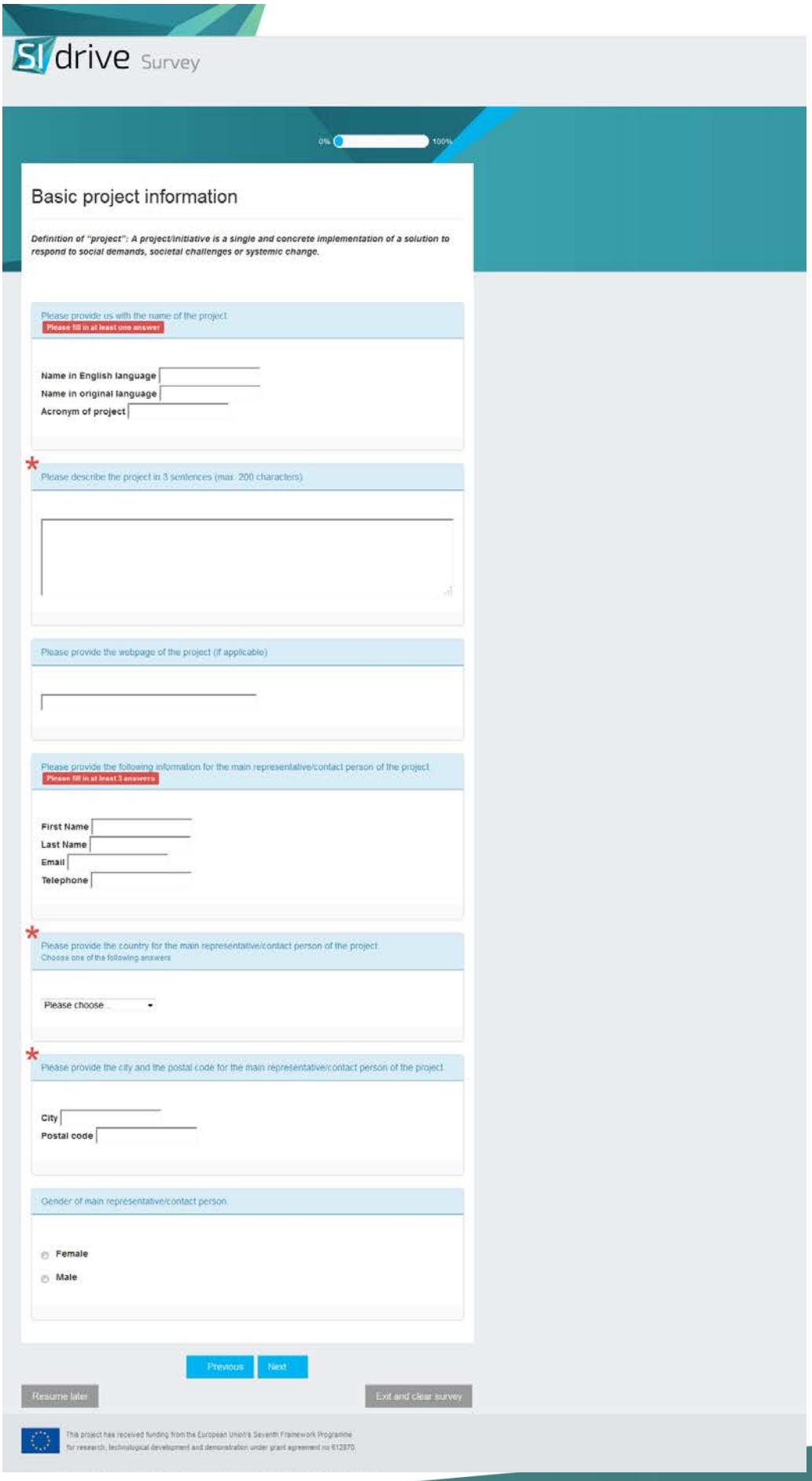
9.2 GLOBAL MAPPING: SURVEY TEMPLATE




SI drive Survey
0%
100%
Basic information about yourself
Please provide us your contact details in the following so that open questions can be clarified if needed.
First Name
Last Name
Email
Partner organisation
Choose one of the following answers
Please choose...
Previous
Next
Resume later
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612870.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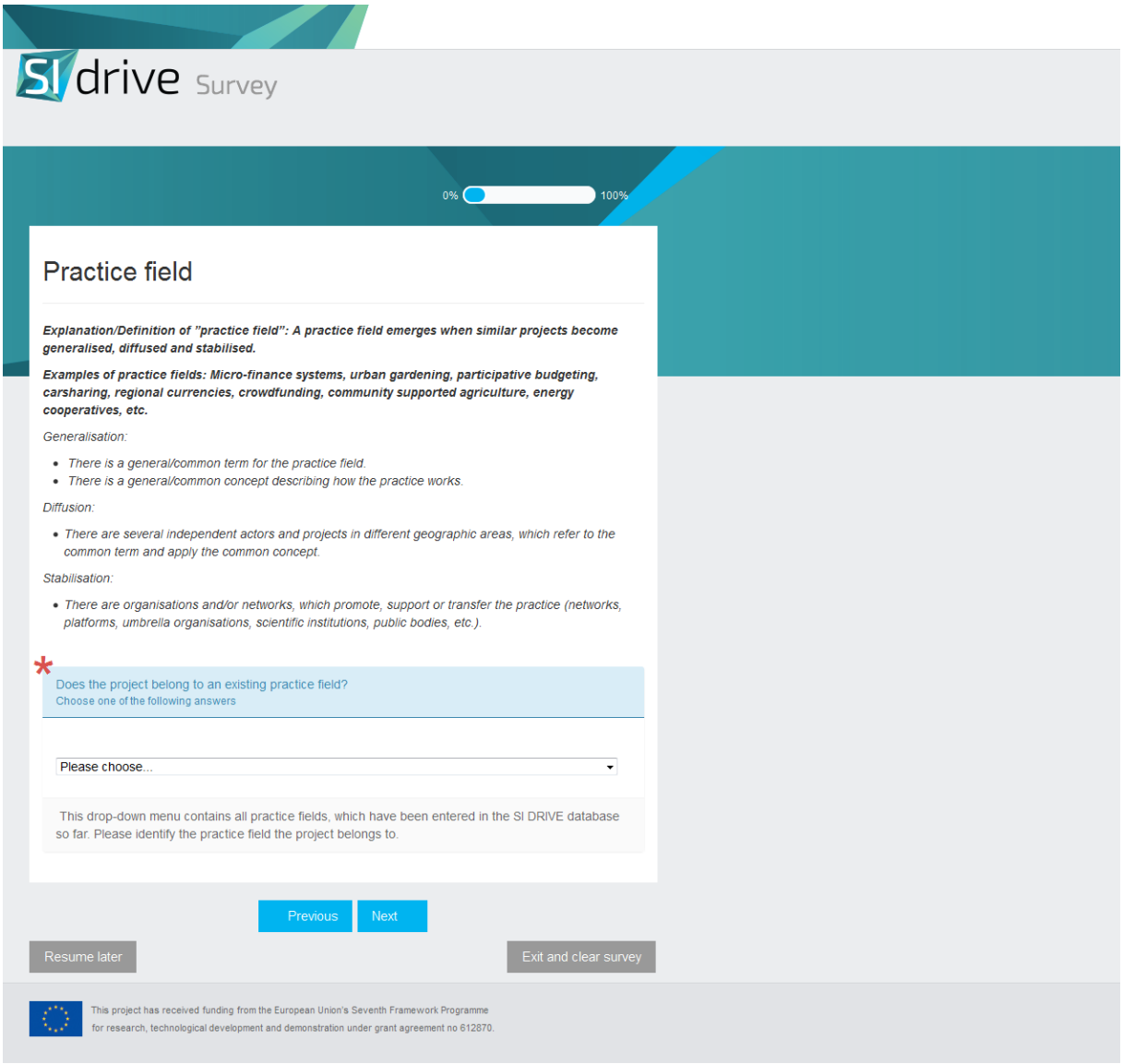
Basic project information
Definition of "project": A project/initiative is a single and concrete implementation of a solution to respond to social demands, societal challenges or systemic change.
Please provide us with the name of the project
Please fill in at least one answer
Name in English language
Name in original language
Acronym of project
Please describe the project in 3 sentences (max. 200 characters)
Please provide the webpage of the project (if applicable)
Please provide the following information for the main representative/contact person of the project
Please fill in at least 3 answers
First Name
Last Name
Email
Telephone
Please provide the country for the main representative/contact person of the project
Choose one of the following answers
Please choose ...
Please provide the city and the postal code for the main representative/contact person of the project
City
Postal code
Gender of main representative/contact person
Female
Male
Previous
Next
Resume later
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612870.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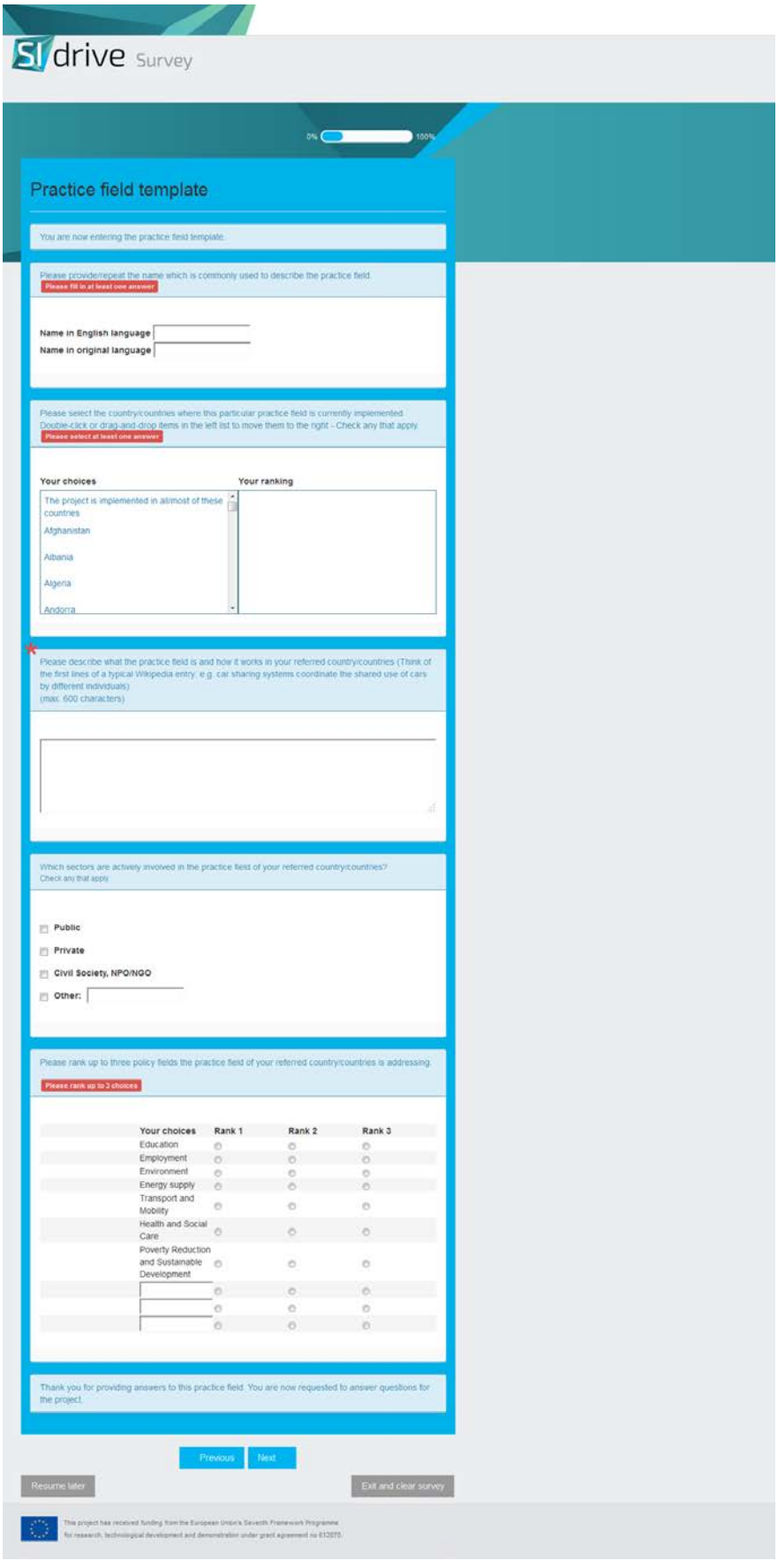
Practice field
Explanation/Definition of "practice field": A practice field emerges when similar projects become generalised, diffused and stabilised.
Examples of practice fields: Micro-finance systems, urban gardening, participative budgeting, carsharing, regional currencies, crowdfunding, community supported agriculture, energy cooperatives, etc.
Generalisation:
There is a general/common term for the practice field.
There is a general/common concept describing how the practice works.
Diffusion:
There are several independent actors and projects in different geographic areas, which refer to the common term and apply the common concept.
Stabilisation:
There are organisations and/or networks, which promote, support or transfer the practice (networks, platforms, umbrella organisations, scientific institutions, public bodies, etc.).
Does the project belong to an existing practice field?
Choose one of the following answers
Please choose...
This drop-down menu contains all practice fields, which have been entered in the SI DRIVE database so far. Please identify the practice field the project belongs to.
Previous
Next
Resume later
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612870.


SI drive Survey
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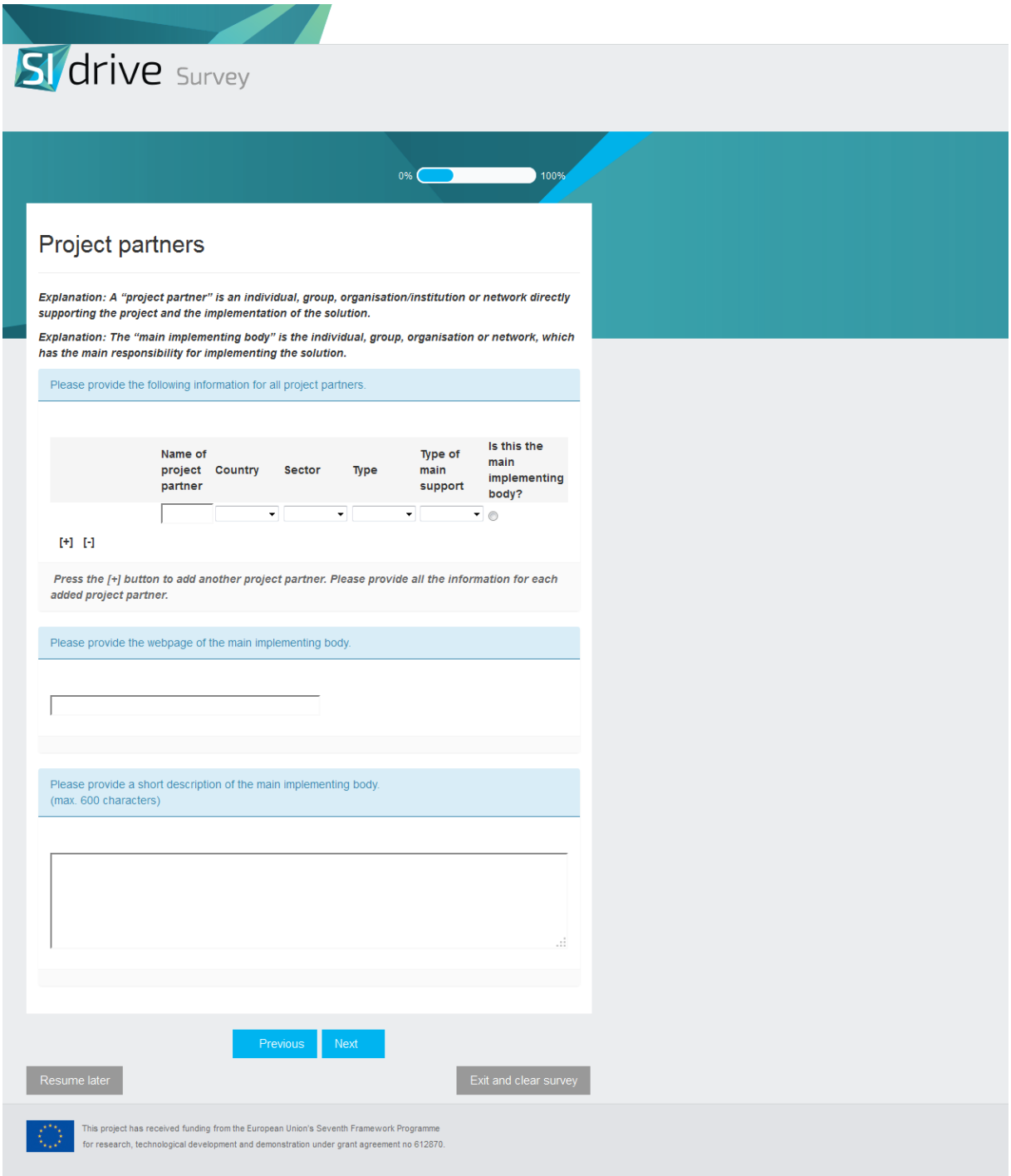
Practice field template
You are now entering the practice field template.
Please provide/repeat the name which is commonly used to describe the practice field.
Please fill in at least one answer
Name in English language
Name in original language
Please select the country/countries where this particular practice field is currently implemented.
Double-click or drag-and-drop items in the left list to move them to the right - Check any that apply
Please select at least one answer
Your choices
Your ranking
The project is implemented in all/most of these countries
Afghanistan
Albania
Algeria
Andorra
Please describe what the practice field is and how it works in your referred country/countries (Think of the first lines of a typical Wikipedia entry: e.g. car sharing systems coordinate the shared use of cars by different individuals)
(max. 600 characters)
Which sectors are actively involved in the practice field of your referred country/countries?
Check any that apply
Public
Private
Civil Society, NPO/NGO
Other:
Please rank up to three policy fields the practice field of your referred country/countries is addressing.
Please rank up to 3 choices
Your choices
Rank 1
Rank 2
Rank 3
Education
Employment
Environment
Energy supply
Transport and Mobility
Health and Social Care
Poverty Reduction and Sustainable Development
Thank you for providing answers to this practice field. You are now requested to answer questions for the project.
Previous
Next
Resume later
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612070.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Project partners
Explanation: A "project partner" is an individual, group, organisation/institution or network directly supporting the project and the implementation of the solution.
Explanation: The "main implementing body" is the individual, group, organisation or network, which has the main responsibility for implementing the solution.
Please provide the following information for all project partners.
Name of project partner
Country
Sector
Type
Type of main support
Is this the main implementing body?
[+] [-]
Press the [+] button to add another project partner. Please provide all the information for each added project partner.
Please provide the webpage of the main implementing body.
Please provide a short description of the main implementing body. (max. 600 characters)
Previous
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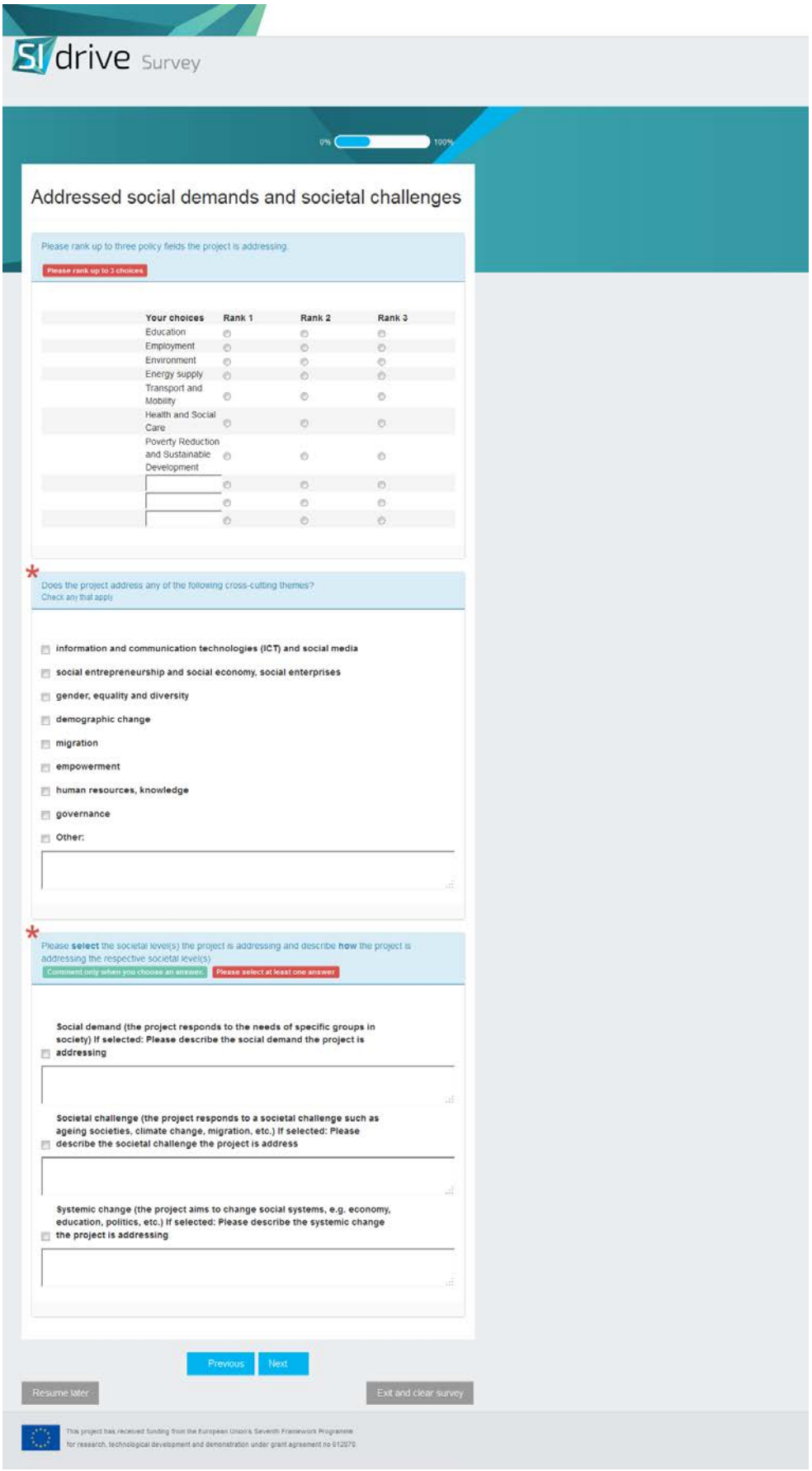
Resume later
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612870.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Addressed social demands and societal challenges
Please rank up to three policy fields the project is addressing.
Please rank up to 3 choices
Your choices
Rank 1
Rank 2
Rank 3
Education
Employment
Environment
Energy supply
Transport and Mobility
Health and Social Care
Poverty Reduction and Sustainable Development
Does the project address any of the following cross-cutting themes?
Check any that apply
information and communication technologies (ICT) and social media
social entrepreneurship and social economy, social enterprises
gender, equality and diversity
demographic change
migration
empowerment
human resources, knowledge
governance
Other:
Please select the societal level(s) the project is addressing and describe how the project is addressing the respective societal level(s).
Comment only when you choose an answer.
Please select at least one answer
Social demand (the project responds to the needs of specific groups in society) If selected: Please describe the social demand the project is addressing
Societal challenge (the project responds to a societal challenge such as ageing societies, climate change, migration, etc.) If selected: Please describe the societal challenge the project is address
Systemic change (the project aims to change social systems, e.g. economy, education, politics, etc.) If selected: Please describe the systemic change the project is addressing
Previous
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Exit and clear survey
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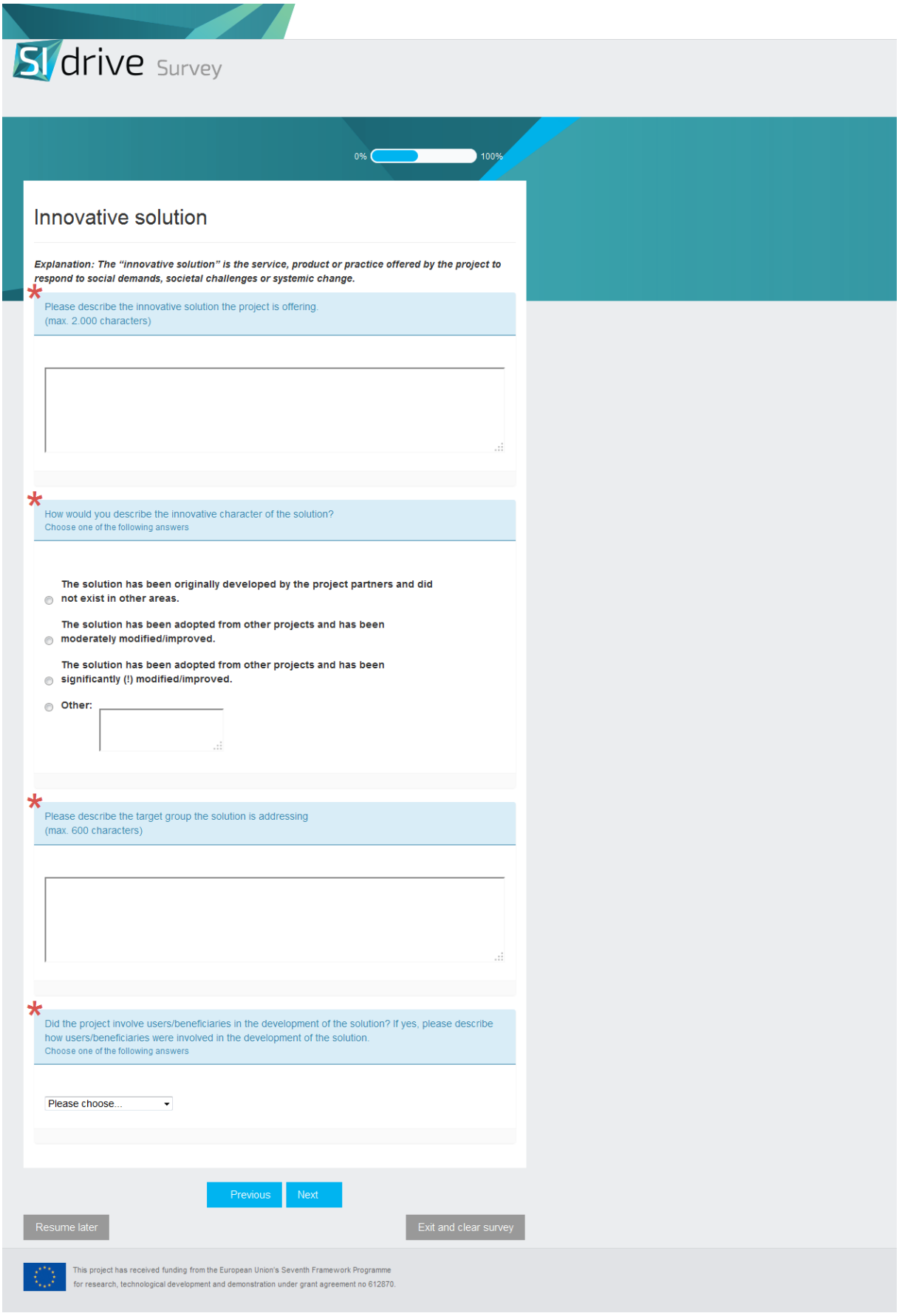
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Innovative solution
Explanation: The "innovative solution" is the service, product or practice offered by the project to respond to social demands, societal challenges or systemic change.
Please describe the innovative solution the project is offering.
(max. 2.000 characters)
How would you describe the innovative character of the solution?
Choose one of the following answers
The solution has been originally developed by the project partners and did not exist in other areas.
The solution has been adopted from other projects and has been moderately modified/improved.
The solution has been adopted from other projects and has been significantly (!) modified/improved.
Other:
Please describe the target group the solution is addressing
(max. 600 characters)
Did the project involve users/beneficiaries in the development of the solution? If yes, please describe how users/beneficiaries were involved in the development of the solution.
Choose one of the following answers
Please choose...
Previous
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Resume later
Exit and clear survey
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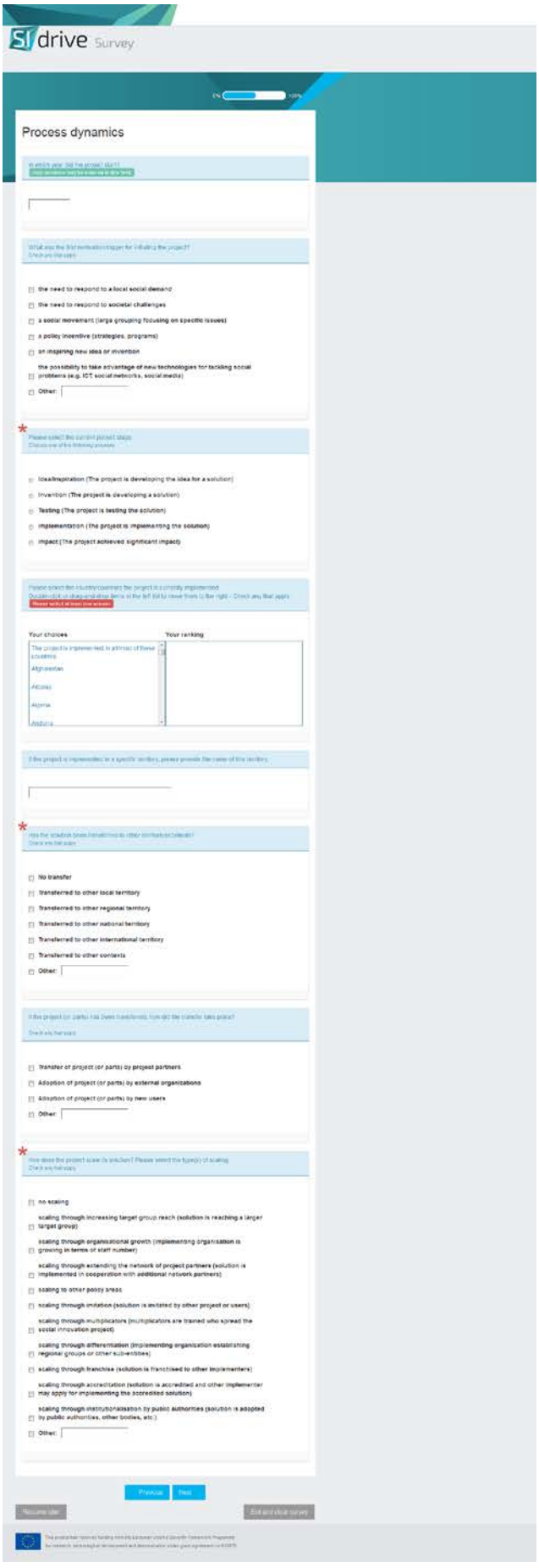
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Process dynamics
the need to respond to a local social demand
the need to respond to societal challenges
a social movement (large grouping focusing on specific issues)
a policy incentive (strategies, programs)
an inspiring new idea or invention
the possibility to take advantage of new technologies for tackling social problems (e.g. ICT social networks, social media)
Other:
Idea/Inspiration (The project is developing the idea for a solution)
Invention (The project is developing a solution)
Testing (The project is testing the solution)
Implementation (The project is implementing the solution)
Impact (The project achieved significant impact)
Your choices
Your ranking
No transfer
Transferred to other local territory
Transferred to other regional territory
Transferred to other national territory
Transferred to other international territory
Transferred to other contexts
Other:
Transfer of project (or parts) by project partners
Adoption of project (or parts) by external organizations
Adoption of project (or parts) by new users
Other:
no scaling
scaling through increasing target group reach (solution is reaching a larger target group)
scaling through organisational growth (implementing organisation is growing in terms of staff number)
scaling through extending the network of project partners (solution is implemented in cooperation with additional network partners)
scaling to other policy areas
scaling through imitation (solution is imitated by other project or users)
scaling through multiplicators (multiplicators are trained who spread the social innovation project)
scaling through differentiation (implementing organisation establishing regional groups or other sub-entities)
scaling through franchise (solution is franchised to other implementers)
scaling through accreditation (solution is accredited and other implementer may apply for implementing the accredited solution)
scaling through institutionalisation by public authorities (solution is adopted by public authorities, other bodies, etc.)
Other:
Previous
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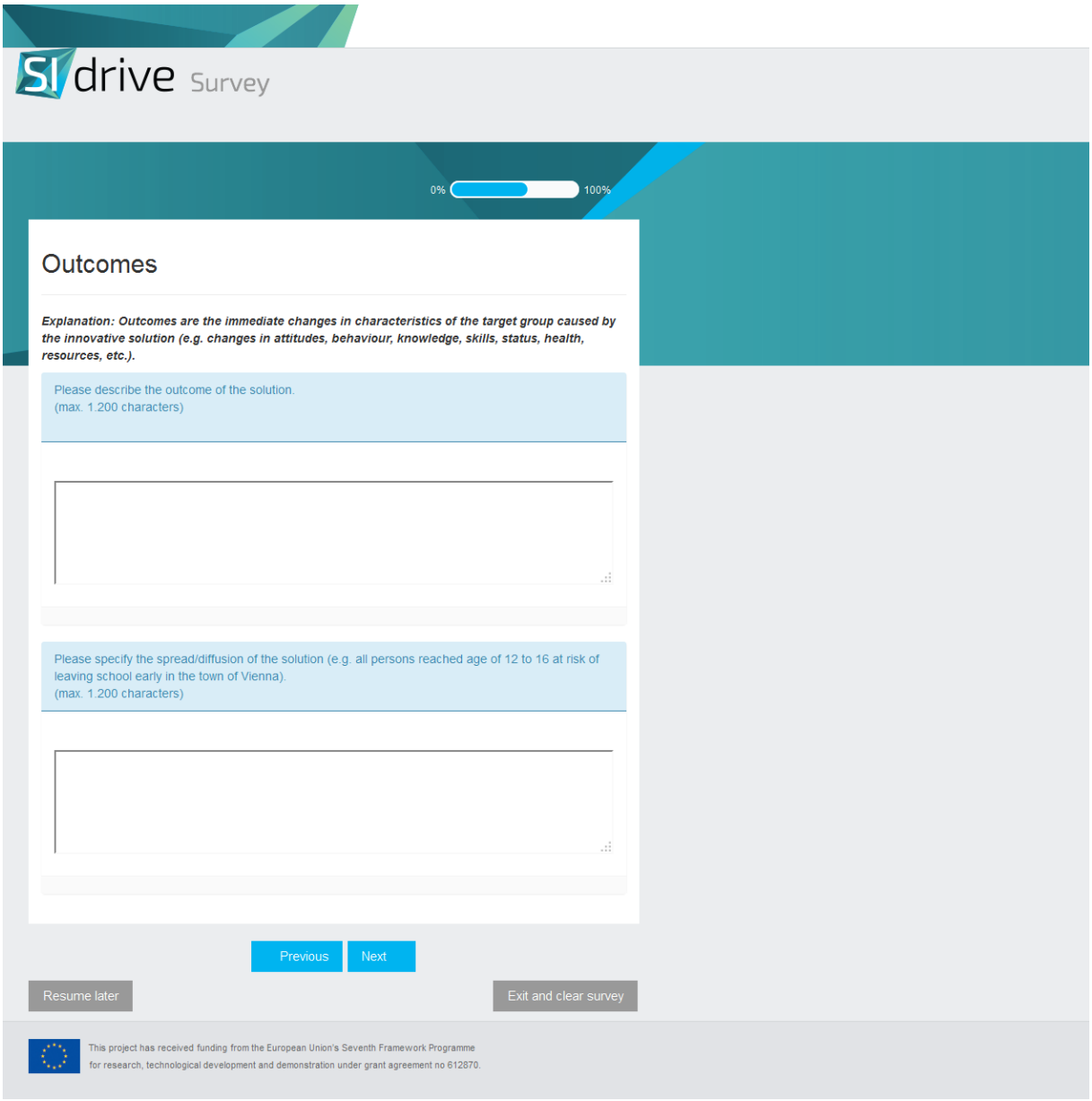
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Outcomes
Explanation: Outcomes are the immediate changes in characteristics of the target group caused by the innovative solution (e.g. changes in attitudes, behaviour, knowledge, skills, status, health, resources, etc.).
Please describe the outcome of the solution.
(max. 1.200 characters)
Please specify the spread/diffusion of the solution (e.g. all persons reached age of 12 to 16 at risk of leaving school early in the town of Vienna).
(max. 1.200 characters)
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Exit and clear survey
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Governance

Explanation: By "governance" we refer to structures and methods for coordinating and managing a project.

Please describe by which structures and methods the project is coordinated and managed (executive board, steering group, etc.).
(max. 1.200 characters)

Please describe the objectives the coordination and management sets for the project.
(max. 1.200 characters)

Is the project related to a social movement, policy programme, umbrella organisation or network?

	Name in English language	Name in original language	Short description
Social movement			
Policy programme			
Umbrella organisation			
Network			

A **social movement** is a large grouping of individuals and organisations, which focus on specific political or social issues (e.g. civil rights movement, environmental movement).

A **policy programme** is implemented by a public body and combines/coordinates several policy actions for achieving a specific policy objective (e.g. policy programmes on homelessness, poverty reduction, digital literacy).

An **umbrella organisation** is a formal association of thematically/functionally related organisations, who become members of the umbrella organisations to advocate a common interest (e.g. International Labour Organization - ILO, the European Federation of National Organisations Working with the Homeless - FEANTSA).

A **network** can be informal or formal and consists of several independent individuals, groups or organisations, which cooperate/exchange on a common issue (e.g. Intercontinental Network For The Promotion Of Social Solidarity Economy - RIPESS).

Previous Next

Resume later Exit and clear survey

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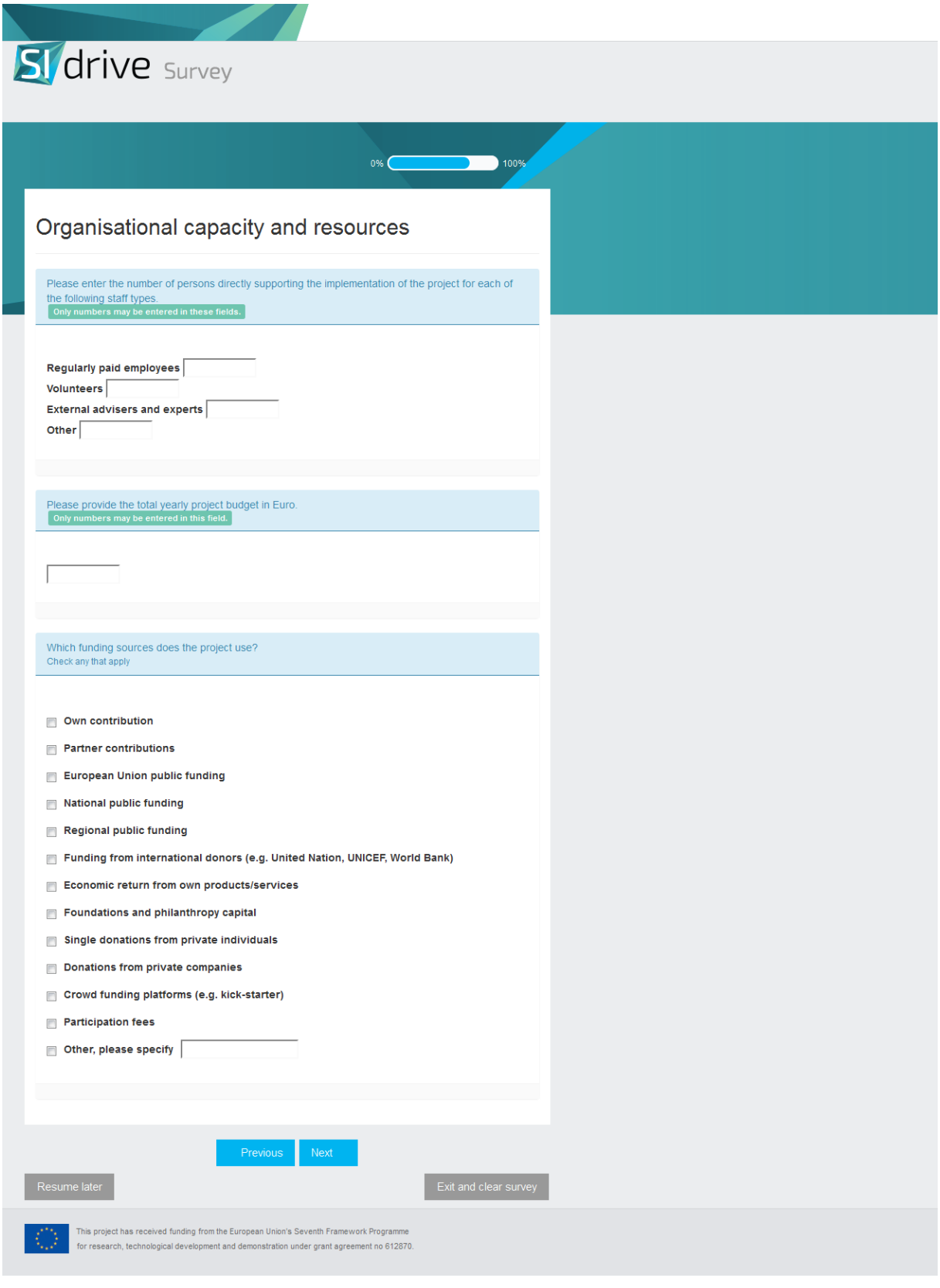
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Organisational capacity and resources
Please enter the number of persons directly supporting the implementation of the project for each of the following staff types.
Only numbers may be entered in these fields.
Regularly paid employees
Volunteers
External advisers and experts
Other
Please provide the total yearly project budget in Euro.
Only numbers may be entered in this field.
Which funding sources does the project use?
Check any that apply
Own contribution
Partner contributions
European Union public funding
National public funding
Regional public funding
Funding from international donors (e.g. United Nation, UNICEF, World Bank)
Economic return from own products/services
Foundations and philanthropy capital
Single donations from private individuals
Donations from private companies
Crowd funding platforms (e.g. kick-starter)
Participation fees
Other, please specify
Previous
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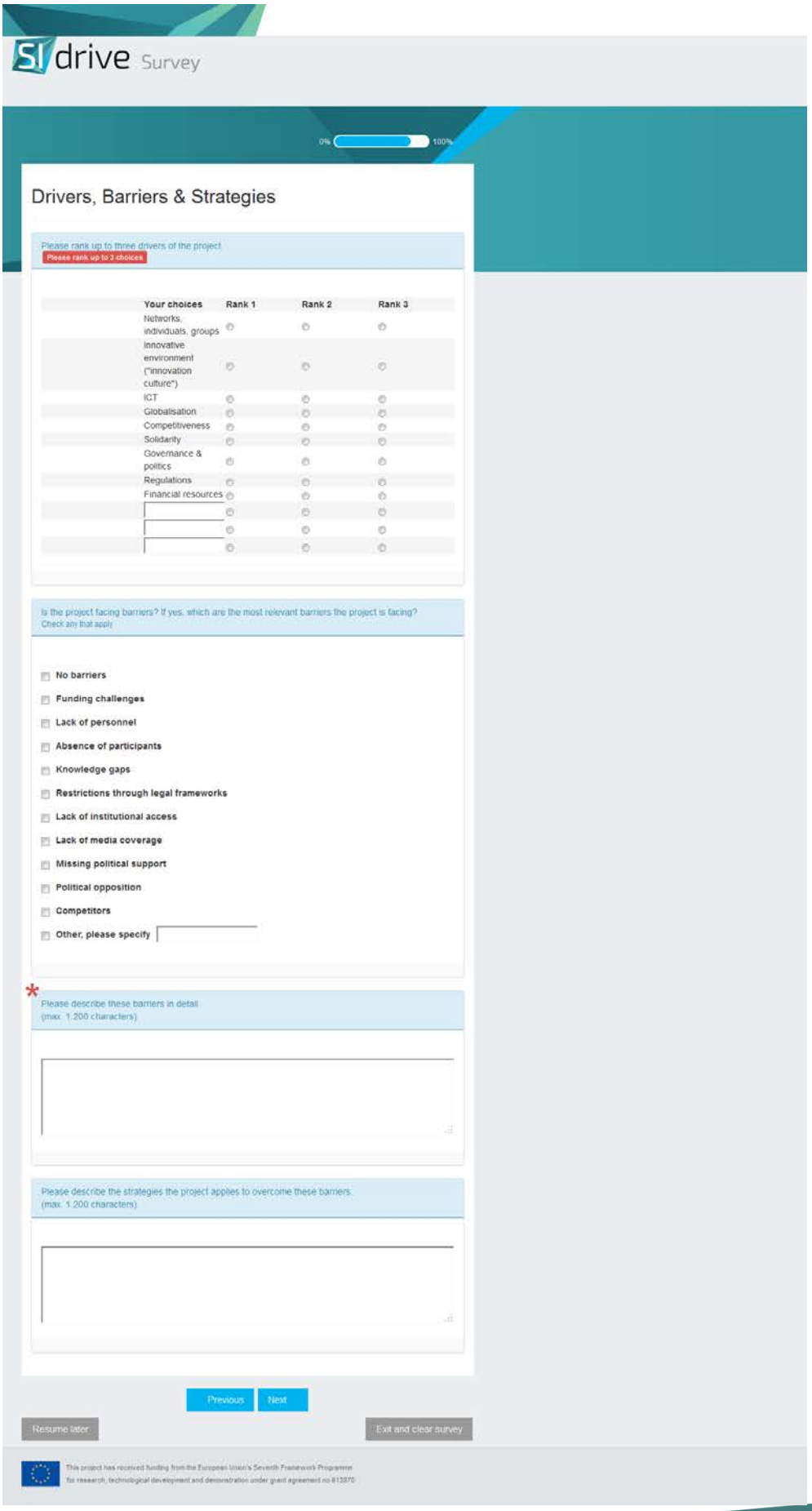
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612870.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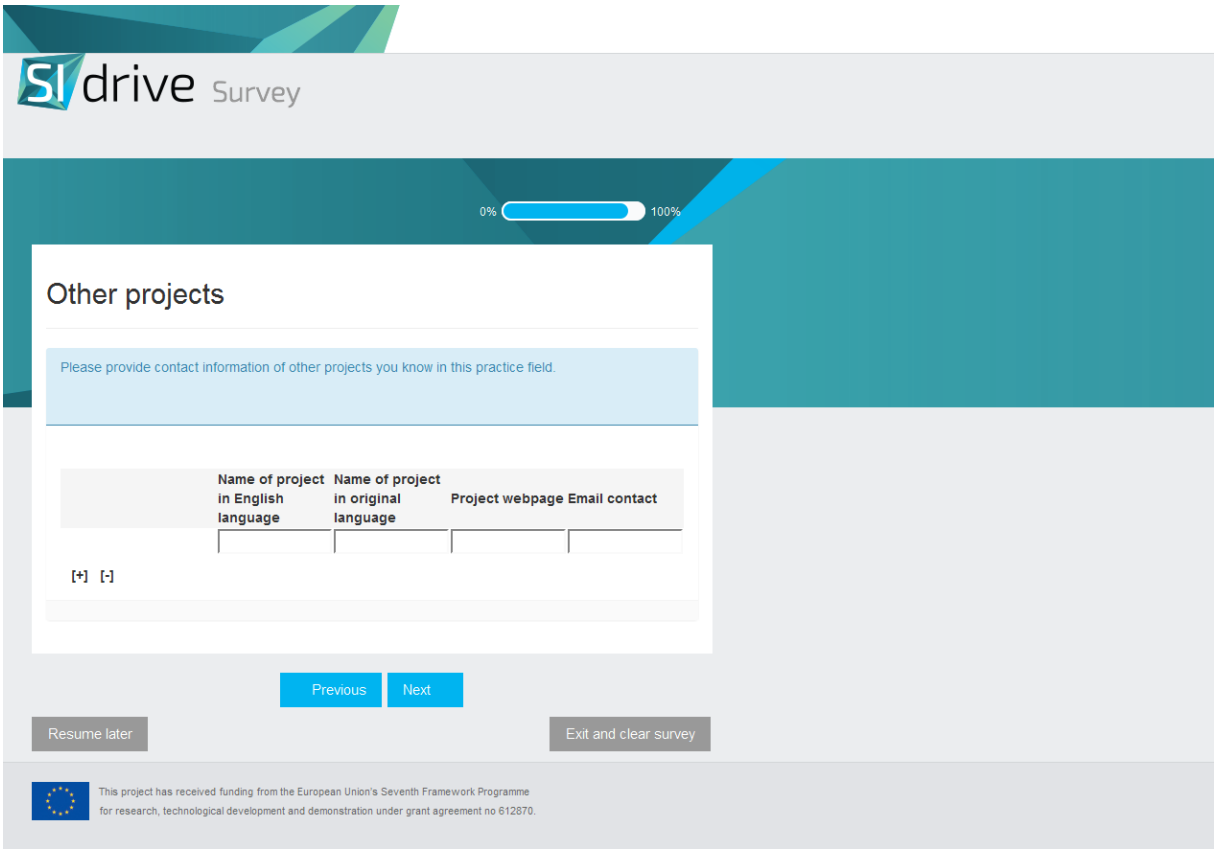
Drivers, Barriers & Strategies
Please rank up to three drivers of the project
Please rank up to 3 choices
Your choices
Rank 1
Rank 2
Rank 3
Networks, individuals, groups
innovative environment ("innovation culture")
ICT
Globalisation
Competitiveness
Solidarity
Governance & politics
Regulations
Financial resources
Is the project facing barriers? If yes, which are the most relevant barriers the project is facing?
Check any that apply
No barriers
Funding challenges
Lack of personnel
Absence of participants
Knowledge gaps
Restrictions through legal frameworks
Lack of institutional access
Lack of media coverage
Missing political support
Political opposition
Competitors
Other, please specify
Please describe these barriers in detail
(max. 1.200 characters)
Please describe the strategies the project applies to overcome these barriers
(max. 1.200 characters)
Previous
Next
Resume later
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 613870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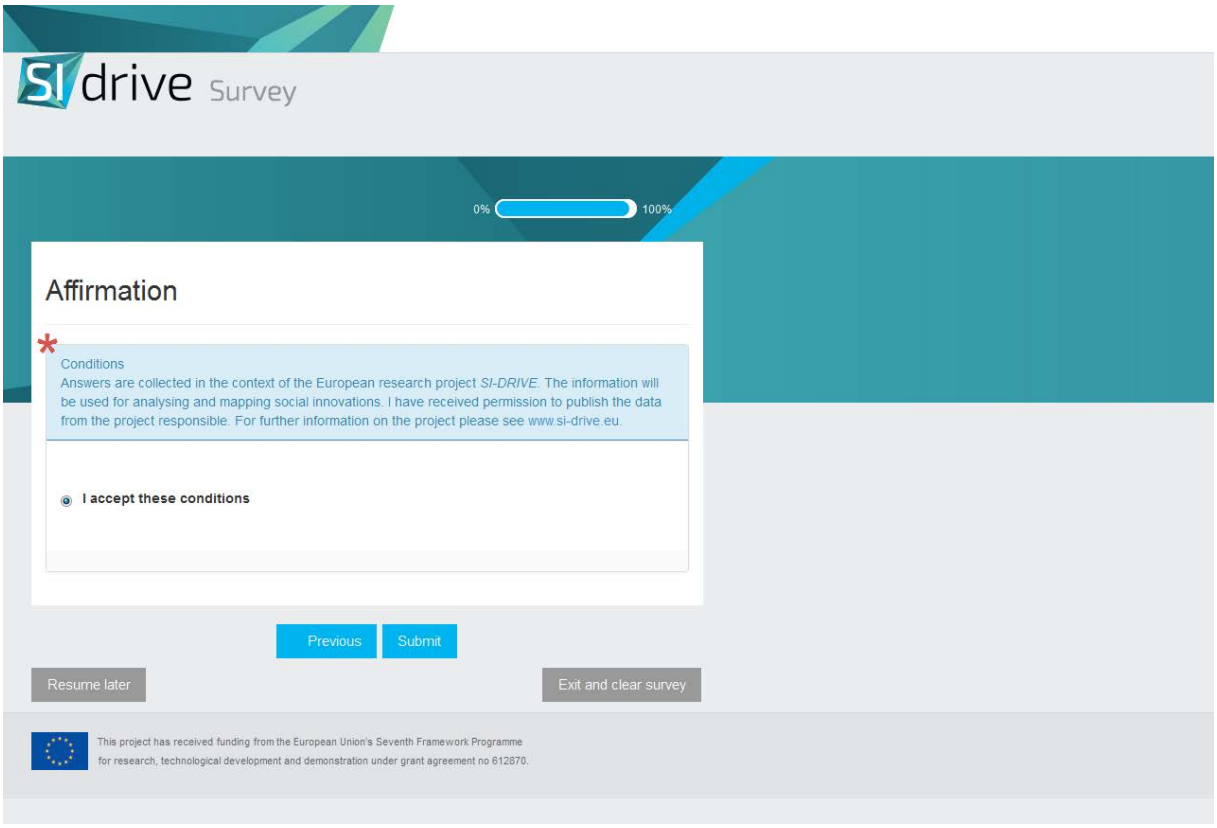
100%
Other projects
Please provide contact information of other projects you know in this practice field.
Name of project in English language
Name of project in original language
Project webpage
Email contact
[+] [-]
Previous
Next
Resume later
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612870.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Affirmation
Conditions
Answers are collected in the context of the European research project SI-DRIVE. The information will be used for analysing and mapping social innovations. I have received permission to publish the data from the project responsible. For further information on the project please see www.si-drive.eu.
I accept these conditions
Previous
Submit
Resume later
Exit and clear survey
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612870.

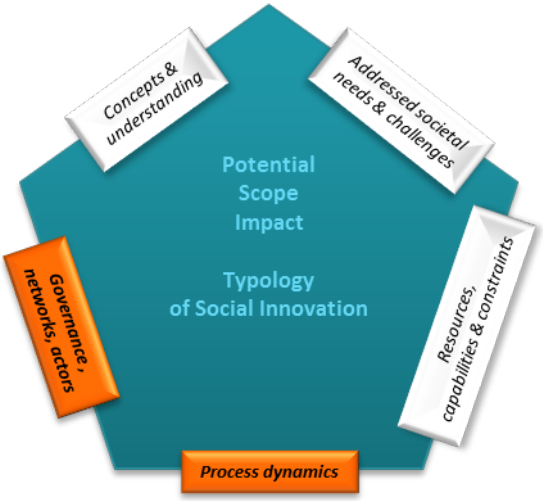
9.3 CASE STUDY TEMPLATE

Case Study Template for the data collection
(Structure for interviews and group discussions, to be integrated in the common reporting template for the chosen practice field)

Background and Central Questions:

The focus of this qualitative research is on the dynamic **interrelation between social innovation, the practice field and various mechanisms of social change**. Therefore the guiding meta-question for the case studies of SI DRIVE is focusing on **mechanisms of social change**:

Does Social Innovation actively use, reflect or contribute to the defined mechanisms of social change (see card 1 in the annex)? Can we identify other, additional mechanisms?



All these mechanisms are reflected in the five key dimension, but putting a focus on social change. Related to the five key dimensions of SI-DRIVE the main focus of the case studies is on **Governance, Networks and Actors** as well as on **Process Dynamics**, mainly asking which changes appear and are driven by what/whom (see also the research foci in the Annex). Within these focused key dimensions and mechanisms of change **factors of success** (and **failure**) are of high importance as well.

The **degree of social change** should be also considered: **diffusion** in society, degree of **institutionalisation**, and **importance of the practice field**, the initiative for everyday life and the local communities.

However, the main objectives are aiming at a better understanding of

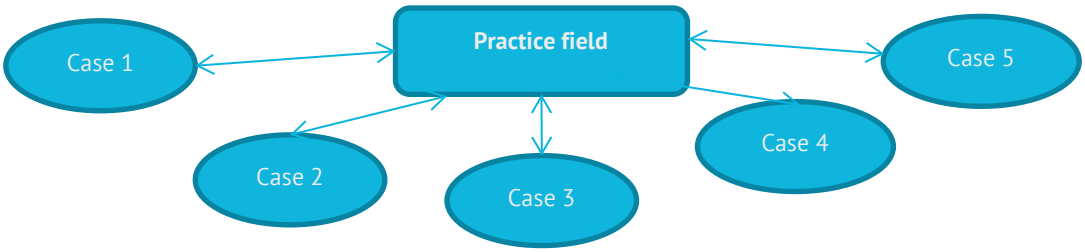
- the **processes and dynamics** of social innovation in relation to social change (institutionalisation, diffusion and imitation of social practices)
- the **functions and roles of actors and networks** for the development, diffusion, imitation and institutionalisation of social innovations
- including the identification of **critical success (and failure) factors**, leading to social changes.

Selection of the Cases, Interviewees, Methods

Two levels of selection and analysis:

1. Selection of the relevant **practice field** (2 or 3 in each policy field)
   Main questions: Importance for the policy field, already leading to social change
   Main interview partners: different kind of representatives of the practice field, e.g. associations, interest groups, politicians, leaders, etc. (and additional documented material, documents analysis).
2. Selection of social innovation **initiatives related to the chosen practice field** (4 to 5 cases)
   Main questions: How the initiatives are connected and contributing to a practice field.
   Main interview partners: people who were actively involved in developing the social innovation initiative, project organisers/participants/actors (and additional document analysis).

Hybrid approach: Because there might be only limited information for the chosen **practice field**, the results of the initiative case studies will be used as a background for the practice field examination and analyses.



Policy field leaders will coordinate the analysis process and summarise the results in the foreseen deliverable, supported by the case study conductors. The cases will be selected on the background of the partners' knowledge and experience (based on the selection of possible cases at the General Assembly 2016 in Vienna and the follow-up discussions). Beneath "practical points like access to and willingness of social innovations to participate and a general regional variety the following aspects should be taken into account for the selection:

(1) The **selection of the practice field**: The (strategical) relevance for the policy field, the differentiation/spread of single cases, an advanced development phase (cases that are already in the implementation, impact phase).
(2) The **selection of the related cases**: The selected cases should be already highly developed (implementation or better impact phase, embedded in networks, movements or umbrella organisations), and be representative for the practice field showing its variety in terms of social demands and regions.

The cases have to be **selected from the existing mapping data base**. If there is a new important case of high interest (not in the database) there is the possibility to add at least **one additional case** per policy field. **Overlapping cases** should be taken into account. Policy field leaders will decide among themselves how overlapping cases can be assigned and analysed.

The template for the case studies has to be seen as a given but **flexible structure**. That means that the main topics and the related main questions (in bold letters) must be reflected, but the remaining questions are helping to structure the deepening of topics appearing as relevant from the interviewees or interviewers perspective, and particular contexts of the initiatives, the actors of the social innovations or practice fields.

The structure of the template for the case study inquiry is the other way round as the template for the reporting:

1. The **case study inquiry** (**bottom-up:** initiative perspective as the starting point) starts with the perspective of the initiative, leading to the overarching perspective of the related practice field in the end: focusing on the context of the concrete initiative (starting with the idea, passing the development process and ending with the impact perspective) → leading to and completed by the practice field context (integration of the initiative in the broader practice field background, conclusions, institutionalisation).
2. The **reporting document** (**top down:** context of the practice field as the starting point) will be structured the other way round starting with the overarching practice field perspective, activating the overall on social change oriented perspective as a context at the beginning and reflecting the social innovation initiatives from this background.

While the case study inquiry is following the context and perspective of a single initiative, the structure of the reporting document is starting with the practice field as the overarching context for the related case studies, bundling and summarising the results of the different related cases, illustrating the practice field, summarizing the given topics (reflected in the case study template).

Already given and available information from the mapping and internet/documents should be integrated in the template first, including information of the practice field. The practice field information already gathered in the case studies (earlier) should be updated continuously in the case study template.

Procedure:

1. Extract the given information from the mapping database and integrate it into the template.
2. Search for additional documented materials (internet, literature, etc.) and integrate the results in the template as well.
3. Selection and inquiry of key persons for the practice field and the related cases
4. Interviews, group discussions, site visits etc. (of **all the relevant actors** of the initiative, **including if possible the users, beneficiaries**)
5. Reporting within the template as described (integrating all the information of the database, interviews and group discussion in one template), a separate summarising across all the case studies will be done in an extra reporting document (by the work package leaders).

The following questions will not vary a lot between social innovation projects and social practices, but the answers relating to the questions are expected to vary to the different levels of uptake. For instance, in a more mature case/practice field there may be a wider set of competitors as a context feature (e.g. car sharing), whereas in a case that is still in its infancy (although it should be well implemented and show dimensions of success as well) competition may be very different in quality or limited in total.

Important distinction between social innovation and social practice: We speak of a social practice when there is already a set of different initiatives, when the original initiators of first social innovation projects (sometimes) are already difficult to identify, variation of the original initiatives have already been applied, maybe a bundle of initiatives exist (institutionalized in a practice field), they have different business models (if any), their services vary, accordingly users vary, incremental differentiation between various offerings.

General Advice: (Please read carefully!)

Please integrate all the preexisting results of the mapping and document/internet search before the interview in the template!

This pre-integration of information will have two important effects:

1. *It will give you a first already comprehensive view on the case*

2. *Based on the given information you can concentrate on the main focus of the case studies:* ***success factors, mechanisms of social change,*** **governance, networks and actors as well as process dynamics.**

This will reduce the number questions and the quantity of needed answers a lot and helps to ***focus on the remaining and main questions****.*

Please use this template as flexible as needed, because ***the context and the perspectives of the interviewees and the discussion groups are of main interest****.*

Because most of the questions are formulated on an analytical background, feel free to translate the questions in a way the interviewees will understand them. The template differentiates between ***must*** *(****main questions in bold letters****) and possible questions deepening the topic (if relevant for the initiative).* → *This will reduce the number of questions!*

While the first part (1-7) is related directly to the initiative, the last questions are focused on the related practice field (8). The practice field perspective might be of more interest for other involved actors than the coordinator of the initiative (e.g. policy, funding organisations, etc.). But please ask the actors of the initiatives these questions as well (as far as possible). If possible, it might be good to have a focus group discussion (with stakeholders from public, economy, civil society and science) after the analysis of the interviews to discuss the overarching practice field perspective in-depth on the basis of the case studies results.

The notes in italic are hints for the interviewer. On the left side of the page you will find headers that help you to go through the interview, identifying aspects which were already answered before.

The interview takes about 2 hours and should be done by an ***experienced researcher familiar with the SI-DRIVE project****, because it is a very challenging questionnaire.*

Please ask the interviewees if you could come back to them with some additional questions arising from the analysis of the case.

*Please ask for acceptance for **digital recording**, pictures etc. in the beginning. Recording helps a lot to concentrate on the interview, and not loosing relevant information.*

Selected practice field and related initiatives

Policy Field: e*.g. Education and Lifelong Learning*

Practice Field: *e.g. Reduction of Educational Disadvantages*

Initiatives:

1. Case: ID Nr. / Acronym *e.g. 338 / Tausche Bildung gegen Wohnen, Exchange education for habitation*
2. Case: ID Nr. / Acronym
3. Case: ID Nr. / Acronym
4. Case: ID Nr. / Acronym
5. Case: ID Nr. / Acronym

Introduction for the Interviewees / Focus Group Participants:

Introduction of the **main** background, context of the SI-DRIVE project, objectives (listed at the beginning of the template) and the main questions for the interviewee (listed below).

We would like to know your opinion, perspective to the following main questions:

1. General overview of the Social Innovation initiative/project
2. What kind of actors, partnerships, alliances, networks are related to the initiative/project?
3. What was the innovative solution?
4. How did this social innovation initiative/project gain momentum?
5. What role did complementary innovation play?
6. What is the impact of the social innovation initiative/project?
7. What is the role of policy?
8. What is the context of the social innovation? Practice field and social change.

General Overview of your Social Innovation

Origin of the Social Innovation	**What is the core idea of the social innovation project?**
Additional questions, elements	What was the **problem/need** before this social innovation project? Which problem did the social innovation address? To what extent was **conflict** a factor that shaped or even caused this social innovation? What **new solution**/service/new delivery processes does this social innovation project offer?
Biography, development of the initiative	**Can you give us a short biography of this social innovation initiative?** *Note: Please reflect the different phases / stages of the initiative/project: From idea and invention over implementation and impact to diffusion and institutionalisation*
Background, Context of the Initiative	*Note: Please reflect also the cultural, historical, policy background of the initiative if not mentioned.*

What kind of actors, partnerships, alliances, networks are related to the project / initiative?

Implementation actors, network

Who was part of the initial network to implement this social innovation project and how did this come about?

Note: Beneath networking also single persons or organisations could be the initiators.

Who was the **main responsible**? What were the **basic incentives** on the level of initiators, main responsible person(s) to **start the social innovation project**?

E.g. differentiation from competitors? Reputation? Idealism or altruistic / intrinsic motivation?

Choice and role of the partners

What were the roles of the additional partners?

What criteria determined the choice of initial and further, additional partners in the cooperation network?

Power and influence, specific background, financing, geographical proximity (local or distant), …

initial partners:

further, additional partners:

Partner interactions

What determined the nature and **dynamics of interactions** between partners?

Partner origin

Do the initiators/project members themselves originate from a **group of disadvantaged** or are they **representatives/ representative organisations/ change agents** on behalf of the disadvantaged?

Connectedness to overarching organisations	**In which kind of other overarching organization (e.g. umbrella organization, policy programme) is your initiative embedded and why? What is the influence of such embeddedness/membership?** **In how far was this membership important?** *Analytical question: To what extent is membership of professional, peer and trust networks, or communities of practice important to individuals in their efforts to develop and manage successful social innovation?* To what extent was the embedding in **social movements** as a specific form of network/cooperation relevant for the success of a social innovation?
Social movement	To what extent was the embedding in **social movements** as a specific form of network/cooperation relevant for the success of a social innovation?

What was the innovative solution?

Note: Parts of this question may have been answered in describing the project/initiative above (question 1). You should focus on the additional aspects listed below.

Innovative idea

On what kind of knowledge and already existing ideas or activities did you base your new solution?

Analysis question: What kind of ideas/insights/findings (based on the accumulated knowledge and learning) on part of initiators/project members led to the idea to develop the SI project?

What have you learnt before and how did this influence the solution you developed?

And furthermore, what have you learnt in the course of your project and how did this alter your solution, strategy or other approach?

Based on what you already mentioned above and in question 1, in what way is the solution innovative?

Interrelation of different forms, levels of innovation

Which **different forms of innovation** is your initiative addressing? Which new believes, values, expectations took place in your initiative? And **how do they interact?**

☐ service innovation

☐ organizational innovation

☐ technological innovation

☐ system innovation

☐ new believes

☐ new values

☐ new expectations

How did your social innovation project gain momentum?

Innovation strategy	**What was the initiators'/actors' strategy to place the innovative solution in the existing context (existing organisations, existing rules/guidelines, existing thinking, etc.)?** Did **competition** play a role?
Drivers, barriers and milestones	**What / who were the drivers, barriers and milestones from idea to growth?** How much of the evolution has been **deliberate and controlled**, and how much is it a result of **eventualities or contingencies**? What are the **factors and issues that have driven the development**? What were the **critical events** of this social innovation project **in a time line**?
Success factors	**What are the key factors that determined success at different stages of the social innovation project?** **What are the initiators'/actors' views on the ways in which the social innovation has changed over time?** What **critical events** (an event/situation that seriously threatened the progress of the initiative) have been encountered as a result of and during the development? What **actions** were **taken** by the actors involved in order to secure successful progression? Are there any features of this particular Social Innovation (internal, external) that have contributed to success (leadership, communications, management structures etc.)? Did **new actors** enter in the course of the project, did actors leave? Why? What **conflicts** occurred in the course of the initiative? Was (charismatic) **leadership** a success factor? If so ☐ locally ☐ nationally ☐ globally
Policy / economy context	**Is there anything in the local or national policy context (or economic context) that has influenced development?**

What role did complementary innovation play?

Transfer, exploitation

What action in which parts of society is necessary to benefit from the idea/innovation?

To what extent is the innovation **driven** by expressed or latent (and assumed) **demand**?

To what extent is **complementary innovation** required on the part of users (in order that an innovation can be exploited successfully)?

Absorptive capacity

To what extent are the recognition, assimilation and implementation of new information and knowledge an issue for your initiative? What 'capacities' or capabilities are required to ensure successful deployment?

*Note: To what extent is this 'absorptive capacity' an issue for **producers** and **users** of the innovation?*

Role of technology

What role did technology play for the project?

What **new actors** appeared in the course of the social innovation (triggered by technological development)?

What **new roles** were taken over by established actors (either using technology, or because the introduction of technology altered their tasks and roles)?

How did **exchange relations** (materials, money, people) alter in the course of the project (maybe **triggered by technology**)?

What is the impact of the social innovation (incl. diffusion and imitation)?

Note: This is a key element of the questionnaire! Get information, perspectives etc. as detailed as possible!

Impact

Did you define success in the beginning of the project? How do you define success now?

Analytical question: Have the key actors of the project had any ambition to define the success and/or impact of their initiative?

What is/was the impact of your social innovation?

Dimensions of impact are: *(to be mentioned to the interviewee)*

Transfer / Institutionalisa-tion
New social practice in everyday life

- Diffusion over **geographical areas, groups in society, policy fields**
- Degree of **institutionalization** (implemented in laws and regulations, daily practices, organisations)
- **Capacity building, empowerment** of the actors and beneficiaries, users
- How **important** is the social innovation **for our daily life**? (e.g. users as per cent of the population)

To what extent is diffusion **feasible or desirable** with respect to your social innovation?

To what extent has there been a deliberate effort to **stimulate diffusion?**

How has diffusion been supported or attempted, what are the **key features of the diffusion strategy**?

What **elements** of the diffusion strategy were **successful and beneficial** (and why) and what elements were unproductive? What are the main **barriers** to diffusion?

What **sector-specific conditions** and characteristics either support or hamper the diffusion processes? What typical conditions in your area **supported or prevented diffusion**?

To what extent are empowerment and capacity building relevant for the actors and the beneficiaries/users of the practice field? Does mutual and social learning play a key role

*Note: Please check this for **producers** and **users** of the innovations within the practice field*

Business models	Were **new business models** or **new remuneration schemes** developed and established?
	Does social innovation require a different **approach to appropriation and allocation of credit or returns**?
	Did you apply for trademarks, industrial designs, patents? Was copyright a topic? Were there any conflicts about **intellectual property rights**?
Imitation, adoption	**Has the social innovation been imitated or adapted or transferred in a different context?**
	Was it possible to **imitate** the project **or** did you **adjust the original idea** according to a new context?
	Are there parts of the innovative idea which you tried to **protect from imitation**? How?
	How was **contact between the key actors of the first and second project** been established?
	Who made the "**first move**", the actors of the first, already implemented initiative, or the actors of the second project.
	How did the **actors of the second initiative become aware** of the project they wanted to "copy"?
	Was there any **help (or knowledge transfer) of the first project** necessary in order to develop the second location's project?
	What are the **drivers and barriers** connected to imitation/adaptation regarding this specific innovation?
	What **actors** have been **of relevance**?
	Are there any other "**transfer mechanisms**" (e.g. internet, etc.…), apart from social relations? Accelerated through social media?

What is the role of policy?

Role of policy actors	**Which roles did policy actors play in your social innovation project? (active/passive)**
	How does the **structure and culture of policy** influence the creation, diffusion and adoption of social innovations?
	Is **policy required to promote** social innovation? What types of policies are required to promote social innovation?
	Are there **different roles for policy** on the different levels: Local, regional, national or European, Global?
	Do **policy programs** play an important role in your innovation? In which stages of the project?

What is the context of the social innovation? (Practice Field and Social Change)

Note: Please change from the initiatives´ perspective to the overarching practice field level, by introducing the SI-DRIVE definition.

The following questions should describe the practice field (mainly in about the same way like they did for the initiative/project). However, the degree to which these questions apply to the practice field depends on the maturity and demarcation of the practice field. If instead, the social innovation case is constituent for the configuration of the practice field (i.e. the practice field is immature or fuzzy, and the case is mature and essential for the shape of the practice field), you may rather want to respond to some of the following questions on the case level trying to encourage the interviewee to abstract from the own initiative to a broader possible or future oriented practice field level. But if ever possible please focus on the practice field. However, this question 8 could be of main interest for the interviews, group discussions with stakeholders of the practice fields (policy, associations, etc.)

Imitative as part of a common practice field

Considering other initiatives similar to yours, do you see any commonalities between them (common societal challenges and/or local demands, barriers, hurdles, factors of success, development paths)?

In SI-DRIVE we distinguish between a practice field and related single projects / initiatives:

- "**practice field**" is a general type or "summary" of projects and expresses general characteristics common to different related initiatives / projects (e.g. micro-credit systems, car sharing).
- "**project/initiative**" is a single and concrete implementation of a solution responding to social demands, societal challenges or systemic change (e.g. Muhammed Yunus's Grameen Bank which lends micro-credits to poor farmers for improving their economic condition, different car sharing projects or activities at the regional-local level).

Practice Field

Your initiative could be seen as a part of an overarching activity field, summarizing or bundling similar initiatives in a common practice field.

In SI-DRIVE we connected your initiative to a practice field named

_____ (name of the practice field)

What do you think about this? Do you agree that your initiative is a part of this practice field or would you suggest another one?

If so, to which other practice field do your initiative belong to:

_____

☐ Not belonging to a practice field yet

Relation to social innovation projects	**If you have a look on the named practice field:** **How far has your social innovation project/case contributed to configuring the practice field?** *Analytical Question: What is the relationship between social innovation projects and social practice (fields)? (as a part of impact)*
Societal challenge, demand	**To what extent is the practice field and its development driven by expressed or latent (and assumed) demand in society or groups of society?** *(Note: this refers to Card 1 mechanism 8 diffusion)*
New knowledge generation	**Which new findings, which learning processes (resulting in new knowledge) shaped the practice field over time?** *Knowledge about users, knowledge about laws/regulations, knowledge about actors in the field, scientific knowledge, facts from media, statistics, etc.* *(Note: this refers to Card 1 mechanism 1 learning)*
Networks, cooperation	**What kind of professional, peer and trust networks, or communities of practice do exist in the practice field?** *(Note: this refers to Card 1 mechanism 6 cooperation)*
Networks or communities	**To what extent is membership of professional, peer and trust networks, or communities of practice important to individuals in their efforts to develop and manage successful social innovation within the practice field (or initiative)?** *(Note: this refers to Card 1 mechanism 6 cooperation)*
Social Movement	To what extent was the embedding in **social movements** as a specific form of network/cooperation relevant for the success of the practice field?

Policy context	**Is there anything in the local or national policy context (or economic context) that has influenced development of the practice field?** *Note: Please reflect also the cultural, historical, policy background of the practice field if not mentioned.*
Conflicts	**Were conflicts an issue in the development of the practice field (i.e. conflict/tensions in society as the cause for a new social practice)?** *(Note: this refers to Card 1 mechanism 4 conflict and 7 tensions)*
New collective ideas	**Are there new collective ideas in society (e.g. beliefs, values, value systems, of fashions, of religions, of cultural symbols, of rules of behavior) that shape the practice field?** *(Note: this refers to Card 1 mechanism 2 variation)*
Role of technology	**What role did technology play for the development of the practice field?** *(Note: this refers to Card 1 mechanism 8 diffusion)*
Institutional structures	**What are the institutional structures that determine the nature and dynamics of interactions between partners in the practice field?**
Charismatic leadership	Was **charismatic leadership** within the practice field a success factor? If so ☐ locally ☐ nationally ☐ globally
Necessary actions to benefit from SI	**What action in which parts of society is necessary to benefit from the practice field?** *(Note: this refers to Card 1 mechanism 8 diffusion)*
Empowerment / capacity building	**To what extent are empowerment and capacity building relevant for the actors and the beneficiaries/users of the practice field? Does mutual and**

	social learning play a key role *Note: Please check this for **producers** and **users** of the innovations within the practice field*
Absorptive capacity'	**To what extent are the recognition, assimilation and implementation of new information and knowledge an issue for practice field? What 'capacities' or capabilities are required to ensure successful deployment?** *Note: To what extent is this 'absorptive capacity' an issue for **producers** and **users** of the innovation?*
Competition	**To what extent is competition a factor in the practice field? And does it lead to innovation as a competitive advantage?** *(Note: this refers to Card 1 mechanism 5 competition)*
Selection	**Which processes of adoption, diffusion and imitation appeared in the practice field?** *(Note: this refers to Card 1 mechanisms 3 selection)* **Which processes of decline and death of initiatives / projects in the practice field do you know? What were the reasons for failure?**
Complementary innovation	**To what extent is complementary innovation required (in order that an innovation can be exploited successfully in the practice field)?**
Institutionalisation	**To what extent was social change, changing social practices planned in the initiatives of the practice field? Which kind of institutionalisation of change appear, succeeded or failed?** *(Note: this refers to Card 1 mechanism 9 institutionalisation)*

Final Remarks

From this interview (and other material on the case you provide us with or that is publicly available), we will write a case report. Of course, this report we can send back to you to prove if everything is understood correctly (case report).

We will integrate the results of all the ten case studies in a policy field report, comparing different cases within a practice field (=practice field report). This report is a deliverable within the SI-DRIVE project which will be published and public available (in English). If you want we can send it to you as well.

For all further publication where your initiative is mentioned (academic papers, book sections) we will inform you and send you a copy. You can follow the progress of SI-DRIVE also on our website www.si-drive.eu.

ANNEX

Card 1:
Mechanisms of social change which can be found in the literature (based on Wilterdink 2014)

1. **Learning**: Evolutionary theories (Dosi, 1982; Nelson & Winter, 1982) in social sciences stress the cumulative nature of human knowledge. Actors realize mistakes, apply new ideas and engage in processes of learning, which results in tacit and codified new knowledge (Cowan, David, & Foray, 2000).
2. **Variation**: Variation can range from 1) new (collective) ideas to 2) single innovation projects which introduce novelty and hence variation. Ad 1) Collective ideas are the cause and consequence of social change. The spread of beliefs, values, value systems, of fashions, of **religions**, of cultural symbols, of rules of behavior. Ad 2) Single innovation projects are on the one hand incremental innovation projects that innovate along a given trajectory; on the other hand, radical innovations that deviate from the trajectory and may lay the ground for a new trajectory.
3. **Selection**: This incorporates processes of adoption, diffusion and imitation, but also processes of **decline** and death of initiatives.
4. **Conflict**: Group conflict has often been viewed as a basic mechanism for social change, these **include** revolutions, but also minor conflicts. Social change in this view, is the result of the struggle between a predominant class and a dominated class which strives for (radical) change. (conflict model of society by Ralf Dahrendorf)
5. **Competition**: seen as a powerful mechanism of change as competition makes it more likely to **introduce** innovations in order to have competitive advantages.
6. **Cooperation**: Although competition as a driver dominates theories that put individualism, individual utility at the fore, where social change is the results of individuals pursuing their self-**interest**, other strands of literature have shown that cooperation (e.g. literature on innovation systems, game theory) or altruism (e.g. Ernst Fehr) also lay the basis for human action.
7. **Tension and adaptation**: In structural functionalism social change is seen as an adaption to some tension in the social system. E.g. a gap between fast-changing technology and necessary **associated** institutional change of some type (see W. Fielding Ogburn)
8. **Diffusion of (technological) innovations**: Some social changes results from innovations adopted in society, may be technological invention, scientific knowledge, but also new beliefs, ideas, values, religions, in short ideas. High uncertainty, most innovations disappear, those that survive follow an S-curve of adoption (cf. Geroski, 2000).
9. **Planning and institutionalisation of change**: Social change may result from goal-directed large scale planning, by governments, bureaucracies, and other large scale organisations. The wider the **scope**, the more the competencies needed, the more difficult to reach goals and the more likely that unforeseen events interfere. Planning implies institutionalisation of change, but institutionalisation does not imply planning (Wilterdink, 2014). Included here are changes in the organisation of the state, interstate relations, laws and directives, programmes etc.