SI-DRIVE

Social Innovation: Driving Force of Social Change

Social Innovation: Creating Innovative Spaces for Education and Lifelong Learning

D4.4: Final Report of the Policy Field "Education and Lifelong Learning"

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1 INTRODUCTION

The transition from an industrial to a knowledge-based society and the short-time adjustment of knowledge, competences and skills is requiring and challenging effective Education and Lifelong Learning structures. Increasing heterogeneity of work, education and living as well as the constant change of technological, managerial and organisational working conditions are challenges for Education and Lifelong Learning from the early-childhood to the retirement phase. Education and Lifelong Learning has to give short-term and new structural answers to these developments. Beneath different approaches to modernise and improve these structures the Social Innovation concept is becoming more and more prominent.

Continuous improvement of Education and Lifelong Learning is the key challenge for European societies and the global world. Education and training, or from a European perspective better summarised under the more comprehensive Lifelong Learning strategy, "have a fundamental role to play in achieving the Europe 2020 objectives" (European Council 2011) as well as to deliver competences to manage social change. Educational strategies do not only focus on the knowledge society to foster European competiveness, but also to reduce poverty and to improve integration and social inclusion.

In Europe and the global world the concept of Social Innovation is becoming increasingly evident in policy, scientific and public debates. There is a growing consensus among practitioners, policy makers, the research community and others that widespread Social Innovation is required to cope with the significant challenges that societies are facing now and in the future. The EU funded project SI-DRIVE (www.si-drive.eu) contributed to a comprehensive understanding of how social innovations occur and under which conditions they flourish and lead to social change. One of the key objectives is to determine nature, characteristics and impacts of social innovation and to identify its success factors, drivers and barriers in seven policy fields: besides Education and Lifelong Learning this includes Employment, Environment, Energy Supply, Transport and Mobility, Health and Social Care, Poverty Reduction and Sustainable Development.

Analysing the relation between social innovation and social change, the main focus of the policy field Education and Lifelong Learning is research on social innovation processes for the implementation of new educational structures within the European concept of improving Lifelong Learning (from early childhood to retirement as well as from the support of vulnerable groups to promotion of talents). SI-DRIVE analysed social innovations creating space for new solutions within and beyond the formal education systems, helping to overcome economic and social changes, assuring social cohesion and economic growth.

The objective is to study and analyse the educational policy environment in order to understand social innovations and their dynamics, to find out what and who drives social innovation in the field of education, which stakeholders are doing what and how far educational policies and its formal structures can be barriers or facilitators to innovation. This results in a deepened understanding of different actors' roles and functions (policy, education areas, stakeholders of related policy fields like employment and economy, learners, pupils and parents, teachers, etc.) within social innovation.

1.1 SI-DRIVE: THE PROJECT

SI-DRIVE extends knowledge about Social Innovation in three major directions:

- Integrating theories and research methodologies to advance understanding of SI leading to a comprehensive new paradigm of innovation.
- Undertaking European and global mapping of social innovation, thereby addressing different social, economic, cultural and historical contexts in eight major world regions.
- 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.

Based on these three pillars SI-DRIVE contributes to a deeper understanding of social innovations. Based on a comprehensive definition of Social Innovation and a theoretical framework for understanding social

innovations empirical knowledge generated through global mapping and case studies will help to understand the role of social innovations for transformative changes in Education and Lifelong Learning (policy and practices).

SI-DRIVE's empirical findings on the background of the theoretical framework will be summarised and disseminated to the Education and Lifelong Learning research community with the aim of discussing relevant findings and outcomes, stressing the focus on the importance of social innovations for transformative educational approaches. One main aspect will be to learn from European and non-European countries in regard to pioneer models of social innovations to increase access and participation to formal non-formal and informal education globally. Social innovations in specific practice fields (combining different social innovation projects and initiatives) will be analysed on their contributions to solve societal challenges (improvement of participation in education and lifelong learning, equal opportunities, modernizing the different education areas, social and digital inclusion, etc.). The aim is to find out the intentional trends and possible impacts on social change in the policy field of Education and Lifelong Learning.

1.1.1 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 pure social entrepreneurship which was in the focus before. The former strong focus on social entrepreneurship excluded other key aspects and the potential of a comprehensive concept of social innovation and its relationship to social change (Howaldt, Kaletka, and Schröder 2017, p. 108).[1] 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.

The starting point of the development of such a 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. (2016) developed a theoretical framework for the empirical mapping of social innovations based on mainly four pillars: (1) a comprehensive definition of social innovation and (2) practice fields combining similar initiatives, (3) five key dimensions and (4) mechanisms of social change.

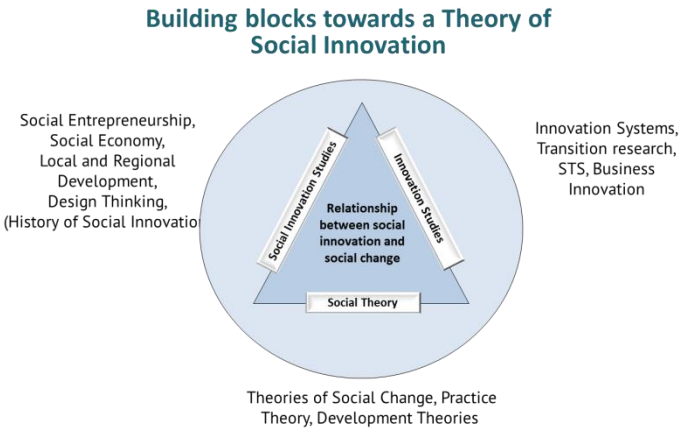

Figure 1: Building Blocks towards a Theory of Social Innovation

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

[1] "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).

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., 2016: 4f).

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

- "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 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).

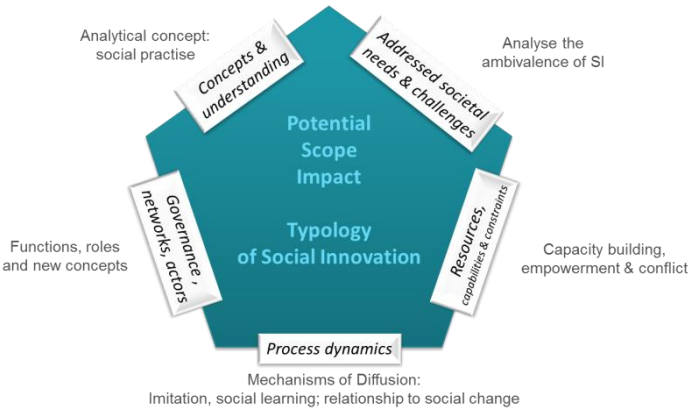

Figure 2: Key Dimensions of Social Innovations

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

1.1.2 Methodology / Empirical background

SI-DRIVE is aiming at a *comprehensive and systematic analysis*, focusing on the *main societal challenges* reflected by *different policy fields* and *mapping social innovations all over the world*. The developed methodology is *combining qualitative and quantitative research* fulfilling the gaps and constraints of each methodology in a complementary and interrelated way: Beneath qualitative research (more than 80 in-depth-case studies) SI-DRIVE conducted - *for the first time* - a *quantitative mapping of more than 1,000 social innovation cases all over the world*.

The SI-DRIVE methodology[2] is 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. Starting with a first theoretical, methodological and policy and foresight framework the empirical phase 1 lead to a global mapping of Social Innovation: comparative analysis of 1,005 cases worldwide, seven policy field reports, global regional report, external database screening, and eight first policy and foresight workshops. These results led to the improvement of the three pillars and set the ground for the second empirical phase: the in-depth case studies in each of the seven policy fields of SI-DRIVE and the second round of policy and foresight workshops. Finally, the results of both empirical phases are summarised in each of the policy fields and across, contributing to the final theoretical framework, the methodology and the policy and foresight recommendations of SI-DRIVE.

Thus, the chosen triangulation and combination of quantitative and qualitative methods also has a sequential aspect: While the quantitative approach is more appropriate for the analysis of 1,005 mapped social innovation cases, the qualitative methodology is more relevant for the 82 conducted in-depth case studies (based on the quantitative and qualitative analysis of the first empirical phase).

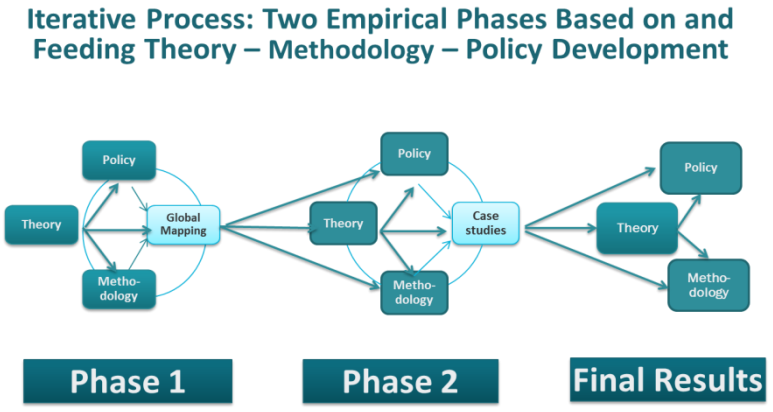

Figure 3: Continuously Updated Research Cycle

While the focus of the global mapping was on exploring the multifaceted world of Social Innovation the focus of the subsequent qualitative research was on the dynamic interrelation between social innovations, the practice field and various mechanisms of social change. Related to the five key dimensions of SI-DRIVE the case studies explored further Governance, Networks and Actors as well as Process Dynamics, mainly asking for factors of success (and failure) and considering mechanisms and degree of social change: diffusion in society, degree of institutionalisation, and importance of the practice field and initiative for everyday life and local communities.

Based on the global mapping of 1,005 social innovation initiatives all over the world 82 case studies were selected from the database (with some additional cases of high recent relevance) and performed. The cases were nominated on the background of given theoretical framework, the results of the mapping and the partners' knowledge and experience. Beneath practical points like access to and willingness of the initiatives to participate in a general regional variety were taken into account. The (strategical) relevance of the practice fields, the representativeness of the single case for the practice field showing its variety in terms of social demands and regions and an advanced development phase (cases that are already in the implementation, impact phase) were additional selection criteria. [3]

1.2 EDUCATION AND LIFELONG LEARNING: EMPIRICAL BACKGROUND

Within the policy field of Education and Lifelong Learning the partners recorded 211 cases in the database of the global mapping related to twelve practice fields (see table 3, chapter 3.2). For the case studies two main practice fields and three additional cases from three other practice fields were chosen, exemplified by at least 18 cases. The chosen practice fields and cases (see chapter 9.1 in the Annex) refer to the main societal challenges and most mapped issues of this policy field:

[2] A detailed description can be found in Howaldt et al. 2016, chapter 3.
[3] Detailed information about the case study methodology and selection could be found in Schröder/Kuschmierz 2016, chapter 1.

- Reduction of educational disadvantages characterised by a high variety and diversity and a high relevance all over the world
- New learning arrangements, interactive education: a more homogeneous field, with a high innovative potential

Added by three smaller, but technology, economy and quality oriented practice fields: digital inclusion via new digital and virtual learning environments for disadvantaged groups, quality improvement of the formal education system and strategic partnership education and economy (transition management, labour market needs, skills miss-match and lack of professions).

The selected cases are located in thirteen countries in six global regions showing some similarities concerning the general approach (holistic view, learner orientation, reflecting system lacks, etc.) but also specific regional, culture based solutions:

- Northern Europe: Finland, Sweden, Lithuania
- Western Europe: Germany, Austria
- Eastern Europe: Bulgaria, Croatia, Montenegro, Romania
- Russia
- Latin America: Bolivia, Chile, Argentina
- North-Africa: Egypt.

Based on this methodology this report is summarising and analysing the state of the art report (Schröder et al. 2015), the global mapping (Howaldt et al. 2016) and the case studies (Schröder/Kuschmierz 2017) conducted in the policy Field Education and Lifelong Learning. The analysis and summary is structured by the main research questions referring to the five key dimensions of SI-DRIVE:

- What is the landscape and context of social innovation in education and lifelong learning? (chapter 2)
- What kind of concepts and understanding are running social innovations creating new spaces to improve education and lifelong learning? (chapter 3)
- Which resources, capabilities and constraints are driving or hindering social innovations? (chapter 4)
- What is the structure of actor-networks and governance in social innovation processes? (chapter 5)
- How are social innovations processing, from start-up over implementation to scaling and institutionalisation? (chapter 6)

The report ends with a summary of findings and derived recommendations and implications for further development and research on Social Innovation within Education and Lifelong Learning.

2 LANDSCAPE: SOCIETAL CHALLENGES AND SOCIAL DEMANDS ADRESSED BY SOCIAL INNOVATIONS

According to SI-DRIVE's approach, "a social innovation initially consists of an initiative and impetus for change in social practices that in some way or another contributes to limiting social problems or satisfies needs of specific societal actors" (Howaldt et al. 2014, p. 158). Thus, in order to understand social innovations in a respective policy field, it is necessary to undertake research on needs, demands and challenges (also see BEPA 2010) as they are the starting points for innovative projects. This foundation for mapping and analysing initiatives in Education and Lifelong Learning was provided by the State of the Art Report (Schröder et al. 2015). In Education and Lifelong Learning societal challenges and social demands are mainly related to gaps, tensions and conflicts of the formal system or areas of education in their respective current shapes. Local and regional demands resulting from needs not tackled by them triggering diverse actors (see chapter 5) to find and create new or complementary solutions on their own, potentially creating change (see process dynamics, chapter 6) in order to satisfy demands.

As the empirical results of SI-DRRIVE' validated, social innovations looked at are answers to (concrete) local social demands, more general societal challenges or address systemic change (see figure 4). Similar to the findings enclosing all policy fields, societal challenges or social demands are also the most important triggers for starting a social innovation in Education and Lifelong Learning (for a closer look on motivations and triggers, see chapter 4.2). However, initiatives with a focus on Education and Lifelong Learning have a reduced focus on societal challenges and a stronger focus on systemic change (47% in contrast to 32% overall), pointing more to the relevance, barriers and constraints of systems of formal education for social innovations (see chapter 5). These challenges and demands are also operationalised by the specific practice fields for initiatives (see chapter 3.2).

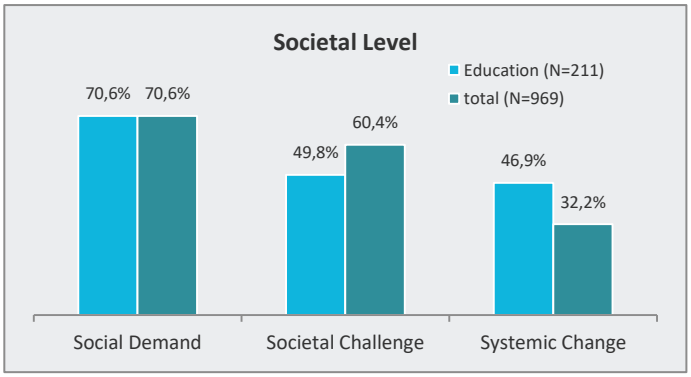

Figure 4: Societal level

2.1 SOCIETAL CHALLENGES AND SOCIAL DEMANDS

As already indicated above, societal challenges are part of a more general, societal or sometimes even global perspective. These challenges are related to or forming local or regional social needs of specific groups and areas within society leading to changing social practices tackled by social innovations.

Obviously, not only needs and demands but also challenges differ amongst diverse national contexts with their specific legal frameworks, demographic trends, labour markets and so forth. However, as shown in the State of the Art Report for Education and Lifelong Learning, "there are more or less the same challenges and social needs in every global region, differed mostly by the status of development in the (formal) education system" (Schröder et al. 2015, p. 34). These commonalities point at underlying **overall challenges** affecting whole world regions (e.g. ageing societies and a shift towards knowledge societies in e.g. advanced economies) or even global society (e.g. climate change) in general.

2.1.1 Common European Challenges

Major challenges with a transnational scope are already defined in the framework of the Europe 2020 Strategy: "common challenges, such as ageing societies, skills deficits in the workforce, technological developments and global competition" (European Commission)[4] are already tackled with various programs for e.g. research, knowledge exchange, support and advice. These challenges point to the importance of education as learners need to be empowered by knowledge and skills (e.g. transversal skills like the ability to learn, entrepreneurial skills and technological skills and knowledge) in order to be prepared for upcoming societal developments, to access employability in changing environments and in times of (evolving) knowledge-based societies (see Schröder et al. 2015).

Lifelong learning is key for dealing with challenges

In this framework of challenges affecting member states of the EU, the importance and guiding principles of Lifelong Learning (LLL) becomes especially apparent, since the adoption of the EU Education Council Conclusions and now in the wider context of the Europe 2020 strategy and reflected by the EU Lifelong Learning Programme (LLP) from 2007-2013 and its continuation with the ERASMUS+ programme 2014-2020.

New technologies and new practices in combination with global competition lead to a need for a permanent actualisation of knowledge not only for employees and entrepreneurs but also for people in the private sphere confronted with new and changing environments (e.g. technological developments, changing societies). Lifelong Learning in this sense is a pivotal challenge itself and a means to tackle global challenges. Hence, the state of the art report of SI-DRIVE suggested a holistic perspective on education already enclosing Lifelong Learning as the underlying concept (Schröder et al. 2015; Schröder/Kuschmierz 2017). Formal primary, secondary, tertiary education and further kinds of education and training could be better framed within the concept and strategy of Lifelong Learning. Both the underpinning philosophies and actual objectives (strategic and operational) as well as the programme architecture and content aim to *use education and training as a key lever* in making the EU more competitive, providing more social cohesion and, especially, enhancing growth.

2.1.2 Global Perspective

Strategies for coping with global challenges in Education and Lifelong Learning were mainly analysed on the background of three pivotal reports provided by the transnational organizations OECD (OECD, 2012), the World Bank (World Bank Group, 2011) and UNESCO (UNESCO, 2015). In the meantime, goals initially proposed in UNESCO's report Education for All (UNESCO, 2015) were slightly modified for the final Sustainable Development Goal 4 (SDG4) of the United Nations. The table below shows the reworked wording with minor changes and gives an idea of the variety of overarching challenges and specific needs from a transnational perspective. As there were no essential changes to what has been a source for creating the State of the Art Report, its arguments remain valid in the current policy framework provided by SDG4 "ensuring inclusive and equitable quality education and promote lifelong opportunities for all" (for an overview on the perspectives of OECD and World Bank, see Schröder et al. 2015).

When taking the global perspective of SI-DRIVE, similar challenges can be identified within different world regions. In many countries, the transversal topic is not about providing education, but rather ensuring its quality and guaranteeing equal opportunities (e.g. access to education). Policy directives in all educational fields are formulated (e.g. by the UN, and by the involved partner countries) for the formal education sectors (primary, secondary, tertiary education) and within a broader Lifelong Learning perspective (from early childhood education to the transition from school to work and so forth). According to SI-DRIVE's educational experts from the different world regions not only is addressing the development of relevant skills of importance but activating skills supply and encouraging people to offer their skills and deploying them is a key.

[4] http://ec.europa.eu/education/policy/strategic-framework_en

Sustainable Development Goal 4:
Ensure inclusive and equitable quality education and promote lifelong opportunities for all

Targets by 2030:

- "ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes"
- "ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education"
- "ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university"
- "substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship"
- "eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations"
- "ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy"
- "ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development"

Means of implementation:

- "Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all"
- "By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries"
- "By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states"

United Nations, 2016 (http://www.un.org/ga/search/view_doc.asp?symbol=E/2016/75&Lang=E)

Table 1: Targets and Implementation of the UN Sustainable Development Goal 4

2.1.3 Main Current Strands for Social Innovations in Education and Lifelong Learning

To overcome recent and future challenges on employability and social inclusion in a mid and long term perspective, a continuous improvement of Education and Lifelong Learning is necessary for European and global societies. Formal primary, secondary and tertiary education and further education and training that is framed within the overarching concept and strategy of Lifelong Learning (covering all kinds of learning including non-formal and informal learning) are seen to provide an adequate answer to constant and profound technological, social, economic and demographic changes.

The comparative analysis of national approaches conducted in the state of the art report for the policy field revealed "a great conformity concerning the social needs [...] for education and lifelong learning, but with specific country foci and priorities or using a different wording. [...] There is also a focus on public oriented innovation activities and on the formal education area. Social innovation is mainly connected to the third sector and vulnerable groups, with limited funding and a general lack of incubating environment (national and local)." (Schröder et al. 2015, p. 33)

As an outcome of the analysis of the state of the art report, five generalized **main current strands** for Social Innovation in Education and Lifelong Learning were elaborated:

1. Interrelations with and impacts on *formal education* (early childhood education, lifelong learning),
2. *informal / non-formal learning* and the challenge of acknowledging and certifying such learning outcomes,
3. *eInclusion* (guiding people to the digital world and promote digital literacy, integrating citizen in digital media access and usage) as a promising "vehicle" for personal development, active citizenship, social inclusion and employability with high potential for certain regions and target groups,
4. the matching process between *industry demands* and education and lifelong learning offers,
5. and strongly required solutions for new learning arrangements and appropriate pedagogic principles.

Based on these main strands, a set of different specific social needs linked to societal challenges was found. These were also the starting points for the definition and selection of practice fields (see chapter 3.2).

Societal challenges and social needs and in Education and Lifelong Learning (according to the comparative analysis of State of the Art Report)	
Skills shortages, miss-match, lack of professions and skills & competences	• Occupational orientation, early pupils career planning: improving the orientation at natural sciences, skilled crafts, overcoming gender segregation and stereotype orientations, improving the added value of VET (e.g. as an alternative to study) • Strategic partnerships between education and economy, labour market needs integration • Entrepreneurship education and promotion • Continuous updating of skills, competences and capabilities, including low-skilled workers • Transition management: from school to work, from outdated to new occupations, redeployment and retraining
Improvement of participation in education and lifelong learning	• New strategies and structures for lifelong learning • Variety, accessibility, recognition of non-formal and informal learning • Early childhood, preschool education • Empowerment instead of / through education
Improvement of learning possibilities and options & expansion of educational opportunities	• New learning arrangements, interactive education (e.g. peer-to-peer, creativity promoting learning environments, individualised and modular training programmes) • New digital and virtual learning environments (e.g. "Digitalisation" of schools, e-learning, blended learning, open education and learning) • Excellence education, elite support • Fostering specific learning contents: Sustainable education, entrepreneurship education, green skills, and others
Improvement & reforms of formal educational systems and institutions	• Updating education institutions and programmes: New secondary school, full-day school arrangements, curricula and management reforms, and others • Quality improvement, setting of new educational standards • Collaboration of educational institutions, transnational cooperation (platforms), collaboration of public institutions with civil society organizations (local, regional, national and international) • New mechanisms for collaboration and decision making: pupils, parents integration • Development of social activity and responsibility of young people • Pupils support: career guidance, preventive programs, counselling of pupils at risk, prevention of school dropouts • Rural areas integration, improvement • New financing schemes, improving infrastructure of schools, educational materials, access to ICT • Improving mobility, e.g. on the basis of the European and National Qualification Frameworks (EQF, NQF) and European Credit-Systems like ECVET, ECTS
Social inclusion of vulnerable groups & equal opportunities	• Reduction of educational disadvantages • Digital inclusion • Specific learning arrangements and networking for education of vulnerable groups (migrants, handicapped and disadvantaged people, …) • Prevention of school violence • Basic education and second chance education, training guidance (qualification, apprenticeship, language courses) • Diversity-competence in schools

Societal challenges and social needs and in Education and Lifelong Learning (according to the comparative analysis of State of the Art Report)	
Attraction of teachers and increasing competences of teachers & trainers	• Attraction of young professionals to educational sector • Alternative forms of educational activities and training (towards consultant, mentor) • Quality of training for teachers • New teaching practices (e.g. active learning, andragogy) • Specific teaching competences: pedagogical techniques, IT competences, vulnerable groups

Table 2: Societal challenges and social needs and in Education and Lifelong Learning

2.1.4 Social innovations in Education and Lifelong Learning and their relationship to challenges and demands

Whereas challenges have a more general and sometimes even global scope, social demands are related to more local and very specific needs of concrete target groups often very tangible to innovators. The most relevant strands for social innovations in Education and Lifelong Learning found in the empirical analysis are related to demographical and technological changes, skills needed in a global competitive world, bottom-up solutions experienced by local or personal needs.

Demographic change is a challenge but does also offer opportunities

Demographic change in ageing societies is a widely seen challenge as it leads to e.g. shortages in the workforce and to higher societal costs for health. This challenge and the linked social needs can be tackled by a shift towards Lifelong Learning. However, as the in-depth analysis of cases revealed, the experience and knowledge of elderly people is a valuable societal asset not only regarding their workforce but also in regard to education. The case study of *Storytelling Grandmothers* (Abuelas Cuentacuentos) provides a blueprint of how the capabilities of elderly people can be beneficial for education. In this case, senior women are engaged in order to improve reading habits and skills of disadvantaged boys and girls, tackling on early stages of learning. While this clearly indicates informal teaching capabilities of elderly members of society, it is beneficial for this group at the same time. In this context, teaching young learners is not only beneficial to society in general and disadvantaged groups in particular, but to volunteer seniors as well, giving them a new opportunity for a fruitful participation and acknowledgement in society beyond traditional paid work.

Technology is a challenge and a chance (enabling and fostering)

Developments in technology are more than just a demand for constant renewal of knowledge in a framework of lifelong learning. New technologies not only provide new dissemination opportunities but also chances for inclusion of disadvantaged learners. Hence, from the perspective of SI-DRIVE, technology is also seen as a complementary innovation, fostering or even enabling social innovation. As a result, e.g. the practice field *'New Digital and Virtual Learning Environments'* shows the importance of technology, reflected in the in-depth case study of *JAKOM*, where software provided technological assistance for people with autism. Furthermore, new technologies also hold potential for new learning environments that help to provide education in a more appealing way that also fosters digital inclusion by using new technologies like software or even virtual learning-games as seen in the case study of *Jumpido*. Here, the gamification of learning maths was used to create an interactive and appealing environment. Last but not least to unfold the potential of information and communication technologies and for digital inclusion basic IT skills are necessary for society at large (see *Timurovtsy*).

Skills mismatches and skills shortages tackled by social innovations

Skills shortages (e.g. due to ageing societies and technological developments) and skills mismatches (due to e.g. a lack of collaboration between formal education, learners and the economy) are tackled by initiatives. From an overarching perspective, all successful innovations with the aim of improvements in education potentially lead to a reduction of skills shortages. Education is key especially in knowledge-based societies. Therefore, when societies shift towards a higher demand for skills based on complex knowledge, this knowledge needs to be transferred. For instance, the example of APM (university graduates and the labour market) revealed opportunities for new practices supporting learners in order to better fit the needs of the labour market. In the case of APM, this support was provided based on the monitoring of labour market insertion which could then be used for informing learners supporting their decision of which educational

pathway to take. By involving not only the perspectives of learners and educational institutions (i.e. graduates and universities in this case) but also those of employers, the project indicates one way in which these challenges are tackled. However, this is only one possible approach towards tackling skills mismatches and related skills shortages. Based on the underlying idea of exchanging knowledge across sectors, social innovations in Education and Lifelong Learning can build on a variety of opportunities for tackling these challenges (as the practice fields indicate: transition management from school to work, career counselling and occupational orientation, collaboration with economy actors, see table 3, chapter 3.2).

Global competition demands Lifelong Learning

The state of the art report highlighted the importance of Lifelong Learning for knowledge-based societies. It was even suggested to understand a shift towards this concept as a competitive factor. Global competition demands an ongoing development of new products, services, technologies and practices. These demands are linked to knowledge and skills of not only developers and scientists but also to economy, civil society and politics. All relevant actors for the production of knowledge and innovation need to be empowered by constant learning, based on a holistic approach (including employability and life managing skills). Hence, in order to tackle the demands of global competition, Lifelong learning is the key. At the same time, Lifelong Learning in this environment needs a focus on all the challenges mentioned before. Skills mismatches and skills shortages are barriers for competitiveness. Ignoring demographic trends can accelerate skills shortages. Technological developments and skills for creating technological innovations (and also social innovations) need to be part of knowledge transfer within the concept of Lifelong Learning as well.

Bottom-up initiatives to cover the variety of contexts and related solutions

Discussion in the policy and foresight workshops of SI-DRIVE and the State of the Art Report revealed demands specific for (global) regions and local areas. While societies with demographic trends towards ageing are in a need of skills in order to tackle skills shortages in geriatric nursing, societies with an opposite trend need a stronger focus on childcare and expansion of the labour market for example, in order to meet the needs of young workers. The same applies for more specific and more local demands. The case studies for example revealed initiatives tackling the need for an inclusion of learners with a migrant background (*Lernhaus*). While this need can be found in different countries around the world (defining it's relation to the cross-cutting theme of migration), it is of particular relevance for international or intra-national regions facing higher levels of immigration. In order to create a coherent picture, country specifics and regional differences need to be taken into account as done in SI-DRIVE based on findings of the State of the Art Report and case studies. Moreover, this aspect does also point to the variety of social innovations and their various contexts. Furthermore, it illustrates why social challenges, needs and demands can be tackled effectively by locally rooted bottom-up initiatives. They are part of the respective contexts and they often have a better understanding of the needs of learners and beneficiaries and how to access solutions. Policy-makers and institutions can benefit from these capabilities as they are often limited by their top-down perspectives and regulations.

Social demands as part of innovators' living environments

The bottom-up innovations in Education and Lifelong Learning looked at in the case studies are often linked to specific needs and resulting demands of specific groups. When innovators are directly confronted with a social demand and the people affected by it, they are particularly aware of it and personally concerned by its importance. A social need or demand might then be linked to tangible consequences and are given a face. This could affect teachers as well as parents or other actors capable of creating change. The in-depth analysis of *JAKOM* revealed the role of individual engagement based on the awareness of an individual innovator who then created new technologically framed practices for learners with autism. The intrinsic motivation for developing this innovation was based on the experiences made with a family member who faced disadvantages due to his autistic background. This course of events illustrates that innovations in Education and Lifelong Learning with a focus on specific demands can be rooted in the individual living environment of innovators.

Social innovations are linked to various ambitions and goals

As improvement in Education and Lifelong Learning is a key challenge of modern societies for social inclusion, societal participation and economic competitiveness, social innovations are linked to various ambitions and goals:

- Social inclusion of **disadvantaged groups** is a key challenge tackled by social innovations. The **empowerment and inclusion of disadvantaged persons** in society by means of providing equal access to education is an important ambition (for instance, considering migration streams in Europe and educational infrastructures in so called underdeveloped countries).
- "Leave no child behind" is becoming an important statement. Ambitions are therefore related to **equal opportunities and access to education** as well as alternative learning arrangements. Moreover, all children should receive the support needed to be included within the education system.
- Ensuring a better **match between economic demand and supply of school leavers** by increasing the critical mass of people with up-to-date qualifications is of high importance. This leads to a better collaboration between industrial and educational institutions in order to enhance the educational profile of pupils.
- For effective social innovations to take place it is important to enhance and support **cooperation and synergies of various actors at a regional level**. This also implies improved communication between the stakeholders.
- There is a need for **more flexible, tailored and learner-centred education**.
- The comparability and **recognition of the different educational systems** as well as the degrees obtained by students should be an ambition for the future. This also implies **enhanced recognition and appreciation of diversity**.
- **More flexibility at institutional level** is clearly needed. Hence, room for adaptive capacity building and distribution of knowledge must be given.
- **Teachers' education** should be updated (constantly) according to upcoming needs (e.g. ICT, migration). Thus, teachers should be motivated, qualified and open-minded (to new ways of teaching).
- In addition, **digital environments** should become accessible to everyone.

2.2 SYSTEMIC CHANGE

Systemic change itself adds to the challenges and needs for education and lifelong learning. As initiatives have a strong focus on specific local demands (also taking more general global challenges into account) they often have to cope with the respective systems of formal education. Beyond the motivation for changing the framework in order to establish new practices, systemic change can also be a core motivation for initiatives when the current system and its regulations are hindering the inclusion of disadvantaged learners, creating new and more effective learning environments or tackling educational disadvantages. The relation between tackling specific demands, global challenges and systemic change also becomes particularly apparent when focussing on the overarching concept of Lifelong Learning. In cases where innovators realize a need for horizontal (complementary) or vertical (ongoing) education beyond formal levels (primary, secondary, tertiary etc.), they implicitly or explicitly put a focus on systemic change leaving the temporal corset of learning limited to childhood and early adolescence, shifting towards a holistic and cross-sectoral approach, looking for new collaborative structures from a learner's perspective and biography.

Systemic change is addressed in all world regions

Despite the addressed societal challenges and social demands the global mapping of SI-DRIVE show that 47% of the initiatives in Education and Lifelong Learning try to achieve systemic change. This general result is based on a strong focus on systemic change of 44-62% of initiatives around the world, despite Western Europe (see figure 5). It becomes evident that systemic change is of higher importance for social innovation in Northern EU and non-EU countries (compared with

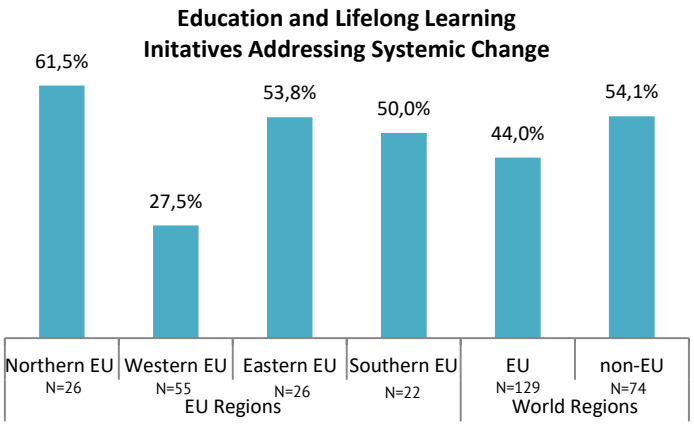

Figure 5: Systemic change addressed by Education and Lifelong Learning initiatives in the world regions

Europe in total), and lower addressed in Western Europe. Possible reasons might be more leeway and higher acceptance of social innovations without changing the system in Western Europe and more possibilities or openness for (genuine) system changes in Northern, Eastern and Southern Europe as well as in some non-EU regions (e.g. Latin America). Additionally, the general significant need for changing formal systems of education than in other policy fields and in specific world regions maybe als0 partly be explained by more system failures and gaps. While the intention to trigger systemic change is sometimes rooted in the challenge for a shift towards a holistic approach, it can also be related to more specific needs in education. The case studies (showing also a wide range of initiatives addressing systemic change) e.g. try to establish new practices of communication between teachers and parents (*Papinotas*[5]), try to entrench new learning methods fundamentally different to current practices (*Jumpido*) or seek to "create systemic change in the approach to the peer violence problem" (Schröder/Kuschmierz 2017, p. 83). As formal education is characterized by established practices, the will to change the system can be rooted in different contexts starting from very specific punctual needs or more general overarching challenges like the needed shift towards more cross-sectoral and holistic approaches (see chapter 3), bridging and overcoming separated responsibilities even of the (primary, secondary, tertiary) education areas and fostering collaboration between different policy areas (esp. education and employment) – sometimes the social innovation is integrated in the system as well (e.g. *Talent Scout*).

Lifelong Learning is addressing systemic change

As concluded in the State of the Art Report, "lifelong learning is far behind to the reality for most European citizens" (Schröder et al. 2015, p. 5) and "only a third of adults across OECD countries participate in non-formal education" (Schröder et al. 2015, p. 19; see OECD, 2012). Results of the case-study report (Schröder/Kuschmierz 2017) revealed that innovations in Education and Lifelong Learning are often developed outside the system, providing solutions complementary or outside the formal education systems. However, despite the related opportunities for providing learning for adults or pre-schoolers making lifelong learning a reality for members of society, analysed innovations with such a focus remained uncommon. Only a few initiatives address education and learning across several stages (training for children and adults of *Fryshuset*). Some others provide guidance and skills in parallel to formal education (e.g. guidance for talented learners of *Talent Scout*) or across generations (e.g. regarding cross-generational outdoor activities of *Friluftsfrämjandet*). But most initiatives started outside the system by civil society or business, for example, focus on collaborative activities in parallel or complementary to formal education with actors from other sectors (private and civil).

Therefore, while first approaches to changing education structures in the direction of Lifelong Learning social innovations could focus on these kinds of improvements much more. A good example is the setting up of new regional / local structures for Lifelong Learning from a learner's perspective or across existing structures (e.g. *HESSENCAMPUS*[6]). Beneath the fact that Lifelong Learning is still not of the same importance and acceptance as formal education in society a possible explanation for the limited orientation of social innovations on Lifelong Learning can be found in the often small scale of the grassroots initiatives. Also the focus of initiatives on local and regional needs and demands, facing very 'tangible' obstacles related to a specific situation with a pressure to act. Thus, meeting their needs requires instant action with a limited time scope oriented towards the gaps and failures of the formal education system. Lifelong Learning (for adults) is more abstract, hence less 'tangible' as it has a wider time scope and is left mainly to the responsibility of companies and the learners themselves. Initiatives reacting to a concrete, local need therefore might not adopt the holistic perspective needed for actively and intentionally adding to lifelong learning. However, the results of SI-DRIVE's global mapping revealed initiatives often also aiming for systemic change and global challenges. This indicates a possible lack of awareness of the benefits and relevance of lifelong learning amongst innovators. However, as the case study analysis conducted in SI-DRIVE focussed on a selection of practice fields, this observation might be limited to these. However, although 17 cases of the mapping were related to the practice field "new strategies and structures for lifelong learning" creating awareness for the capabilities and importance of Lifelong Learning is needed in order to initiate more initiatives in this direction.

[5] In the following examples out of the listed case studies in the annex (see chapter 9.1) will be named in italic letters. Further descriptions of the cases could be found in Schröder/Kuschmierz 2017.

[6] HESSENCAMPUS is a case part of the global mapping, but not chosen for the in-depth case studies of SI-DRIVE. For further information see Schröder 2015.

2.3 CROSS-CUTTING THEMES: HUMAN RESOURCES, KNOWLEDGE AND EMPOWERMENT ARE THE MAIN ISSUES

Beside societal challenges and social need social innovations in Education and Lifelong Learning are related to diverse cross-cutting themes. Some of these topics are already mentioned as societal challenges, also relevant for local demands: migration, gender, equality and diversity, and demographic change are tackled as well as human resources and knowledge.

Cross-cutting themes illustrating the relation to societal challenges

Many of these themes illustrate the close relation of global challenges to local or regional social demands. Human Resources and knowledge development is linked to the needs of a "knowledge society". At the same time, it needs to be transferred by formal institutions and beyond. Therefore, when there is a lack of teaching relevant knowledge demands are triggering innovators to find new solution within formal education or beyond. This aspect is particularly relevant for technologies and knowledge related to its production, further development and usage. Another cluster of cross-cutting themes can be found in addressing inequalities. Hence, empowerment, gender, equality, diversity and challenges due to migration are relevant for initiatives in Education and Lifelong Learning. Furthermore, demographic change is a recurring theme as it is also affecting societies around the world but in different manifestations as some countries are facing ageing societies and others are facing a growing proportion of young citizens. Social entrepreneurship, economy and enterprises are creating a new space to tackle social needs in a different business related way. As a result, initiatives might manifest as social enterprises incorporating social entrepreneurship in the framework of social economy. Another framework condition (which will be further discussed in chapter 5) is governance, showing the relevance of new, collaborative governance approaches (instead of government by the formal education system).

Knowledge, empowerment, gender, equality and diversity are the most important themes for social innovation in Education and Lifelong Learning

The analysis of data gathered in the global mapping (also compared with the results in total) reveals a strong focus of initiatives tackling the cross-cutting themes of human resources, knowledge and empowerment (see figure 6). As education and learning are practices related to human resources improvement and knowledge transfer as well as to capacity building and empowerment, this result validates the assignment of initiatives to the policy field. Beneficiaries of social innovations are empowered by knowledge and by gaining skills which is important for managing their working life but also their private sphere. Similarly, empowerment by knowledge and skills can also lead to inclusion of disadvantaged groups within society. Hence, there sometimes is a link between the less often addressed theme of migration and the prominent topic of empowerment. Results of the in-depth case study for *Lernhaus* illustrate how the inclusion of learners with a migrant background is realised by social innovations. Apart from these also gender, equality and diversity are more relevant cross-cutting themes than in other policy fields - revealing the awareness of initiatives for topics related to structurally disadvantages groups. Tackling topics like gender equality reveals initiatives' contribution to social change beyond the scope of education.

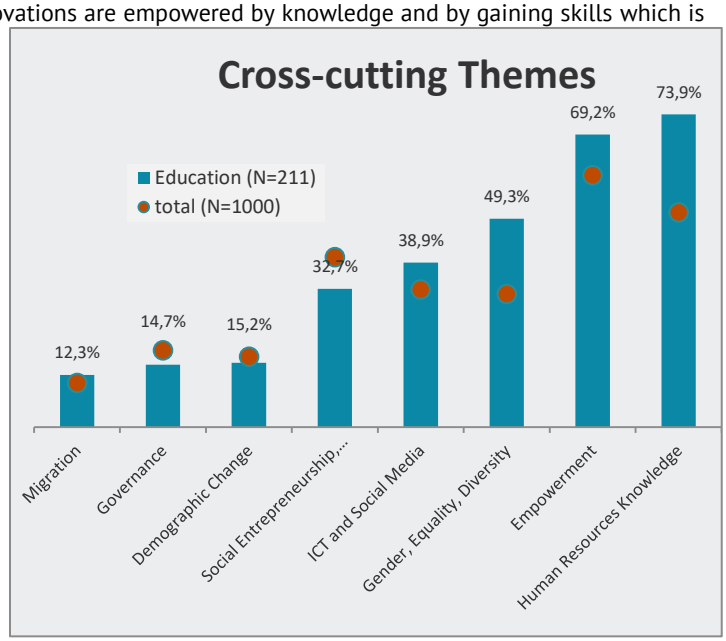

Figure 6: Cross-cutting themes

2.4 CONCLUSIONS

As SI-DRIVE's theoretical foundation already anticipated, initiatives in Education and Lifelong Learning are confronted with a **diverse landscape of local social demands and societal challenges** (demographic change, vulnerable groups, continuously updated skills and qualifications, equal opportunities, digital inclusion, etc.) with a **high variety of ambitions and goals** - sometimes with a **need for systemic change** as the **formal education system is the main reference point** for most of the innovations. Social innovations are answers to specific (sometimes personal experienced) demands of tangible target groups tackled by inventing, establishing and diffusing new practices – leading to new knowledge and empowerment of the people concerned.

When innovators are trying to create change in education with the aim of establishing new practices, they are often confronted with the formal system, its specifics and restrictions (see the empirical results of the following chapters). Hence, changing formal education is sometimes key for new solutions in Education and Lifelong Learning. This is particularly important for new social practices that initiatives are trying to institutionalize or to integrate additionally in and compatibly to existing education structures. Moreover, societal and global challenges for education reveal the importance of a **paradigm shift towards a holistic approach**, fostering **cross-sectoral collaboration and learner-centred lifelong learning**., There is therefore a need for a stronger focus on **learning beyond formal education**, comprising addressing systemic change as well. This is a key topic in education in general which needs to be in focus in order to unlock the full potential of new learning, supported by new practices developed by (bottom-up) social innovations.

3 CONCEPTS AND UNDERSTANDING

Despite the growing numbers of social innovation in the last years there still is a **lack of awareness** of Social Innovation (even by a lot of existing initiatives that do not appoint themselves as such); its **concept** is still widely **unknown, understood and not reflected** (chapter 3.1). This is leas to a niche existence of social innovation initiatives and solutions and a highly **undeveloped potential** for Education and Lifelong Learning.

Societal challenges and (local) social demands (as depicted in chapter 2) are the origins and starting points of social innovations in general and in Education and Lifelong Learning, leading to a high variety of different initiatives and understandings of Social Innovation. The common understanding in SI-DRIVE is based on the comprehensive definition and the concept of "**practice fields**", categorizing similar initiatives under a common topic (chapter 3.2). Beside this, the **holistic perspective** of social innovations (chapter 3.3) addressing problems from a learner's perspective and the **compatibility to the formal education** system (chapter 3.4) are relevant elements of the recent concepts and understandings of Social Innovation in Education and Lifelong Learning.

3.1 MISSING AWARENESS AND UNKNOWN CONCEPT LEAD TO AN UNEXPLOITED POTENTIAL OF SOCIAL INNOVATION

Although there is a growing number of social innovations in Education and Lifelong Learning within the last ten years (more than 80% started in the last decade, see figure 8) the concept and potential of Social Innovation is still not reflected in the improvement of Education and Lifelong Learning, esp. related to the formal education systems and new lifelong learning structures. Initiatives often just do not call their practices Social Innovation, even they are.

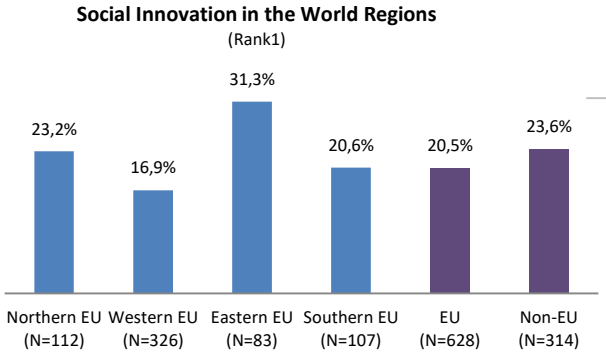

Figure 7: Proportion of Education and Lifelong Learning initiatives (rank1) in world regions

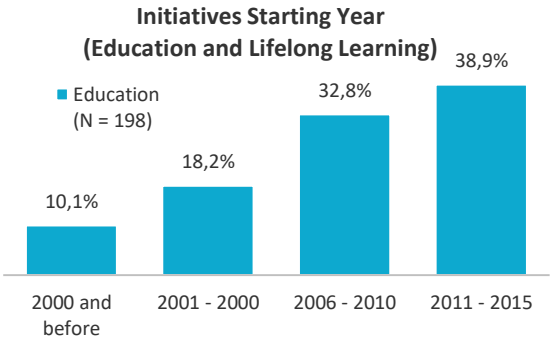

Figure 8: Starting year of the initiative

Social innovation initiatives focusing on Education and Lifelong Learning are more prominent in Eastern than in Western Europe (see figure 7), covering more or less the same challenges and social needs in Europe and other regions and differ mainly by the status of development within the (formal) education system related to different priorities depending on the national challenges and cultures (change from a state dominated system to regional responsibilities, e.g. Gulf States, former communistic Eastern countries) (Schröder et al. 2015).

There are no systemic or systematic innovation and incubation structures for social innovations in Education and Lifelong Learning. Despite the increased general awareness of **social innovation,** its recognition and policy support especially in Education and Lifelong Learning is still low. In this policy field Social Innovation is not a widely spread concept and therefore there are only few national, regional or local policies and subsidies which aim to support it. Compared with the high awareness of Social Innovation especially in Latin America (see Domanski et al. 2017) and the case studies *Papinatos*, *Hospedaje Estudiantil en Familia, Abuelas Cuentacuentos*) in

Europe (beside a lot of programs inherently fostering social innovations) only a few programs explicitly related to social innovation in Education and Lifelong Learning could be found (e.g. the regional NBank Social Innovation Funding and Support Program[7]).

As a kind of hypothesis there is an emerging tension that seems to hinder social innovation development: While the formal education system is too rigid and too centralized, the non-formal and informal lifelong learning of adults is too decentralized and not structured enough. In other words: On the one side formal education is highly regulated with different responsibilities, not working together with actors from other education areas or actors outside the education system; on the other side lifelong learning (of adults), continuous vocational education and training, non-formal and informal learning are mainly individual, market or company driven or characterised by diffused or voluntary responsibilities and missing transparency and counselling (no or marginal structures or systems for Lifelong Learning from the cradle to the grave). But there are movements overcoming these restrictions: E.g. Finland seems to some extend very close to the social innovation concept, because of its high involvement and consideration of stakeholders (bottom-up), the given autonomy and the permeability without dead-ends in the formal education system (Schröder et al. 2015, p. 32). Another approach could be found in the HESSENCAMPUS initiative in Germany (Schröder 2012).

3.2 PRACTICE FIELDS COMBINING SIMILAR SOCIAL INNOVATIONS

"Many Policy Field Reports confirm that the societal and governance systems, in which the social innovations are embedded, are complex and the problems addressed are deeply rooted in multifaceted societal and structural issues. At the same time, we have to admit that many initiatives are small in scale: Only few of the initiatives are leaving the narrow context of the initiative and the local region, and if so, mainly scale within the own initiative (increasing target group or number of partners) or transfer within the narrow local and regional level … Therefore - as we emphasized in the Critical Literature Review (Butzin et al. 2014b, p. 154) - to better understand the relationship between social innovation and social change we have to analyse the social embeddedness of any innovation in a dense network of innovation streams. In the SI-DRIVE project we have developed the concept of *the practice field* as a general type of different projects within one thematic area (see chapter 2.2.1). Only by taking the broader perspective of a practice field we will be able to get deeper insights into upcoming trends and emerging areas for social innovation and their impact on social change." (Howaldt et al. 2016, p. 23)

Based on the SI-DRIVE definition of Social Innovation and the practice field concept (see chapter 1.1.1) a highly diversified list of more than 90 practice fields across all the seven policy fields were mapped within the 1.005 social initiatives. These practice fields are a first step towards a typology of Social Innovation, which have to be further discussed, especially concerning their distinction within the policy field and across the different policy fields (especially in relation to practice fields elaborated in the Employment and Poverty Reduction field). Table 4 summarises the recently defined practice fields in Education and Lifelong Learning. Looking at the topics of the practice fields the already mentioned cross-covering of initiatives, addressing more than one policy field becomes evident. In particular, this applies to the policy fields Employment (e.g. entrepreneurship and occupational orientation, transition management) and Poverty Reduction and Sustainable Development (e.g. reduction of educational disadvantages). However, this topic will be further explored in the next chapter 3.3.

Based on these societal challenges and the related social demands (see table 2, chapter 2.1.3) the partners defined and selected twelve recent and empirically relevant practice fields for Education and Lifelong Learning. The listed practice fields could be seen as a (meso level) conglomerate and a link between the broader societal challenges of Education and Lifelong Learning (macro level) and the single social initiatives based on social needs (micro level).

[7] https://www.nbank.de/%C3%96ffentliche-Einrichtungen/Ausbildung-Qualifikation/Soziale-Innovation/index.jsp

POLICY FIELD / PRACTICE FIELDS	NO. OF INITIATIVES
Education and Lifelong Learning	**211**
Reduction of educational disadvantages	44
New learning arrangements, interactive education	41
Entrepreneurship education and promotion	18
Alternative forms of educational activities and training (towards consult, mentor)	17
New strategies and structures for lifelong learning	17
Occupational orientation, early pupils career planning	15
New digital and virtual learning environments	13
Quality improvements, setting of new educational standards	13
Collaboration of different actors (local, regional, national and international)	11
Pupils support	10
Transition management	7
Digital inclusion	3
Others	2

Table 3: Practice Fields in Education and Lifelong Learning

Completely new and adopted solutions are both relevant (innovation streams)

Special attention should be paid not only to the development of brand new ideas and solutions but also to the transfer and modification of social innovations, especially when it comes to multiple innovation streams, fed by an evolutionary interplay of invention and imitation. "So there is a strong interactivity in the process of innovation in which imitation and adoption of solutions from other projects and initiatives plays an important role and creates new streams of innovation that mutually reinforce each other" (Howaldt et al. 2016, p. 25). This is underlined by the mapping results: As almost half of the initiatives are creating brand new solutions, almost the same number of initiatives is moderately or significantly modifying existing ones (see figure 9).

As more brand new solutions are developed in the policy field of Poverty Reduction and Sustainable Development (two out of three initiatives) in Education and Lifelong Learning 45% of the initiatives are inventing new solutions, but 55% are adopting and (mainly moderately) improving existing solutions to solve challenges and demands. In this respect, practice fields are a good ground for emerging innovation streams, based on bundling similar innovations (new and adopted ones), creating a practice field "milieu" for initiating, exchanging, scaling, diffusion and further developing of good practices.

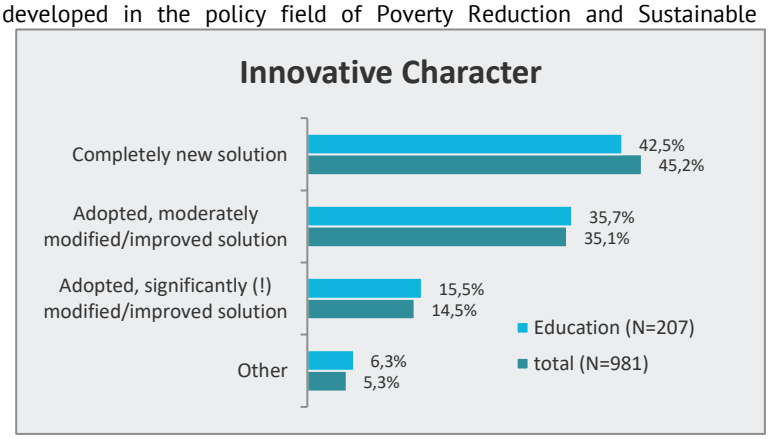

Figure 9: Innovative character

Cross-sector engagement and user involvement as part of the Social Innovation concept

All the sectors are highly engaged in all the policy fields, this is also the case for Education and Lifelong Learning (see figure 10 below). This cross-sectoral engagement has to be seen as a conceptual element of Social Innovation in general, also relevant for initiative's success (leading to a **Social Innovation Ecosystem** approach, elaborated in chapter 5).

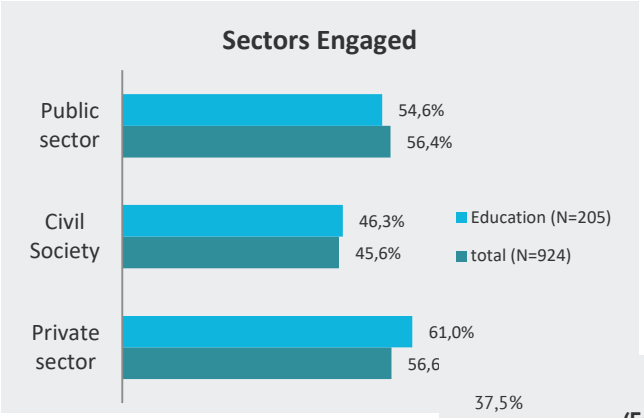

Figure 11: Sectors engaged

Learning do have (not considerably different to the results in total) various roles and functions within the initiative Mainly they are engaged in knowledge and solutions provision, and to some degree they are engaged as co-creators, innovators or adaptors; however, funding is not their part (see figure 11). In accordance with the cross-cutting themes user involvement is part of the human resources and knowledge issue tackled by social innovations as well as a relevant conceptual element for the empowerment of people concerned.

Another element of the concept of Social Innovation is the significant involvement of users and beneficiaries in the development process. The analysis of the cases for which information on user involvement is available revealed less integration of users in Education and Lifelong Learning (58%) compared to the other policy fields (about 70-78% user involvement indicated, only in Employment with 52%this is lower too). The users or beneficiaries in Education and Lifelong

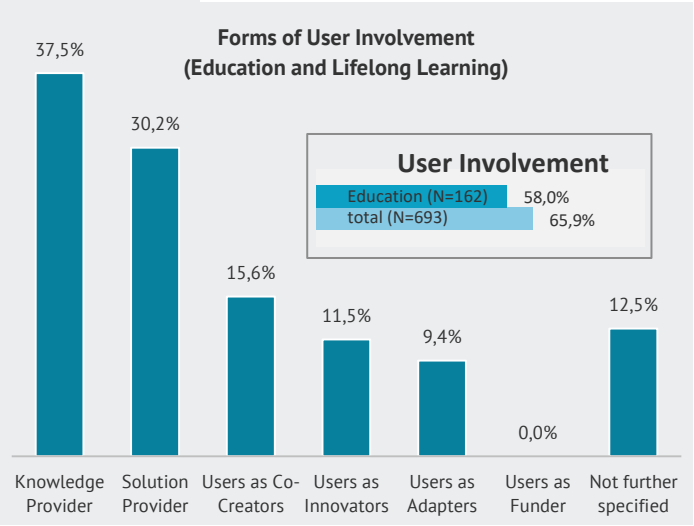

Figure 10: User involvement

3.3 HOLISTIC PERSPECTIVE FOR CROSS-SECTORAL SOLUTIONS

The theoretical concept and the comprehensive understanding of Social Innovation and the empirical analysis "reveal a strong need for social innovation to overcome the policy area related societal challenges and social demands. In every policy field we find a growing number of social innovation initiatives addressing a wide range of distinct social needs and societal challenges. Moreover, it appears that social innovation initiatives commonly are not implemented in a single policy, but affect also other policy fields. In this regard, a distinction must be made between the motives of social innovators on the micro level, i.e. response to a local social need or societal challenge, on the one hand and the core and associated policy fields as a macro level *frame of reference* on the other hand, combining e.g. employment or environment related activities with education measures to solve a local social demand." (Howaldt et al. 2016, p. 21)

Anticipating that social innovation most likely will cover more than one policy field the mapping offered the possibility to rank the initiative into the main three policy fields (as a maximum) for which a initiative is offering solutions (rank 1 was the most important policy field). The analysis of the combinations of the ranking led to a high number of interrelation between the policy fields (see figure 12). Concerning Education and Lifelong Learning there is a high connectivity to solving overarching problems combining educational solutions together with employment and poverty reduction, and enriching knowledge about environmental solutions:

- A lot of cases combine solutions for Education and Employment by focusing either on employment or on education (ranking 1).
- *Poverty Reduction and Sustainable Development* is a kind of cross-cutting policy field that is related to *every* other policy field, but mainly addressing Education, Employment and Health and Social Care. In Education and Lifelong Learning especially the practice field "Reduction of educational

disadvantages" is of cross-cutting relevance, mainly connecting education and poverty reduction and sustainable development.

- *Environmental* initiatives often integrate educational activities, providing relevant knowledge on climate change and environment protection.

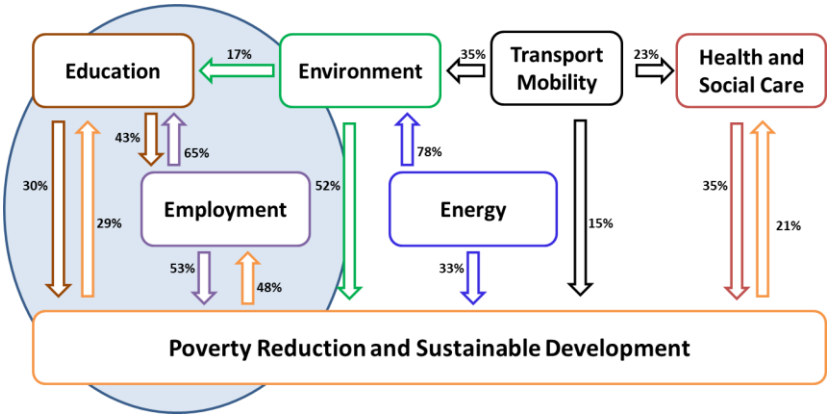

Figure 12: Connectedness of Education and Lifelong Learning to other Policy Fields

This interrelation also reflects the **holistic concept** of the initiatives integrating relevant stakeholders of **other practice or policy fields** (further developed in chapter 5). Although the selected cases are mainly related to improving the formal education areas (primary, secondary and tertiary education), it is clear that, instead of an institutional or education system related standpoint, they are focusing on and looking for solutions from the **learners' perspective and demands**. For instance, the social innovation cases focus not only on the reduction of educational or social disadvantages in a broader sense, but on the empowerment of people concerned, finding **"solutions for the learner and with the learner"**. Therewith, top-down or system governance is enriched by social innovations with a bottom-up perspective of learners and **learning processes** (by people concerned, by the given demands, by taking up problems from the ground, not solved by the education system and institutions). Hence, they are a way to overcome the existing innovation barriers (of the formal education system and its silo thinking and acting).

3.4 COMPATABILITY AND SUPPORT OF THE FORMAL EDUCATION SYSTEM IS OF HIGH RELEVANCE FOR THE SUCCESS OF INITIATIVES

The main element for social innovations in Education and Lifelong Learning in all stages (from the idea over invention and implementation to scaling, institutionalisation and diffusion) is the **interrelation and compatibility of innovative initiatives with the (formal) education system and policy**. Compatibility with the education system, involving public sector actors and considering path dependencies are relevant for scaling, diffusion and sustainability of social innovations. If not compatible, social innovations in the selected practice fields face challenges in developing, surviving, impact, scaling, institutionalisation and diffusion. Consequently, there is mainly a particular relation up to a close dependency from the (formal) education system, independent of idea generation, implementation and further development:

- Ideas for innovations are mainly informed by gaps and failures of the formal education system
- Intervention and implementation have to be checked with actors of the formal system and policy
- Institutionalisation and diffusion are mainly depending on the system actors' toleration, acceptance and support and system integration.

As the most cases show, there is a concentration on the improvement of the formal education sector, attending to update and improve the education system (e.g. infrastructure, teaching materials, quality of teaching, accessibility, target group disadvantages and company needs). Therefore, social innovations (or the development of new practices) are mostly done in relation or compatible to given (formal) structures. Innovations going beyond or changing given formalities, structures and procedures are mainly restricted to existing (legal) leeway or the necessity to change formal and legal structures (incl. law). In regard to filling specific gaps of the system, there are a lot of social innovation initiatives which have to relate their efforts to the formal, public education system. "To put it albeit somewhat over the top: System organisations (ministries, schools, etc.) determine to a high degree the institutionalisation and diffusion of social innovations coming

from outside the system, only a few find their way outside of it (e.g. the nature and outdoor based association *Friluftsfrämjandet*)." (Schröder/Kuschmierz 2017, p. 105)

Lifelong Learning and Vocational Education and Training is not in the focus of social innovations

As a consequence of the concentration and relation to the formal education system, other lifelong learning (including continuous vocational education and training, informal and non-formal learning, further or adult education) is not in the focus of most social innovations. Lifelong learning as a perspective is reflected only in a marginalised way in the practice fields chosen, esp. when it comes to non-formal and informal lifelong learning of adults. However, this does not mean that lifelong learning doesn't play a role in social innovation of this policy field at all: There is a specific practice field "New strategies and structures for lifelong learning" in the global mapping represented by 17 cases recorded. These case studies reveal, that cases which are not oriented at the formal education systems are tackling issues like intercultural exchange, life managing skills, non-typical forms of education, social integration and empowerment of groups on risk (including gender equality, women at work), diversity and antiracism, community engagement and "one shop approaches", and combining education with manufacturing.

But in the framework of the transition from an industrial to a knowledge-based society and its corresponding concept of Lifelong Learning, a more comprehensive orientation of learning and support structures throughout the whole life span is needed. These must reflect the increasing heterogeneity of work, education and living biographies of adult people. The individual learners' personality (like most of the social innovation cases refer to) and the learning process (not just learning phases or punctual activities) have to be the starting and reference point for every learning environment.[8] It would be helpful if Education and Lifelong Learning were to be oriented towards a comprehensive understanding of learning (taking into account all areas and forms of learning and competences) and the learners personality, environment and biographical history. This leads to a **paradigm shift** from an institutional perspective to a strict learner's and learning process perspective, and will lead to new overall and comprehensive structural principles within the whole education system, not just the formal one.

3.5 CONCLUSIONS

The specific context of social innovations in Education and Lifelong Learning is mainly **dominated by the (*formal*) education system as a reference point**, affecting tangential societal *function systems* (such as politics, law, and economy), different *subject areas* (disadvantaged groups, family, employment, etc.) and substantive didactical *concepts of reference* (e.g. self-actualisation, individual learner personality). SI-DRIVE's results clearly show that new social practices in Education and Lifelong Learning are developed in an **incremental** way, mostly in relation to the formal education systems, structures, frameworks and policies - serving local demands and using leeway on the regional/local level. Brand **new practices** appear as well as **copying new solutions** by modifications. The defined **practice fields** are serving an excellent common ground for upcoming innovation streams, further initiating, developing and diffusing similar innovative solutions (new and adopted ones). In this respect, practice fields could be seen as a meso level combining similar initiatives / solutions (micro level) for solving societal challenges (macro level). Setting up of such collaboration platforms and networks could establish new incubation and imitation streams, helping good practices being adopted and diffused.

However, there is a **lack of awareness** of the concept and potential of Social Innovation in Education and Lifelong Learning, leading to a missing systematic and systemic support for solving social demands and coping with societal challenges. The formal system is **not aware of the co-existence of Social Innovation**. Following a learner-centred approach is demanding a cross-sectoral and **holistic approach** that should foster the **Lifelong Learning perspective** (beyond the formal education system) much more in the future. The latter is also of relevance for social innovations, which should take this perspective into account more strongly than nowadays.

[8] For a comprehensive approach to establish new regional-local structure for lifelong learning, based on such a paradigm, see Schröder 2012.

4 RESOURCES, CAPABILITIES AND CONSTRAINTS

The potential and development of social innovations is dependent on the resources, capabilities and constraints, drivers and barriers they face. Future oriented (social) innovation friendly environments and policy recommendations have to reflect this, to initiate, improve and (sometimes) institutionalise social innovations and to foster and support social change.

The Comparative Analysis of the global mapping already stated, that "resources, capabilities and constraints are a relevant part of the SI-DRIVE pentagon and to a great extent related to another key dimension: actors and networks, civil society or citizen engagement, user and volunteer involvement and the embedding of the social innovations in policy programmes, networks, umbrella organisations and social movements. Resources, capabilities and constraints include also cross-cutting themes like (1) funding, financial resources and regulations, legal conditions, (2) human resources, knowledge, empowerment and (3) scientific research and obtainable results (comprising external expertise for the development, professionalization and diffusion of social innovations)." (Howaldt et al. 2016, p. 56)

Against this general background the specific resources, capabilities and constraints for social innovations in Education and Lifelong Learning are summarised, based on the main empirical results concerning drivers and barriers for the initiatives and defining the components for a strategy to deal with sourcing resources, developing capabilities and overcoming constraints:

- Resources: Personnel and financial resources as the backbone of social innovations
- Capabilities and drivers: Societal challenges and (local) social demands are the origin of social innovations driven by individuals, groups or networks
- Constraints and barriers: Path dependencies and the dependency on the formal system is restricting, limiting, cutting back and declining the potential of social innovation.

4.1 RESOURCES: PERSONNEL AND FINANCIAL RESOURCES AS THE BACKBONE OF SOCIAL INNOVATIONS

The resources for social innovations in Education and Lifelong Learning are mainly financial and human ones. *Financial funds* largely determine a successful initiation and implementation, and in a later stage are guaranteeing scaling and sustainable institutionalisation. *Human resources* are the foundation and driver of social innovations: intrinsically motivated people (often with charismatic leadership) or networks of people, gaining support of civil society, volunteers, professionals, and policy and economy agents.

Mix of funding sources: Trying to "get what is possible", relying on partner and own contributions

In general social innovations are dependent on a mix of funding sources, not because this is a chosen economic strategy by diversifying risk and minimizing dependency from just one source, rather as they try to get what they can get. This is also the case for Education and Lifelong Learning (see figure 13); however, with some major differences in the access to specific funding sources: Compared with the other policy fields, initiatives in this area depend more on partner contributions and donations of companies, individuals and foundations and are less oriented at economic return and regional public funding.

The main funding for Education and Lifelong Learning initiatives besides the already mentioned partner and personal contributions, donations and foundations comes additionally from national funding; besides economic return fees or crowd funding are less important. Private companies support more often initiatives in Education (50%) than in other policy fields (ranging from 37% in Poverty Reduction and below 25% of the others.[9] The interest of private companies is lower in Eastern and Northern Europe (about 30%) and higher in non EU countries 66%. It is mainly based on the companies' need of getting highly and demand oriented educated

[9] See Howaldt et al. 2016, table 8.

people, often fostered by corporate social responsibility (CSI) activities. In some case the economic sector is – in line with civil society – expressing its dissatisfaction with the ability of the formal education system to react to the actual needs of the companies (quickly) and the missing practical relevance of the curricular for economic challenges (e.g. skills mismatch, contemporary needed skills, proactive measures to adjust the university curricula to the needs of regional companies, see e.g. the case of *APM*, attracting and training highly qualified people throughout different education phases, see *SEC*).

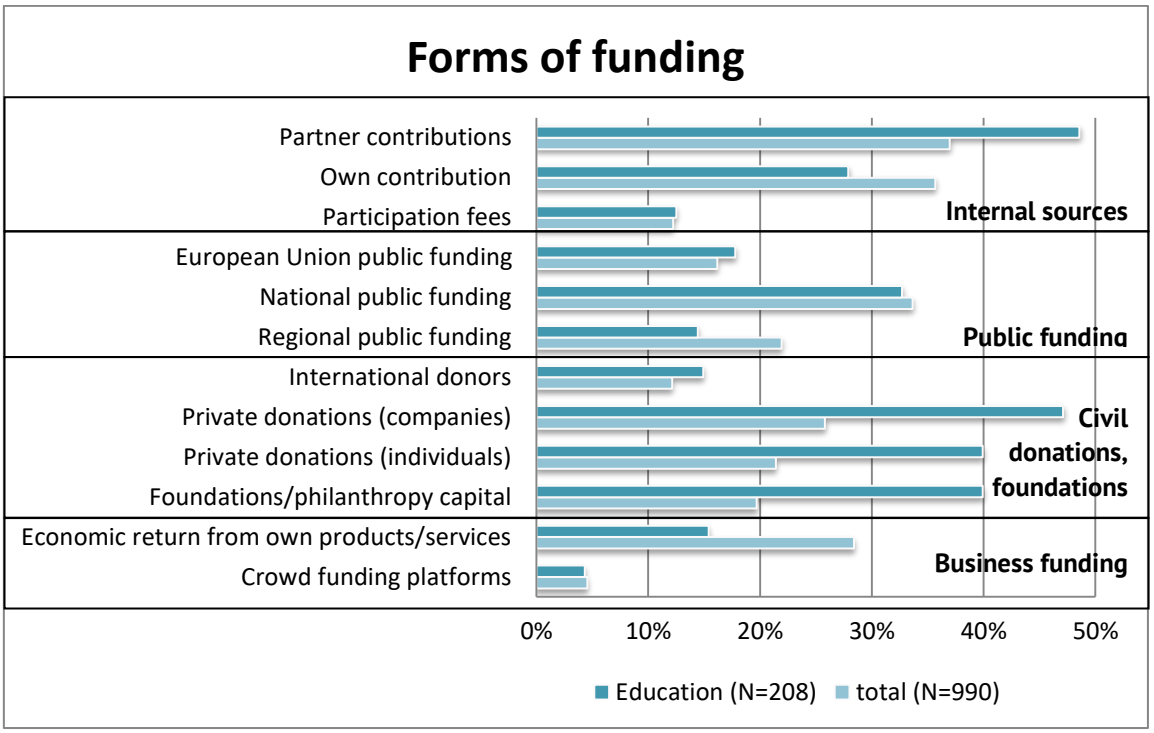

Figure 13: Mix of funding sources

The struggle for funding is – in some way, in some areas - leading to a competition among the initiatives for funding (via public programs). This is also given for public awareness, policy recognition and support, volunteers, clients (e.g. universities in a region are competing for students – Talent Scout). It comes to competition for funding mainly of small initiatives with larger NPO/NGO organisations, which are more professionalised in accessing funding mechanisms and proposals. Compared with these organisations, the small initiatives are disadvantaged "in the competition for public money" (even small initiatives sometimes are more efficient in reaching impact than the big ones). Awards are important sources for funding and publicity in the field of grassroots initiatives– leading towards marketing and impression management, but this is also introducing competition where collaboration would be more appropriate.

Based on the different funding sources and the stages of the social innovation process from implementation to sustainability and institutionalisation there are nameable resources the initiatives can make use of (see figure 14): While 20% of those initiatives who gave information about funding (about half of the education cases and one third in total) do have a yearly budget of more than 1 million Euro almost half of the initiatives in Education and Lifelong Learning are of small financial scale, only having a budget of up to 10.000 Euros only. Also compared with the yearly average budget of 12.3 million Euros of all initiatives in total and differentiated by the policy fields it has to be stated that the lowest financial resources could be found in Education and Lifelong Learning (∅ 1.6 million Euros), in this policy field social innovations have considerably less money than in all the other policy fields. This is of high relevance because it justifies that most of the initiatives are focusing on small local solutions and have only a small reach up to now (see chapter 6.2, transfer and scaling activities).

Concerning the development paths of the innovations (chapter 6.1) it has to be stated that funding is the main push (or downturn) for the development of the initiatives to restart, implement and scale (e.g. *TBfW*, *Lernhaus*, *Jumpido*, *Teach for Lithuania*). In the starting phase (idea/inspiration and invention) the innovators are to a higher degree financing the initiatives by their own or partner contributions.

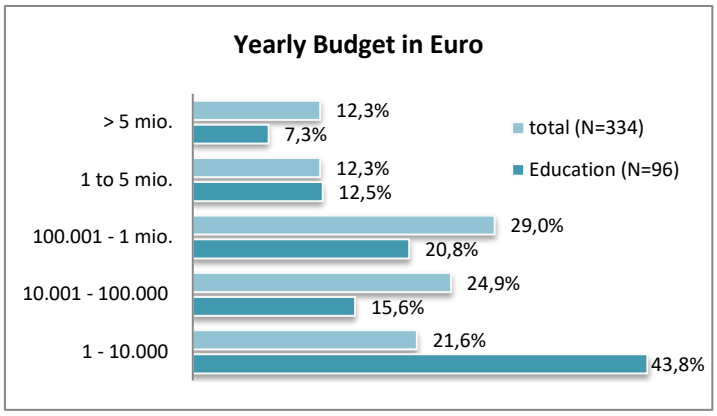

Figure 14: Yearly budget of the initiatives

Human resources, knowledge and empowerment: a relevant reference point, continuously developed within the social innovation process

Besides societal challenges and (local) social demands social innovations are driven by and dependent on human resources: individuals and their engagement, charismatic leadership, knowledge about and experiences with the problem and the target group, access to and acceptance by the target group, and others). Therefore it is not surprising that Human Resources, Empowerment and Knowledge are relevant cross-cutting issues, with higher importance in this policy field: about 70% of the social innovation in Education and Lifelong Learning refer to the two main cross-cutting issues) than in general (see figure 6, chapter 1).

Human resources support for social innovations in Education and Lifelong Learning is manifold when it comes to the actors: regular employees (277 on average)[10] are supported by a notable number of volunteers (758 on average), external experts (124 on average) and others (227 on average). These average figures are based on a wide range of persons engaged, showing that most of the initiatives are of small scale (see figure 15): More than half of the initiatives do have up to ten employees, but two out of three initiatives are supported by more than ten volunteers and up to five external experts.

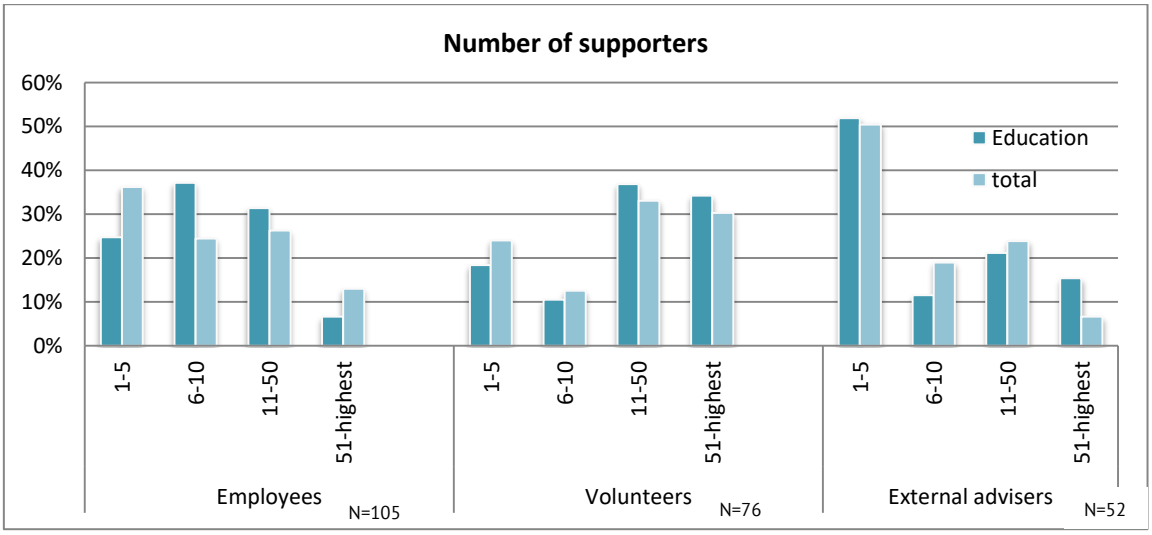

Figure 15: Persons engaged in the Education and Lifelong Learning initiatives

Compared with the other policy fields[11] Education and Lifelong Learning has - besides Poverty Reduction (∅ 587 persons)[12] - the highest number of employees and is supported by a huge number of external *advisers,*

[10] The average is as high as that, because of a high number of employees of a Russian Academy (*SEC*) running a social innovation.
[11] For more details see Howaldt et al. 2016, chapter 4.3.2.1
[12] This high number of employees is due to the fact that there were a few worldwide active development aid NGO´s and similar national agencies related to Poverty Reduction and Sustainable Development.

experts (∅ 124) compared with the other policy fields (∅ 3-21). One reason for the high number of employees and external experts might be the necessity of involving actors of the formal system as "gatekeepers" and that some of the bigger initiatives are fostered by public institutions (e.g. *SEC*).

The case studies reveal that **participation of professionals** with extensive knowledge in education and pedagogy is essential for social innovations in Education and Lifelong Learning, gathering educational researchers and practitioners (e.g. *Educate Me*) to consolidate the models and to contribute to the quality of education and learning. In this respect especially **regional universities** are not solely producers of knowledge, but can act like responsible entities for social change and regional development (e.g. *Talent Scout*, see also *SEC* in the practice field of new learning arrangements). Cooperation with **schools and teachers** (open for the consideration of new models and joint efforts to implement desired change) is very important for system integration of the initiatives from a practical perspective (e.g. *Papinotas, Educate Me*).

Last but not least **charismatic leadership** is of high importance in the almost smaller initiatives analysed in this practice field, in opposition to "collective leadership" of initiatives of bigger entities (e.g. *Lernhaus*) where the management structure is not so much depending on single persons. Therefore dependency on charismatic leadership is in some cases also a burden, because at certain stages of development initiatives have to become independent from the founders to become sustainable. However, the chosen initiatives of this practice field show that it is necessary to have people who can handle trust issues with the target group the best, as being or have been part of the target group and showing by own career that success is possible (e.g. *TBfW, Talent Scout*). Initiators concerned by the problem themselves, of a high intrinsic motivation and close milieu relation are more able to overcome individual (clientele) and institutional (formal education system) resistance.

Mutual and process related learning is a critical endeavor

Learning "on the case" is a threefold key for the social innovation process and enabling impact and sustainability: (1) **Mutual learning** (by doing) of beneficiaries, initiators, volunteers and other people involved (knowledge, skills, competences development), (2) **social learning** of the (almost local) society actors, education system players through recognition, assimilation and implementation of new information and knowledge (absorptive capacity building) and (3) **empowerment and capacity building** based on learning effects and leading to new practices and positioning of the people involved.

Mutual learning and knowledge exchange between the initiatives is of high relevance for social innovation initiatives, within (specific and content relevant issues) and across (general skills, key competences like managerial skills) the practice fields. Therefore besides existing networking *systematic* diffusion platforms (for exchanging approaches, solutions and knowledge) are actually desired.

The **learning processes** embrace new findings and knowledge about users, laws/regulations, relevant actors in the field, scientific knowledge, facts from media, statistics, etc. (**absorptive capacity building**). Most of the initiatives can be seen as a kind of **learning ecosystems** or **mutual learning systems** of all involved actors: Not only the beneficiaries are learning, but also the developers/initiators and the nearby environment (parents, stakeholders, citizens of the local district involved, neighbours, policy makers, company representatives, engaged NGO/NPOs, just to name the main actors of the cases). This includes learning effects of public authorities: e.g. concerning the overcoming of difficulties with law and regulation and recognising boundaries of existing systems (*TBfW*: tax classification of social enterprises, *PROSA*: education gap for elder young refugees).

These learning effects are also a part of **empowerment and capacity building** concerning both the innovators and the beneficiaries, including in the majority of cases further (local and regional) actors (parents, teachers, students, etc.). Up to – to a certain extend - the whole inhabitants of an area (e.g. a quarter or district in the case of *TBfW*) are a target group for empowerment. The empowerment of host women through access to cash income (*Student Lodging / Hospedaje Estudiantil en Familia*) and the empowerment of schools by own budgets (*Papinotas*) are further examples of a kind of local community empowerment.

4.2 CAPABILITIES AND DRIVERS: SOCIETAL CHALLENGES AND LOCAL SOCIAL DEMANDS ARE THE ORIGIN OF SOCIAL INNOVATIONS DRIVEN BY INDIVIDUALS, GROUPS OR NETWORKS

Capabilities and constraints of social innovations are mainly influenced by drivers (including motivation and triggers) and barriers (see next chapter), which are often mutually dependent and interacting (being "two sides of the medal").

Broadly speaking, the term *capability* refers to a (business') ability to use its processes in order to gather its resources and thereby attain the desired innovation objectives (Ottaviano, 2004). According to Hadjimanolis (2003), some key capabilities to innovation are technological ones, such as the capability to produce ideas and to develop them into products. Other skills are marketing and service skills, legal skills to protect intellectual property, the ability to network, to form alliances and to span inter-firm boundaries. According to Lawson and Samson (Lawson & Samson, 2001) - beside the fundamental vison and strategy of an innovation - competences, culture and climate and new technologies are sources for innovation capabilities that are closely related to the SI-DRIVE philosophy. Compared with more market and technology driven innovations capabilities in Social Innovation are more related to empowering people to find solutions for societal challenges and social demands and focusing more on social values instead of economic profit.

In line with the general results of SI-DRIVE social innovations in Education and Lifelong Learning are initiated and enabled by *individuals, groups or networks* who are driven by *societal challenges* (e.g. the reduction of educational disadvantages) or *local demands* (see figure 16 and 17). Related to these challenges and demands, existing gaps and failures of the formal education system and often personal negative experiences in about 60% of the initiatives individuals, groups and networks are found as the main drivers (more often than in total), the others are not so relevant (for less than 5%). ICT is of a higher relevance than in general, because of the practice field "new (digital) learning arrangements".

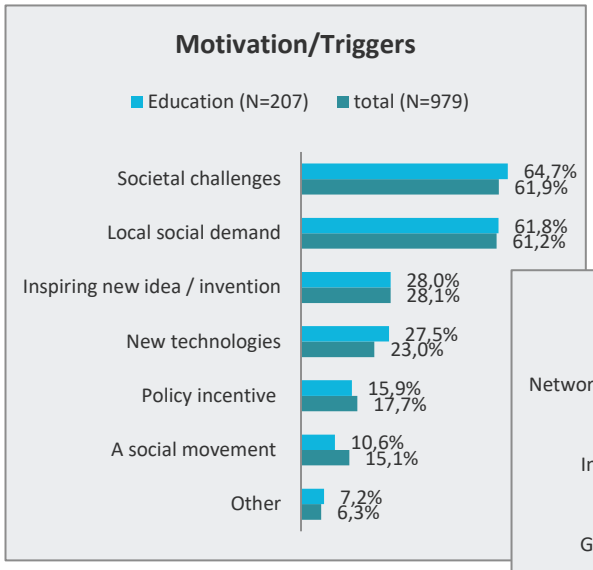

Figure 17: Motivation and triggers starting a social innovation

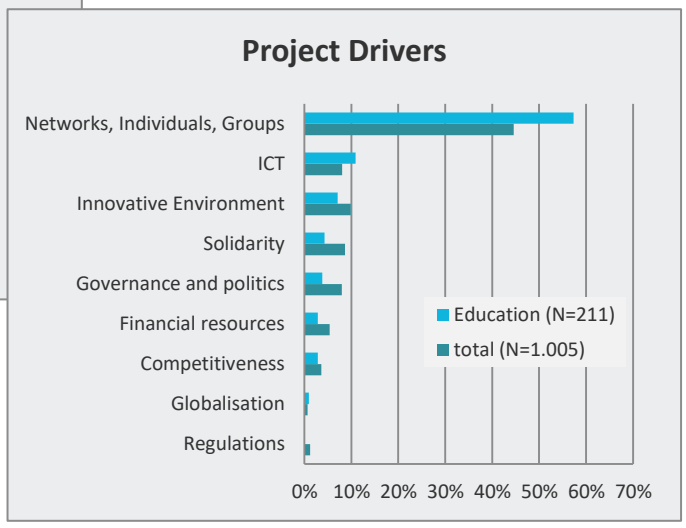

Figure 16: Main driver for social innovations (rank 1)

While there are differences in the triggers for social innovations between the policy fields (but Education and Lifelong Learning is broadly in line with the average)[13] there are only minor disparities between the world regions. In general, no bigger differences between Europe and the rest of the world can be seen (e.g. in Education and Lifelong Learning competitiveness as a trigger is only stated in Eastern Europe).

[13] See Howaldt et al. 2016, chapter 4.2.2.1.

Additional to the results of the global mapping the SI-DRIVE Policy and Foresight Workshops on Education and Lifelong Learning formulated the following drivers pending societal challenges: Necessary social change (e.g. mismatch between economic needs and shaped qualifications), the increasing general demand for the provision high qualified and the process of digitalization, new learning arrangements and new pedagogical approaches (individual, didactical, digital), new collaborative learning platforms as well as co-working and cooperation, and not to forget society's frustration with educational institutions and systems and the self-organisational capacity of the civil society for bottom-up social innovations. Further drivers are:

- The identification of social needs, niches and **system gaps** not covered by the formal education system, e.g. previous negative experiences of social innovators in the educational domain, often accompanied by a frustration with traditional educational methods.
- Related to the formal system granting **leeway for experimentation** and **formal support** have been singled out as a boost for social innovation initiatives.
- The innovator and **individual engagement**: Social innovators with a great extent of **charismatic leadership**, dedication and motivation, trusted by beneficiaries and other societal members are considered important enablers for social innovations.
- **Technology** is complementary to social innovations, facilitating innovation processes, either by becoming part of a solution or by assisting in the communication and knowledge sharing processes of the actors involved.

Process related improvement of capabilities through social leaning, empowerment and absorptive capacity building

In general, **networks** for exchanging information and knowledge are crucial drivers. Especially when it comes to cross-sectoral or cross-policy field initiatives: e.g. in practice fields that are at the interface of education and employment, social services and policies, there exist many relevant established communities and networks; sometimes established in the education system or in the region, and mostly related to target groups (such as refugees/migrants, handicapped people, etc.) which can be taken advantage of. As a result, societal awareness about the importance of Education and Lifelong Learning is built up, social innovations in this field will be appreciated and collaborations and corporations between different actors are taken for granted.

Already stressed as important resource (chapter 4.1), **social learning** plays a key role to the extent that different actors understand the enormous benefits of the initiative, driving the social innovation process and allowing a more rapid expansion. Within social learning processes – based on success stories – integration and institutionalisation of new practices in the formal education system (e.g. *Talent Scout*: new ways of talent identification and support), innovative ideas are absorbed by further system actors (schools, universities, ministries, etc.). This kind of **absorptive capacity building** is an essential part of the initiative's success, integrating existing and developing new knowledge. Activities conducted in the past will inform actions of the future. Mutual learning in a collaborative way, embedding as much different actors as possible will ensure successful and ongoing deployment, activating the potential of social innovations by empowering people (e.g. through self-activation –*Educate Me*, *Fryshuset*).

4.3 CONSTRAINTS AND BARRIERS: DEPENDENCY ON THE FORMAL SYSTEM IS RESTRICTING, LIMITING, CUTTING BACK AND DECLINING THE POTENTIAL OF SOCIAL INNOVATION

Barriers for social innovations named in the case studies and workshops of the policy field Education and Lifelong Learning are the lack of resources regarding qualified people, political support and restricting legislation and a shortage of financial means. Especially the existing government and fragmentation of education areas, the missing continuity of policies and strategies as well as the inflexibility and the persistency of national or regional institutions and systems, a high degree of bureaucracy and administration and missing administrative resources are the main barriers from a formal system perspective.

The global mapping (see figure 18) revealed that funding is by far the main challenge as well as a lack of personnel and missing political or institutional support (at local, national or European level). At the same level as all the cases barriers in Education and Lifelong Learning in Education and Lifelong Learning are named by three of four initiatives (76%). Funding is by far the main challenge for more than half of the initiatives facing barriers, followed by missing political support and lack of personnel (each about 20% of them). Besides lower knowledge gaps, astonishingly legal restrictions are seen as a lower obstacle than in other policy fields. This might be due to given leeway, niche orientation, system initiation or integration of concrete solutions for specific social demands - knowing that changing the system as such would take too much efforts and resources.

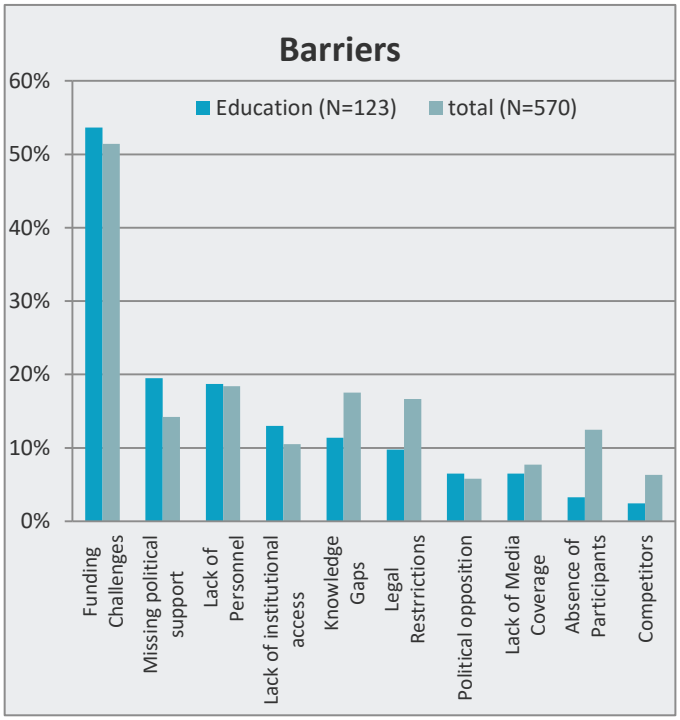

Figure 18: Barriers

Human resources challenges mainly mentioned in the case studies are related to time restrictions of the main actors/initiators (esp. for scaling and diffusion) and to missing managerial competences. Management skills and plans are sometimes supported by professional coaching of social innovation related foundations and academies (e.g. *TBfW*). Moreover, with its step-by-step approach to developing the initiative, much of the learning can be considered as learning-by-doing with trial-and-error (becoming a driver as well, see the chapter before).

4.4 CONCLUSIONS

Personnel and financial resources as the backbone of social innovations are characterised by a **mix of funding** sources, which is not a risk diversity strategy but showing the precarious financial backup of most of the initiatives ("trying to get what is possible"). Human resources, knowledge and empowerment are continuously developed by **mutual learning** of all actors involved within the social innovation process, leading to capacity building and new capabilities. **Empowerment** is an important result and a driver, concerning not only beneficiaries and innovators but even sometimes (parts of local) communities. While societal challenges and (local) social demands are the origin of social innovations driven by individuals, groups or networks the initiatives are strongly **confronted with path dependencies** and the **restricting formal education system**, limiting the potential and effectivity of social innovations.

Resources, capabilities and constraints have to be seen in a **process or developmental perspective**, meaning that they change over time and allocated differently to specific development phases of social innovations (see process dynamics, chapter 6). A **social innovation friendly environment** is demanded (fostering social innovation ecosystems, see chapter 5) - different from other (technological or economic) innovations because of stocktaking of the potential of the whole society. Competition, capacity building and empowerment are driving the innovation process overcoming barriers and constraints. As competition is found between social innovation initiatives for funding, awards and support there is also a kind of competition or **creative tension** between social innovations and the formal sector (about the best solutions to cover system gaps or failures).

The **main drivers** are (local) **social demands and societal challenges** as well as **individuals/groups/networks. Main barriers** are the search for funding, missing (policy) support mechanisms, lack of personnel and (managerial) skills. But barriers and drivers are often two sides of a medal. **Barriers can become drivers:** E.g. the current education systems and institutions are a barrier for new solutions but system failure and gaps could

become important drivers for social innovation; or: public funding is a driver but being dependent on it is a barrier too (esp. if funding is restricted to piloting project schemes):

Again, as already revealed in the chapters before and the upcoming chapters, for most of the initiatives the **formal education system is the reference point**. Therefore, especially in order to generate more impact, to scale and to diffuse, political support is needed for social innovation the initiatives in Education and Lifelong Learning. It is important to consider political programmes directed at improving specific situations of the initiatives. Besides system integration this support has to go beyond "applauded" recognition (*TBfW*: a lot of positive feedback, high level attention and different awards, but no concrete support). Moreover, policies could also help the networking activities of social innovations driven by exchange platforms and support by tailor-made policies.

5 GOVERNANCE, NETWORKS AND ACTORS

The analysis of the data collected in the global mapping of SI-DRIVE already revealed a high relevance of individuals, networks and groups being the main drivers of social innovation not only across all policy fields but for Education and Lifelong Learning in particular (they were mentioned as main drivers for more than 60% of the mapped initiatives, see chapter 4.2). In order to put a reasonable focus on this crucial element of social innovation, in this chapter the different actors of the field, their networks and their modes of interaction within specific governance structures are discussed in regard to their meaning for initiatives with a special emphasis on cooperation and collaboration.

"Governance systems are comprised of actors, their modes of interactions and the institutional frame" (Butzin et al. 2014b, p. 161). Especially in Education and Lifelong Learning governance plays a crucial role because of its formal system relation. However, as indicated above, governance consists of different dimensions. In our perspective, actors are confronted with governance on three different levels:

1. Firstly, there is **political governance**. Social Innovations in this policy field are linked to the formal systems of education to a certain extent. Therefore, the political framework and its leeway for new solutions often coming from outside the system and is an essential framework condition.
2. Secondly, there is **governance within the initiatives**. Different individuals interact in "**communities of practice**" in order to conduct the activities and run the initiatives. Moreover, governance structures help to cope with the challenges initiatives are facing (e.g. by division of labour and competences or by specific modes of governance like charismatic leadership).
3. Thirdly, **interaction between the initiatives and other collective or individual actors** in the field is taking place in terms of networking, cooperation, collaboration but also regarding rejection due to e.g. conservative policies or institutions.

These governance structures are based on specific actors and network constellations, characterised by cross-sectoral collaboration of a high variety of players and stakeholders.

5.1 ACTORS FROM ALL SECTORS OF SOCIETY

Actors relevant for initiatives in Education and Lifelong Learning stem from **all sectors (private, public, science and civil society**) and take over different functions in the field. They are stakeholders (e.g. target groups, public institutions or financers) and initiators, they define the framework and they pursue different interests fostering or hampering social innovation. An interesting finding of the in-depth case study analysis (Schröder/Kuschmierz 2017) relates to the fact that actors from all sectors **have at least once functioned as an initiator in the different practice fields**. Whereas most of the smaller initiatives were initiated by independent individuals (e.g. *TBfW, JAKOM*), also associations or NGO's (Red Cross in *Lernhaus, Storytelling*), business (*Teach for Lithuania*), public organisations and educational institutions, in particular universities (*e.g. Timurovtsy, SEC, Talent Scout*), played a significant role in developing and implementing projects that are aimed at solving social needs.

In more than half of the social innovation case in Education and Lifelong Learning (see figure 19) NGO/NPO´s are engaged, more so than in the entire other policy field. Public bodies (42%) and private companies (33%) are also of high relevance, but a bit less than in general. Important drivers of social innovation are research and education institutions (21%), again more active in Education and Lifelong Learning than in all the other cases. This is especially notable because the universities could take over a more active and formative role in Social Innovation in general (see Howaldt et al. 2016, p 152).

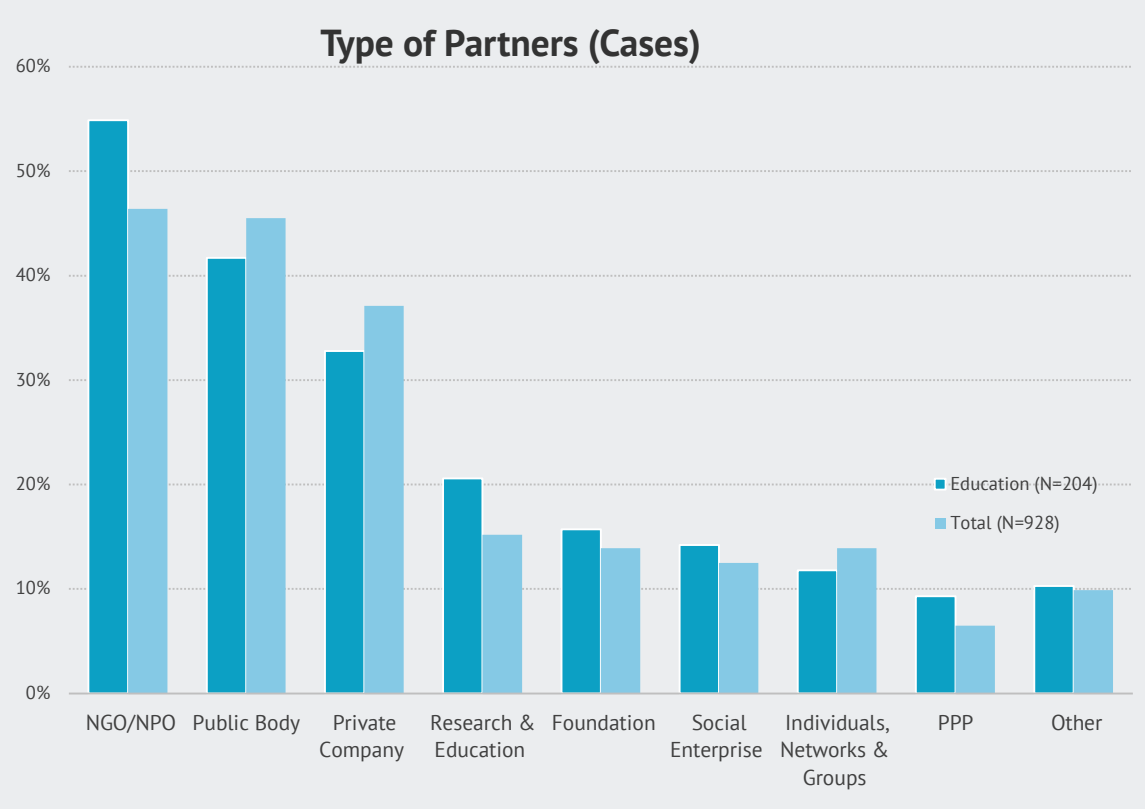

Figure 19: Type of partners engaged (multiple choices)

Moreover, these actors form, provide and maintain **networks**, relevant for initiatives. In addition to already existing networks, initiatives also build their own collaboration networks. Relevant networks can be found in all sectors; besides education and science, there are networks of actors coming from business, civil society and the public sector. When integrated in formalized or informal networks, initiators are able to accumulate *social capital*, i.e. they get access to all resources currently or potentially available to their members (Bourdieu 1983). As a result, initiators access resources coming from members or the network in general. They e.g. benefit from the provision of important knowledge (e.g. managerial competencies, how to access disadvantaged learners, knowledge on the educational needs of a target group) which is related to the specific expertise available in the respective networks (e.g. networks of teachers or learners might provide different knowledge than networks specifically aiming at the support of social innovators in general). Also, networking can grant access to financial resources or personnel. Moreover, networks help innovations to scale and diffuse, when the solution is promoted. In Education and Lifelong Learning, initiatives especially benefit from networks with or of actors from the formal systems of education, providing support in developing and maintaining the solutions.

The different actors active in the policy field and in related networks can be grouped with their specific role within the social innovation initiatives as follows (also see Schröder/Kuschmierz 2017):

Group of Actors	Role for Social Innovations in Education and Lifelong Learning
Governments	**National level:** - Possible social innovator (as seen e.g. in the case of *APM*) - Possible supportive role with room for further improvements (e.g. funding-schemes, promotion, assistance in institutional processes) - Responsibility for (esp. improvements of) legal framework (important for an innovation-friendly environment), integration of successful initiatives in the formal education system **Regional level:** - Higher level of involvement due to the regional focus of many initiatives - Provision of support and advice to initiatives - Provision of financial resources in order to implement solutions - Approval and promotion of projects
NPOs/NGOs/ Foundations/ Umbrella Organisations	- Initiators or umbrella-organisations for initiatives - Important partners for collaboration (assistance through support and promotion, acceleration by taking over or imitation and diffusion) - Pivotal role of foundations in particular (provision of professional expertise, funding, awards, competitions)
Users/Beneficiaries Civil Society Local Communities	- Local communities and civil society are often the initiators of social innovations - Local communities as users, beneficiaries, participants of projects - Human resources (esp. volunteers) - Important role of local communities for legitimation and the 'license to operate'
Companies	- Social enterprises as developers and 'owners' of innovations - Sponsoring (esp. banks; companies in the framework of corporate social responsibility programs), (local) distribution and dissemination of projects - Consultancy services providing professional business knowledge and mentoring for initiatives (e.g. regarding business plans, determination of the target group)
Educational Institutions/ Representatives (e.g. schools, kindergartens, universities and teachers, educators)	- Clients and users of solutions - Facilitators, initiators and ambassadors of new educational practices (implementation, advice, mentoring, development, provision of resources, distribution) - Provision of leeway for testing and experimentation - Gatekeepers for the formal systems of education (esp. relevant for institutionalisation)
Society in General (subordinate level, enclosing all groups and their cumulated interests)	- Demanding solutions for societal challenges (e.g. demographic change, skills shortages etc.) - Cultural background: norms and values lead to expectations relevant for successful institutionalisation of new practices leading to social change

Table 4: Groups of actors and their specific roles in social innovation activities

5.2 COOPERATION AND COLLABORATION AS SUCCESS FACTOR

Cooperation and collaboration are key elements in understanding success or failure of social innovation in general (see e.g. SSIR's series on collaboration)[14]. Engaged in communities of practice[15] actors of social innovations share and learn from best practices and access support and assistance. Thus, in the framework of SI-DRIVE it is considered as a mechanism of social change (see chapter 6.3 and Howaldt/Schwarz 2016). Activities in some practice fields of Education and Lifelong Learning even depend deeply on cross-sectoral cooperation and collaboration (e.g. 'strategic partnership of education and economy').

Generally, initiatives in Education and Lifelong Learning often sustain because of an adequate embeddedness in networks and a reasonable level of collaboration (as seen e.g. in the in-depth analysis of *Fryshuset*, *Educate Me* or *Storytelling*) or fail because of a lack of efforts or integration (as seen e.g. in the case of *JAKOM*) (see Schröder/Kuschmierz 2017). Thus, in discussions conducted as part of the policy and foresight workshops, SI-DRIVE partners assessed collaboration and cooperation as a key driver for innovations in this field. The case-related importance of membership in professional networks or in communities is heavily depending on the respective position in the field. Important and bigger players bring in their own reliable networks and communities. For individuals or smaller initiatives, financially less potent actors, membership in networks and communities of practice is seen as essential, because cooperation and collaboration with other actors is indispensable for successfully placing a new initiative, but often more informal and loose, restricted by low resources (time and budget).

However, interaction happens in a diverse context of formalised, established and informal networks and communities. Depending on the practice fields, there are regular meetings for counselling services, social work or for political engagement, where various organizations participate. This kind of networking is often organised informally, ad hoc and driven by individual actors. Interviewees regard informal communities as most essential when developing initiatives in a similar context, with friends and people becoming volunteers, or supporting the idea with political, private, and other engagement. Such '**communities of practice**' of students and young professionals often mark a starting point, when people extend their activities and start their own initiatives. In effect, they 'reinvent' a community of practice and from that innovative character gain legitimacy in spite of initial mistrust of established institutions.

[14] https://ssir.org/topics/category/collaboration

[15] Communities of practice are a group of people who share a common concern, a set of problems or a passion about a topic and who deepen their knowledge and expertise by interacting on an ongoing basis. Communities of practice follow thereby a particular methodology which is based on theories of learning in action – learning while doing. (see http://www.socialinnovator.info)

Thanks to cooperation, support by partners coming from different sectors of society (see figure 19, chapter 5.1) encloses a various spectrum. Similar to what has been found in the total of the mapped cases, innovations in Education and Lifelong Learning mostly benefit from support in the development of ideas (e.g. in cooperation and collaboration with the target-group; see user involvement in chapter 3.2) and (to a higher degree) from funding delivered by partners. But also other aspects were detected to be relevant, such as the provision of specific knowledge needed for the activities, infrastructure, personnel, dissemination support and even lobbying, convincing policy makers of the importance of social innovations' objectives (see figure 20).

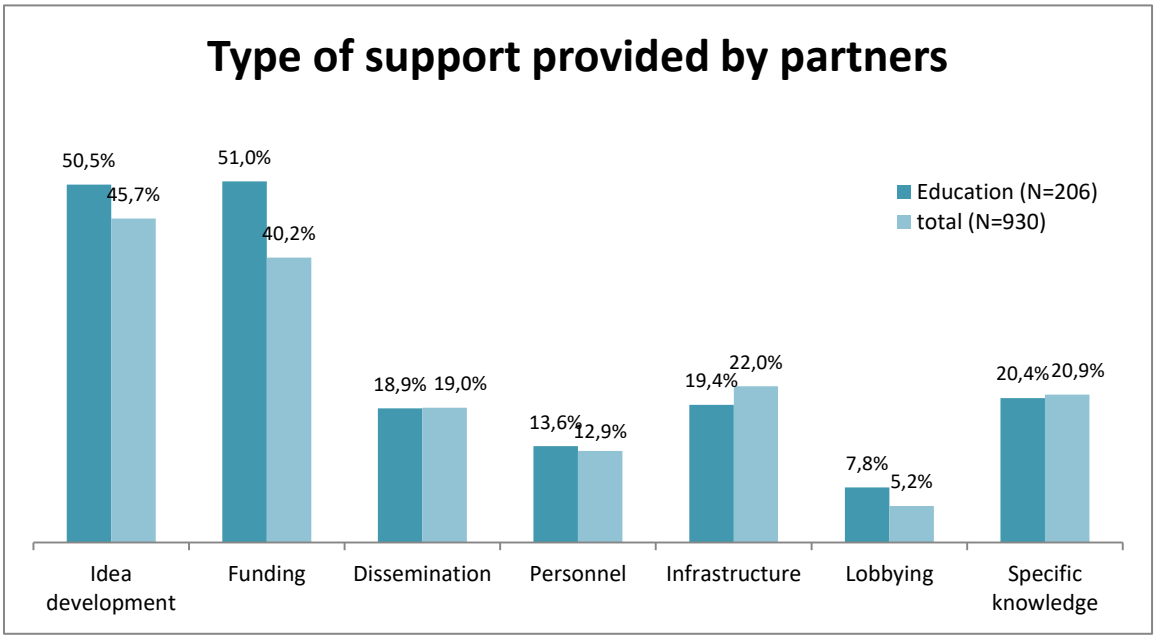

Figure 20: Support provided by partners

Cooperation with formal system actors is essential

As the in-depth case studies revealed (Schröder/Kuschmierz 2017), initiatives are linked to the respective formal systems of education to a high extent (see chapter 3.4). Hence, most of them are basically in need of cooperation with system actors or accordance with existing regulations regardless of their degree of dependency. The analysis revealed the importance of institutional support for scaling and for institutionalising social innovations in particular. Therefore, solutions in need of a successful institutionalisation have to build on **cooperation with the formal system and its actors** (schools, teachers etc.) as they are the most important gatekeepers in this policy field. Moreover, collaboration (based on mutual willingness) helps innovations to scale and institutionalize even better. However, similar to the perspective of policy makers (see paragraph below) actors of formal education sometimes are restricted to their 'silo-thinking' (a perspective limited to the respective internal formal demands of the system). As a result, in the policy and foresight workshops, this was discussed to be a main issue for the success of social innovation in Education and Lifelong Learning. When actors of formal education have a blind spot for innovative solutions coming from outside the system, they will not support or cooperate. On the other hand, tension with the respective formal systems of education (see chapter 3.4).is often the starting point for initiatives with a will for creating change.

Cooperation and collaboration with policy-makers can change the framework

The hegemonic role of formal education is based on the respective legal frameworks. When there is no or only scarce leeway for initiatives informally tackling social needs and societal challenges in Education and Lifelong Learning, the legislature has a pivotal role for changing this context. Hence, when initiatives **collaborate with politics and policy-makers** who take a perspective beyond their respective 'silos' (see above) in particular (as they are key for future legislative developments) they might achieve individual or even collective leeway for social innovations. This aims at the necessity for change towards more awareness of the capabilities of social innovations on the policy level. Based on formal leeway, initiatives can get access to bodies of public education, leading to more opportunities for co-creation, scaling, diffusion and institutionalisation of their

innovations. Moreover, politics and public authorities in general are relevant partners for financial support. Collaboration with these actors can also raise awareness for the value of their solutions, leading to (not only) financial support.

However, public institutions sometimes are highly involved. They provide access to relevant networks, communities, information and methodologies. In some cases, their commitment is based on the awareness for the problem an initiative is trying to solve (as seen in the in the in-depth analysis of e.g. *APM*, where the widely seen problem of skills mismatches was tackled). The analysis of the case *Teach for Lithuania* provided an example for how collaboration with public authorities, policy-makers and institutions of the formal system is taking place (see figure 21). The project created a network for recruiting and selecting young teachers, personnel selection and professional assistance of companies, schools and education providers (municipalities) in cooperation with education and business. These networks of likeminded initiatives rather constitute a (learning) forum in which an exchange of current status quos, challenges and progressions made is taking place.

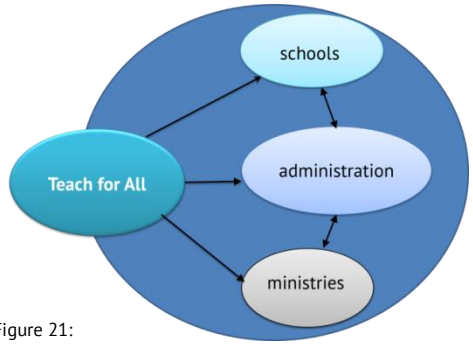

Figure 21:
Cooperation with the formal education system (*Teach for Lithuania*)

Cross-sectoral collaboration adds to a holistic approach

The global mapping of social innovations revealed the relevance of cross-sectoral collaboration, cooperation and partnership. Besides the crucial role of cooperation with actors of the formal systems and politics, initiatives in Education and Lifelong Learning (as already revealed in chapter 3.3 and 3.4) benefit also from cross-sectoral support of and collaboration with diverse actors from **science, business and civil and society,** building on a **holistic approach** towards Education and Lifelong Learning by taking a wider perspective (e.g. including the aim of integration in adds to the labour market, employability, integration in society as such). Analogous to the concept of knowledge production in a quadruple helix of innovation (e.g. Carayannis/Campbell 2012), initiatives can build on the provision of various resources (e.g. financing, volunteers, academic knowledge on e.g. teaching techniques or specific knowledge on needs) when they create or participate in networks with these actors becoming part of a supportive ecosystem[16] (see and figure 22). Moreover, collaboration with actors coming from sectors other than education, can lead to new solutions as they are developed outside the 'silo' of education, involving more actors with different perspectives and capabilities. Cooperation with the respective target groups can be particularly important for effective and sustainable innovative solutions geared towards the actual needs. The same applies to direct collaboration with stakeholders, involving them in the design or implementation process. As part of the in-depth analysis, target group related networking was e.g. found in the

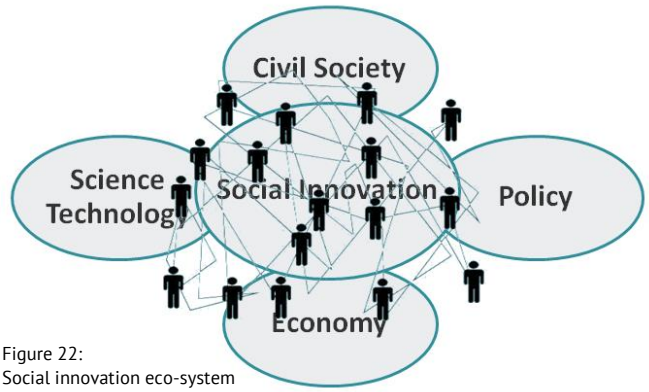

Figure 22:
Social innovation eco-system

[16] "Resources, capabilities and constraints are closely related to the social innovation *eco-system and infrastructure* for social innovations (and the related practice field). This is "… corresponding (to) rationalities of action and regulation mechanisms and the associated … problem solving capacities" (Domanski et al. 2017, p. 15). Appropriate supporting structures are relevant to exploit the potential of social innovations (ibid, p. 16)." Howaldt et al. 2016, p. 56.

case *PROSA*, where collaboration in regard to the inclusion of refugees and migrants in education takes place. Furthermore, collaboration with business also plays a crucial role in the policy field in regard to sponsoring and disseminating and acting as local distributors of social innovation initiatives. Banks especially are funding specific initiatives (e.g. *Teach for Lithuania*) as well as business in the framework of corporate social responsibility measures (e.g. *Lernhaus*). Moreover, the support of consultancy services was singled out in several cases, providing managerial knowledge or mentoring (e.g. regarding business-plans or determination of target groups as in *TBfW*). Furthermore, academia can be a crucial part of a supportive ecosystem, providing knowledge relevant for all actors (e.g. *Talent Scouts*).

The in-depth analysis of the case *Exchanging Education for* Habitation (*TBfW*) provided a vivid example for cross-sectoral cooperation and collaboration with actors coming from all ideal-typical categories of the quadruple helix or social innovation ecosystem. Support is provided by public authorities (e.g. federal and state ministries), business, NGOs, associations (e.g. foundations) and the sub-organisation of collaborating universities with a specialized focus on social entrepreneurship (see figure 23).

In summary, initiatives addressing Education and Lifelong Learning need to link up to different actors, capable of reaching out to users and to mobilise financial support, competencies and training to deliver on needs and demands in new ways, while overcoming resistance to new initiatives and change more broadly. Cooperation and collaboration sometimes are strongly linked to the connectivity of the initiators as cases in the practice field revealed. The role of these actors will be discussed in the following section.

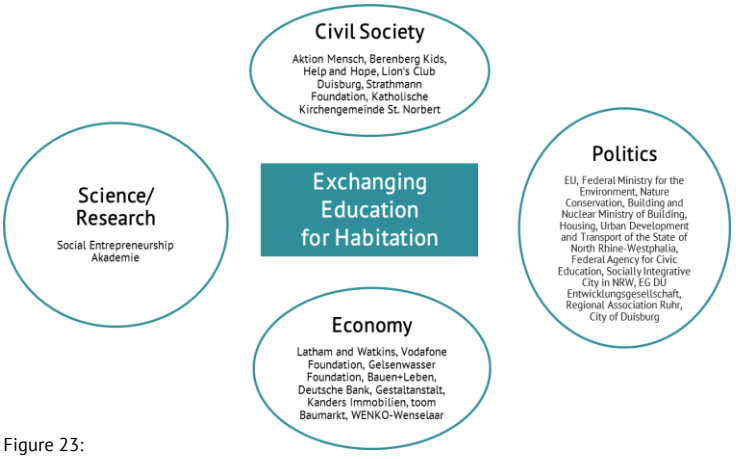

Figure 23:
Cross-sectoral collaboration (*TBfW*)

5.3 INDIVIDUAL ENGAGEMENT AND CHARISMATIC LEADERSHIP

Close to collaboration and networking of different engaged actors and stakeholders individual engagement and charismatic leadership are the basic drivers of social innovations (see chapter 5.2).

Individual engagement plays an ambiguous role

The analysis of cases showed a high relevance of individual engagement. On the one hand, most initiatives in Education and Lifelong Learning were initiated by engaged individuals (e.g. *TBfW, Storytelling, JAKOM*). Their personal commitment and perspective is reason for starting an initiative to trigger change. On the other hand, individual actors (esp. teachers) coming from formal institutions of education sometimes support initiatives as they are convinced by their objectives (e.g. *Jumpido, Talent Scout*). While individuals with their respective capabilities are considered a crucial driver of social innovation, giving them a pivotal role this can also be a barrier when initiatives grow, workload intensifies and more competences are needed. Hence, cases revealed how very small initiatives strongly depending on individuals sometimes failed due to a lack of capabilities after initial success (e.g. *JAKOM*). However, discussions conducted in the framework of policy and foresight workshops revealed obstacles due to limited individual capabilities are not only limited to later stages of social innovations but could also play a crucial role at earlier stages and even in the beginning when there is a lack of necessary knowledge (e.g. regarding specific needs of the target group, requirements of the legal framework, managerial skills).

Charismatic leadership is a valuable asset

The important role of individuals for success of innovative initiatives becomes particularly obvious when looking at the benefits connected to charismatic leadership. Several initiatives even stressed leadership as a key success factor for the respective social innovations, as they raise awareness about the specific issue, have

the vision and self-confidence in pursuing these problems, and also the skills in undertaking the organisation of the social innovation. Thereby, they can convince others of their idea, create commitment in society, erode potential resistance and enable proactively bottom-up initiatives. However, as highlighted before, individual leadership is more important for smaller initiatives (as e.g. cases. in the practice field of *Reduction of Educational Disadvantages* showed). Bigger projects with more partners involved, incorporating collective leadership, are consequently less dependent on single individuals.

Charismatic individual or collective leadership also plays a crucial role for cooperation and collaboration as it was highlighted to be essential for initiative's success before. Charismatic individuals (not only leaders) are able to convince the relevant actors of the field to turn into partners. By partnership, they are able to create change in the heavily formalized sector of education together with its pivotal actors. They are tangible representatives of social innovation, hence they are not only an asset for the respective initiatives but also helpful for social change in the policy field in general as they raise awareness for existence and performance of new approaches and solutions.

5.4 INTERNAL AND OVERARCHING GOVERNANCE STRUCTURES

Alongside the distinction of types of governance in the introduction of this chapter data from the global mapping reveal that social innovations in Education and Lifelong Learning are built on different modes of governance in the sense of internally running the initiatives and connect and embed them to overarching configurations.

Internal governance structures could be improved

Overall, the analysis of open answers shows a heterogeneous picture of the organizational background, different implementation structures and incorporated elements of strategic and operative management (see figure 24). The highest amount of initiatives builds on elements of strategic management as part of a governance structure whereas executive directors seem to play a particular role. As modes of collective governance structures, executive boards and advisory boards also seem to be particularly relevant elements of strategic management. Operative management and implementation structures seem to be subordinate to the practice of mapped initiatives in education and lifelong learning.

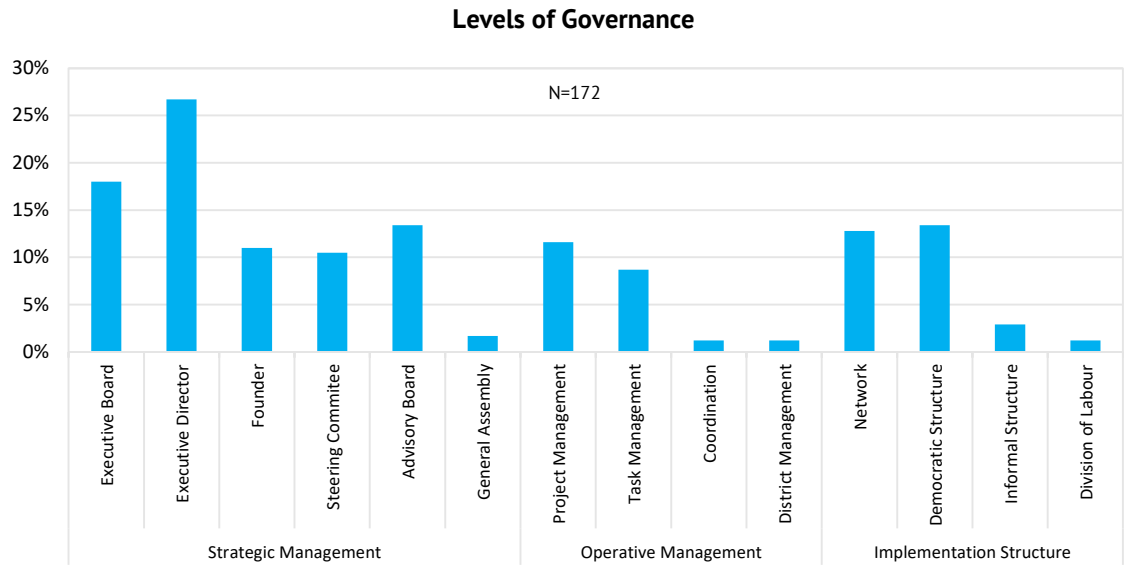

Figure 24: Levels of governance

Overall, the results indicate that governance on the internal level does not play a crucial role for the practice of initiatives in Education and Lifelong Learning. Only strategic management seems to be considerably relevant,

especially the executive director who is named the most (which is in line with charismatic leadership, see statements above). When taking the widely seen benefits of a division of labor and clearly assigned responsibilities into account, a potential barrier for sustainability shows up. However, smaller initiatives in particular might not be able to build on division of labor or sophisticated organizational structures due to a lack of personnel or other resources (e.g. time, monetary resources, and managerial skills). Moreover, very small initiatives addressing a very specific and very local demand, with maybe only 1 or 2 members might not be in a need of more structure as long as they do not scale.

Policy programs, social movement, networks and umbrella organisation provide the major overarching organisational background

When it comes to underlying governance structures on the organisational level, mapped social innovations in Education and Lifelong Learning reveal that they are mainly arranged as public entities, already established umbrella organisations and broad networks or entities rooted in civil society (see figure 25). Private entities and cooperatives were named as legal entities of fewer cases. However, it has to be noted that information on the organizational background is not available for all of the cases.

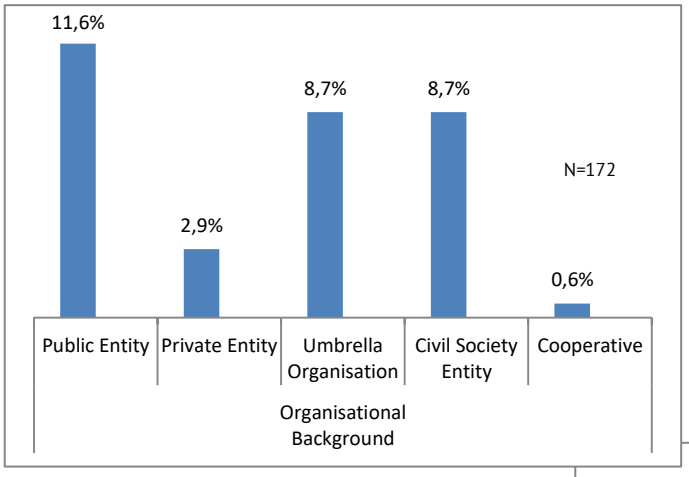

Figure 25: Organisational background of the initiatives (entities)

The strong involvement of public entities points to the necessity of cooperation with the formal systems of education, mentioned above. When public institutions provide social innovations in Education and Lifelong Learning, barriers due to reluctance of the gatekeepers (e.g. schools) are less likely as they are either the providers themselves or actors on the same institutional level. Hence, initiatives are often related to policy programs which provide the framework for education and formal education in particular. Almost half of the social innovations initiatives (46%) in Education and Lifelong Learning are connected to a policy program, social movement, network or umbrella organisation (see figure 26). Especially the embeddedness in policy programs and social movements, which is of a higher relevance in this field compared to the other policy fields. To overcome the hurdles of the stable formal systems of education and their reluctance towards change civil society reflected in the relevance of social movements (and private companies in the frame of corporate social responsibility measures) plays a particularly crucial role for pushing new practices of Education and Lifelong Learning.

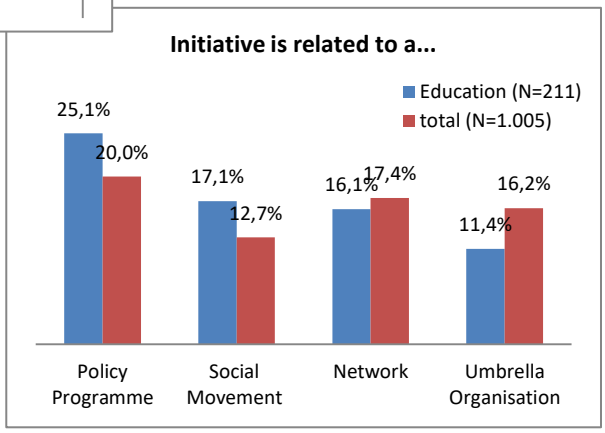

Figure 26: Connectedness of the initiatives to overarching organisations

Apart from concrete single organizations, initiatives are also rooted in networks of e.g. civil society or teachers, parents and so forth. Hence, their relation to networks and the importance of networking is already stated several times as relevant in the field of Education and Lifelong Learning (see also chapter 6.3). Umbrella organizations could be seen as well-established networks and based on sufficient resources (e.g. managerial knowledge specific for civil society organisations, dissemination and exchange of knowledge structures). Although cases prove this relation (for example, the case studies *Lernhaus* and *Talent Scout*) it is only important for 11% of the cases in Education and Lifelong Learning.

5.5 ECOSYSTEM GOVERNANCE FRAMEWORK: POLICIES, SYSTEM OF EDUCATION NEED TO BE MORE AWARE OF SOCIAL INNOVATION

As already explained above, social innovations in Education and Lifelong Learning are framed by a highly formalised environment. Formal systems of education take the pivotal role of a strong reference point for initiatives. Policies, often characterized by an exclusive focus on formal education ('silo-thinking') for a limited time span enclosing childhood and young maturity, are barriers for implementation and acceptance of new practices. At the same time they lead to creative tension triggering innovators to tackle needs on their own (see chapter 4.3).

Policy-makers and educational institutions need a shift towards awareness for the capabilities of social innovations

While creative tension will always be a starting point, silo-thinking of policy-makers and representatives of formal education need to change their view towards innovations in Education and Lifelong Learning. Combined with the need for strengthening lifelong learning, a **paradigm-shift** is the key. When policy makers and institutions shift towards a holistic perspective on education as a lifelong journey, the potential of social innovations will become obvious. Bottom-up initiatives establishing new practices outside the formal framework have the power to address all phases of education (see Schröder et al. 2015, p. 7f) in all phases of people's life. When policy makers change their minds, understanding the potential of social innovations in Education and Lifelong Learning, they might contribute to more supportive **ecosystem governance**, providing infrastructure, formal leeway and support of any kind. In such an **ecosystem**, administrations, policy-makers and institutions (kindergartens, schools, universities etc.) could even be 'owners' of social innovations; hence, supporting and institutionalising new practices fostering holistic education with a lifelong perspective would be their mission. Social change in education towards lifelong learning needs to be understood as key for coping with global challenges and regional, local demands rather than a risk for established actors. Even if initiatives themselves are not fully aware of lifelong learning's or even social innovation's potential and necessity (see chapter 3.1), they hold the key for change. As the case studies of SI-DRIVE revealed, initiatives often have a close link to the specific, 'tangible' demands of local and regional communities or specific groups (see chapter 2.1). They tackle demands and challenges (system gaps and failures) sometimes not seen or taken up by politics and institutions. Coming from various sectors, they take specific and specialized perspectives not accessible to everyone. Consequently, systems of education moving towards a holistic approach also need to collaborate with these actors in order to effectively tackling challenges and demands.

5.6 CONCLUSIONS

Initiatives in Education and Lifelong Learning are confronted with **various actors** coming from **different sectors** and their networks. These actors – often organized in networks - have different interests and approaches towards support of social innovations. However, cooperation and collaboration with actors and their networks is key to the success and sustainability of initiatives. Beside organisational networks on the local level,**networking** on the (inter)national level is of importance for lobbying, knowledge exchange and further development (of the initiatives and innovation structures). Besides the integration in overarching networks the **connectedness to policy programs, umbrella organisations or social movements** is of importance in this sense as well.

The framing level of **governance is mainly defined by policy**. Policy makers and stakeholders of the formal system specify the legal framework and can e.g. provide or neglect formal leeway for initiatives trying to improve the system. Moreover, administrative institutions can even provide funding or other crucial forms of support. Therefore, the role of the public sectors is ambiguous, pushing or hindering, competing with social innovations not only for the best solutions but also for (social or educational) values, in the best way by setting up **creative tension**. Anyway, cooperation and collaboration with policy makers and the political level in general is important for initiatives, especially in Education and Lifelong Learning to generate permeability of the formal system and for "breaking the glass-ceiling".

While cooperation with the formal system of education is sometimes essential in order to provide learners with new products or services or institutionalise new practices, collaboration with other actors is also important.

Actors from civil society provide initiatives with various forms of support (e.g. human resources, knowledge). Collaboration with the target group and user involvement helps initiatives to find tailored, adequate and sustainable solutions to specific demands. Furthermore, collaboration with the economy helps initiatives on different levels: Similar to other actors, companies or economic associations provide resources, knowledge and support (e.g. for their specific demands like overcoming skills shortages). Actors from academia also play a crucial but still underdeveloped role in order to support initiatives, especially with knowledge and competencies. SI-DRIVE revealed direct involvement of actors coming from all these sectors. Moreover, by combining the competencies, capabilities and the support of all sectors, initiatives in Education and Lifelong Learning can benefit from their own strong **ecosystem** (enclosing all the relevant stakeholders from different sectors).

On initiative's level, governance structures are important in order to have a structure capable of dealing with the various challenges to social innovations throughout their lifespan. Besides well-known organisational elements common in business (e.g. executive board, project management), **charismatic leadership** plays a crucial role for initiatives in Education and Lifelong Learning. However, its part is two-faceted: on the one hand, charismatic leaders can help innovations to establish and diffuse based on their capability to convince stakeholders. On the other hand, when their role is too pivotal, individual charismatic leaders can become the main decisive factor for initiatives' survival. When they are leaving the project (also taking with them implicit and tacit knowledge), it might sometimes come to an end as they might take away implicit knowledge and the 'face' of an initiative. Therefore, initiatives need to find ways to build on more collective forms of leadership in the long run.

6 PROCESS DYNAMICS

Social innovations not only produce outcomes, hence products and services, but further focus on process dynamics, thus such organizational and social dynamics that actually produce a given social innovation. As stated in the Critical Literature Review of SI-DRIVE and in accordance to Hoffmann-Riem (2008, p. 591f), "[…] *process dimensions of social innovations concern the creation and structuring of institutions as well as behavioral change [and] the empowerment of actors*".

The analysis for the process dynamics in the policy field Education and Lifelong Learning will be conducted at the level of the social innovation projects and initiatives, thereby e.g. focusing on typical development paths social innovations undergo, transfer and scaling, on the mechanism of social change, and lastly, the outcomes social innovations in the field of Education and Lifelong Learning typically produce.

6.1 DEVELOPMENT PATHS OF SOCIAL INNOVATION

Generally, five development phases for social innovations can be described – ranging from idea and invention to testing and implementation to impact. The first two stages concern an inspirational and idea generation phase in which **idea and invention development** takes place. As a specific issue is identified by a (prospective) social innovator, ideas on how to tackle the problem will be developed. After an idea has been generated, it needs to be tested in the **testing phase.** This usually happens through iteration, trial and error and may include feedback mechanism from users and experts. When a social innovation is moving away from the piloting and testing phase towards a more stable project stage, in which factors that are securing long-term sustainability of a given project, i.e. streamlining the project, scaling the activities to other areas and securing financial income streams, a social innovation can be said to be in the **implementation phase**. The last identified project stage within SI-DRIVE relates to the ultimate goal achievement of any given social innovation and concerns an initiative's **impact** on society, hence the last stage is achieved "[…] when entirely new ways of thinking and doing are put in place […]" (BEPA 2010, p.53) and the instutionalisation of new practices and practice fields is given, leading to social change and innovations streams by reaching critical mass or impact (Howaldt/ Schwarz 2016).

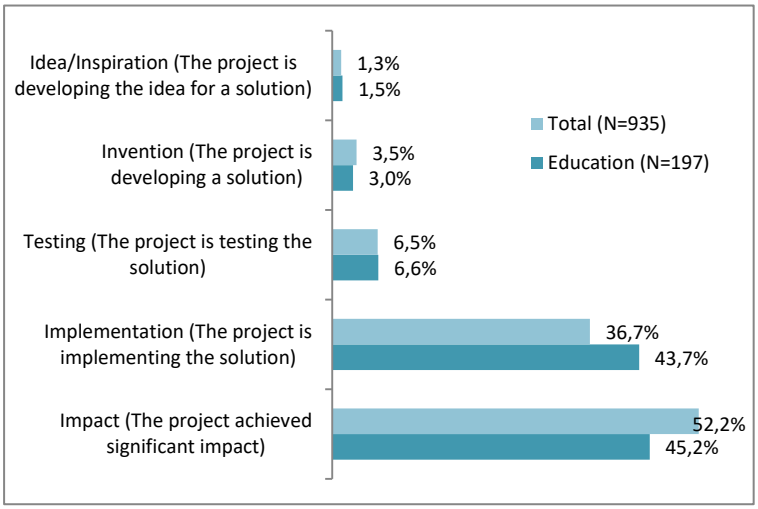

Figure 27: Development stage of the initiatives

In line with the average totals (see figure 27) the mapped social innovations in Education and Lifelong Learning are already reaching impact (45%) and or implementing solutions (44%); approximately only 10% could be found in an earlier testing, invention, and ideation/inspiration stage.[17] The high development stage is remarkable, because most of the initiatives (about 80%, see chapter 3.1) started within the last ten years, suggesting a fast progress from the idea to implementation. However, the case study report (Schröder/Kuschmierz 2017) underlined that social innovations do not develop in a linear manner or in sequential, subsequent stages (i.e. some initiatives started diffusion activities while still being in their testing phase), instead development can be

[17] However, it should be highlighted that especially those cases and initiatives have been recorded as social innovation in the global mapping that were best visible to the researchers, hence especially those cases that were already mature and successful in attaining their goals, therefore likely to show successful implementation and impact.

described as iterative in a non-intended way of trial and error, where different feedback loops, critical incidents and push factors are forcing the initiatives back and forth.

The analysis of 18 social innovation cases in Education and Lifelong Learning identified five different development patterns for social innovations (see figure 28). It can be noted that the development charts of continuous growth (straight or with up and downs) and the step-by-step model can be clearly described as following an upward trend, enabled through cooperation and partnerships with different actors, (more or less) stable financial support, a successful diffusion and/or expansion strategy in mind, embeddedness in the local community, thus having a strong spatial dimension, as well as depending on mutual learning. In fact, in most of the cases factors that pushed the initiatives' upwards development were access to financial, human and other resources; support by and access to formal educational institutions; as well as project extension through coordinated networks. In contrast, cases following the path of "continuous growth with up and downs" are often characterized by having struggled to develop sufficient income and/or partnership structures in the beginning; however, they have been capable of overcoming these start-up difficulties in their course of development, e.g. by receiving funding, recognition or other valuable resources. The three models can be differentiated in terms of phases of stagnation, learning and crisis; however, the latter also implies that initiatives could recover and continue their activities. The majority of cases (16 out of 18 cases) analysed during the in-depth case study phase could be appointed to these three models.

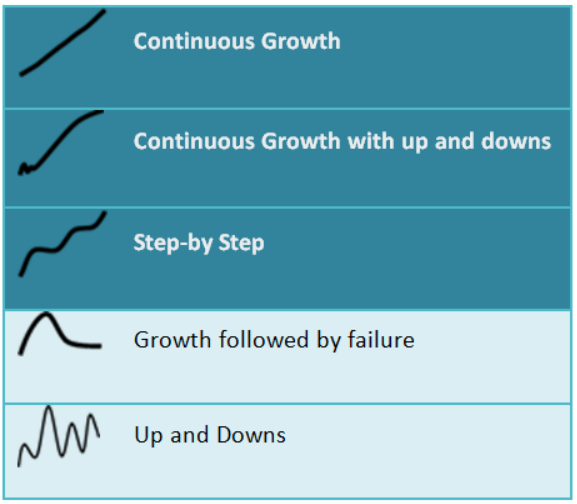

Figure 28: Development paths of social innovations

The development models of "growth followed by failure" and "Up and Downs" tend to pinpoint failure and can be associated with an organizational life-cycle approach in which an organization first experiences growth, reaches maturity, and then faces decline which may lead ultimately to organizational death. The initiatives that can be ascribed to these two models face phases of decline (or several phases of decline as it is the case for "Up and Downs") due to barriers that were not overcome easily, if at all. Besides financial challenges, especially the aspect of cooperation and changing partner structures has determined the trends, as sustainable partnerships or collaboration efforts hardly could be achieved. As such, the important role of cooperation is highlighted and can be considered as an important mechanism that drives social change.

The **interrelation** of the social innovation initiative **with the formal education system** and its actors is a crucial link and often a **predetermined breaking point**: Social innovations are usually open to share information with other players and jointly organised workshops, visits, exchange of staff and clients are common practice in the field and allow information and knowledge to spill to other projects or areas. However, the formal education system is an area that adapts new practices, information or knowledge very slowly and reluctantly, which makes it difficult for new modes to be easily diffused (e.g. 'Jugendcollege'/PROSA initiative provides an example where many different organizations are cooperating and working towards a common goal – but with limited connection to the established education system).

Taking the formal education system as reference point the following development paths are appearing in accordance to the case studies revealed:

- Innovations initiated, implemented **within the system** (system immanent) (e.g. *APM, SEC*)
- Innovations initiated, implemented and conducted **outside the system** (system external) (e.g. *Friluftsfrämjandet, Jumpido, Papinotas, TBfW*),
- Innovations (**hybrid solutions)** initiated outside the system, but
    - Affect the system (e.g. Teach for Lithuania) or "repairing" system failures (e.g. PROSA) or
    - Being integrated in the system (e.g. Talent Scout).

To be more detailed, it could be said that initiatives **starting outside the system** perform different strands of development:

1 System initiated but outside acting: e.g. through universities initiated general digital skills improvement of the local citizens through young volunteers (*Timurovtsy*)
2 Generated outside the system, but (partly) integrated and institutionalised by and within the system: e.g. *Talent Scout´s* early talent's identification and support
3 Staying outside (but related to) system development:
   - not accepted/integrated (e.g. *JAKOM*),
   - as an alternative to traditional learning (e.g. *Friluftsfrämjandet*: learning outside institutions, in nature, *Storytelling, Jumpido*)
   - as a new concept outside clear formal responsibilities of the system (e.g. *TBfW*: combining learning and coaching with improving the housing situation in a district).

6.2 SCALING MECHANISMS

As already stated, attempts to replicate and modify social innovations are quite visible for more than half of the initiatives in this policy field (see chapter 3.2). According to the global mapping, two of three initiatives are **transferring** their solution; mainly by integrating new project partners (46%), to a minor extend by the adoption by new users and external organisations (see figure 29). From a territorial perspective it becomes evident that (in line with the social innovation cases in general) mainly the local and national level of transfer are of relevance, regional and especially international transfer activities are of minor relevance (see figure 30).

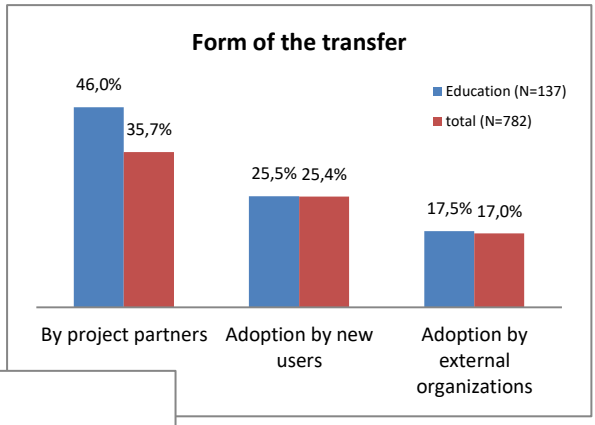

Figure 29: Form of transfer

Close to transfer, methods of **scaling** are especially extending the target group (e.g. by focusing a larger population or including additional characteristics beneficiaries could carry), of increasing the network through which a critical mass should be reached (having new cooperative arrangements with NGOs or other networks, trying to acquire additional volunteers) or through organizational growth (see figure 31). Here, the importance for social innovation initiatives to reach a critical mass, hence reaching a sufficient number of potential beneficiaries, as will be discussed in following chapter on mechanism of social change, becomes quite apparent. As it seems, not only a successful solution but a critical mass of acceptance and diffusion are the selection criteria for effective scaling and transfer. Generally it can be concluded that transfer and scaling is still done mainly (in 50-75% of the mapped cases in Education and Lifelong Learning) *within the initiatives* (extending target group, networking and project partners).

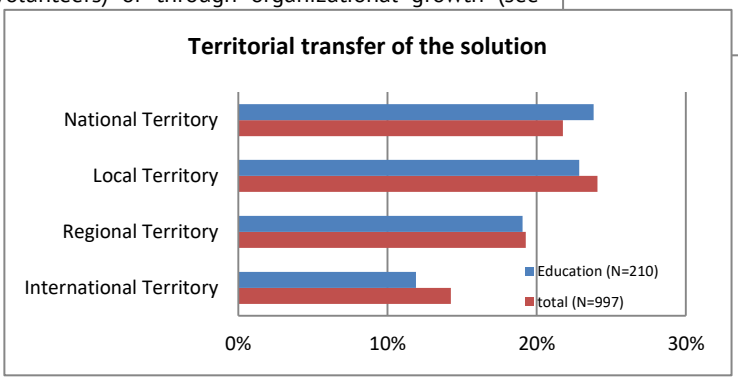

Figure 30: Territorial transfer

In the case study analysis, the relevance of reaching a critical mass, diffusing the social innovation solution to other contexts, and ultimately the importance of scaling the solutions, has been highlighted too. In fact, most initiatives reported that they had had the expansion of their solution in mind from the beginning thereby pointing to their initial motivation of tackling societal demands and challenges. However, some initiatives

faced barriers such as insufficient financial resources or a lack of (institutional) support that hindered the process of successfully diffusing the solutions. Approaches of replicating the social innovation e.g. to other geographical areas (scaling-out) or by scaling-up (affect a wider system change by tackling the institutional causes of a problem) have been widely adopted by the initiatives under investigation. Additionally, non-replicative (less explored) strategies such as the affiliation and cooperation with new partners as well as the direct or indirect dissemination of ideas, knowledge and best practice have been helpful for initiatives to expand their solution as well.

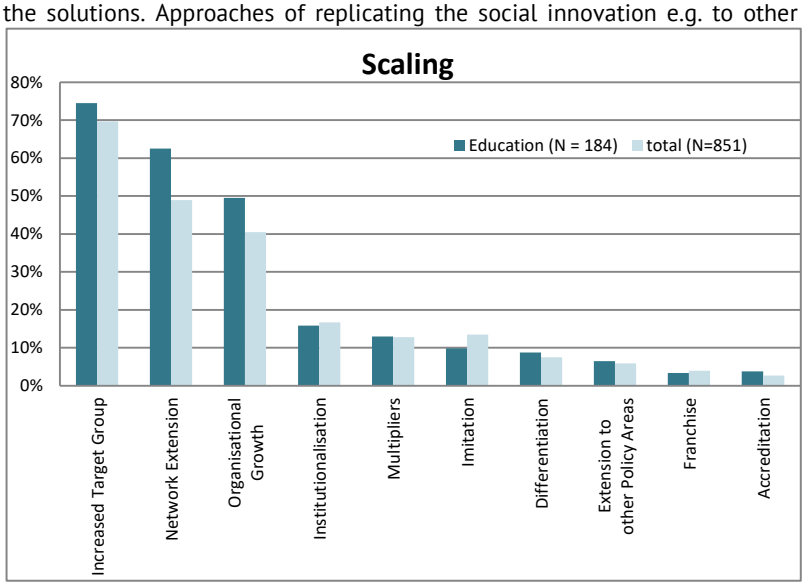

Figure 31: Type of scaling

Generally, it can be noted that a relevant factor for initiatives in regard to scaling, transfer, diffusion and sustainability is the compatibility to the respective educational system (see chapter 3.4). Again, if not compatible, social innovations may face challenges in developing, surviving, impact, scaling, institutionalisation and diffusion. In fact, it has been concluded that the degree of compatibility of a given social innovation initiative with the formal system directly impacts an initiative's success in developing further to the impact stage. Only a few cases are developed outside the system, finding a niche to exist independently from the education system (see chapter 7.1).

6.3 MECHANISMS OF SOCIAL CHANGE

An important contribution by SI-DRIVE's work is its focus on the role social innovation takes, or could take, in contributing to (beneficial) social change. As such, social change can be described as the process in which "[…] **new social practices emerge,** *become socially accepted, and diffused in society* **by processes of imitation, adaptation, and social learning** *and ultimately institutionalised as new social practice or made routine* (Howaldt and Schwarz, 2016, p. 58)". Thereby, social innovation is not only a core element and generative mechanism of social change but the process of social innovation has to be seen as a process of social change as well.

In the table below, the general trends for the mechanism of social change in the policy field of Education and Lifelong Learning are summarised (for further details see Schröder/Kuschmierz 2017, p. 109f.). In regard to social change, it can be largely concluded that if social change has evolved, it has had happened spontaneously and not as a planned process. The presences of outstanding and unsolved problems in education and learning have informed social innovation initiatives to develop alternative solutions. Important elements are the evidence and success of the solution, the critical mass of implementation and the presence of financial backup that support the provision of diverse solution providers. Social innovations that arose "bottom-up" and diffused to reach large numbers of users have tended to transform into well organised structured activities that acquired public support and gradually became endorsed or integrated by the public system.

Mechanisms of Change	Trends in Policy Field Education and Lifelong Learning
Learning	• Mutual learning (by doing) of beneficiaries, initiators, volunteers and other people involved (knowledge, skills, competences development) • Empowerment and capacity building based on learning effects and leading to new practices and positioning of the people involved (e.g. *Student Lodging, Storytelling*)
Variation	• Based on new collective ideas and a paradigm shift driving the social innovation development • Single innovation projects with specific target group focus • Social innovations are bound to the limits set by the formal education system
Selection	• Processes of adoption, diffusion and imitation are strongly observable in the policy field, often aimed at attaining a critical mass • The formal education system is the main player of selection (criteria)
Conflict/Tension	• Exists between social innovators/societal demands and the services/solution offered by the formal system • Considered a starting point for social innovators to become active
Competition	• Not a predominant factor, however, competition among initiatives for resources (public funding and support) has been highlighted • There is a kind of "competition" between social innovations and the formal system, because of better solutions for system failure and gap.
Cooperation	• Relevant in for entire policy field, especially with formal institutional actors, however also cross-sectoral cooperation is a building block for successful social innovations.
Diffusion and complementary innovation	• Especially the supporting role of technology and ICT has been highlighted by the initiatives under investigation • Technology is complementary - facilitating innovation processes, either by becoming part of a solution or by assisting communication and knowledge sharing processes.
Institutionalisation	• Planning for social change is hardly possible and institutionalization strongly dependent from public authorities' acceptance of the solution • The interrelation between social innovations and formal education systems can be described with three important development paths: **within** or **outside the system** as well **hybrid solutions** (see chapter 6.1)

Table 5: Mechanisms of social change

Especially the mechanism of learning and selection are important input and process mechanism in Education and Lifelong Learning. Learning thereby happens at two levels. At the level of the social innovation initiatives, new knowledge and learning for the initiative is created. However, empowerment and capacity building have the main aim to develop the agency of users and beneficiaries. Thereby, win-win situations are often created. Selection, adoption, diffusion and imitation, however, are mainly depending on the connectedness with the formal education system.

However, the different mechanisms of social change interact and reinforce another. They could be grouped also in accordance to the level at which they become effective, providing stimuli for social change and in fact realise an impact:

- **Input and process mechanisms** - these consist of the inputs and basic processes social innovation needs to effect social change: learning, variation and selection
- **Driver mechanisms** - these consist of the drivers social innovation needs to effect social change: conflict, competition, cooperation and tension
- **Outcome mechanisms** - these consist of the outcomes social innovation needs to effect social change: diffusion, complementary innovation, planning and institutional change.

As the input (resources) and process mechanisms, as well as the drivers have already extensively be described, the next chapter is focusing on the outcomes of social innovations in Education and Lifelong Learning

6.4 OUTCOMES AND IMPACT

In the policy field of Education and Lifelong Learning, the outcomes of social innovations are quite varied and concern different levels ranging from impacts at the individual level towards cultural or institutional modes of change. In fact, answers received during the global mapping are related to four different levels (Howaldt et al. 2016, p. 134):

- initiative level: company or project growth, efficiency of the services or cost reduction;
- target group level: number of beneficiaries/user/consumers, integration and inclusion, empowerment or increasing employability;
- societal level: quality of life, social cohesion, social welfare, economic welfare, environmental improvements;
- culture/institutional level: legitimation/recognition of a solution and attitude changes.

For social innovation projects in Education and Lifelong Learning, a trend towards achieving positive impacts on **target group level** becomes obvious as the initiatives stated outcomes that are centering on potential beneficiaries or users (26%) as well as on their empowerment (26%, exceeding the totals of all policy fields by about 7 percentage points) (see figure 32). Inclusion and integration (15%) and increasing employability (14%) of the target groups are also in focus. While the latter is also revealing the already stressed cross-sector approach the responses underlining the fact that for the majority of social innovations in Education and Lifelong Learning **local target groups and local solution** are the centre of attention. This has been further confirmed by the case study report (Schröder/Kuschmierz 2017) in which a paradigm shift from an institutional and teacher-centred approach towards a learner-perspective, focusing on individuality of the learner and supporting self-actualization, becomes observable in local impact focused initiatives.

Outcomes directly linked to the **initiative** itself, focus on the efficiency (23%, exceeding the totals of all policy fields by about 10 percentage points) and growth of the project (14%). These outcomes are on increasing the project performance and effectiveness; cost reduction of (system) solutions is not in focus (2%).

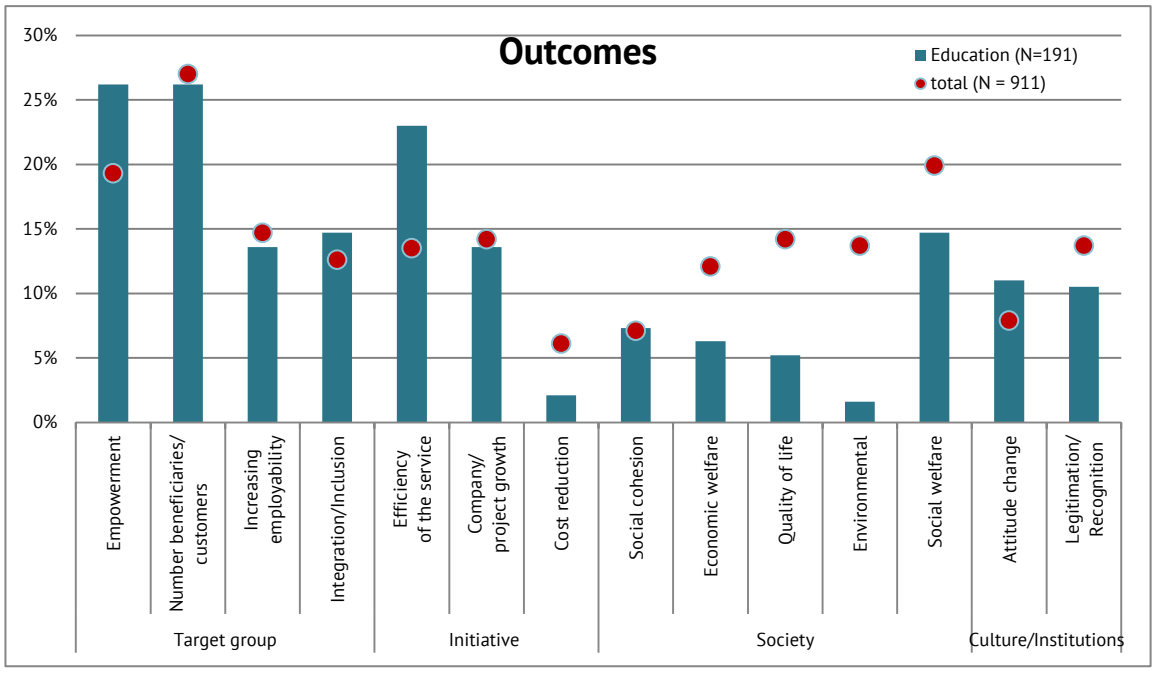

Figure 32: Outcomes

Outcomes on the **societal level** (esp. economic welfare, quality of life, environmental improvement, but also to a lower extent social cohesion and welfare) are not in focus (also lower when compared with the results in total).

The fourth group emphasising **cultural or institutional modes of change** is also of lower relevance: legitimation/recognition and attitude change are named by about 10% each. A plausible explanation for this taillight position may relate to the fact that social innovations in Education and Lifelong Learning in all stages (from the idea over invention and implementation to scaling, institutionalisation and diffusion) have strong interrelation with the (formal) education system and are dependent upon the system's willingness to integrate a given solution. Although it is necessary to unfold the full impact of the initiatives changing the formal system is not a realistic ambition for the mostly small scale initiatives.

Results of the in-depth case study (Schröder and Kuschmierz, 2017) underline these outcomes. Empowerment, integration and inclusion, project growth and ambitions by initiatives to expand their services so as to reach out to a larger number of beneficiaries have been highlighted in different case studies. Thereby stressing the importance of self-actualisation and focusing on identified learning needs. Additionally, the outcome of increasing employability has been stressed several initiatives, revealing that there is a high connectivity between the policy field of Education and Lifelong Learning and other policy fields, e.g. Employment, Environment and Poverty Reduction and Sustainable Development. Correspondingly, in line with to the global mapping results, outcomes related to cultural changes (attitude change; legitimation/recognition) have not been reported often by the investigated case studies and were mentioned only a few times. In the table below, a general overview of the outcomes achieved by the investigated initiatives during the in-depth case study analysis have been summarised.

Practice Field	Most stated Outcomes
Reduction of educational disadvantages	**Target Group level** • Empowerment has been a stated outcome by all initiatives investigated in the in-depth analysis • Similar relevant have been outcomes integration and inclusion, followed by increasing the employability of beneficiaries **Initiative level** • Project growth has been relevant for almost all analysed cases. Project growth is often linked to expanding and transferring the solution to other areas as well as to increasing the number of beneficiaries **Society level** • Especially social cohesion and increasing the quality of life of beneficiaries, target groups or even entire communities has been cited by initiatives • Linked to the outcome of employability, economic welfare has been in focus for some initiatives
New Learning Arrangements and interactive learning	**Target Group level** • Empowering beneficiaries has been stressed by all investigated initiatives. • Employability has been an important aspect for three out of six initiatives, thereby focusing on the skills required for future jobs • Integration / Inclusion and social cohesion are not as much in focus as in "Reduction of educational disadvantages" but remain important for half the initiatives **Initiative level** • Project and organizational growth has been a reported outcome for all investigated cases. Most of them already expanded their solution to other areas, nationally and internationally. **Society level** • Increasing the quality of life, enabling social cohesion as well as improving economic welfare have been of similar importance among initiatives in this practice field.
Other practice fields	**Target Group level** • Empowerment, integration and employability are important outcomes for cases in the practice field "new digital learning environments" and "strategic partnerships education and economy". **Initiative level** • Project growth has been reported by the initiative "Teach for Lithuania". Growth was achieved by extending the network of volunteers across Lithuania, however, is now stagnating due to financial barriers. **Society level** • Social and economic welfare is an underlying motive and outcome in the practice fields of Quality improvements of the formal education system (Teach for Lithuania) and Strategic Partnerships Education and Economy (APM).

Table 6: Outcomes within the practice fields of the case studies

All in all, in the policy field of Education and Lifelong Learning an overall trend towards achieving outcomes at individual and target group level are of high importance for all initiatives of the case study and also are ranking high in the global mapping. Here, a comprehensive understanding of learning (what skills, competences are needed) as well as the learners' (social) environment are guiding the initiatives' **holistic and cross-sectoral/area approaches** of Education and Lifelong Learning.

Enhancement of target groups and society in general are addressed outcomes

When looking at the high number of users or beneficiaries involved (see chapter 3.2) and as well on the outcomes of social innovations (see figure 32), the prominent role of the respective **target groups** becomes apparent. While this focus might not be surprising at first sight, it is worth to be mentioned as it highlights social innovation's strong focus on local or regional social needs (see chapter 2) related to specific, concrete groups. These can be young pupils or adult learners and parents as well as teachers or educators in general. Also, the in-depth case studies revealed initiatives focussing on a combination of target-groups and their

interaction. This was found e.g. in the case *Papinotas* where the initiative strives to enhance communication between teachers and parents based on the provision of a platform for new practices of communication building on an already existing technology. Sometimes, when putting a focus on systemic change, initiatives even address policy makers capable of changing the framework of formal education. However, in the in-depth analyses of cases, this was only found on a side-note. While some initiatives try to change the framework of education by promoting new practices, cooperating with policy makers in order to diffuse, they do not see political administrations and institutions as core target groups of their activities. Hence, in the cases analysed, lobbying was not found to be the mission. However, as the discussion conducted in the policy and foresight workshops of SI-DRIVE revealed, activities focussing on policy makers could help changing the framework, fostering systemic change not only in regard to support for specific initiatives and single solutions.

Besides the level of target groups, **society in general** (such as including improving quality of life, social cohesion, social and economic welfare, environmental improvements) was also mentioned to be the addressed level for initiative's outcomes fairly often. Hence, when taking an actor-centred perspective, society also plays a role for initiatives in Education and Lifelong Learning and beyond. Especially when initiatives focus on the overarching level of societal change, answering societal challenges, society is more than just a relevant actor; it becomes a target group.

6.5 CONCLUSIONS

Social innovations initiatives are following a social innovation process from the idea and invention over testing and implementation to impact, not necessarily following this as a sequential path but often in an **iterative way** with feedback loops, temporised and restarting phases.

In close relation to these findings, a **variety of development paths** have been identified. Most of the successful cases investigated in the case studies of SI-DRIVE followed a model pinpointing at a development that is targeted more or less at continuous growth and impact. Thereby, push factors identified have been: access to a differing set of resources, e.g. financial and human resources, awards and other forms of publicity, access to a variety of relevant (key) actors and stakeholders (especially including formal system actors), as well as other assets such as property (e.g. buildings, real estate, technical infrastructure).

It becomes evident that social innovations in Education and Lifelong Learning are **incremental** and strongly focus on improving **target group** specific circumstances. However, in different ways and intensity the initiatives are always related to the (formal) education system and policy (as an **all-pervasive reference point**). Again, the compatibility with the education system, involving public sector actors and considering path dependencies are relevant for scaling, diffusion and sustainability of social innovations in the policy field Education and Lifelong Learning. If not compatible, social innovations in the selected practice fields face notable obstacles in developing their initiatives. Moreover, there are niches outside the system which are occupied by social innovation initiatives successfully as well.

As a main result, perceived **system gaps and the resulting conflicts and tensions** often serve as a starting point for social innovation initiatives to develop. Thereby, the mechanism of cooperation (especially with the formal system), selection and variation as well as institutionalisation are all strongly related to and dependent on the boundaries set by the system and finally determine success and sustainability of a social innovation project.

7 FINDINGS, RECOMMENDATIONS AND IMPLICATIONS

This chapter is summarising and reflecting the results of SI-DRIVE in the policy field of Education and Lifelong Learning. A brief review of the main findings (based on the conclusions of the results of the five key dimensions) is complemented by the main policy implications and recommendation and possible further research topics.

7.1 MAIN FINDINGS AT A GLANCE

The policy field of Education and Lifelong Learning is characterised by different national education systems, differing sometimes across the regions of a country and divided in separated regional or area related responsibilities. While the formal (primary, secondary and tertiary) education system is mainly centralised Vocational Education and Training (VET) as well as Lifelong Learning (LLL) of adults are mainly decentralized (local municipalities and/or industry sector related). However, besides the **great variety** of social innovations (besides the practice fields and their related initiatives this is improved also by the different wordings of tag cloud made from the case study descriptions in figure 33).most of the initiatives are related to gaps and failures of the **formal system**, VET and LLL of adults are not in the main focus.

Figure 33: Social Innovation in Education and Lifelong Learning (tag cloud case studies)

The **context** of social innovations in Education and Lifelong Learning is characterised by the dominance of the (*formal*) education system, affecting tangential societal *function systems* (such as politics, law, and economy), different target groups and *subject areas* (disadvantaged groups, family, employment, rural areas, etc.) and substantive *concepts of reference* (e.g. self-actualisation, individual learner personality).

The SI-DRIVE results clearly stress that new social practices in Education and Lifelong Learning are developed in an **incremental** way mostly with **relation to the formal education systems**, structures, frameworks and policies - serving local demands and using leeway on the regional/local level. Brand new practices appear as well as copying new solutions by modifications. The main motivation, triggers and drivers are (local) **social demands and** (general) **societal challenges** as well as **individuals/groups/ networks** (not to forget **charismatic leadership).** About half of the initiatives are intending **systemic change**. Brand new practices appear as well as **copying new solutions** by modifications. Although almost all initiatives are scaling, there is only **limited transfer.** Transfer (mostly done on a local, national level) and scaling is done mainly within the initiatives and by the project partners. A remarkable possibility **improving impact, diffusion and transfer** much more is that nearly half of the **initiatives are embedded** in networks, social movements, umbrella organisations or policy programmes.

There is a high **connectedness to other policy fields** (esp. Reduction of Educational Disadvantages, Employment and Poverty Reduction and Sustainable Development) and high interactions/interrelations with formal system (system immanent and external as well as hybrid solutions). This is leading to **different strands of development**: system initiated, outside acting; system initiated and remaining; generated outside the system (partly integrated and institutionalised or staying outside). The **formal system is acting and reacting** on social innovations mainly in a constructive manor: As initiator and relevant development partner, as integrator fostering scaling and institutionalisation and as supporter or 'tolerator' of stand-alone initiatives (with more or less acceptance, and minor or no support of system institutions).

To overcome social demands and societal challenges **cross-sector collaboration and networking** is crucial by actively involving public, economic and civil society partners (including active user/beneficiary involvement) – leading to a **social innovation ecosystem.** But, compared with technological innovations the fourth sector and

element of a quadruple helix **"research and science"** (see chapter 5) has an underdeveloped role in social innovation ecosystems so far**.**

There is a **mix of funding sources**, but funding is by far the main challenge as well as a lack of personnel and **missing political or institutional support** (at local, national or European level). On the other hand, granting leeway for experimentation has been singled out as a boost for social innovation initiatives. **Technology** is complementary to social innovations, facilitating innovation processes, either by becoming part of a solution or by assisting in the communication and knowledge sharing processes of the actors involved.

Empowerment, human resources, knowledge and gender/equality/diversity are the main crosscutting themes showing the target group orientation of social innovations. Human resources are the main source for increasing impact, leading to the main outcomes named by social innovation initiatives: **empowerment, more beneficiaries** and higher **efficiency**.

Barriers for the development of social innovations stem from three different sources, namely political actors, society in general and barriers that derive from inside social innovation initiatives. The most cited barriers from policy site has been related to the **lack of financial support mechanism,** the **bureaucratic/silo-thinking** nature of ministries as well as a **lack of institutional support** (for instance the provision of access to schools). Such barriers can be associated with an overall **lack of awareness of the concept and potentials** of social innovations on the side of policy.

Drivers and motivators, ambitions and goals as well as barriers and enablers are very closely related to each other. In some cases, **barriers can even become drivers**, e.g. when society's attention is drawn to existing problems. It seems that society's frustration about current systems and institutions as well as the dissatisfaction with market failures can act as an important driver for social innovation (even if this is not always the case). Government can act as an enabler through funding, sponsoring and facilitating initiatives outside the system, but being dependent on financial support from government and the given governmental structures can act as a barrier as well. Main *barriers* are missing continuity of policies and strategies as well as the inflexibility and the persistency of national or regional institutions and systems, a high degree of bureaucracy and administration and missing financial and administrative resources.

All in all, social innovations in Education and Lifelong Learning reveal an ongoing **paradigm shift** from the institutional to the learners' perspective leading to a **holistic approach**: from top-down to bottom-up as well as from teacher to learner-centred approaches, based on a comprehensive understanding of learning and offering milieu specific solutions. In fact, the holistic approach adopted by social innovators can be considered the legitimation for social innovators as they work distinct from the formal system.

The mechanisms of social change analysed in the in-depth case studies of SI-DRIVE reveal that **conflict and tension** can be considered the starting points driving social innovations in Education and Lifelong Learning, 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**.

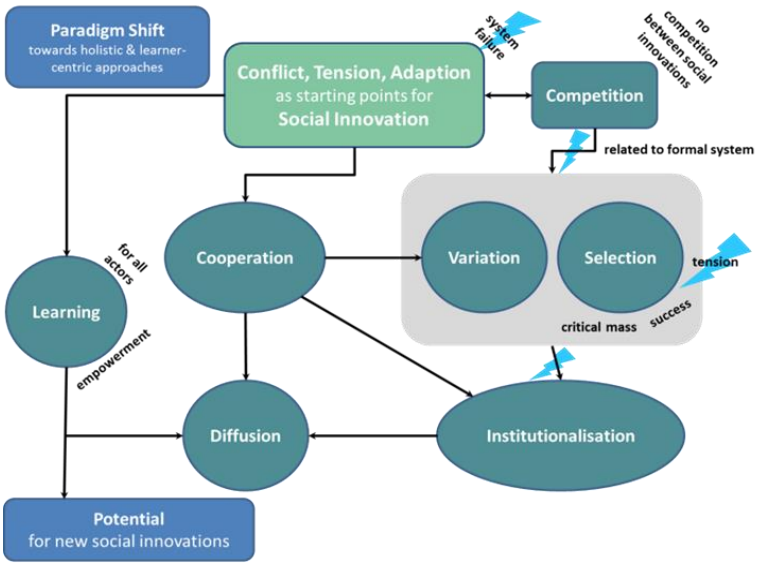

Figure 34: Mechanisms of social change

Competition among social innovation initiatives is not of an issue; instead there is a kind of "competition" with the formal system concerning the best way of improving education. 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 or further innovations.

In line with the **SI-DRIVE key dimensions** and corresponding **research foci** (see Butzin et al. 2104) it could be concluded for the policy field Education and Lifelong Learning:

- That there is no clear **understanding** or orientation of social innovation and related **concepts** (esp. in European countries). Nevertheless, there are a lot of innovations that could be seen as new social practices and innovation processes which fulfil the criteria of the SI-DRIVE working definition and the five key dimensions.
- Social innovations are clearly directed towards **societal challenges and social needs**. The ambivalence of innovations is reflected in the complicated and harmful innovation processes that bring together the different rationalities and cultures of the involved (educational) institutions and other actors outside the formal education system. Mainly, the strict (legal) boarders and the different responsibilities within the education system hinder the innovation process, and can be seen as the main barriers for new practices evolving from outside the system.
- **Process dynamics** are often dominated by **governance, networks and actors** reflecting triple or quadruple helix constellations (policy/public institutions, economy and companies, science and consultancy, civil society / non-governmental organisations). **Civil society and citizen involvement and empowerment** are (indirectly) given within the social innovation processes.
- The main challenge (esp. for grassroots initiatives) is getting **leeway and acceptability** by the formal education system (including clarifying the responsibilities going beyond the given formal structures).
- **Resources, capabilities and constraints** are often related to the formal education system and its institutions. As such, the funding of social innovations is especially a problem for grassroots initiatives. **Drivers** (mainly societal challenges and social demands, individuals, groups or networks) **and barriers** (mainly related to funding and formal system restrictions) are manifold and sometimes interrelated.
- **Social change** is depending to a high degree to governance activities. Social innovations initiated beyond centralised mechanisms, a new correspondence of national (laws, regulation and systems) and regional-local applications could be a research focus for further empirical and theoretical analysis.

7.2 IMPLICATIONS AND RECOMMENDATIONS

Based on the empirical results and the workshops of SI-DRIVE in the policy field Education and Lifelong Learning the following policy implications and recommendations have to be taken into account:

- The **increasing importance and unlocked potential** of social innovation: because of the **missing awareness** there is a need for extending visibility of social innovation and its underlying concept to unlock the potential of social innovation in Education and Lifelong Learning.
- The **dependency** of social innovations **on the formal system** and the silo-thinking of public institutions necessitating a new role of public policy actors within a **social innovation ecosystem**.
- The cross-cutting perspective and the **holistic approach** of the solutions (paradigm shift) and the combination of similar initiatives in **practice fields** as an approach for joint solutions, immitation and innovation streams.
- **New governance and social innovation friendly environments** (from leeway to cooperation with and integration in formal systems), with tailored support at different stages of the social innovation process, effective scaling mechanisms and mechanisms leading to social change
- **Lifelong Learning**: a concept to increase social innovation?!

7.2.1 Increasing Importance and Undeveloped Potential of Social Innovation

Although there is a growing number of a social innovation in Education and Lifelong Learning a lot of initiatives are not labelled as social innovation. Compared with other regions (e.g. Latin America[18]) and other policy fields (e.g. Poverty Reduction and Sustainable Development, Environment and Climate Change) **visibility, awareness, recognition and acceptance of the social innovation concept** have to be fostered. This would lead to unlock the quantitative (in terms of numbers of initiatives, diffusion and imitation) and qualitative (in terms of success and impact) potential of social innovation in Education and Lifelong Learning.

Unlocking the potential of Social Innovation would increase the possibility of civil society for more and better solutions for societal challenges and (local) social demands (bottom up initiatives as experts for solutions to local social demands). Concerning this policy field of Education and Lifelong Learning it perceives improvements in Education and Lifelong Learning as a key challenge of modern (knowledge) societies, done by (e.g. didactical, digital) improvements of the existing systems, its gaps and failures, teaching quality and teacher qualification, the inclusion and empowerment of educationally disadvantaged groups, fostering equal opportunities, and a better match between economic demand and up-to-date qualifications.

7.2.2 Formal Education System as Pervasive Reference Point

Most social innovations in Education and Lifelong Learning face a strong dependency on the formal system. The development of new practices is mostly done within the given formal structures. Despite projects within the context of the formal education system (created and initiated, funded and (partly) conducted by responsible public institutions), innovations going beyond or changing given formalities, structures and procedures are mainly restricted to given (legal) leeway or the necessity to change formal and legal structures (incl. law).

Against this backdrop it becomes evident that social innovations in Education and Lifelong Learning are **incremental** and in different ways and intensity always related to the (formal) education system and policy. Social innovations staying outside and with no direct relation to the formal education system exist but remain uncommon.

Social innovations driven by deficits and limitations of the education system

Social innovations are often identifying and solving the deficits and limitations of the education system. A lack of official solutions or programmes for the problem at hand is the main starting point. For instance the practice field of overcoming educational disadvantages is partly shaped by the very slow-going innovations in the established institutions of education with their still apparent socially selective character. While knowledge about the impacts and recommended routes of reform (from, for example, the PISA and PIAAC studies, labour economics and also education sciences with an increasingly comparative focus) is widely spread, the institutionally dense education systems with its interlocked regional, national and federal state-level responsibilities has strong path dependencies and vested interests that encourage **compensatory rather than transformative** social innovations – although the difference is not always well defined.

Moreover, the actors of the formal system could be drivers of social innovations as well:

- As **initiator**, relevant development partner, offering and benefiting from an experimental sphere without any risk
- As an **integrator** fostering scaling and institutionalisation
  - Within the system by initiating or taking over and integrating social innovations
  - Besides the system (in relation to specific needs and areas of the system, improving it from outside, mainly because of benefits from external resources (volunteers, donations, etc.)
- As a **supporter** or "**tolerator**" of stand-alone initiatives (with more or less acceptance, and minor or no support of system institutions).

[18] See e.g. Domanski/Howaldt/Schröder 2017 and Domanski et al. 2015.

Again, social innovations (in their great variety) generate **creative tension** demanding innovating, further development and social change. This works in both directions: System changes can lead to more leeway for social innovations coming from outside the system and social innovations can push the system to necessary improvements. However, this tension leads to a kind of **competition between the public sector and civil society**. Initiatives, which are not accepted, supported or tolerated by the system, may face failure more often, becoming victims of circumstances, of power relations, or of selection based on competition between institutions of the formal education sector and social innovation initiatives.

Ambivalences: System Repair by Leeway or Systemic Change?

As already described tackling system gaps is key for motivation and an initial driver for social innovations in Education and Lifelong Learning. While the challenges are often produced by the formal system or the system players who do not know or are not allowed to solve the problems, social innovation initiatives use their leeway given by the formal system or regulations. On the other hand, almost half of the initiatives in Education and Lifelong Learning seek to achieve systemic change. This comprises initiatives which try to promote a change in general values in society, and also those who want to change a system, such as the education system of a country. Initiatives with such ambitions are likely confronted with more ambivalent opinions, with a higher level of resistance or support. For example, the quantitative mapping results show initiatives which develop better governance of schools by extending the school functions and teachers' capacity or try to overcome the separation of different educational phases and institutions.

"Such initiatives questioning and challenging the current state of play often find themselves in situations where partners of the initiative may have conflictual goals, and where also external support will be accepted or declined also because of the assumed interests of the external party and the potential threat the initiative poses for them." (Howaldt et al. 2016, p. 53)

When social innovations and their initiators can **overcome the described barriers**, often thanks to their resources, their endeavor is leading more often to sustainability, institutionalisation and (in some way) social change. Nevertheless, because most of the grassroots initiatives are located somewhat outside the education system (see interrelation challenges with the formal system), their knowledge is often not directly transferred to schools, universities and other education system's organisations and professionals aside from informal paths and connections.

7.2.3 Paradigm shift to a holistic approach

Social Innovation in Education and Lifelong Learning is often linked to other policy fields, reflecting the cross-sectoral approach and the holistic learners' perspective. This shows that by using their leeway social innovations in Education and Lifelong Learning are promoting and stimulating a **paradigm shift** from an institutional and teacher-centred approach towards a learner-perspective (individuality of the learner, support self-actualization, extend personal competencies and enable individual improvement) leading to a more comprehensive holistic approach tackling several societal issues and social demands simultaneously by offering a sector overarching solution (employability, labour market, skills matches, etc.). Beneath the integration of all the relevant stakeholders of different sectors, user involvement informs the basis for such holistic solutions. To achieve social change and improvement of Education and Lifelong Learning there has to be more leeway for addressing and repairing system gaps, flexible and tailored education, changing and improving system institutions and frameworks in order to make the formal system more receptive for social innovations.

Becoming more flexible and deviating from silo-thinking within bureaucratic structures is a relevant precondition to allow social innovation to flourish and currently represents a main challenge for policy. As social innovation initiatives often use non-traditional approaches to solve specific local issues, issues that are not necessarily working in the educational sphere only but have intersection with other policy areas (e.g. Employment), it becomes important that **administrative capacities** for support of social innovations will be strengthened (on national, local and regional level).

The holistic approach also includes new modes of cooperation and collaboration, leading to **networking** and **new governance** structures. For instance, networking on the operative level is often done by local governance structures including all the relevant stakeholders for solving concrete local demands; overarching sectoral or (inter)national networking is focusing on concept development, knowledge exchange, learning, and lobbying. These given or new networking structures should consider the practice field approach of SI-DRIVE as a possible common ground for initiatives solving similar challenges and demands. This is in line with the **communities of practice** of social innovations, exchanging knowledge and best practices with like-minded people and/or organisations thereby engage in "action-learning" or learning-by-doing processes.

7.2.4 New Government Structures: Ecosystem of Social Innovation

Individual engagement, charismatic leadership and communities of practice as drivers of social innovation have to be embedded in collaborative governance structure to deal with the multifaceted problems and solutions in a holistic way. Aiming at enriching the top-down governance with a bottom-up perspective social innovations need a development of given structures **from fragmentation** (with separate rationalities and target-orientations, different public responsibilities) **to overarching and connected governance structures**. New governance structures should improve collaboration beyond, across and within the silos and focus on the learners' demands instead of an institutional perspective.

However, an **innovation friendly environment** is important, fostering collaboration between different sectors (e.g. through the implementation of networks as platforms to learn, exchange knowledge and expand the solution), between research and practice, and the availability of seed funds specialised to support practical experimentation. This also includes a policy approach that serves social innovation with new occasions of a **better use or combination with existing technologies** and with **relevant complementary innovation**.

New governance has to improve **interaction between social innovation actors and the formal system**, so that bottom-up initiatives and top-down governance mechanism are mutually driving and reinforcing each other for

- **Overarching** solutions (transition from school to work, education and employment, social inclusion)
- More **leeway** for grassroots / bottom-up innovations: new ideas, cooperation instead of fearing to lose responsibilities
- A better **compatibility** of social innovations with the formal system (ecosystems)
- Making **policy part of the solutions:** avoiding competition with the formal system, stock-taking of and integrating social innovation solutions
- Extended role of **universities and consultancies**: knowledge provision and exchange, evaluation, new ideas, process moderation, advocacy for social innovation, technological development to support learning possibilities and access, and others.

7.2.5 Combining Social Innovation with Lifelong Learning

Focusing mainly on repairing, improving and transforming primary, secondary and tertiary education leads to the fact that **Lifelong Learning** (beyond the listed education areas) is not covered often by social innovation initiatives, and not part of the mind-set of most innovators. To unlock the potential of Social Innovation in the sense of Lifelong Learning (from the cradle to the grave, from early childhood up to retirement, including formal, non-formal and informal learning, employability and life skills):

- A **better understanding** of social innovations has to be fostered - examining what is needed to support the development and diffusion of social innovations; understand its added societal value and its diversity.
- National or regional **Social Innovation strategies** have to be developed.
- **Coordination** between ministries, institutions and political entities has to be enhanced; decentralization and cross-sectoral responsibilities of political competencies should be improved, involving the public sector as part of the solution.
- An **innovation friendly environment** with formal leeway for experimentation within and outside the boundaries of the education system has to be provided.
- Initiating, fostering and upscaling of social innovations by **new governance**, social innovation **ecosystems** and **greater flexibility** of the formal system.

- **Diffusion** of best practices has to be enabled, e.g. through the development of exchange platforms, increasing visibility of new or best options and success stories, creating blueprints for supportive environments and solutions.

In line with Lifelong Learning as a European strategy aiming at improving of the EU's competitiveness in the middle to long-term (Lisbon-Strategy, EU 2020 Strategy), Social Innovation in Education and Lifelong Learning can help to address technological, social, economic, and demographic changes and challenges in a holistic way. Focussing on new practices, mainly at the regional-local level, Lifelong Learning is also an opportunity for every individual who wishes to manage actively, and in a self-reliant way, the constant change in work and society. However, as social innovation reveals, this cannot be reduced to a purely individual responsibility; rather new governance structures will facilitate new solutions helping the individual learner in the achievement of new goals and his/her particular demands in an appropriate way. **Combining Social Innovation with the Lifelong Learning strategy** the *individual* personality of learners and the learning *process* (not just learning phases or punctual activities) have to be the starting and reference point for every learning environment. On the one hand this leads to the already described holistic approach of social innovations with a comprehensive understanding of learning (taking into account all areas and forms of learning and competences) and the learners personality, environment and biographical (learning) history. On the other hand this comprises a **paradigm shift from an institutional perspective to a strict learner's and learning process perspective**, enforcing new overall and comprehensive structural principles within the education system and beyond. The reconstruction and partly new construction of traditional structures of education are necessary, building up a Lifelong Learning system instead of innovating only within the borders of (formal and separated) educational institutions and areas, arranging Lifelong Learning possibilities in a more flexible way, especially at the local level (Kruse et al. 2010).

7.3 FUTURE POLICY AND RESEARCH IMPLICATIONS

Policy advice in order to boost social innovations as a concept in the field of Education and Lifelong Learning is related to a better and coherent **understanding and visibility** of this kind of innovation. This can be achieved by **fostering collaboration and transparency** about deficits and conflicts, by engaging stakeholders via cooperation and networking, as well as by giving social innovation initiatives within and outside the education system **leeway for experimentation**. Less compliance and recognizing the added value generated by social innovations, more promotion of the emergence of social innovations as well as **dealing with and learning from the diversity of social innovation initiatives** are also characterizing new policy approaches in the policy field of Education and Lifelong Learning.

Hence, policy makers have to focus on providing a framework for **de-centralized, tailored support for civil society** initiatives serving solutions that could not be or are not covered by system actors. In order to achieve this goal, **administrative capacities** are crucial for policy makers to realize adequate pathways for initiatives to benefit from funding and support opportunities. This requirement becomes particularly important as policy makers in the respective context might not be aware of the potential social innovation provides. The policy field and its actors have to be more aware of the concept and possibilities of Social Innovation, finding new collaborative **solutions for the learner and with the learner**, across given responsibilities and possibilities.

Interaction between social innovation actors and the formal system has to be improved, so that bottom-up initiatives and top-down governance mechanism are mutually driving and reinforcing each other for **overarching** solutions (e.g. transition from school to work, education and employment, social inclusion). This requires **new governance structures**: cooperation instead of fearing to loose responsibilities, collaboration across and within the silos, focusing on the learners' demands and not the institutional perspective, from fragmentation to overarching structures, avoiding competition with the formal system, stock-taking of and integrating social innovation solutions. Furthermore the formal education system can be described as a driver for social innovation activities due to its initiation, funding and assimilation of (successful) bottom-up solutions into its structures.

Moving from the fragmentation of education (with separate rationalities and target-orientations, different public responsibilities) to overarching and connected **governance structures** (**ecosystem of relevant actors and stakeholders from policy, economy, civil society and science**) between centralised and decentralised public

government, market and civil society driven structures could be beneficial. This means a common management of resources (infrastructure, staff, etc.), competences, learning offers and programmes to secure an improve efficiency for the learner and the regional-local area, and to increase efficiency (by a common use of resources). This includes also an extended role of **universities and consultancies** (knowledge provision and exchange, evaluation, new ideas, process moderation, advocacy for social innovation, technological development support learning possibilities and access, and others).

Public policy actors will have to take over a **new role** in supporting and fostering social innovations and its impacts, not only by providing adequate funding schemes, but by coordinating and integrating social innovations into the existing (formal) system, giving leeway for grassroots and bottom-up innovations. Ideally, public policy should be involved in social innovation solutions (**policy as a part of the solution**), therewith granting the required support to disseminate and scale the solution across local and regional boarders. In relation to the demand, solution and development stage of a social innovation, formal system players should engage as **initiator, integrator, supporter** and/or well-disposed **tolerator**.

Combining similar initiatives to **practice fields** is a notable approach for milieu and practices related collaboration, exchange and lobbyism. Being a good ground for emerging innovation streams, based on new and adopted innovations practice field "milieus" could be created for initiating, exchanging, scaling, diffusion and further developing of good practices.

Technology is already a complementary part of social innovations and facilitating innovation processes, either by becoming part of a solution or by assisting in the communication and knowledge sharing processes of the actors involved. But as technological innovation could be improved by embedding it in a social innovation or design thinking process, social innovations could be enhanced much more in the future by taking advantage of new technologies, as a part of the solution.

To conclude: **Policy in Education and Lifelong Learning** should

- Unfold the potential of Social Innovation by **improving acceptance, understanding and visibility** of the social innovation concept
- Setting-up **new governance** structures and promoting an education **social innovation ecosystem**: top-down and bottom-up, involving all the relevant stakeholders from all relevant sectors (civil society, science and research, economy and public sector); for networking and collaboration across institutions and areas, by promoting an social innovation ecosystem; coping with and coordination between different actors (ensuring stakeholder integration); taking into account civil society and the economy; setting up and qualifying intermediates and enhancing their acceptability; developing a new balance of centralisation and decentralisation; compatibility, involving public sector actors and considering path dependencies for upscaling of social innovations.
- Providing **more flexibility, leeway** for (bottom-up) innovation, compatibility of social innovations with the education system; balancing (sometimes) conflicting *demands* (e.g. the quest for greater flexibility versus standardisation); focusing on comparable skills and competences and at the same time ensuring cultural tolerance; promoting collaboration despite formal responsibilities; overcoming inertia and bureaucracy;
- **New role of public policy actors**: Public policy actors will have to take over a new critical role in fostering social innovation and its impact, not only by funding, stimulating and unlocking social innovation but also by coordinating and integrating social innovations in the existing system, giving leeway or changing the education and lifelong learning system if necessary.
- Take into account **variety and regional, local differences**: regional differences concern the role of civil society; the historical, social and economic context; the quality of life, the system stability and capacity, infrastructure and digital accessibility, and others.
- Solutions for the learners and with the learners.
- Focus on the **holistic and cross-sectoral approach**, taking the **Lifelong Learning strategy** and concept serious, focusing on the learner's perspective: "Solutions for the learners and with the learners".

Based on this summary **key questions and approaches** for policy and research are:

- How to raise **awareness** of Social Innovation in Education and Lifelong Learning? How to make Social Innovation more **visible**? (e.g. through narratives in a policy maker style, exchange of new or best options) - And the other way round: How to raise awareness of social innovators for lifelong learning outside of the formal education system (esp. for non-formal and informal learning of adults)?
- How to foster more **overarching** solutions in the education area and policy field (transition from school to work, education and employment, social inclusion)?
- How to create more **leeway** for grassroots / bottom-up innovations? How to enable new ideas and cooperation instead of fearing to loose responsibilities? How to enriching the top-down governance with a bottom-up perspective?
- How to enable new **compatibility** of Social Innovation with the formal system?
- How to set-up **social innovation friendly environments** and foster respective **ecosystems**?
- How to make **policy part of the solutions**, by avoiding competition and foster systematic stock-taking and integrating SI solutions?
- How to move from the fragmentation of education (with separate rationalities and target-orientations, different public responsibilities) to overarching and connected **new governance structures**? How to establishing new governance structures across and within the silos, focusing on the learners' demands and not the institutional perspective? (common management of resources (infrastructure, staff, etc.), competences, learning offers and programmes).
- How to **extend the role of universities**? (knowledge provision and exchange, evaluation, new ideas, process moderation, advocacy for social innovation, technological development support learning possibilities and access, and others)
- How to improve the role of **technology**? (not only for dissemination and distribution of solutions but also as an enabler and ground for new learning solutions)
- How to improve **transfer and imitation**? (set-up and running exchange and development networks, considering the practice field concept)
- How to take the **Lifelong Learning** concept more serious? (paradigm change from an institutional to a learner perspective, reorganising institutional structures and advancing synergies between European national and regional-local policies).

Again, against this backdrop it has to be discussed in how far the Lifelong Learning concept and strategy (embedding formal, non-formal and informal learning throughout the whole lifespan from the cradle to the grave) could be taken up much more by social innovators and combined with the concept of Social Innovation. By focusing on education and learning – in the overarching context of Lifelong Learning – the strategy and concept of Lifelong Learning could be combined with the Social Innovation concept, based on a common **paradigm shift and holistic approach** (from the institutional to a learners perspective, from a top-down to an increasing bottom-up perspective of embedding all the relevant stakeholders in the innovation processes). **Learning, not schooling**, has to be the main reference as well as the **learners´ demands**. Of high importance is how and with which approach social innovation ecosystems will be established, providing more leeway for experimentation and system change; and in the end, leading to new and established social practices and social change.

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9 ANNEX

9.1 PRACTICE FIELDS AND SELECTED CASES (CASE STUDIES)

Detailed descriptions of the cases could be found the case study report (Schröder/Kuschmierz 2017)

Case No.	Name	Country	Partner	Description
Practice Field (A): Reduction of educational disadvantages				
1.	Tausche Bildung für Wohnen - TBfW) (Exchanging Education for Habitation)	Germany	TUDO	The initiative is offering a new learning environment and aiming at improving equal opportunity and integration for children with a precarious living background in a disadvantaged district. Core of the idea is that so-called godparents (students who are teaching and coaching the children) can live without paying rent in the district; in return, they educate and supervise children from structurally disadvantaged neighbourhoods
2.	Talent Scout	Germany	IAT	Talent scouts identify and empower young people from deprived households, recognising and exploiting their talent to obtain a university degree and therewith, enhance their employability as highly skilled workforce.
3.	PROSA - School Project for Refugees	Austria	ZSI	The initiative offers high quality education for refugees who are not allowed to attend school, providing self-organised schooling to refugees above the age of compulsory education and thereby overcoming a gap in state provision.
4.	Lernhaus (Learning House)	Austria	ZSI	An institution where children and youth between six and 15 years receive teaching aid and tutoring free of charge. Lernhaus is also a meeting point outside of school premises, where children are given space and time to work and learn, but also to engage in leisure activities.
5.	Fryshuset (Youth Centre)	Sweden	IKED	A bottom-up initiative now one of the largest youth centres in the world organising premises and activities to help young men from risk groups (e.g. drug addiction, alienation, criminality) to gain a platform for learning and self-developing by making problem creator's part of resolving social problems.
6.	Educate Me	Egypt	HU	Addressing illiteracy as one of the largest problems in education in Egypt today with a contextualized model, student centred learning, community-run not only helping the kids be literate but develop also to become self-actualized in a cycle of three steps (awareness, choice and action).
7.	Hospedaje Estudiantil en Familia (Student Lodging with Families)	Bolivia	ECLAC	The initiative increases school enrolment, reduces school dropout and repetition that affect students in rural areas. Living far away from school and walking long hours to get to the schools led to the solution of student lodging in guest families nearby the school.
8.	Abuelas Cuentacuentos (Storytelling Grandmothers)	Argentina	ECLAC	The initiative is fostering reading abilities of boys and girls with the help of senior citizen volunteers (grandmothers), in a programme that has expanded inter-generational dialogue and gives a leading role to elder people.
9.	Papinotas	Chile	TUDO	Papinotas is a company based online platform for teachers sending text messages (SMS) directly to parents' mobile phones. The core idea is to achieve better flow of information between teachers and parents in order to create a more favourable environment for education leading to higher attendance at school and other positive effects.

Case No.	Name	Country	Partner	Description
Practice Field (B): New learning arrangements, interactive education				
10.	Jumpido (Gaming for Math)	Bulgaria	ARCF	Jumpido is a software tool developed for children that teaches math through interactive games. It comprises a set of educational games for primary school pupils and offers an innovative way of learning that makes children be physically active in the classroom (jumping, waving, squatting) while simultaneously it helps them to learn Mathematics in an engaging way.
11.	Timurovtsy (Young Volunteers) for Information Society	Russia	ISEDT RAS	The project has the goal to eliminate computer illiteracy. The project involves volunteers (pupils and students), who teach elder people computer and office equipment skills at the premises of computer-equipped classrooms in universities and libraries.
12.	Scientific and Educational Center (SEC)	Russia	ISEDT RAS	The essence of the initiative rests on the organization of an integrated chain of training for highly qualified personnel, covering the entire educational process, from elementary school to post graduate university courses. It thus aims at strengthening the availability of highly skilled specialists in the academic and higher educational sphere from an early education stage on.
13.	Friluftsfrämjandet (Outdoor Association)	Sweden	IKED	Based on local clubs, a wide array of outdoor activities is arranged for local communities with the purpose to learn about nature by doing things together across age, religion, political opinion, etc.
14.	Storycrafting	Finland	IKED	This project aims at listening to children's narratives by an easy to use method through which "children are telling". It thereby moves away from the traditional, objectifying approach to children's education, focusing on the questions raised by children and developing a participatory and co-operative approach.
15.	Pripovijedaonica (Storytelling)	Montenegro	SIL	The social innovation focusses on anti-bullying education by applying new learning methods in a form of storytelling instead of traditional approaches.
Practice Field (C): Digital inclusion with new and virtual learning environments (for disadvantaged groups)				
16.	JAKOM (assistive communication tool)	Croatia	SIL	JAKOM is an IT based assistive technology and alternative solution designed to improve communicational abilities of (autistic) persons with intellectual and communicational impairments, between parents and handicapped children. This communication platform could be also used for better involvement and inclusion in everyday life and society (e.g. consultations, hospital treatment, shopping, and other social participation).
Practice Field (D): Quality improvement of the formal education system (teacher recruitment)				
17.	"Renkuosi mokyti" Teach for Lithuania	Lithuania	KSU	This social innovation is the first private business initiative in Lithuania to initiate changes in Lithuanian educational system by attracting the best university graduates to work as a teacher. The core idea is to bring innovative people into the education system by attracting talented young people
Practice Field (E): Strategic partnership education and economy (transition management, labour market needs)				
18.	University graduates and the labour market APM	Romania	UDG	APM aims at developing a system that tracks to what extent graduates from university transit to labour markets and to what extent the knowledge acquired during higher education fits to company needs.