

4 RESOURCES, CAPABILITIES AND CONSTRAINTS

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4.1 INTRODUCTION

The potential success and development of social innovations is dependent on their access to resources, and their dealing with constraints and capabilities. For social innovators, the use and access to these resources is somewhat different than for technological and business innovators. A clear understanding of these differences can guide social innovators in developing strategies to better deal with resources and developing capabilities that eventually result in social change. Achieving social change needs a specific, theoretically and empirically underpinned approach. Considering the success of social innovations, this chapter will look into this underpinning, thereby elaborating which resources, constraints and capabilities function as leverage factors, and in what way.

The starting point for stressing the different approach to resources between Social Innovation on the one hand and technological and business innovation on the other is that social innovations often start in the civil society and in public policy, but hardly ever on markets. Civil society driven actions lack public and market funding. But what does this observation mean? One of the conclusions of the Critical Literature Review (Howaldt et al, 2014) is that civil society - as an innovation actor - is a widely untapped area, especially when it comes to questions about how resources are mobilised and used by actors of civil society in order to innovate. Therefore, "we have to put a strong focus on the role of civil society (citizens, non-governmental and not-for-profit organisations (NGOs, NPOs) social movements, communities) in the innovation process. In particular, we should analyse how the social innovation cases in SI-DRIVE have diffused and whether this facilitated the empowerment of citizens" (Howaldt et al. 2014, p. 150). "Like technological innovations, successful social innovations are based on a lot of presuppositions and require appropriate infrastructures and resources. Moreover, *social innovations* are requiring specific conditions because they aim at activating, fostering, and utilizing the *innovation potential of the whole society*" (Howaldt et al. 2016, p. 2).

Resources, constraints and capabilities are a relevant part of the SI-DRIVE pentagram (the five key dimensions, see figure 3) and to a great extent related to other key dimensions: actors and networks, governance structures, 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 are also related to cross-cutting themes defined by SI-DRIVE, e.g. (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). Let us first summarise what we mean with resources, constraints and capabilities.

Resources and constraints can best be dealt as interconnected topics. Having too little resources is clearly an important constraint for a social innovation. Social innovation often starts with individual citizens or representatives from public or private institutions that are trying to establish new practices and social change. They are, for example, persons wanting to address a particular societal challenge or find a solution for a (local) social demand, wanting to bring about social change. The first and most important resource is clearly *human resources*, i.e., the collaboration and cooperation of people, as without them nothing would happen at all. Successful social innovations represent intrinsically motivated people, peers or networks of people, who succeed in gaining the support of significant others, such as civil society, volunteers, professionals and sometimes policy agents. Another interconnected crucial resource is the presence of *financial funds*, that largely determine a successful start-up and, after that, a successful sustainability or scaling up of the social innovation initiative. The difference with technical and business innovations is that social innovations rarely have sound economic business cases to make them sustainable. Clearly, without sufficient funding, social innovations often disappear after a while. Many social innovators are personally driven and motivated by *societal challenges* (as for instance in environmental issues) or *local or individual demands* (as in the case of Poverty, Health, Education for example). This personal drive is in itself not a resource but an interrelated motivator, a necessary condition.

Constraints are the lack of qualified personnel, sufficient political support and a restricting legislative environment, besides the earlier mentioned limited amount of funding. But these constraints for social innovations are very much related to regional, cultural and governmental frameworks; they vary within the different policy fields. Social innovators need to overcome these constraints, and not always are they well equipped to do that.

Capability, our third term, can be defined at the individual but equally at the organisational level. Theoretically, using individual capabilities to achieve new goals is central to deal with any kind of issue. The capability approach (Sen 2001; Nussbaum 2011) is an economic theory whose core focus is on what individuals are capable of. Sen (2001) relates capabilities to development economics and poverty issues and discusses political issues regarding the human freedom of choice, empowerment, and a person's quality of life. The capability approach can connect quite easily to Social Innovation, since social participation and well-being in life needs to build on deploying human talents and competencies. As such, this stream of thinking suggests that any performance is more than being measured by financial or economic indicators, as seems the case in the narrow views of neo-liberalism. Capabilities are the foundation of how humans participate. Social Innovation, focusing on public and social values rather than economic values only, could apply the capability approach as a way to alleviate social problems, under the condition that people are provided sufficient means for social participation and economic development. Capabilities at the individual level overlap in great deal with "people as a resource" for Social Innovation. When talking about capabilities for social innovations, we mainly focus at the organisational level and not so much at the individual level. The term *capability* then refers to a business' ability to use its processes in order to marshal its resources and thereby attain desired innovation objectives (Ottaviano 2004). According to Hadjimanolis (2003), some key capabilities to innovation are technological ones, such as the capability to produce ideas, 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 vision and strategy of an innovation - competences, culture and new technologies are sources for innovation capabilities that are closely related to the SI-DRIVE philosophy.

For this section, the guiding question is: From our conceptual understanding and from our empirical results, which resources, constraints and capabilities are used and how do they help to initiate, implement, scale, diffuse and institutionalise social innovations?

We want to develop this understanding by comparing resources for product driven innovations with resources needed for social innovations. To accomplish this, three steps are needed: (1) an overview of what innovation studies have to say about the role of resources; (2) defining the components for a strategy to deal with sourcing resources and developing capabilities; (3) presenting the main resources and capabilities of the SI-DRIVE's mapping results. Our analysis also will show what a Social Innovation friendly environment may be constituted of (including a social innovation ecosystem). Key words in this respect are governance, capacity building, and empowerment.

4.2 WHAT CAN WE LEARN ABOUT RESOURCES FROM INNOVATION STUDIES, ECONOMIC INNOVATION, AND SOCIAL INNOVATION STUDIES?

Innovation studies, business innovation and Social Innovation studies are our starting point for assessing the use of resources and capabilities as well as existing constraints for social innovations. These conceptual approaches deliver us classifications with (more or less) relevance for SI-DRIVE. They give us a first understanding of the difference in use between different types of innovations. We will start with an external perspective (comprising innovation studies, business innovation and Social Innovation), and elaborate in a second step on our internal theoretical, empirical and policy related SI-DRIVE results. We need to understand how these resources are embedded in the context of the policy fields and different regions, taking into account different acting levels (local, national, global/regional). From this analysis, we can look at the contours for the strategies social innovators can use in relation to resources, improvement of capabilities and reduction of constraints.

(a) Lessons from innovation studies, technological innovation and Social Innovation studies

The Young Foundation (Murray et al. 2010) categorized four main barriers for social innovations: access to finance, availability of scaling models, insufficient skills and formation, missing networks and intermediates. These barriers also exist for innovators in general. Any type of innovator has to deal with a shortage of resources, limited amount of capabilities and a major set of existing barriers. This is no difference for innovators of new technologies or products as for social innovators. There are, however, general differences between these innovators in terms of accessing resources and capabilities and in the ecosystem that support these innovators. These differences need to be understood when social innovators create strategies to make their social innovations more successful. To bring this understanding, we have used a typological approach in table 1, to clarify some basic differences between technological and business innovations on the one side and social innovations on the other.

	Technological/business innovations	Social innovations
Funding	Private funding, public funding support; huge amounts of money, high investment for future competitiveness, return on investment Shareholder value	Mix of funding sources: social capital, own funding, public funding; sometimes often only small amount of money, own other resources (e.g. time, support), sustainability and social value in the foreground instead of return on investment Public and social value
Networking and collaboration	Closed, proprietary; also crowdsourcing and open innovation	Open, public and co-creation, knowledge of the crowd, user involvement
Number of partners; knowledge resources	Limited, specialised	General, open, heterogeneous, networking
Outcomes	Private, appropriated by limited number of persons, driven by economic value, competition, return on investment	Public results, impact central, driven by social value, collaboration, social return on investment
Ecosystem support	Well defined ecosystem of funders, knowledge (without integration of civil society) National Innovation Systems Strongly acknowledged by policy Central role of research and development / universities	Incomplete ecosystems (no full support systems in place, but strong involvement of civil society); made by chance Weakly acknowledged by policy Undeveloped and recently minor role of universities
Driver/motivation/ stimuli	Market, profit, technology driven (development of technology because it is possible)	Societal challenge and (local) social demand driven, technological development to solve a problem
Target group	Economic, buying customers	People of limited means who can hardly afford to pay for it

Table 1: Basic differences between technological/economic and social innovations

Of course, in reality these differences are somewhat exaggerated. Social entrepreneurship on the one side and the recent development of innovation studies (e.g. open and public innovation, co-creation are also elements of the new innovation research) and propagating the integrative innovation approach are blurring the boards between these two differentiations. However, social innovations cover a broad spectrum of funding, partners, contexts and outcomes; depending on the demand and its specific solutions. For each of these elements, technical/commercial and social innovators experience differences in dealing with shortages in resources and capabilities.

Funding: the focus of the companies is more on constraints in their functioning than capabilities. According to Silva et al. (2007), constraints to innovation can be classified according to three different factors:

1. Economic factors: economic risk, high costs;
2. Company internal factors: lack of financing, organisational rigidities, personnel and knowledge gaps, missing technological possibilities and know-how, inefficient market information;

3. Regulations, insufficient support from National Innovation System (NIS), lack of customers' responsiveness.

Social innovators will also have to deal with such constraints. The resources of social innovators are also related to their own social capital. We need a better understanding of what supports and hinders the development of 'social capital' by social innovators and the civil society: How do supporting networks for social innovators work in practice? "Inter-organizational collaboration is a way to increase the capacities of organizations and to apply leverage to existing resources so as to solve social problems more effectively by pooling together resources, skills and knowledge" (Harrisson 2012). The funding part for social innovators will therefore always work differently than for commercial innovators. *Enablers* for Social Innovation are a match between innovation objectives and user needs, a strong management support, adequate innovation funding, a clear organisational benefit from its innovating activity (profit/return), customer/user participation, clear objectives as to what to innovate as well as an appropriate incentive system (Orcutt/AlKadri 2009). Orcutt and AlKadri (2009) further emphasized communication, empowerment of people.

Networking and collaboration: social innovators will require a broad network and alliances of partners for developing impactful solutions. This requires, in contrast to the narrow focus of commercial innovators, new participation and collaboration structures, a more comprehensive co-creation and user involvement (e.g. civil society, beneficiaries, users as active partners in the solution process), empowerment and human resources development. Attention has to be paid to the invention itself, its development as well as its diffusion and imitation (Tarde 2009). Networks and collaboration are not only relevant for the invention and implementation but also for scaling and diffusion of successful social innovations. Appropriate resources are necessary to stimulate not only to market new inventions but also to start imitation and diffusion of social innovations, to foster new social practices and social changes, better coping with societal challenges and social demands than before.

The development methods of both types of innovations will be very different. Technology and commercial innovators probably can partly rely on project management methods. Their strategy should involve employees in the innovation process, as in workplace innovation and employee engagement approaches. Social innovators need a specific focus on concepts and approaches such as the theory of change and appreciative inquiry: "[...] their relevance for the processes of Social Innovation, in particular the bottom-up, self-driven and self-controlled practices involved in which traditional development paths are shunned or revised based on what the community itself sees as its most important assets and goals. Indeed, these approaches are largely about the process of change itself, where goals are often identified during rather than prior to the process, and the recognition that these processes are rarely linear but instead have many feedback loops that need to be understood within the context of experimentation and social innovation" (Millard 2014, pp. 45). Furthermore, design thinking might be appropriate to foster the role of civil society through living experiences and change-oriented capacity building (Schaper-Rinkel/Wagner-Luptacik 2014).

Number of partners; type of human resources: technological and commercial innovators rely on the quality of teams of specialists to develop and implement their innovators. They include end-users only afterwards or to a limited degree, if at all. The reality of social innovators is quite different. Not only more actors are required in the different phases of the innovation process, the type of engagement is different. Dufour et al. (2014) identified practice conditions facilitating or hindering the implementation of a social innovation by stressing the low quality of training and support, collaboration, and organisational problems such as voluntary participation, staff instability, and collaboration within existing structures as well as individual constraints such as decreasing motivation, lack of professional skills. Not only that. Power relations and control forms, administrative burdens, aversion to risk and failure of the public sector innovations and participations are mentioned by Chapman (2004) as system failures for social innovations. Problem complexity, the lack of networks and intermediaries (connection of social innovation initiatives to established networks), protection and risk aversion (conservative decision making) are claimed by Chalmers (2012).

Beside networks, actors and institutions "*knowledge intensity*" is one of the main building blocks for Innovation Studies (tacit and implicit knowledge, differentiated knowledge bases, and knowledge dynamics). For instance,

National Innovation Systems (NIS)⁷ are seen “as a system of interconnected institutions to create, store, and transfer the knowledge, skills, and artefacts which define new technologies” (Butzin et al. 2014b, p. 108; Metcalfe 1995 cited in OECD 1999). NIS are systems of forming, spreading knowledge and combining knowledge, be it internal, implicit, or external, they are “structures for dealing with knowledge”. Even we know that social innovations lack sufficient “knowledge input”, this factor remains an important resource and driver. Increasing knowledge intensity is also mentioned by Stehr (2007, p. 65) for economic activities and actions (Butzin et al. 2014b, p. 112). Knowledge is seen here as the most important input factor for innovation. In terms of a functional consideration of NIS, functions that are relevant in dealing with knowledge (across institutions) are in the foreground (generating, acquiring, spreading, regulating, applying, using knowledge)” (Howaldt/Schwarz 2010, p. 12). The role of knowledge as a driver of innovation development and imitation, transfer and diffusion is evident (Butzin et al. 2014b). Additionally it has to be stressed that knowledge is dynamic, context-specific, time and space depending (Nonaka et al. 2000, p.7; Butzin et al. 2014b, p. 112). It is therefore important to observe that the comparative analysis showed the underrepresentation of universities and knowledge institutes as partners in the fields of Social Innovation (Howaldt et al. 2016).

Outcomes: the outcome of the innovation process is not the same for social as for technological/commercial innovations. For technological/commercial innovations, the end result is mainly characterised by a more (economic) value creation. Social innovators, in contrast, are focused on social impact and social value (new social practices), profit being not the main driver. New ways of developing and diffusing social innovations are necessary (e.g. design thinking, innovation labs etc.) as well as additional far reaching resources in order to unlock the potential of Social Innovation in society and to enable participation of the relevant actors and civil society.

Ecosystem support: resources, capabilities and constraints are closely related to the *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 (p.16). Related to networking different roles and functions of innovation actors are emphasized in innovation studies, namely the Triple Helix (public, private, research) but also Quadruple Helix (adding civic and societal actors) integrating the influence of society in innovation performance (Butzin et al. 2014b, p. 107). Companies can build on well-developed networks to support their innovation process. As shown in innovation studies, national and regional innovation system research (Fagerberg et al. 2005; Butzin et al. 2014b) it is evident that successful (technological) innovations are based on a lot of presuppositions and require appropriate infrastructures and resources.

This is also evident for social innovations, but while there are a lot of technological oriented innovation studies there is a lack of research on these preconditions in relation to Social Innovation. And yet, social innovations require specific conditions because they aim at activating, fostering, and utilisation of the innovation potential of the whole society, just to name users as solution providers, comprehensive integration of beneficiaries in the innovation process, and empowerment of people involved. Alongside civil society, the social economy is an environment equally often mentioned as an important source and driver of Social Innovation. It is thus suggested to pay particular attention to the environments of civil society and the social economy (Scoppetta et al. 2014) in order to understand their particular distinctions. Studying these distinctions is of special relevance for public decision makers, as it provides the relevant background against which supporting infrastructures can be set up (Howaldt et al. 2014, Research Focus 8).

As the TRANSIT project reveals, “social innovations use specific and characteristic types of resources. They mainly benefit from labour, time and creative effort that is offered, whether on a voluntary or reciprocal basis. In both cases, this is, in the perspective of the formal economy, surplus capacity that is otherwise unused. Many of the organisations struggle to find and secure financial resources from external actors to cover small, but critical, fixed costs of base-level operations. Requirements for impact assurance from funders are understandable, but an assured base-level of funding is critical to the sustenance of the initiatives. If Social Innovation is to produce

⁷ According to Metcalfe (1995), a national innovation system can be defined as the „[...] set of distinct institutions which jointly and individually contribute to the development and diffusion of new technologies and which provide the framework within which government form and implement policies to influence the innovation process” (Metcalfe, 1995). This perspective “[...] highlights interactions and interfaces between various actors and the workings of the system as a whole rather than the performance of its individual elements” (OECD 1999).

greater levels of social impact it must be better and more reliably funded. Money is well-spent in sustaining core operations as this avoids disruption and frees the organisations to do what it does best, deliver social benefits, and gives scope to raise more resources for additional activities of interest to impact investors in respect to base-level (fixed) costs. A good way of funding core costs is to pay social innovation initiatives from money saved from the public purse thanks to the initiative. Tools such as Social Return on Investment (SROI) can enable initiatives to undertake such calculations.” (Kemp et al. 2015, p. 27)

(b) Strategies for social innovators: learning from others

The comparison between technological/commercial and social innovations revealed that it will be important to build on a broad set of factors to develop social innovations. The TEPsIE project recognised different types of barriers to be overcome:

- “*Vicious circles’ and ‘traps’ of innovation dynamics*: e.g. entry barriers to entire new activities, growth, scaling and diffusion challenges, cooperation problems with other stakeholders and sectors;
- *Action and actor related barriers*: cooperation and coordination problems, under resourcing, organizational failures, conflicts of interest of the participating stakeholders and their institutions, agency failures like missing financial and other resources.”

Incubators (like BENISI and TRANSITION) are focusing on resources, capabilities and constraints mainly for scaling. Beside financial they also stress human resources being of high relevance (skills and time, coaching and capacity building, networking, peers support and connecting, understanding of local framework and context (Davalli et al. n.d.). For achieving more impact of social innovations, we can learn from the SI-DRIVE results (see Howaldt et al. 2016 and 2016a, chapter 4.3.2) that social innovators need to consider the following issues for their innovation strategies:

- Based on the variety and high number of partners, diverse funding and support possibilities are possible and necessary (see chapter 4.3.2 Figure 13) to succeed in the implementation and impact as well as institutionalisation of the initiatives.
- Because of the far going development of the initiatives, organisational institutionalisation on the local level is already far reached (shown by the participation of partners from all sectors, embeddedness in overarching institutions etc.), this is also reflected by a yearly budget (Howaldt et al. 2016a, chapter 4.3.2b), employees, etc.
- Because of the high orientation on embedding civil society and all the relevant stakeholders, a high number of persons are and have to be engaged in the initiatives (employees, volunteers, external advisors, and others) (see Figure 12 below).
- Knowledge and funding gaps (see Howaldt et al. 2016, p. 20) are a main problem until the initiatives are institutionalised in accepted and diffused social practices.
- Empowerment is based on a quantitative participation of civil society, users, beneficiaries and a qualitative integration of diverse know-how of the different partners (mutual learning).

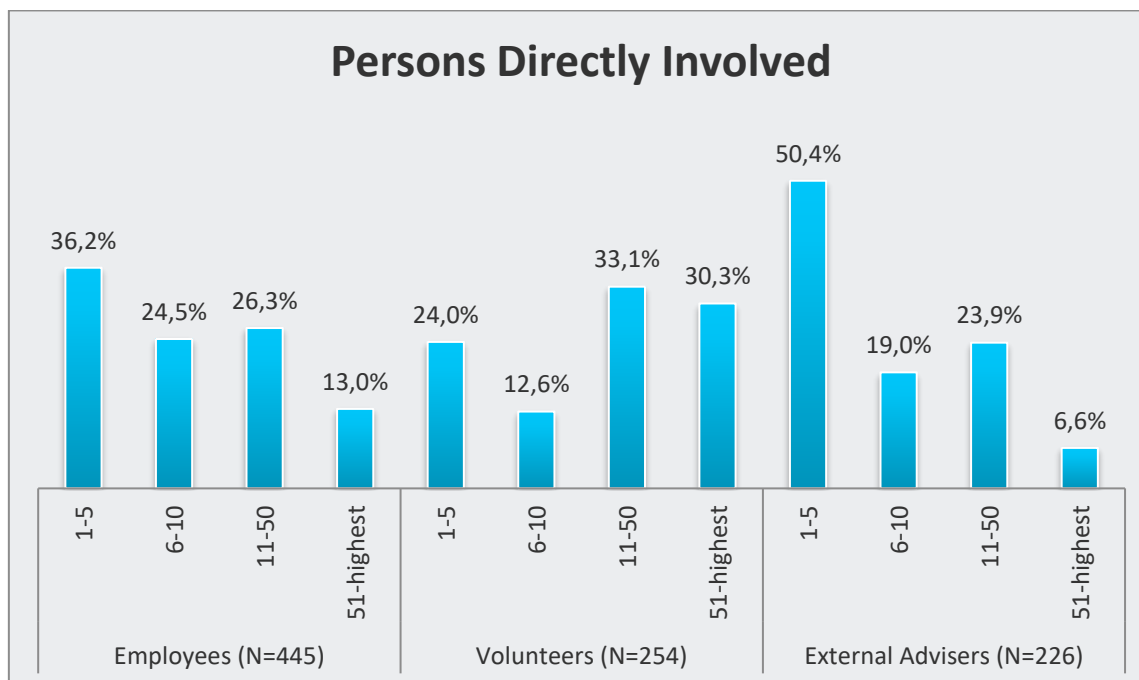


Figure 12: Number of persons, directly involved in the initiative (employees, volunteers, external advisers)

We can learn from Swedish policy recommendations for Social Innovation (Hansson et al. 2014, p. 10) to successfully develop and establish an ecosystem in which barriers for upscaling are overcome, success is enabled and capabilities are increased. Not only do we need to focus on resources, stakeholder and ecosystem collaboration, further we need to stress the role of knowledge and empowerment:

- Develop diversified funding possibilities and customised financial support systems as well as financing research on critical perspectives on Social Innovation.
- Finance competence development that is needed for the facilitation of complex co-creation processes.
- Support co-production of knowledge between stakeholders and increase knowledge exchange between actors in the Social Innovation ecosystem.
- Support competence development to support social enterprises and social innovations within the established innovation and business support systems.
- Further expand the knowledge of and possibilities of measuring the social and environmental impact of innovations.
- Develop existing and new models for interaction and knowledge creation between civil society organizations, public sector, academia and private companies.
- Increase formal and informal education on Social Innovation.
- Encourage knowledge exchange and co-learning between challenge-driven educational models.
- Promote civil society's role and position in innovation, encourage and strengthen democratic and inclusive innovation processes to anchor change processes among the multitude of citizens and stakeholders affected by them.

4.3 WHAT CAN WE SEE IN PRACTICE?

Several of our SI-DRIVE project activities help to shed light on how social innovators deal with resources. We gather the outcomes of the State-of the Art Compiling Report, the Regional Report, the Global Mapping Comparative Analysis, the Case Study Compiling Report and the Policy and Foresight Workshops under the following headlines:

1. Human resources
2. Financial resources
3. Organisational capabilities
4. Dealing with constraints

Combining the quantitative and qualitative outcomes of the global mapping and the in-depth case studies, we can learn about the recent situation of social innovation initiatives. Based on these results we will show limitations and potentials of explanation, which lead us to reflected and proved consequences for the framework of Social Innovation and future (social) innovation research (questions).

4.3.1 Human Resources: Intrinsic Motivated People, Leadership Style and Learning

Social innovations need motivated and active citizens. Our research shows which persons help drive the social innovations, which type of leadership style is effective and how these persons learn-by-doing.

Active citizens are not only needed to invent the innovation, but equally to drive the innovation. Citizens need not so much to be knowledgeable as scientific experts for technological innovations. These 'human resources' can come from everywhere. However, the scaling-up of social innovations require specific and diverse competences. Most failed social innovations look back at lacking competences of their initial promoters and actors. Sometimes this has to do with the fact that these actors have limited experience with pushing and growing their ideas. From the data of SI-DRIVE, we understand that most social innovations are in search for sufficient and the right human resources. More importantly, these human resources need to excel in two domains: a) connectedness to other networks, social movements, policy programs and umbrella organisations, and b) sufficient numbers of motivated people to help drive the social innovation. The bottom-line is that social innovators can be anyone: regularly paid employees, volunteers, external advisers or experts, and other supporting persons. And social innovators may even be beneficiaries. They all need to be motivated by the civil cause.

These facts are underlined by the mapping results. More than 60% of the initiatives with regular paid staff have up to ten employed persons and more than one third of the initiatives are supported by more than ten volunteers. About half of the initiatives are supported by up to five external experts and advisers. The average number of employees in fully scaled-up and established social innovations is 188, supported by an average of 1.068 volunteers and 39 external advisers or experts. This result differs between the policy fields. Due to the general variety of social innovations and the different contexts they are implemented in, the size of the persons involved is differing: more *employees* are engaged in initiatives in the policy fields of Poverty Reduction and Education than in the other policy fields. More *volunteers* are supporting innovations within Transport and Mobility and Environment, less in Energy Supply and Employment. External *advisers and experts* could be found more often in Education than in the other policy fields and other supporters are mainly found in Poverty Reductions and Health and Social Care.

Also the significant involvement of users or beneficiaries (in practice we could find that two of three initiatives include their effort) is typical for social innovations. Beneficiaries are a remarkable human resource as such; especially due to their personnel problem-related practical knowledge and experience (see Howaldt et al. 2016, p. 13)

The analysis of the mappings also reveals that *leadership* needs to be contingent. Start-ups and smaller social innovations rely greatly on charismatic leadership. Only such initiators are sufficiently concerned by the challenges lying ahead, and probably have sufficient connection to the concerned milieu. Larger social innovations rely more on "collective leadership" where the management structure is not so much depending on single persons.

The case studies reveal that mutual learning, absorptive capacity building and empowerment are highly relevant to develop the initiatives further and to attain sustainability. Mutual learning takes mostly place at the individual level of people involved and can also refer to the target group of the solution. Social learning of society actors and system players takes place through recognition, assimilation and implementation of new information and knowledge (absorptive capacity building). However, capacity building is often linked to the initiative itself and interrelated to "path dependencies of development" – as experiences from the past will inform actions in the

future. Capacity building (also for public institutions, system representatives) and empowerment based on learning results of the involved people create win-win situations for producers and users alike.

Capacity building of intermediary organisations and institutions is evolving, with the goal to cooperatively equip initiatives with the right skills, competencies and even resources to be successful (see our elaborations on incubators like BENISI and TRANSITION). In line with this and compared with the high engagement of science in technological innovations, the underdeveloped role of universities within social innovations has to be stressed. Universities could and should engage much more in supporting social innovations by knowledge provision and exchange, evaluation, new ideas, process moderation, advocacy for Social Innovation, (supporting) technological solutions, and others.

4.3.2 Financial Resources: Social Innovations are Depending on Diverse Funding Sources

With regards to funding, we need to look at four topics. Social innovators clearly have a complicated funding situation. We are talking here of private citizens that are starting a local, possibly limited initiative. This always means using own funding. But there are more sources to be harnessed. Secondly, we need to understand that funding practices may be quite different internationally. Thirdly, this diverse funding situation also leads to the use of diverse and specific business models. Considering all of these factors, fourthly it is clear that wanting to support social innovations will require specific approaches.

The global mapping reveals a wide range of different financial sources which form the backup of social innovation initiatives. There are differences in the budget the initiatives can deal with and a variety of funding sources. The main funding sources are internal contributions of the initiatives (own and partner contributions), supplemented by (European, national, regional) public funding. Civil society (foundations, philanthropy capital, international and individual donors) are also a highly relevant funding source. Social innovators sometimes rely on pay-back from own activities (economic return from own products or services, participant fees), and of minor relevance remains crowd funding. These sources result in a broad picture and highly diverse combination of funding sources. Social innovators are not relying on such practices merely as a risk diversification rather they have no other choice. They need to combine funding sources to help their initiative survive. Funding sources may vary across the policy fields. This is reflected in an evident way in Poverty Reduction and Sustainable Development in which almost every listed funding source is of relevance.

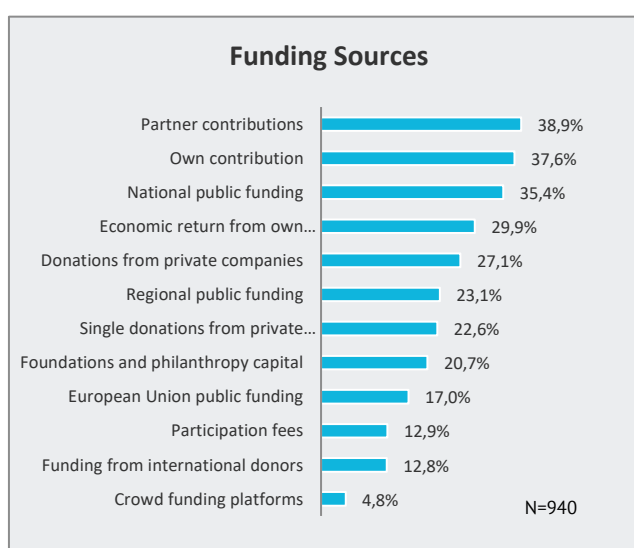


Figure 13: Funding sources

When the results are compared between the world regions, the main difference is that in non-EU initiatives donations from private persons, companies, international donors and foundations are by far more relevant as a funding source, while in European countries, national and regional public funding coupled to participant fees and own contributions are the dominant practices.

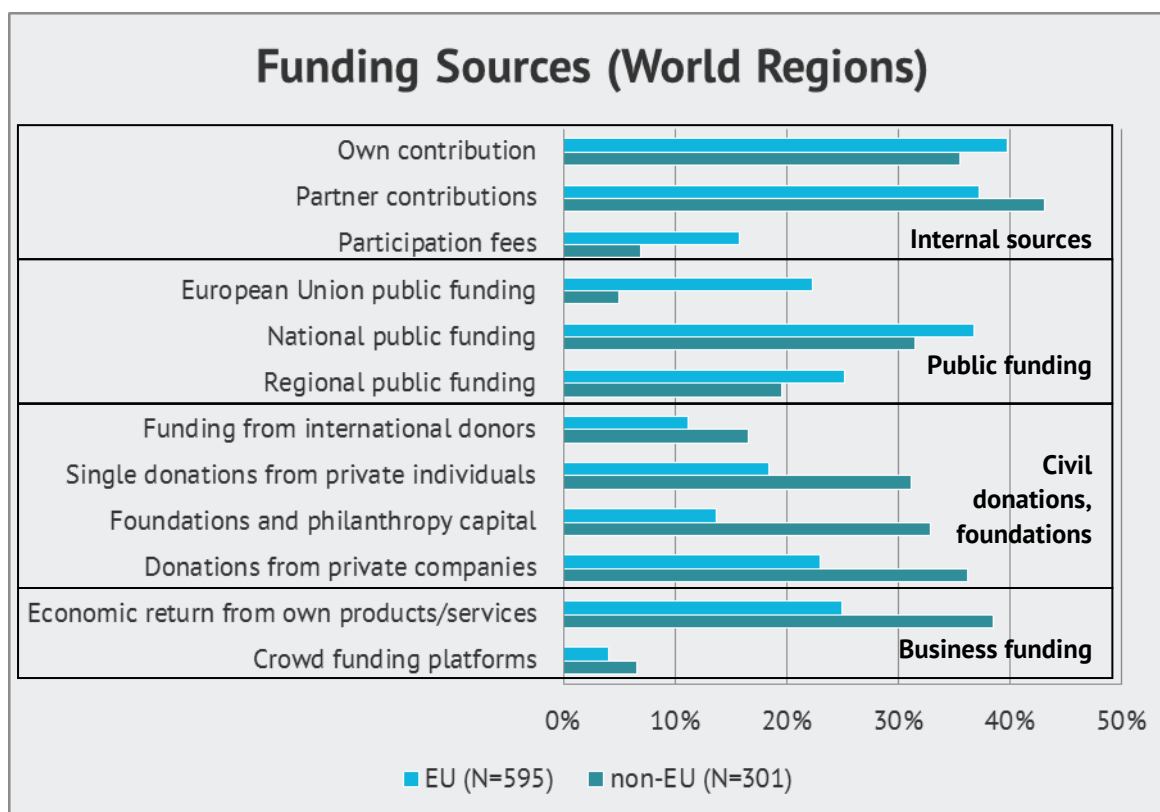


Figure 14: Funding source by world region

With these diverse funding sources, that are different from business and technological funding schemes, it is also clear that social innovators will be using a multitude of business models. As commercial competition with other social innovations is not in the mind-set of most of the initiatives, other business models are used by initiatives:

- Social enterprises (with not-for-profit revenue models),
- Initiatives embedded in corporate social responsibility programmes or measures (funded by companies),
- Hybrid revenue models (sponsored by sales, fees, etc.),
- Licensing models,
- Associations (funded by fees),
- Small business (market competition).

Social innovators also have to live with the fact that they will be competing with other initiatives for funding, as well as for human resources (public funding and support).

As a steady financial backup is still one of the main challenges for social innovations, innovators require an innovation friendly environment in this respect. Ideally, social innovators would require some kind of basic funding in the incubation phase. Local innovation laboratories for social innovations are helpful to get start-ups launched. In the upscaling and institutionalisation phase, social innovations require additional co-funding sources next to the existing participant fees and their own contributions. Of course, social innovations could benefit from exhibiting more “business” orientation and managerial capabilities. These resources are, as documented above, also a serious constraint for initiatives.

4.3.3 Organisational Capabilities: New Governance Systems

Social innovators are mainly driven by societal challenges and local social demands. Our mapping shows that for more than 60% of the mapped social innovations, these factors serve as motivation and drivers (see chapter 3). This is clear when thinking about general societal challenges like climate and demographic change, society’s frustration of ineffective systems, measures and regulations, system and policy gaps and failures. Social

innovations want to solve these challenges. Local demands on social inclusion, labour and education, reduction of mismatches, are demanding new and innovative social solutions that are leading to new social practices – all demands push intrinsic motivated people of different sectors to take up their (civil) responsibility. An active civil society expects this. Social innovations are driven by a sense of urgency and pushing up the public and political agenda with social needs and demands that are not yet covered by the formal system.

To deal with these drivers, the organisational capabilities for social innovators need to be in place.

Social innovations need to be embedded in environments in which they can connect to important stakeholders. *New governance systems* or innovation friendly environments are needed, supported by an open government which is giving leeway for and fostering experimentation. As social needs and challenges can be regarded as wicked problems, connecting and facilitating collaboration between different stakeholders is of huge value. Networks also provide routes for sharing experiences and learning from best practice at a local, national and international level. Membership in relevant networks is regarded as very important and seen as advantageous and as a precondition for being successful.

Besides funding and a sustainable financial back-up of the initiatives, the *usage and taking up of new technological possibilities* is an important capability of a social innovation. The possibility of taking advantage of new technologies appears in a remarkable extent in every policy field, showing the relevance of technology in supporting and enabling social innovation activities: based on digitization, social media and mobile technologies as a mean for tailored target group and mass communication, as well as a new basis or complementary innovation for new social practices (e.g. electric cars for car sharing, energy supply). Technology and ICT have great potential to become an integral part of social innovations, especially in terms of communication, research, public relation and dissemination as well as becoming an integrative part of the solutions (assisting technologies in Education, Health and Social Care).

The case studies reveal the role of complementary innovation in the different policy and practice fields. Whereas *complementary innovations* in some policy and practice field are more of technological nature, others are related to the development of new business models that make social innovations more sustainable. Combining technological, economic and social aspects in an innovation process wherever relevant to solve social demands is an important capability, leading to effective solutions.

Integration with the dominant institutional setting is a capability easily overlooked. Selection, adoption, diffusion and imitation, and social change are mainly depending on the connectedness with the (formal) system in which the initiatives are embedded in (e.g. there is only low leeway of social innovations in education to act without a relation to the formal education system). Conflicts and tensions arise due to perceived system gaps. Institutionalisation and planning of social change is mainly dependent on the relation (acceptance, toleration or integration) to the formal systems. Anyway, institutionalisation and planning of social change are not elaborated systematically (e.g. due to missing managerial competences); an unlocked potential for diffusion and transformations is evident.

These capabilities are required in all social innovations. There are only minor disparities to be seen between the world regions in presence of capabilities. In general, no big difference between Europe and the rest of the world can be stated. The Regional Report of SI-DRIVE stated a common set of factors across all European countries enabling Social Innovation (Boelman/Heales 2015, pp. 5) while factors enabling social innovation in non-European countries are more often depending on the political situation, policy programs and the possibilities for civil society to act.

How can these capabilities be activated and supported?

An important leverage factor is to set up an innovative environment unlocking and fostering the capabilities of social innovations. Such environments let grassroots movements grow, supply means to find new ways of funding, and help to set-up support structures. The relevance of taking advantage of new technologies and sustainable business models, e.g. the Canvas business model (Osterwalder/Pigneur 2010), has to be made more evident. Universities and research centres should become drivers for Social Innovation (as they have access to technological innovation, they could exchange up-to-date knowledge, etc.). Only about half of the social

innovations are supported by *external experts* (see chapter 4.3.1). Science and research – and this is different from technological innovation – are not having a relevant role as a trigger or driver (this is underlined by the low number of involved universities and research institutions as partners of initiatives).

Governance of social innovations should be supported by open government, providing leeway for experimentation. In some respect political changes (e.g. structural reforms in the Eastern Europe and Western Balkan, Russian Federation), economic crises, constraints on public finances and the prevention of social follow-up costs have also led to *structural reforms* and the search for new, innovative solutions and mechanisms – leading to new participative and decentral approaches increasing the role of local communities, civil society and grassroots initiatives.

An innovative environment - established and supported by (new) governance structures and politics - needs a *supportive legislative environment* (giving 'space' for experimental innovations), especially concerning political support on the local level.

Especially in policy fields with a high degree of regulation by formal systems (like Education, Employment, Health), *new governmental structures* are needed: new leeway for experimentation done by an "open government" which is itself embedded in broader open governance systems encompassing all of society's actors. In this context, the public sector needs to adapt its roles and relationships with these others actors" (Millard 2015, p.3).

4.3.4 Dealing with Constraints

The global mapping demonstrates that a variety of constraints for upscaling of a social innovation exists, mainly *focusing on the initiative* itself (level 1): lack of funding, lack of personnel, knowledge gaps. Although there is a mix of funding sources and funding is not the main driver (as mentioned above), *funding is by far the main challenge* of the social innovations. Against the background that empowerment, human resources, and knowledge are the main crosscutting themes of the social innovation initiatives, the appointed lack of personnel and knowledge gaps are relevant barriers as well.

Although legal restrictions and lack of policy support are not in the focus generally, the in-depth case studies show that they are very relevant for development and institutionalisation. Also the policy and regional reports reveal a broader problem setting, focusing on the (legal) framework conditions and mind-sets that hinder social innovation activities to unfold their potential (contested terrain). Again, open government is demanded, not only for experimental leeway but also for taking up the provided solutions of social innovations, integrate and flourish their social/public value by fostering, exchanging and institutionalising of new social practices in the (formal) system.

The following description of constraints illustrates the multifaceted obstacles the initiatives have to face as well as their strategies to overcome them.

Constraints	Challenges	Strategies
Funding	Lacking access to and time restricted dependence of funding and bank loans, unattractive interest rates, missing sustainable finance, cost expansions when it comes to scaling and diffusion, negative return on investment, low profit generation, and lack to finance relevant staff.	Looking for possible investors from any kind, public funding from different levels (EU, national, regional, local), searching for alternative financing sources (fundraising, crowd funding), applying to awards and competitions to receive publicity and additional funding, charging fees (from consumers, users, members), changing the financial allocation (within organizational structure, money spent on behalf of the beneficiaries, etc.), minimizing costs, development of new (public) financing policies, engagement in marketing and market activities, seeking new partner- and sponsorships, establishment of a new legal entity (to get access to specific funding opportunities).

Constraints	Challenges	Strategies
Knowledge gaps	Lacking capabilities and skills (esp. business and managerial, staff training and personnel development, networking and communication skills) as well as missing experience in economy, lack of professional knowledge (e.g. information technology and recruiting staff), difficulties to get access to required information, external expert knowledge is needed in some areas.	Building up skills and capabilities (upskilling and training, workshops, learning etc.), getting managerial training (e.g. administration procedures, business plan design etc.), knowledge exchange and connecting with other organisations, collaboration for learning, facilitating knowledge transfer, exchange and learning opportunities, buying in of knowledge, collaboration with external experts to gain specific expertise.
Lack of personnel	Insufficient number of staff and volunteers, lack of finance and incentives (working conditions, wages, etc.), difficulties in retaining qualified personnel, special treatments for some kind of employees (e.g. handicapped people).	Recruiting applicable staff and exchanging personnel with other initiatives or own partners (barter exchange: while the initiative often receives access to an organisation's employees and infrastructure, it offers its services in exchange), recruiting (more) volunteers (using media and networks), training and upskilling of existing staff, care or assistance for employees with specific needs, installing incentive systems (employer branding, attractive work, stimulating motivational aspects, imposing working standards), optimising the work flow.
Absence of participants	Missing acceptance and feasibility of the solutions for (some parts of) the target group, limited coverage of the problem related to the stage of the initiative, lack of awareness and reaching the target group, and lack of interest and publicity, popularity.	Awareness campaigns, app development for continuous integration of participants, implementation of communication about the project, services, and product and its solution potential, setting up a team to ensure proper communication to society, evidenced-based communication to overcome mistrust or scepticism in society, convincing the public of the effectiveness of solutions, incentivising participation, granting participants for their efforts and willingness, personalising solutions to specific target group as well as approaching specific target groups, broadening target group focus, collaboration with relevant stakeholders.
Legal restrictions	Access to financial systems (application for funding and bank loans are too complicated or not possible), too strict or not formulated standards (e.g. quality or safety standards), not given congruence or weak interpretation scopes to law and regulations ("grey zone"), necessity for new laws or regulations, and limited legal structures and possibilities to establish social enterprises or other organisation and legal entity forms of initiatives.	Imitation of good practice in order to comply with legal requirements, partnering with other organisations, dialogue with official authorities to negotiate favourable legal conditions, achieving or complying with given standards, creating new legal conditions for the smooth execution of the initiative's solution, finding alternative ways of operation if it is not possible to negotiate new legal framework conditions, using existing leeway possibilities

Constraints	Challenges	Strategies
Political support structures	Governmental coordination structures, corruption, lack of government contracts and funding, lack of political will and promotion, and other political priorities or problem ignorance.	Advocacy to influence government and politics in order to recognise as well as support and finance the solution, ensuring an overlap between political strategies and objectives with the initiative's own objectives and priorities; building networks, platforms and relationships for dialog, cooperation and partnerships at a political level; designing favourable policies for solution, using media as a tool to receive governments attention, especially if the problem at hand is not yet a political priority or the problem has been ignored.
Lack of institutional access	Not given acceptance by external parties; missing legitimacy, interest, practical support; no willingness to change (public) institution, ponding on institutional rationality (saving privileges, not willing to change internal structures and to take over additional or other tasks than the ones they are obliged to), and public bonds to established solutions (path dependency). Missing capabilities of governmental institutions to understand the potential of Social Innovation.	Establishment of and engagement in public-private-partnerships, engage in networks or platforms in order to convince institutions and advocate the legitimacy of the solution, collaboratively development of solutions with institutional integration, putting local demand in focus, public relation activities as a mean to access institutional support through awareness raising and attention making, accessing institutional support as a mean to give the solution a better backing by strengthening credibility and legitimacy.
Political opposition	Especially at local and regional level, doubts on the legitimacy of the solution cause political opposition, political disparities (not in the general solution but the implementation, etc.), and public bonds with incumbent solution.	Convincing politics by showing the effectiveness of solutions, regular and continuous information exchange and transparency, dialogue with the authorities in order to get support, building networks with stakeholders in order to build a stronger force against political opposition.
Lack of media coverage	Lack of publicity of the solution, lack of media interest; ineffective or no use of online tools, social media and networks, insufficient or not given collaboration with media, and no or week media coverage.	Active facilitation of diverse media channels, public relation campaigns, using in-house communication capabilities, cultivation of media relations in order to have access to media support when required (incl. usage of social media).
Competition	Establishment of similar or alternative solutions, either by other initiatives or the private market; price competition with private market solutions, and no competitive wages.	Adjustment, improvement or diversification of the products or services, strategical cooperation and partnerships, quality improvement, niche orientation, marketing activities.

Table 2: Constraints, challenges and strategies to overcome these

The *Regional Report of SI-DRIVE* (Boelman/Heales 2015, p. 5) identified a number of other factors which constrain Social Innovation and that are also relatively common across Europe: poor funding models, resistance to change and risk aversion, conflicts of interest and poor knowledge sharing systems (e.g. learning from failures, not reinventing the wheel new). Many countries in the Western Balkans and Eastern Europe identify legacies from previous political regimes which continue to constrain Social Innovation today: lack of volunteering culture and human capital, limited trust in social enterprises and the third sector. Especially the policy field of Poverty Reduction and Sustainable Development shows a widespread set of barriers additionally to the already described ones: poor understanding of the problems and their dimensions, high level of illiteracy in the regions, hindering legal and institutional arrangements, lack of will and poor political commitment, corruption and low transparency, patriarchy and structural inequality, cultural barriers, social norms and values resisting empowerment, habits and customs, regulations and policies, prejudices; poor government policy and local government opposition; market dominance (exploitation).

Additional factors constraining social innovations, especially in non-European countries, can be divided in political (centralised government, missing support, corruption) and economic factors (missing entrepreneurial spirit, lower capital and per capita income) as well as civil society awareness and engagement. But as already said, central government or system compatibility is a good example of being a constraint and a driver as well: If

the social innovation is in line with the government's policy goals, or not against it, it receives much policy support.

4.4 CONCLUSION

The main question for this section was phrased as, how do resources, constraints and capabilities function as leverage factors for initiating, implementing, scaling, diffusing and institutionalising social innovations? The SI-DRIVE project shows - for the first time - how social innovators are dealing with limited resources, facing many constraints and which capabilities are available to them.

Our analysis shows that social innovations have similar but different and more challenging properties in comparison to technological and economic innovations. Social innovations require substantial human resources, unlocking the potential of society as a whole for specific solutions (quantitative in numbers and covered sectors and qualitative in context related knowledge). 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 societal actors involved and even (parts of local) communities. Those initiatives - that provided information on their staff - have a quite respectable number of regular employed people, activating considerably more volunteers, and are supported by a number of external experts and advisers (as shown in Figure 12). This need puts the social innovators in a difficult spot: lack of personnel is one of the main barriers for upscaling. Secondly, all social innovators experience funding issues. This is also the case for other innovations; however in social innovations funding sources are quite diverse and more precarious. Social innovations are funded by different sources: own resources and contributions of the partners as well as public, civil and private funding. At the same time, the economic return from own products and services remains a relevant funding source as well.

We can find large funding differences between the different social innovations. The yearly budget of the initiatives (if they have one) varies a lot, ranging from small scale initiatives with up to 10.000 Euro to big established initiatives with more than 1.5 billion euros (and mainly more than 50 employees) available.

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 related to each other. In line with the results of the SIMPACT project, barriers can become drivers as well: Depending on the context of the social innovation "every driver can feature as a barrier and vice versa" (see the four contexts of drivers and barriers in Pelka/Markmann 2015, p. 1). For example, the current education systems and institutions are a barrier for new solutions, however system failure and gaps could become important drivers for Social Innovation; or: public funding is a driver but being dependent on it can act as a barrier too (especially if funding is restricted to piloting project schemes). Capabilities and constraints of social innovations are mainly influenced by faced drivers (including motivation and triggers) and barriers, which are often mutually dependent and interacting (being "two sides of the medal").

What does this mean for scaling and institutionalising social innovations?

Social innovators will need to develop a broad spectre of strategies to get their right resources and develop relevant capabilities. The main results show a high innovation capacity and empowerment of society by broad and diverse financial and personnel resources, by social innovations situated mainly in the implementation and impact phase stage (see chapter process dynamics). The integration of partners of all societal sectors, building an innovation related ecosystem, diverse funding sources, a high budget (of established initiatives), the diverse know-how of partners, a broad user and beneficiary involvement and a high number of volunteers could be seen as an already existing *excellent basis for further development to an ongoing institutionalisation of the initiatives, their diffusion and adoption*. Moreover, existing initiatives of such kind can become an inspiring movement or practice to adopt, modify and develop other solutions for other societal challenges and social demands, especially as responding to societal challenges and social demands is the main motivation and trigger to start a social innovation.

The analysis also shows that social innovations need to be integrated into social movements, networks, umbrella organisations, and not to forget policy programs, if they wish to diffuse and become adopted. However, although we find examples of social innovators dealing with these elements, it is clear that this potential is still not unlocked to a high degree. In line with the TEPSIE project and the results of the incubator projects BENISI and TRANSITION (Davalli et al., n.d.), funding and knowledge gaps remain main problems and barriers, leading to a limited transfer and diffusion (see chapter 6). Regarding financial resources, the initiatives are very different, depending on the policy field and the region on the one hand as well as on the scale and funding resources of the single initiative on the other. Indeed, many funding sources have been named, however relying on a variety of different sources is not a chosen strategy (e.g. risk diversification, not dependent on single sources), rather it is a given necessity to look for funding wherever it comes from. Empowerment is given by the (quantitative) participation of civil society, users, beneficiaries and the (qualitative) integration of diverse know how of the different partners. Resources, capabilities and constraints have to be seen in a *process or developmental perspective*, meaning that they change over time and are allocated differently to specific development phases of social innovations (see chapter 6).

Is it possible to support social innovators with this complex reality?

This chapter contains several suggestions. Social innovations are driven by individuals, networks and groups meaning that initiatives are very much relying on personal engagement and persons. There is a need for environment and governance structures that are friendly to these innovators. Especially if compared with technological development infrastructures and support structures (like NIS), it becomes evident that the instruments for supporting social innovations have to be improved, e.g. if it is to improve the usage of technologies for social innovations or to integrate technological development in a Social Innovation process based on a social demand or a societal challenge.

Alongside civil society, the social economy is an environment equally often mentioned as an important source of Social Innovation. It is thus suggested to pay particular attention to the environments of civil society and the social economy (Scoppetta et al., 2014) in order to understand their particular distinctions. Studying these distinctions is of special relevance for public decision makers, as it provides the relevant background against which supporting infrastructures can be set up. Within the mapping of SI-DRIVE social entrepreneurship and social economy as well as social enterprises are not appointed as the main part and partner for social innovations, but nevertheless they could still be seen as a relevant driver of Social Innovation: beside empowerment, human resources and knowledge, entrepreneurship is named as one of the main crosscutting themes in almost half of the initiatives.

However, 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 restricting formal systems*, limiting the potential and effectivity of social innovations. Therefore a specific Social Innovation friendly environment is demanded (fostering Social Innovation ecosystems) - different from other (technological or economic) innovations - for the purpose of unlocking and stocktaking the potential of the whole society. Competition, capacity building and empowerment are driving the innovation process, thereby overcoming barriers and constraints. As there is hardly any market- or solution-related competition, competition can be found between initiatives for funding, awards and support. Moreover, competitive or creative tensions between social innovations and the formal sector (concerning the best solutions to cover system gaps or failures) have been identified.

Social Innovation ecosystems need new governance structures, embedded in and enabling and fostering innovation friendly environments. As Millard (2015) proposes, the societal level perspective of social innovations demands an open government or better *open governance*: with open assets, services, engagement, structures, organisations and processes. This is "about linking and integrating the worlds inside government, as well as linking and integrating these with the worlds outside government for the specific purpose of creating public value. (...) It involves breaking down, or at least cooperation between, silos across different administrations, levels and locations, through pooling and sharing infrastructures, processes, data, assets, resources, content and tools. It implies forms of federation and coordination which balance centralisation and decentralisation as well as top-down and bottom-up approaches. This involves huge challenges technically, politically, legally,

organisationally and in terms of working cultures. The vision is of a 'whole-of-government' approach embedded in and interacting with the reality of society as a whole" (Millard, 2015, p. 4).

Within such open government and open governance systems "*gatekeepers*" do have a central role by bridging different realities (such as of governmental/public actors and social innovators) "granting access to existing social systems (like the health system or the labour market) and with these to funding opportunities and target groups. (...) For social innovations, it is crucial to identify gatekeepers, their functions, objectives and governance"(Pelka/Markmann 2015, p. 3). The practice fields of SI-DRIVE - if being further developed, in a more coherent way - could be a starting point for setting up clusters (similar to business clusters of SME's) to join the forces of social innovation initiatives, for lobbying, knowledge exchange, access to and generating of new resources, capacity building, overcoming institutional barriers, and other activities.

An insufficiently reflected and underdevelopment resource for improving social innovations in any kind are universities and research centres. In the Social Innovation ecosystem or quadruple helix they still have a minor role now, especially when compared with their major role in technological innovation. They could support social innovators and innovations with knowledge exchange, integration of new technologies, monitoring and evaluation, pilot and demonstration projects, supporting managerial competences, and others - to enhance their capabilities and to help them overcoming constraints (see chapter 5).