

# New Initiatives for the Empowerment of People with Activity Limitations – An Analysis of 1,005 Cases of (Digital) Social Innovation Worldwide

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**Abstract.** The paper exploits an extensive quantitative case mapping to blend three strands of research: First, social innovation will be considered as an approach to improve and/or guarantee social inclusion for people with activity limitations. Secondly, ICT will be understood as a means to empower people with activity limitations; and thirdly, the needs of vulnerable people will be regarded as a lens for scrutinizing those two approaches: How can ICT based social innovation/digital social innovation (DSI) empower people? The analysed cases shed light on the phenomenon of “digital social innovations” and allow first insights into their practice. The paper illustrates a quantitative overview of the actors behind these initiatives, their funding structures and drivers and barriers. In a conclusion, the new phenomenon of “digital social innovation” is described in contours.

**Keywords:** Social innovation · ICT · Digital inclusion · Digital social innovation

## 1 Introduction

Social welfare systems and public services are under pressure in many countries as a result of the financial crisis and global challenges. In 2013 the European Commission has launched a policy instrument to address these challenges by suggesting a “European” approach to modernizing welfare systems; the “Social Investment Package” (SIP)<sup>1</sup>. This collection of suggestions

- “guides EU countries in using their social budgets more efficiently and effectively to ensure adequate and sustainable social protection;
- seeks to strengthen people’s current and future capacities, and improve their opportunities to participate in society and the labour market;
- focuses on integrated packages of benefits and services that help people throughout their lives and achieve lasting positive social outcomes; (...)”<sup>2</sup>

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<sup>1</sup> Communication from the Commission to the European Parliament, the Council, the European and Social Committee and the Committee of the Regions: Towards Social Investment for Growth and Cohesion – including implementing the European Social Fund 2014-2020. COM(2013) 83 final. See: <http://ec.europa.eu/social/main.jsp?catId=1044>.

<sup>2</sup> <http://ec.europa.eu/social/main.jsp?catId=1044>.

The SIP identifies eight target groups that would profit most from this modernization of welfare services; “older people” and “disabled people” being two of them. In its core the SIP urges Member States to prioritise social investment and the modernisation of their welfare systems in order to reach the inclusion and welfare goals of the EU 2020 strategy. Social innovation (SI) is an essential element of the SIP, highlighting SI as a policy instrument for addressing vulnerable people’s needs.

International innovation research is providing numerous indications of a fundamental shift in the innovation paradigm towards social innovation [1]. This new paradigm is characterized by the innovation process opening up to society, its orientation towards the major societal challenges, and a stronger recognition of social innovations complementary to technological innovations [2]. Social innovation is understood as a new combination or figuration of practices in areas of social action, prompted by certain actors or constellations of actors, with the goal of better coping with needs and problems than is possible by use of existing practices. An innovation is therefore social to the extent that it varies social action, and is socially accepted and diffused in society. This definition exceeds a normative understanding of social innovations as ‘good’ or socially desirable. It also enlarges traditional technologically oriented innovation concepts. Such a comprehensive understanding of innovation may also serve as an answer to a situation where the limits of strictly policy-driven programmes on the one hand and social entrepreneurship and civil society initiatives on the other hand become obvious. Therefore, it is important to better understand the potential and mechanisms of intersectoral approaches for solving the grand societal challenges such as a better inclusion of people with activity limitations.

While “in recent years, social innovation has become increasingly influential in both scholarship and policy” [3], there is still no sustained and systematic analysis of social innovation, its theories, characteristics and impacts. But, Misuraca et al. [4] conclude that “(...) social innovation - and more concretely ICT-enabled social innovation - can provide an important contribution to social policy reform, providing new/better/different ways of integrating the provision of social services.”

This political backdrop is used to investigate findings from an extensive analysis of social innovation cases, for the first time empirically describing this new concept of addressing needs; produced by the EU funded research project “Social Innovation – Driving Force of Social Change” (SI-DRIVE, 2014–2017). In a first step the characteristics of SI initiatives will be described in order to understand the objectives, processes and outcomes of this emerging phenomenon.

## 2 The Dataset

### 2.1 Methodological Approach

SI-DRIVE has mapped social innovation projects and initiatives all over the world via desk research and interviews. 1.005 cases – exploiting existing descriptions of social innovation initiatives - have been collected; with 25 project partner institutions contributing to the sample. For the first time, socially innovative projects and initiatives around

the world have been analyzed and compared in such quantities, allowing for analyses with a special thematic focus.

The 1.005 cases are the result of an expert based selection. Social innovation experts from all world regions, all of them either SI-DRIVE project partners or advisory board members, were asked to identify cases which meet the criteria of the working definition of social innovation.<sup>3</sup> These cases could be in different stages of the innovation process, from ideation, implementation, imitation/diffusion up to the stage where the solution has already been institutionalized.

A survey template consisting of open and structured questions was developed for the data collection of all cases. A case is defined as follows:

1. A case is what the experts define as a relevant social innovation project/initiative.
2. A case has to show novelty of the social practice and first diffusion in society.

From these 1,005 cases, 240 cases (23,9 %) showed an inclusive character, 172 initiatives targeted people with activity limitations (17,1 %) and strive to facilitate their integration into society. 328 initiatives are either inclusive or integrative (32,6 %). The overlap between those groups is 42 initiatives which are targeted towards people with activity limitations and inclusive at the same time.

325 initiatives of the whole sample built their service on digital technologies, making them “digital social innovations”. 134 initiatives are “digital social innovations” that are either inclusive or targeted at people with activity limitations or both (Table 1).

**Table 1.** Count of initiatives in the different subgroups and in total

	Total	Non-ICT-based	ICT-based
All cases	1005	680	325
Inclusive and integrative initiatives	370	236	134
Inclusive initiatives	240	150	90
Integrative initiatives	172	116	56

## 2.2 Definitions: People with Activity Limitations and Inclusive Initiatives

The various terms and unclear definitions which dominated the discourse on disability, impairment and activity limitation for a long time shared foremost a traditional individual-centric view on people with activity limitations that located the disability in the bodily, sensual or mental functions of the affected persons themselves. Since the implementation of the *International Classification of Functioning, Disability and Health* (ICF), a stronger focus on participation in various dimensions of society as a crucial part of the concept of disability and therefore a more differentiated framework for the description of individual physical and mental statuses is regarded as widely accepted. A person’s level of functioning therefore derives from the dynamic interactions between environmental and personal factors as well as the individual health conditions.

<sup>3</sup> The composition of world regions follows the United Nation’s macro geographical (continental) regions and geographical sub-regions classification.

Following the ICF, it can be said that people are disabled by environmental (i.e. inaccessible environments) and structural factors (i.e. insufficient provision of assistance) which are not compatible to their own functioning.

The *United Nations Convention of the Rights of persons with Disabilities* (CRPD), a human rights charter that clarifies the common human rights for people with disabilities, renounces a specific definition of disability and herein implies the understanding of disability as a part of the human condition that highly depends on the particular cultural and temporal context. The CRPD has set new goals for policy and decision making as it emphasizes every person's right to fully participate in society and its various domains of everyday life. Using the ICF as a bridge between scientific values and the political and social values expressed in the rights in the CRPD, is a conception oriented towards the "rights approach to disability" that finds its expression within the paradigm shift mentioned above [5]. Seeing ICT as a vehicle to ensure empowerment and participation, it becomes necessary to develop indicators which allow research on these issues. By analysing cases which are inclusive in their basic orientation, meaning the needs of persons with disabilities are mainstreamed from an early stage of the initiative, and by differentiating them from cases which are especially directed towards people with activity limitations and those cases which fulfil neither of those characteristics, this evaluation strives to generate comparative statements concerning these groups. To exemplify this differentiation, one example from every sub-group (with a focus on ICT) is illustrated below:

### **Inclusive Initiative:**

- *Wehelen* is a participatory online platform based in the Netherlands, which facilitates and simplifies (informal) care in society, in terms of searching for, offering and organising it without any costs involved.<sup>4</sup> The project targets all Dutch residents, irrespective of personal preconditions. The platform enables people offering their help as well as indicating need for help. The initiators want to de-anonymize cities and neighbourhoods and provide an easy way for inhabitants to get in touch to each other and raise the level of empathy and care. The platform itself works with icons, aside from descriptions, making it easier to understand for people with mental handicaps. The webpage is constructed in a way that people with sight limitations owning special internet browsers have easy access. People with activity limitations are not in the focus at all, whereas all infrastructure is designed in order to meet as many needs as possible for potential users.

### **Integrative Initiative Directed Towards People with Activity Limitations:**

- *LIFEtool* is a non-profit organisation and is located in Linz/Austria.<sup>5</sup> They offer counselling and training as well as soft- and hardware products for augmentative and alternative communication (AAC). Accessible software programs and apps as well as computer input devices for children, adolescents, adults and elderly with

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<sup>4</sup> <https://www.wehelen.nl/>.

<sup>5</sup> <http://www.lifetool.at>.

disabilities, their relatives, educators and therapists are developed and put to use in order to reduce external assistance needs for people with activity limitations by providing technical and digital devices to the people which are matching exactly to what they really need. Because the leverage point and goal of this initiative is the integration into social and working life, it is classified as an integrative initiative rather than an inclusive one.

### **Inclusive Initiative Directed Towards People with Activity Limitations.**

- *Sydney's pioneering system of accessible pedestrian signs* (Australia)<sup>6</sup> aims to increase consistency, accessibility, sustainability and city legibility. It's a coordinated and easy to understand system which should encourage people to walk more in the city by improving the city's wayfinding strategy. I.e. new pylons, flag signs, finger signs as well as tactile and audible indicators allow people with activity limitations to perceive the wayfinding system. Pylons and tactile signs will also feature QR tags that can be used for digital links to city websites, transport for information and timetables as well as destination tourism information. In this way people with activity limitations become main addressees of this new system but the system itself follows a *design for all* approach targeting environmental and structural factors and seeking improvement for everyone.

## **3 Findings**

The findings presented here are supposed to provide a first quantitative insight into the emerging topic of (digital) social innovation for people with activity limitations. Therefore, different perspectives into the subsets of cases of digital social innovation for people with activity limitations within the 1,005 cases will be developed. The focus lies on two sets of key questions to build an understanding of this new and forasmuch unrecognized phenomenon in the field of welfare services. First: Who are the actors involved, what is their sectoral origin and in how far is cross-sectoral collaboration a trademark of the cases identified? And second: How can the innovation process be characterized, including questions regarding drivers and barriers, the role of ICT, or the topic or policy field in which they are operating.

### **3.1 Who? Actors and Collaboration**

People with activity limitations are a primary target group of social innovation initiatives. While 23,9 % of the 1,005 social innovation cases identified worldwide show an inclusive character, meaning they are accessible, available and affordable for everyone interested, 17,1 % (172 social innovation initiatives) specifically focus on or actively involve people with activity limitations. This is remarkable since activity limitation was not a specific criterion in the expert-based selection process in the SI-DRIVE project which analyses social innovation in all its diversity (from education, employment and poverty reduction,

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<sup>6</sup> <http://www.sydneymedia.com.au/accessible-signs-open-up-city-streets/>.

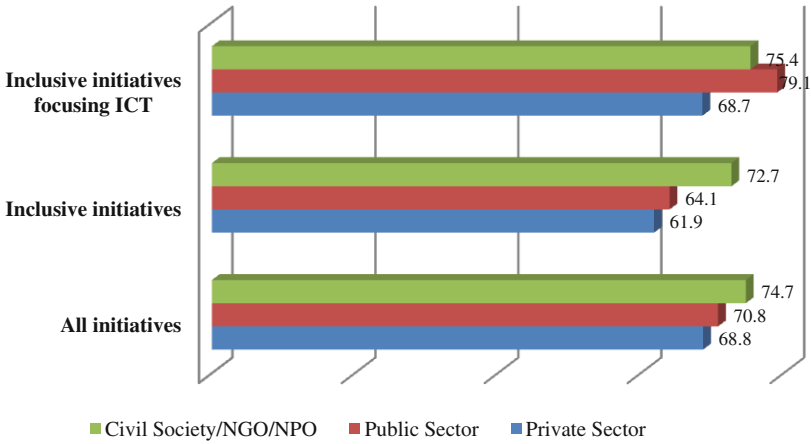
health and social care to transport and mobility as well as environment and energy supply). But people with activity limitations are differently addressed within different world regions: Western and Northern Europe seem to play an “early adopter” role – with 57,5 % (77 cases) of all digital social innovation cases for people with activity limitation can be found in one of these two regions. Surprisingly, North America scores low in the number of ICT enabled social innovation for people with activity limitations – only three cases could be found in this region. This result may also lead back to a small number of cases in North America in general and especially within those policy fields foremost actively in the field of inclusive policy (Table 2).

**Table 2.** Distribution of ICT-based inclusive initiatives to the world regions

World region	Total	% of all inclusive ICT-based initiatives	% of all inclusive ICT-based initiatives in the resp. World region
Northern EU	28	20,9	24,6
Western EU	49	36,6	14,8
Eastern EU	9	6,7	10,7
Southern EU	15	11,2	13,9
North America	3	2,2	8,8
Latin America	4	3,0	7,7
Africa	5	3,7	6,6
Middle East	5	3,7	25,0
Asia	5	3,7	5,4
Russia	3	2,2	8,1

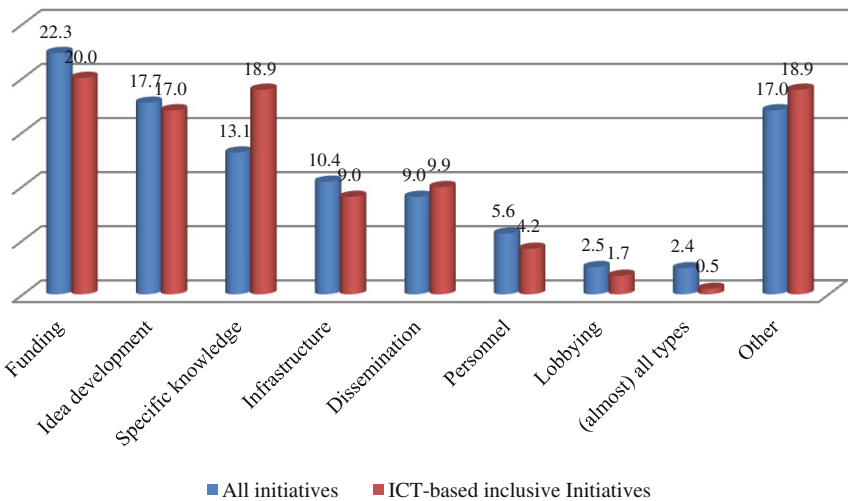
Social innovation initiatives are led by men: 54,8 % of the main representatives of the initiatives mapped are male, 45,2 % female. In inclusive initiatives and those focusing on people with activity limitations, 51,4 % of the main representatives are male and 48,6 % are female. Inclusive initiatives based on DSI are represented by male contact persons in 53,2 % of the cases. While it is evident that the field of social innovation is a very recent field in general (86,2 % of the initiatives were funded after 2001), the DSI-sector can be described as even younger in its character. 93,7 % started their work after the year 2001 from which 46,5 % of the inclusive initiatives focusing ICT were funded within the last five years.

Social innovation is characterized by an innovation process opening up to society. Our sample therefore investigated the sectoral origin of actors involved in the initiatives. The theoretical claim is substantiated by empirical results which show that multiple actors are involved in most of the 1,005 initiatives: 68,7 % of the initiatives comprise at least one actor from the private sector; 70,8 % from the public sector and 74,7 % from the civil society sector. At an average, one initiative involves partners from 2,14 of the mentioned three sectors. This result is remarkable. It shows that while the civil society and its social economy initiatives play a significant role, and social economy entities are certainly “important agents in the battles against social exclusion, poverty and environmental degradation, and key actors in the creation of social capital and the delivery of public services” [6], the third sector is not the source of social innovation. Actors from



**Fig. 1.** Sectors actively involved in the initiatives in % of the specific samples

the public and private sector are almost equally involved. These figures are very similar for initiatives using ICT means or addressing people with activity limitations; the overall finding of well connected initiatives is true for all subsets of social innovation initiatives (see Fig. 1). Especially concerning inclusive initiatives operating with ICT, the public sector seems to be from great importance. While this sector is involved in 70,8 % of all mapped cases the inclusive initiatives focusing ICT indicated participation of the public sector in 79,1 % of the cases. In general, initiatives with a focus on ICT seem to be more oriented towards cooperation and transfer, as they state slightly more involvement of partners from the various sectors (except of the private sector).



**Fig. 2.** Types of support provided to the initiatives through partner organizations in %

Opening up to society also means opening up to users and beneficiaries in the innovation process. Asking for the involvement of users in the developing process of the initiatives, 61,5 % stated that beneficiaries participated in the innovation process from an early stage on. Within the inclusive initiatives focusing ICT this number is considerably higher: 75,5 % indicated user-involvement in their solution.

What types of support do the involved actors provide to the initiatives? Among the support that those initiatives get from their involved actors, “funding” seems to be of utmost importance. 627 out of 1,005 initiatives receive funding from their partners, 482 are supported in idea development and 349 receive specific knowledge. This links to the insight that funding is the most crucial issue for social innovation [7] (Fig. 2).

### 3.2 How? Drivers, Barriers and ICT Use

The use of ICT in supporting social innovation is widely discussed [8–11]. ICT seems to be a strong catalyst in promoting, fostering and sustaining social innovation initiatives as modern digital technology seems to support the co-operation and networking attitude of social innovation initiatives – especially for vulnerable target groups [12, 13]. Therefore, the SI-DRIVE dataset asked for the importance of using ICT in the initiative. 325 out of 1,005 cases of SI are building on digital technologies; and 32.7 % of the social innovation cases aiming at people with activity limitations are making use of ICT.

Our sample of 1,005 initiatives of social innovation worldwide differentiated seven practice fields of social innovation: Education, employment, environment, energy, transport and mobility, health and social care, and poverty reduction. Initiatives are relatively evenly spread over these practice fields (between 8,0 and 18,4 %). But a focus on use of ICT within these initiatives reveals an interesting cohesion: Among digital social innovation cases, the topic “health and social care” is addressed by 34,3 %, making “health and social care” the most addressed topic by digital social innovation, while initiatives dealing with environmental or energy issues rarely build on digital social innovation (1,5 and 0,7 % of the cases). Initiatives with an inclusive character and those addressing people with activity limitations can be found predominantly in the fields of health and social care (31,6 %), education (18,6 %) and poverty reduction (16,2 %). For every initiative in the sample, experts were asked to name the three strongest drivers and barriers and rank them from 1 to 3. In 448 of 1,005 cases, the most important drivers are the individuals involved along with their competences, motivation and networks pushing the initiative forward. With 44.6 %, this is by far the strongest rank 1 driver for the whole sample, followed by the innovative environment as a whole in which the initiative has been created (99/9.9 %), solidarity (87/8.7 %), ICT (81/8.1 %) and governance/politics (80/8.0 %). Looking at rank 2, there are three drivers of considerable importance: The innovative environment (193/19.2 %), followed by individuals, networks and groups (185/18.4 %) and solidarity (135/13.4 %). Looking at the 370 cases with an inclusive character and/or addressing people with activity limitations, the picture is comparable.

Looking at the three most important barriers the initiatives have encountered, funding challenges are clearly the biggest issue (for 29.7 % of the initiatives this barrier is the most important one). This is followed by a lack of personnel (10.5 %), knowledge



gaps (10.0 %), legal restrictions (9.5 %) and missing political support (8.1 %). In contrast to traditional innovations, competitors are seldom considered a barrier (3.6 %).

For inclusive initiatives and those focusing people with activity limitations the problem of funding seems to be even bigger: 34,1 % of them see it as the highest barrier, followed by lack of personnel (13.8 %), knowledge gaps and legal restrictions (both 9.7 %).

For even 35.1 % of the ICT-based initiatives in this group (inclusive/activity limitations) funding challenges dominate. Knowledge gaps also pose a considerable barrier (16.4 %).

## 4 Discussion

People with activity limitations are an important actor and target group for social innovation initiatives worldwide. At the same time, a considerable share of social innovation initiatives are inclusive, meaning they are accessible, available and affordable to everyone interested and are treating the needs of people with activity limitations as cross-cutting themes in their everyday-work. Having in mind that social innovation has gained importance for societal development as a whole, and solving the grand challenges society is facing today, the concept has to be systematically explored in order to reap its full potential in the field of inclusion and for the actor group of people with activity limitations. This group is not limited to being receivers and the object of social innovation approaches, but they play an active role in the SI process, especially in the field of DSI.

As the analysis of the SI-DRIVE dataset has shown, this process is characterized to a large extent by intersectoral cooperation of public, private and civil society actors. Social innovation initiatives acknowledge the importance of involving actors from all fields of a “quadruple helix for social innovation”, bringing together civil society (marginalized persons’ stakeholders), policy making, economy and research in any kind of solution. Results have shown a high prevalence for inclusive initiatives focused on ICT to involve the public sector while they generally seem to put greater emphasis on cooperation and knowledge transfer. This raises questions such as how professionalized this cooperation is, how it can be supported and how intermediary actors, such as social innovation labs and centres, can help to better facilitate cooperation throughout the whole social innovation process.

ICT use also plays an important role for many SI initiatives and is an important driver, leading to ‘digital social innovation’ (DSI) as a specific sub-set of social innovation and an emerging object of research. This suggests a strong role of digital/social media for today’s social innovation empowerment activities: A lot of today’s social innovation activities are driven by social entrepreneurs cooperating via social media or are addressing digital inclusion. Though, a large share of DSI initiatives for people with activity limitations seems to be confronted with funding challenges as one of the main barriers.

What we were able to provide, on the basis of the quantitative mapping, is a general overview of ICT-driven social innovation initiatives which are inclusive or which focus

on people with activity limitations, highlighting the actors involved, the importance of intersectoral collaboration, and drivers and barriers encountered. Given the policy background and the expectations towards social innovation as a new way of addressing vulnerable people's needs, our empirical results are showing that (digital) social innovation indeed can be an instrument for addressing the needs of people with activity limitations – but our comparative study also indicates huge differences between world regions: While western and northern European countries seem to exploit the added value of digital technology combined with social innovation for the needs of people with activity limitations, other world regions are showing a different picture. The most interesting facet of analysed cases is their approach to stakeholder involvement; most cases of social innovation are actively involving actors from several societal sector and therefore follow the approach to build their services on “multiple shoulders”. Moreover, the active involvement of people with activity limitations seems to be a common approach within social innovation initiatives.

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