IA4SI PROJECT

"Impact Assessment For Social Innovation"

Contract n° 611253

WP2: Methodological framework definition

Deliverable 2.2 – IA4SI methodological framework - Final version

Project funded by the European Commission, DG connect (UNIT E3), Coordination and Support Action

Contract Number: 611253

Project Acronym: IA4SI

Deliverable N°: 2.2

Date: 31 January 2016

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Made available to: Public

Versioning		
Version	**Date**	**Name, organization**
Initial document structure	1/12/2015	Alessandra Prampolini (T6)
Post-review document structure	20/12/2015	Alessandra Prampolini (T6), Francesco Bellini (EK)
First version of chapter 3-4-5	10/01/2016	Alessandra Prampolini (T6), Francesco Bellini (EK), Iana Dulskaia (EK)
Second version of chapter 3-4-5	17/01/2016	Alessandra Prampolini (T6), Francesco Bellini (EK), Iana Dulskaia (EK), Katja Firus (T6)
First version of deliverable	26/01/2016	Alessandra Prampolini (T6), Francesco Bellini (EK), Iana Dulskaia (EK)
Internal Review	27/01/2016	Wim Vanobberghen (iMinds)
Second version incorporating internal review comments	28/01/2016	Alessandra Prampolini (T6), Francesco Bellini (EK), Iana Dulskaia (EK)
Final version	29/01/2016	Alessandra Prampolini (T6), Francesco Bellini (EK), Iana Dulskaia (EK)

Quality check:	Wim Vanobberghen (iMinds)
Internal Reviewers	Wim Vanobberghen (iMinds) and others

Suggested citation

Passani, A., Bellini, F., Prampolini, A., Vanobberghen, W., Firus, K., Dulskaia, I. (2016), "IA4SI Methodological framework – Final version. Deliverable 2.2 of the project "IA4SI – Impact assessment for Social Innovation", European Commission – 7th Framework Programme

IA4SI – Impact assessment for Social Innovation

IA4SI is a support action project developing a socio-economic and environmental impact self-assessment methodology for evaluating projects in the field of social innovation. The project is a collaboration between iMinds (project coordinator), T6 Ecosystems, Eurokleis and ATC and runs from 2013 to 2016.

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ACRONYMS

Acronym/Term	Definition
CAPS	Collective Awareness Platforms for Sustainability and Social Innovation
C/B	Cost-Benefit
DSI	Digital Social Innovation
DoW	Description of Work
EU	European Union
FP	Framework Programme
GDP	Gross Domestic Product
GHG	Greenhouse Gases Protocol
Index	A synthetic aggregation of indicators
Indicator	"An indicator quantifies and simplifies phenomena and helps us understand complex realities. Indicators are aggregates of raw and processed data but they can be further aggregated to form complex indices". (Source: International Institute for Sustainable Development quoted by ostings.diplomacy.edu/baldi/malta2001/statint/Statistics_Int_Affairs-27.htm). An indicator is a synthetic description of a phenomenon and its development over the time, it can be composed of one variable (simple indicator) or of two or more variables (complex indicator). "A composite indicator is formed when individual indicators are compiled into a single index, on the basis of an underlying model of the multi-dimensional concept that is being measured" (Source: OECD glossary of statistic terms http://stats.oecd.org/glossary/detail.asp?ID=6278)
ROI	Return of investment
SI	Social Innovation
Variable	"A variable is a characteristic of a unit being observed that may assume more than one of a set of values to which a numerical measure or a category from a classification can be assigned (e.g. income, age, weight, etc., and "occupation", "industry", "disease", etc." "Source: OECD glossary of statistic terms. http://stats.oecd.org/glossary/detail.asp?ID=2857)

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EXECUTIVE SUMMARY

This document presents the final version of the IA4SI methodological framework for the impact assessment of Social Innovation in the context of the Digital Agenda. The assessment framework has been designed for, and in conjunction with, Collective Awareness Platforms for Sustainability and Social Innovation (CAPS) projects funded by the EC 2013 call for proposal. “CAPS” is a term associated with the social innovation domain and it has been used by the European Commission to mark a research field where projects can investigate how collaborative and networked ICT systems enable and facilitate social innovation-related processes and practices touching upon awareness and solution generation of problems occurring in society, therein highlighting the role and initiatives of individuals.

The IA4SI methodology outlined here is the result of a one year and half process, during which the project team developed a first version of the methodology (D2.1, IA4SI methodological framework First version”), discussed it with its users (the “first generation” of CAPS projects), developed the tools for the assessment and proceed with the assessment itself, gathering and analysing data from the CAPS projects.

The IA4SI methodology follows a quali-quantitative approach to impact assessment and builds on principles of Cost-Benefit analysis and of Multi-Criteria analysis. These two methods are seen as complementary as they assist to frame both qualitative and quantitative impacts that can be represented in monetised form as well as impacts that are better described in non-monetary terms (such as social or political impacts). Other methodological frameworks informing the IA4SI methodology are Social Media ROI, Stated preference methods, and Revealed Preference methods. The environmental impact assessment is inspired by the Organizational Environmental Footprint (OEF).

The combination of these methods yields an approach that allows the consideration of both a wide spectrum of impacts as well as the combination of variables that are expressed in different ways.

The IA4SI methodology analyses CAPS projects and the CAPS domain at an aggregated level by using eight synthetic indices: four of them are related to key areas of impact (social impact, economic impact, environmental impact and political impact), and are called **vertical indices**. The IA4SI methodology also contains four transversal indices that provide information about the process followed by the CAPS projects in determining their impacts. In other words, the **transversal indices** are related to the attributes of the innovation developed across all the areas of impacts. The IA4SI synthetic indices are the following:

– Social impact – Economic impact – Environmental impact – Political impact	*Vertical indices*
– Efficiency – Effectiveness – Fairness – Sustainability	*Transversal indices*

Each index is composed of a number of dimensions or sub-indices, and each dimension is linked to specific variables that are described in a dedicated chapter 3 and in Annex . The qualitative and

quantitative variables[1] collected during the assessment process are normalised and aggregated in order to build indices. Also, the IA4SI methodology follows an input-output-outcome/impact model so that each variable can be associated with this model.

The IA4SI assessment methodology is based on an integrated online toolkit, i.e. Self-assessment Toolkit (SAT), User Data Gathering Interface (UDGI) and Citizens Engagement Platform (CEP), which is not merely constituted by different data gathering instruments, but it also supports the analysis of the data allowing the automatic impact self-assessment of CAPS projects.

The data gathered through the IA4SI toolkit have been used for developing three main research outputs: a deliverable containing an assessment report for each of the collaborating CAPS projects, a report analysing the characteristics and impacts of the CAPS domain as a whole and a report dedicated to the identification and the further analysis of good practices.

As a final remark, the methodology is meant mainly for *in itinere* (on-going) impact assessment. While it can be used for assessing projects impacts also after their end (ex-post), it stresses that – throughout the IA4SI project – the methodology has mainly be tested with on-going CAPS projects rather than (similar) projects that may have ended already. Moreover, the proposed methodology is meant as a tool for assessing projects and not programs. In other words, the analysis that IA4SI methodology does about the digital social innovation domain, is likely to yield important insights to the EC about this area of activity, yet cannot serve as program evaluation which would demand a more extensive time of scrutiny and a different approach.

Both the methodology and the tools, now fully tested and implemented, are meant to support the next generation of CAPS projects in assessing their impacts and in getting an overview of the CAPS domain activities and results. New CAPS projects will have the opportunity to make use of the tools during their activities and possibly repeat the assessment more than once. Each time all projects will enter or update their data, every single project will get an updated version of its status and it will be also possible to monitor the progress of the entire domain. IA4SI wishes for a regular and effective use of its methodology and tools, and through this use it aims to give concrete contribution to the scientific debate about digital social innovation.

[1] **Qualitative variables** are also called categorical variables or attribute variables. The values of a qualitative variable can be put into a countable number of categories or different groups. Categorical data may or may not have some logical order. Lickert scales are used for describing qualitative variables. The values of a **quantitative variable** can be ordered and measured.

INTRODUCTION

This deliverable describes the IA4SI final methodology for social, economic, environmental and political impact self-assessment for Collective Awareness Platforms for Sustainability and Social Innovation (CAPS) projects and domain. It is the final output of WP2 which goal is:

"*to define the IA4SI framework by identifying the social, economic political and environmental indicators needed to assess the impact of projects in the area of Social Innovation and the domain as a whole. Projects assesses in terms of efficiency, effectiveness and potential in terms of societal up-taking*".

The proposed methodology is tailored for the CAPS domain: a new research area created within the European Seven Framework Programme (7FP) where projects can investigate how collaborative and networked ICT systems enable and facilitate social innovation-related processes and practices by developing piloting actions, which regard awareness and solution generation tackling emerging social needs, highlighting the role and initiatives of individuals.

The quali-quantitative methodology was chosen for measuring impact self-assessment, which builds on previous experiences in impact self-assessment of European projects (SEQUOIA, ERINA+ and MAXICULTUE projects mainly[2]). As it will be explained in the next chapters, it follows the impact value chain approach and finds in the Cost-Benefit Analysis and in the Multi-Criteria Analysis methods its main pillars (other methodological framework included in the IA4SI methodology are: Social Media ROI, Stated preference methods, and Revealed Preference methods.). The IA4SI methodology specifically targets on-going impact assessment but can also be used for evaluating project impact after the end of their activities (ex-post) method.

It has been developed using a participative approach, engaging CAPS projects in the validation and fine-tuning of its indicators and variables. Moreover, the methodology offers a multi-stakeholders approach to impact assessment as it engages projects' coordinators, projects' partners, projects' users and - to a certain extent – European citizens. The methodology is accompanied by the IA4SI toolkit, which includes three online tools for data gathering and analysis[3].

The IA4SI methodology incudes eight main synthetic indices: four vertical indices which are social, economic, environmental and political impacts and four transversal indices which are: efficiency, effectiveness, sustainability and fairness indices. Each vertical index is articulated in different subcategories and for each one specific indicator has been selected.

[2] Information about the previous projects can be fund at: http://www.lse.ac.uk/media@lse/WhosWho/AcademicStaff/PaoloDini.aspx (summary of SEQUOIA project and deliverables); www.erinaplus.eu; www.maxiculture.eu. Main reference for the methodologies are the following: Passani et all., 2013; Passani, Bellini, Spagnoli, Ioannidis, Satolli, Debicki, Crombie, 2014; Passani, Monacciani, Van Der Graaf, Spagnoli, Bellini, Debicki, Dini, 2014

[3] For e detailed description of the IA4SI toolkit and its technical features please refer to D3.1 "Self-Assessment Toolkit, User Data Gathering Interphase and Citizens Engagement Platform"

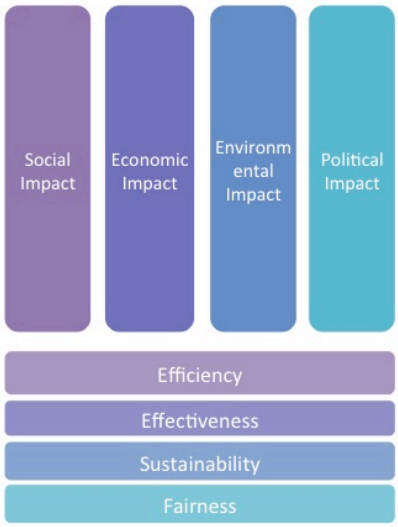

Fig. 1 – IA4SI vertical and transversal indices

The deliverable is articulated as follows:

Chapter 1 defines the domain under assessment by linking the Collective Awareness Platforms for Sustainability and Social Innovation with the debate on Social innovation definition and with the emerging topic of Digital Social Innovation. The chapter ends with a proposal operational description of the CAPS domain, which guide the IA4SI methodology development and its application.

Chapter 2 frames the IA4SI methodology in the context of impact assessment approaches, delineates the main challenges and describes the process followed for developing the IA4SI methodology.

Chapter 3 presents the IA4SI synthetic indices, their subcategories, indicators and variables.

Chapter 4 describes the statistical process through which the synthetic indices are build, the normalisation process and the benchmarking approach.

Chapter 5 explains the data gathering process and introduces, in a synthetic way, the IA4SI toolkit. The expected outputs of the impact assessment are also described by presenting the structure and the main content of the impact assessment reports that IA4SI team has developed in the second year of the project.

The deliverable concludes with an overview of the next steps in terms of deliverables, data gathering activities and interaction with CAPS projects.

Annex presents all the indicators and variable composing the IA4SI methodology with the related questions for project coordinators and partners. The questions presented in the annex populate the IA4SI self-assessment toolkit.

1. DEFINING THE AREA UNDER INVESTIGATION

1.1 Collective Awareness Platforms for Sustainability and Social Innovation (CAPS)

The acronym CAPS stands for Collective Awareness Platforms for Sustainability and Social Innovation. The European Commission (EC) used this acronym for the first time in 2012, in the context of the Seventh Framework Programme of research. It served for identifying a new group of research projects and, to a certain extent, a new research area.

The European Commission defines CAPS as follows:

"The Collective Awareness Platforms for Sustainability and Social Innovation (CAPS) are ICT systems leveraging the emerging "network effect" by combining open online social media, distributed knowledge creation and data from real environments ("Internet of Things") in order to create awareness of problems and possible solutions requesting collective efforts, enabling new forms of social innovation. The Collective Awareness Platforms are expected to support environmentally aware, grassroots processes and practices to share knowledge, to achieve changes in lifestyle, production and consumption patterns, and to set up more participatory democratic processes. Although there is consensus about the global span of the sustainability problems that are affecting our current society, including the economic models and the environment, there is little awareness of the role that each and every one of us can play to ease such problems, in a grassroots manner."[4]

The first part of the quote proposes a definition of CAPS, while the second one lists the expect benefits, or in other term impacts, of CAPS. Some scholars propose an analysis of the single terms composing the label 'CAPS' that can be used as a point of reference (Arniani et all., 2014). Synthetizing, Collaborative Awareness Platforms can be seen as ICT-supported collaborations of human and non-human actors which enable and facilitate the production, sharing and sense-making of information gathered through citizen engagement and through sensors. The term platform refers to systems which integrate different ICT tools; socio-technical solutions for promoting reciprocal understanding among social actors, self-organisation, collaboration and orchestration of actions. The information and data at the centre of such platforms are related, and are expected to foster, sustainability and social innovation. The term sustainability will be further described in paragraph 3.4, while in the next paragraphs the concept of Social Innovation is introduced and discussed.

With the first call (Call10 of FP7 – objective 5.5 of work programme 2013), the European Commission invested 19 million of Euros into 12 projects and 500.000 Euros for a Study on "Social Innovation in the Digital Agenda". Other three projects - funded under other programmes – were added to this domain as well, because their research activity is very relevant for CAPS. As a result, the programme consists of 15 on-going projects in this area.

In this context, IA4SI is developing a methodology for the self-assessment of these projects. These are seven Research Projects for Grass Roots Experiments and Pilots, four support actions (including IA4SI) and one project dedicated to the management of a seed fund for social innovation activities. The CAPS domain is part of the Horizon 2020 programme, with an initial investment of 37 million Euros for the periods 2014-2015 As we will see in the next chapters, the expectation is that the IA4SI methodology can be used for future CAPS projects and beyond, for Digital Social Innovation project in general.

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[4] (http://ec.europa.eu/digital-agenda/en/collective-awareness-platforms-sustainability-and-social-innovation)

1.2 Social Innovation (SI) and Digital Social Innovation (DSI)

Social Innovation

The term social innovation is composed of two words: “Social” and “Innovation”. It is useful, therefore, to consider the epistemologies behind the two terms in the various definitions of social innovation that are currently available, so as to try to circumscribe the realm of social innovation, and to understand its boundaries. Moreover, social innovation as a field of study is rather interdisciplinary.

Murray, Caulier-Grice and Mulgan (2010a) in “The open book of social innovation”, define social innovation as “new products, services or methods that tackle pressing and emerging social issues and, at the same time, transform social interactions promoting new collaboration and relationships” (2010a: 3). In this definition, the term “social” is used in two ways: it characterises the issues to be solved (such as adaptation to climate change and the effects of aging population on society) and the methods used for solving such issues, and which imply a modification in social relationships. In this definition, social innovation represents both product and process innovation. It generates a new product/service by changing, at the same time, the way in which this product/service is produced. It benefits society ‘twice’, that is, by proposing a solution to a specific problem and by offering new social links and collaboration opportunities. The innovator can be a social entrepreneur, a self-organised local community, an association, a company or a government. Examples of social innovation can include co-housing, the Grameen bank, eco-towns and car sharing. In terms of process innovation, the understanding of social innovation is associated with terms such as participation, engagement, empowerment, co-design, bottom-up, grassroots initiatives and so forth.

In analysing the meanings attributed to social innovation, however, some differences can be detected in understanding the concept. In most cases, the term is used to describe and recommend a new centrality for private-public partnerships as instruments capable of innovating the welfare state, and making it more efficient (BEPA, 2011). So, even if these institutions use the first definition described above, its operationalization may vary considerably depending on the inclusion, or, exclusion of social actors as potential social innovators. More specifically, in what can be defined as a governmental approach to social innovation, social entrepreneurs and companies, cooperative and consultancies are recognised as the main innovators that can support government in the implementation of new initiatives and in changing the welfare state. Bottom-up processes, grass-roots initiatives and social movements may find it difficult to access the support measures offered by governments under social innovation programmes without the mediation of social entrepreneurs and ad hoc consultancies (Illie and During, 2012).

It is important to emphasize that the term “social innovation” is not new. Many of the social services taken now for granted, and seen as “institutional”, were once considered to be great social innovations, such as free national health systems, public kindergartens, cooperatives, and trade unions (Mulgan et al, 2007).

Moreover, the concept can even be traced back further, dating back to the beginning of nineteenth century. Godin (2012) explains that the term social innovation emerged after the French revolution and, at that time, had both a positive and a negative connotation. The negative connotation saw social innovation as synonymous with radical socialism represented by thinkers such as Fourier, St-Simon, Proudhon, and called for a drastic and fundamental change of social order. A more positive connotation linked social innovation to social reforms and social justice.

It is worth investigating the ‘value connotation’ that the term seems to carry nowadays. The concept of innovation does not seem to be problematized in the context of social innovation. Innovation is seen in a positive way and tends to be used as synonymous with “improvement” and “progress” when, to the contrary, there are also innovations that have negative effects at economical, social, political or environmental levels. In this sense, social innovations only refer to

positive innovation that, as in the definition proposed by Philip, Deiglmeier and Miller (2008:36), is meant to be more "more effective, efficient, sustainable, or just than existing solutions." This definition is central for IA4SI, as it informs some of its complex indices as it traces a clear pattern in terms of expected impacts.

It is also important to notice that the term "social innovation" can be seen to accentuate distinct aspects in different countries. For example, in the Anglo-Saxon world social innovation tends to be linked to the 'third way', as a new path for public-private partnerships and for supporting governments in tackling social issues with the support of entrepreneurs and civil society. Social innovation acts across the boundaries between the state, market and third sector and contributes to the demolition of such boundaries (Phillis, Deiglmeier and Miller, 2008). In other countries such as France, for example, it still tends to recall a concept of being "alternative" to the Government and to political institutions (Godin, 2012). This connotation is also used by social activists and is linked to an alternative Left-wing school of thought for whom social innovation is a process and a strategy to change society through solidarity, cooperation and cultural diversity.

In this perspective, the protagonists of social innovation are mainly social movements and grass roots initiatives. And here, "social" shows another meaning, that is, social as community-based, social as non-institutionalised, social as popular. In this view, with reference to urban development, the term social innovation has been used to describe a process that is driven by, or, at least deeply engages inhabitants in the transformation of neighbourhoods and is, therefore, in opposition to top-down approaches to local development and city renewal (Sharra and Nissens, 2010). According to Busacca (2013), the mainstream definitions of social innovation, the ones that root for the third-way, are synergic with the current economic organisation of western society, which he defines as neo-liberal, and search for measures that are able to mitigate the social effects of this model. By linking the term social innovation with its historical background Busacca proposes a different definition of social innovation that includes the likelihood to contrast the neoliberal model of western societies. For this reason, he has defined social innovation as "new ideas that work in a more effective way in meeting social goals with the aim of transgressing social rules accordingly to a vision of a different social system" (Busacca, 2013: 49).

From this overview, social innovation can be said to lack a univocal definition and, when used by different social actors (e.g., governments, researchers, activists, third-sector representatives), may be linked to different value propositions. Social innovation is emerging as a field of scrutiny, and one of the first items on its agenda will likely be to creating a more precise definition or classification of social innovation and to make its epistemology more explicit. Today, not much systematic investigation is readily available on social innovation, and digital social innovation in particular; the definition is still problematic and research on models, methodologies and tools for stimulating, supporting and understanding social innovations are on-going (The Young Foundation, 2010a; Murray et all., 2010a). Some initial insights are offered by Moulaert et al. (2005) who analysed how different disciplines have considered specific aspects of social innovation, also BEPA (2010) categorizes social innovations according to their outputs and Ilie and During (2012), following a post-structuralist approach, study social innovation by following three discourses around the term, that is, governmental, entrepreneurial and academic. Most of the work conducted so far focuses on defining social innovation, analysing the processes by which it is emerging and flourishing, and map experiences of social innovation worldwide. The attention is devoted to the description of concrete experiences for abstracting models for social innovation replicability and scaling-up. Little has been done so far to analyse the results of social innovation initiatives; to evaluate the benefits produced by public-funded programmes and to compare the effects of social innovation projects with previous and alternative models of tackling social issues.

Digital social innovation

Social innovation has emerged as an alternative to technological innovation or, better, as a necessary complement to it (Phillis et all., 2008).

Social innovation, however, is now challenged by the role that the Internet is playing and can play in the future in terms of fostering social innovation. The term Digital Social Innovation is emerging as a way of indicating digitally enabled or supported social innovation; the term is used by the research project, leaded by NESTA and financed by the EC within the CAPS domain titled Digital Social Innovation, and is also used by the Young Foundation). Social media, connected to the Internet of Things and to big and open data are seen as new instruments for fostering social innovation both in its institutional and grassroots understanding. By adding the word "digital" to the term social innovation, it impacts the interpretations of both "social" and "innovation".

Here, social does not refer to a local community per se but can consider also online social interactions and online social communities across geographical boundaries. The term innovation is now also applied to technology as 'digital social innovations' are said to create new online instruments (new ICT products and services) that enable social innovation and take advantage of the network effect typical of the Internet. Process innovation in these terms then implies a new way of collaborating, creating and sharing knowledge online. The research in the field is still at an early stage but a preliminary mapping of digital social innovation is provided by NominetTrust (http://www.socialtech.org.uk/), a spin-off of one of the main global Internet registries that provides support and findings for digitally based social innovation initiatives. The similarities between the term Digital Social Innovation and CAPS are evident.

Technology in general, and mainly social media, are seen as important instruments able to benefit society more than individual participants or its promoters when used for social innovation initiatives. The interest of individuals to participate, their growing role as content creators and the possibility to establish and nurture social relationships across geographical borders are seen as element to be exploited in developing and promoting new solutions to social issues.

Digitally-enabled social innovation can be promoted by grassroots movements, by entrepreneurs (social or not) and/or by public bodies. As in the face-to-face world social innovation initiatives can be profit or not-for-profit. Examples of digital social innovation include Wikipedia (with reference to knowledge creation and sharing), Change.org which allows users to launch campaigns as instruments for political participation, crowdfunding platforms such as Kickstarter that innovate fund-raising models by asking individuals to economically support an idea, project or production, or Atmosfair (https://www.atmosfair.de) that allows travellers to calculate and offset the impact of their flights, generating funds to be used by the organisation to finance renewable energy projects.

Digital social innovation is seen as promising due to the ubiquitous nature of social networks that can help to reach people normally disconnected from public and local services and to appeal to the youngest generation for which online life may appears more relevant or easier to access that face to face participation at the community level.

1.3 CAPS, Social Innovation and Digital Social Innovation as research field

The concept of social innovation is still nascent and the different forms it can take have not yet generated a robust way of analysing and measuring its impacts (Bund et al, 2013).

In fact, methodologies for assessing the outputs and the impacts of social innovations are still at an early stage of development (Bund et all, 2013). Research in the field is still largely relying on case studies and qualitative methodologies, not allowing comparisons and aggregations (Cajaiba-Santana 2014; Biggs et all, 2010; Smith and Seyfang 2013).

Murray et all (2010a) list a variety of methods; this document was used as a point of reference in developing the IA4SI methodology, which is based on some suggested methodologies: standard investment appraisal methods, cost-benefit analysis and cost-effectiveness analysis, stated preference methods, social accounting methods, quality of life measures, social impact assessment, comparative metrics or benchmarks, user experience surveys, etc.

In this regard, it is important to notice that social innovation cannot be considered as synonymous with social entrepreneurship or the third sector in general. Social innovation, in fact, sees the collaboration of different actors, which may include, but are not limited, to social entrepreneurs; it generally happen in mixed consortiums and tend to have more liquid forms of organisation than classical forms of the third sector such as charities, cooperatives and the alike.

Assessment of social entrepreneurship and of the third sector impacts is regularly calculated both at enterprise and at country level. Corporate social responsibility initiatives - which may overlap with some forms of social innovation as they are delivering service in a more just or sustainable way - are often assessed using ad hoc social return of investment (SROI) instruments and philanthropic organisations use multiple, non-standardised methods for supporting decision making processes related to investments in development programs (see paragraph 2.3). However, as we see, we can use the lessons learned from this "sector" only in a limited way as IA4SI is dealing with international, research-based projects and not to entrepreneurship or public driven initiatives (Passani et all, 2014). Management understands the project as an organizational entity and organization scholars as a temporary organizational form and is increasingly prevalent in contemporary society.

A related topic is the localisation of impacts, especially relevant for digital social innovations, which are expected to produce benefits in different territorial contexts. It is relevant to understand if, and to what extent, the online tools for social innovation enable transformation at local community level and if so, how this happens (Young Foundation, 2010). Impact assessment appears extremely relevant in demonstrating the validity of the social innovation approach, its articulations at institutional, entrepreneurial and grassroots levels, its capability in producing new collaborations among these levels and its multiple applications (such as global warming, employment, education, health, political participation and other pressing social challenges).

The research on impact assessment is particularly challenging as social innovation is intended to produce positive changes in terms of individuals and groups wellbeing and to be more efficient, effective and just that alternative solutions (Philip, Deiglmeier and Miller, 2008).

Analysing the effects of social innovation initiatives can also be helpful in refining the understanding of the social innovation concept itself, as well as in orienting policies.

Another focal point of investigation is related to the interdisciplinary nature of social innovation and what it can mean, or achieve in terms of collaboration among different stakeholders.

New social challenges have emerged and some of the traditional ways of managing social issues (market-or government-based) seem to be less and less able to properly answer these challenges. Citizens are looking for new forms of participation, information availability is growing in exponential terms but it is increasingly difficult to navigate and to evaluate in terms of trustworthiness. Climate change calls for lifestyle transformations, cities are growing in complexity and inhabitants are demanding more customised services and a higher quality of life. In this scenario, new and emerging digital technologies, especially those ones such as social media, that are better at involving users in content creation, are seen as potential new spaces for collaboration and self-organisation that are able to propose new production, consumer and lifestyle models. In this view, social innovation, and its digital counterpart is emerging as a promising concept for describing new patterns for innovation while, at the same time, positively changing social relationships of society at large.

As anticipated, IA4SI project wishes to contribute to the debate in the field by analysing the first 15 CAPS projects, their objectives, outputs and impacts. Thanks to the close collaboration with CAPS projects and the data that was gathered and analysed at aggregated level, some of the research topics mentioned above can be addressed, and improve our understanding of how to describe the results of initiatives that are interdisciplinary in nature and multi-situated (online, offline, at local level and international level possibly at the same time) and multi-stakeholders.

Concluding this section, we can operationalize CAPS projects by interpreting them as a sub-category of the wider concept of digital social innovation. They serve as the main target of drawing out the IA4SI methodology.

CAPS projects are ICT-enabled pilot initiatives, which address pressing social issues and sustainability issues by promoting the active participation of European citizens and/or rely on their capability of proving and sharing information. CAPS projects are digital social innovation initiatives and as such are expected to propose innovative solutions which should be more efficient, effective, just and sustainable that available ones. CAPS initiatives are multidisciplinary in nature and most of them have a relevant research aspect.

By analysing the current CAPS projects, it is possible to group CAPS stakeholders in four main categories: research, business, civic society and policy-makers.

More precisely, CAPS stakeholders can be described by the following:

RESEARCH

- Universities
- Research centres
- Academic researchers
- Independent researchers
- Graduate students
- Other EU projects
- Any other research-related organisation/professional

BUSINESS

- ICT large companies
- Non-ICT large companies
- ICT-SMEs
- Non-ICT SMEs
- Cooperatives and social entrepreneurs
- Consultants and self-employed workers
- Utilities (water, energy, etc.)

CIVIL SOCIETY

- NGO, Associations and charities
- Umbrella organisations
- Trade unions and parties
- School, Teachers, educators
- Activists and social movements
- P2P producers
- Bloggers or content producers
- Citizens at large
- Other civic society organisation

POLICY-making

- Local policy-makers
- National policy-makers
- EU policy-makers
- Global policy-makers
- Local governmental bodies and officials
- National governmental bodies and officials
- EU governmental bodies and officials
- Global governmental bodies and officials
- Interest groups

Considering the topics covered by on-going CAPS projects and the topic suggested by the EU programme (Call10), the categories used by the Digital Social Innovation projects[5] for categorising European initiatives in the field, and the categorisation of social innovation projects proposed by the Tepsie project (Bund et all, 2013) are the following:

- Energy and environment
- Social inclusion
- Participation and democracy
- Economy: production and consumption
- Knowledge, science and information
- Rights
- Finance

[5] www.digialsocial.eu

- Culture and art
- Health and wellbeing
- Community creation, renewal and reinforcement
- Work and employment
- Neighbourhood regeneration and housing

At the present stage, none of the project is active in the domain of "Neighbourhood regeneration and housing" yet which is central in the social innovation debates. Also, the "work and employment" and "culture and art" topics seem not be represented in the current CAPS activities, but considering the future application of the methodology, it is worth to consider also these domains/topics.

The following figure lists the projects that have participated in the development of the IA4SI methodology and that have been invited to test and use it. They are divided according to the three typologies proposed by the EC on the CAPS dedicated website (http://ec.europa.eu/digital-agenda/en/caps-projects).

Fig. 2 – On-going CAPS projects

Most of the projects started in October 2013, with the exception of Web-COSI, which started in January 2014. Furthermore, USEMP and P2Pvalue were not financed by Call10 and were integrated in the CAPS domain due to the topics they investigate. Recently, another project called. The study "Digital Social Innovation" is also part of the CAPS domain even if, due to its pure research-oriented nature, it is not be engaged in the assessment.

2. IMPACT ASSESSMENT: FRAMING THE SCOPE AND THE CHALLENGES FOR THE IA4SI METHODOLOGY

This chapter introduces the IA4SI methodology by framing it in the wider context of impact assessment. More specifically, this chapter presents the methodological pillars on top of which the IA4SI methodology is built. It is important to recall that IA4SI build on previous European projects in the field of impact assessment such as SEQUOIA[6], ERINA+[7] and MAXICULTURE[8]. The methodologies developed for these projects were fully discussed and accepted by the EC. Those previous projects represent important testing of the overall IA4SI framework and offered important lessons learned that have been incorporate in the IA4SI methodology described in chapter 3. Such

[6] For an overview of the SEQUOIA methodology and results see Passani et all, 2014. The compete methodology is described in Monacciani et all, 2011 and a practical approach to its usage is described in Monacciani et all, 2012.
[7] The ERINA+ Methodology and related tools is described in Passani et all, (2013)
[8] The MAXICULTURE methodology is described in Passani et all, 2014.

previous experiences supported the definition of the IA4SI framework but it is important to stress that most of the indicators and variables that are described in chapter 3 have been developed *ad hoc* for the CAPS domain. Finally, in the previous experience the environmental impact assessment was very limited in the case of SEQUOIA or was absent at all in the case of ERINA+ and MAXICULTURE. We will explain in the following paragraphs and in chapter 3 the reasons why the environmental impact has been enlarged and has acquired a higher relevance.

2.1 Impact assessment and impact value chain: framing the IA4SI methodology

The guide to impact assessment developed by the EC INFOREGIO Unit (European Commission, 2012b: 119) defines impact as,

> "a consequence affecting direct beneficiaries following the end of their participation in an intervention or after the completion of public facilities, or else an indirect consequence affecting other beneficiaries who may be winners or losers. Certain impacts (specific impacts) can be observed among direct beneficiaries after a few months and others only in the longer term (e.g. the monitoring of assisted firms). In the field of development support, these longer-term impacts are usually referred to as sustainable results. Some impacts appear indirectly (e.g. turnover generated for the suppliers of assisted firms). Others can be observed at the macro-economic or macro-social level (e.g. improvement of the image of the assisted region); these are global impacts. Evaluation is frequently used to examine one or more intermediate impacts, between specific and global impacts. Impacts may be positive or negative, expected or unexpected".

This definition shows that impacts tend to be observable only after the end of a project. This is the first point to be made in order to appropriately frame the IA4SI mission. IA4SI's methodology is not able to capture the impacts of CAPS project on their users after the end of their activities, as the methodology has been applied to on-going CAPS projects. Therefore, the IA4SI methodology and assessment focuses on **expected** impacts and describes, coherently with the definition of impact provided by the International Association for Impact Assessment (IAIA), "the difference between what would happen with the action and what would happen without it[9]". Nevertheless, it is important to note that the IA4SI methodology can be used also when these projects will be completed, so that, in synthesis, the methodology can be useful in the on-going project phase and in their ex-post phases. The methodology is not meant to be used for ex-ante evaluation, for example, when evaluating future CAPS proposals if not with relevant adaptations.

In synthesis, running an impact assessment means answering the following question: "What is the difference a CAPS project makes at socio-economic level, at environmental level and at political level?" This has been done by mapping the inputs, the outputs, the outcomes and the expected impacts of CAPS projects. In other words, this was carried out by applying the value chain approach - also known as logic model or logic chain.

In this view, as shown in the following figure, the term "impact" is used to refer to results at the end of the logic chain and is the consequence of project activities, outputs and outcomes.

[9] Available at http://www.iaia.org/publicdocuments/special-publications/What%20is%20IA_web.pdf

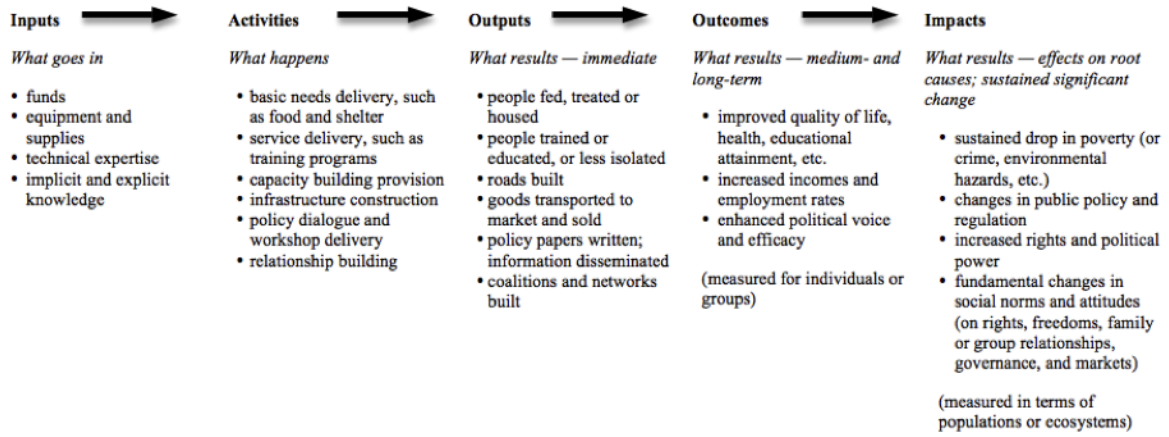

Fig. 3 - Logic model. Ebrahim and Rangan (2010:49**).**

Adapting from Epstein and McFarlan (2011), it is possible to define the main steps of the value chain as follows:

- **Inputs:** the key tangibles (monetary) and intangibles (non-monetary) investments made in a project. The analysis of the input is important at the project level and at aggregated level both when running a qualitative analysis and when applying quantitative method such as the Cost-Benefit analysis which is used in IA4SI (described in paragraphs 2.2)
- **Activities:** the specific programs or actions that the project undertakes. In the case of CAPS projects the research, development and piloting activities performed.
- **Outputs:** tangible and intangible products and services that are the result of the organizations activities. Describing outputs means describing the observable results of a project such as the number of published scientific papers, the number of released software, the number of developed policy recommendations, etc. They need to be constantly monitored during the project lifecycle. IA4SI has not considered all the outputs of a project (for example, it has not considered the number of produced deliverables), but only those outputs that can be of help for evaluating the project impacts, i.e. does that have a logic link with impacts. The analysis of outputs is needed also in order to evaluate project effectiveness and sustainability.
- **Outcomes:** specific changes in behaviours and affected by the delivery of the services and products created by the projects. Analysing outcomes means analysing the short-time effect produced by the project on its stakeholders. The main difference between outcomes and impact is the time frame in which they can be observed: outcomes are short-term effects while impacts are long-term effects. The IA4SI methodology develops a set of variables that merge outcomes and expected impact as suggested, among others, by the KEA Benchmark Methodology (KEA, 2012a). This choice is guided by the fact that IA4SI has observed on-going projects so that long-term impacts were not, as mentioned, directly observable. The indicators selected, however, assure the possibility to map both outcomes and expected impacts. Moreover, concerning the economic impact it is necessary to stress the fact that - due to the restricted number of projects under assessment and considering the distributed nature of projects (that do not focus on a single territory) - IA4SI has not assessed the impact on the European or local/national economy. Rather it has assessed the sustainability of each of the project outputs, the economic benefits a project provided to the project's consortia and to the users, and its impact on the development of new business models and on the attractiveness of a territory.

- **Impacts:** benefits to the communities and society as a whole as a result of the project outcomes. Impacts are the net difference made by an activity after the outputs interact with society and the economy. They are long-term and long-lasting effects of an action and can be, as outcomes, direct or indirect, intentional or unintentional, positive or negative.

The terms just described are important in the IA4SI methodology as an input-output-outcome-impact model of impact assessment is followed. And, it was also reflected in the Self-assessment toolkit that CAPS projects have used for entering the data about their projects and for visualising the assessment results (see paragraph 5.1). Paragraph 3.9 shows the indicators and variables that are related to the logic model. Before describing the techniques used in IA4SI for describing and quantifying the projects impacts, it is worth mentioning that a preliminary step needs to be undertaken prior to applying the logic model, i.e. the definition of the baseline.

2.1.1 Baseline definition

In order to describe and possibly quantify the differences produced by a CAPS project, or by any other innovative initiative, it is necessary to have a description of alternative scenarios or counterfactual scenarios. Typically, the counterfactual scenario represents the situation without the project outputs, which could be defined as "baseline scenario", a sort of no-investment scenario without the project outputs (Monacciani, Passani, Bellini, Debicki, 2012). In this way, it was excluded from the assessment of the outcomes and impacts that would have occurred anyway, even without the project.

In the case of IA4SI, it is also necessary to guide the CAPS project in considering only the outcomes and impacts effectively related to the project activities and outputs, excluding pre-existing results. In fact, some of the CAPS projects build on pre-existing technological solutions and online communities. For this reason, it was necessary to distinguish the number of users that exist before the start of the project and the number of users that have been added to the online community thanks to the project activities.

The baseline scenario (without-project scenario) is the most suitable counterfactual scenario used in the context of research and pilot projects. In fact, the alternative would be to ask projects to compare themselves with other already existing solutions. This is the classical request for commercial innovations and, in that case, the evaluator would map all commercial initiatives that have some similarities with the project under assessment and/or that a potential user can see as an alternative to the project under analysis. IA4SI consortium has considered the possibility to follow this path viewing commercial or non–commercial alternatives to CAPS projects outputs, such as other Digital Social Innovation projects available online, but the topic and activities proposed by CAPS projects seems to be not easily comparable with what already is available. Moreover, as CAPS projects develop and integrate different services, this would lead to a rather complex analytical activity as each service or its component could deserve a baseline scenario.

2.2 Main approaches used in the IA4SI methodology

In this paragraph we will describe the evaluation techniques that were used for description and quantification of the difference produced by CAPS projects on this beneficiaries.

Evaluation techniques to perform an impact assessment are numerous. Each differs in its level of detail, the range of considered stakeholders, the characteristics of the required data and its final aim. The selection of an appropriate method is critical since evaluation accuracy and success depends on the suitability of techniques and the rigor with which they are applied.

According to the Evalsed manual (European Commission, 2012b), four main methodologies are currently used for socio-economic impact assessments:

- *Contingent evaluation*: it is called also priority evaluation method. Its aim is to involve the public to participate in decision-making. The method combines economic theories with social surveys to simulate market choices and to identify priorities of choices and preferences. This approach is useful for decision-making, especially with techniques using value judgements. This method is usually applied in an environmental impact assessment, especially to evaluate non-marketable environmental goods. As this method is normally applied before the start of an investment/project and considering the final aim is to orient policy choice, it is not used in the IA4SI methodology.
- *Cost-Benefit Analysis (CBA):* it is aimed at evaluating the net economic impact of a public project involving public investments. A CBA is used to determine if project results are desirable and produce an impact on the society and economy by evaluating quantitatively monetary values. CBA considers externalities and shadow prices, allowing also the consideration of market distortions. Usually, a CBA is used in ex-ante evaluations for the selection of an investment of a project or in the ex-post evaluation in order to assess the economic impact of project activities. In IA4SI this approach is used for analysing the economic impact of CAPS project. However, due to the no-profit nature of CAPS projects and considering their peculiarities in terms of outputs, the Cost-Benefit analysis is applied using the willingness to pay and the willingness to donate as main monetary values.
- *Cost-Effectiveness Analysis (CEA):* it is a method for selecting the most effective alternative in terms of costs between projects with the same objective. A CEA is used for evaluating benefits that are not expressed in monetary values. It is not based on subjective judgements and it is not useful in case of projects with many different objectives (in this case a weighted CEA is used). The main objective of a CEA is to evaluate the effectiveness of a project, but it does not consider the efficiency. A CEA should be applied only to compare simple programmes providing the same kind of impacts. Within the context of CAPS projects, the IA4SI team decided to not apply the CEA as the context in which the projects are developing Digital Social Innovation initiatives is complex and we prefer to use the Multi-Criteria Analysis, which is more useful for assessing different impacts;
- *Multi-Criteria Analysis (MCA):* is used to evaluate non-monetary values of a project and to compare and aggregate heterogeneous values (tangibles and intangibles, monetary and non-monetary). A MCA combines different decision-making techniques for assessing different impacts of the same project. It is aimed at identifying the opinion expressed by all stakeholders and end-users of a project in order to formulate recommendations and to identify best practices. The MCA is used for evaluating the social, political, environmental and economic impacts that cannot be expressed in monetary terms (Mendoza and Macoun, 1999; Mendoza and Martin, 2006).

The IA4SI methodology was grounded on the Cost-Benefit analysis (CBA) and on the Multi-Criteria analysis (MCA) in order to be able to describe impact measurable in monetary terms and impact non measurable in monetary terms[10]. As we will see in the following paragraph, there is not a ready-to-use impact assessment methodology for social innovation, Digital Social Innovation or CAPS, and a single instrument cannot be sufficient in mapping and describing the outputs and impact of research project which focus on very different topics, engage several kind of stakeholders and have a research and innovation focus. For these reasons, besides Cost-Benefit analysis and Multi-Criteria analysis IA4SI also makes use of an emerging approach called Social Media ROI, and adapts the Environmental Impact Assessment framework to the needs of CAPS

[10] Please refer to Passani et all, 2014 for a more elaborated analysis of these two techniques and the evaluation of their pros and cons. Other references on the Cost-Benefit Analysis and the Multi-criteria analysis are: Brent, 2007; EC, 2008; Department for Communities and Local Government, 2009.

domain. Finally, IA4SI explores the changes in opinions and behaviours generated by CAPS project through the user survey that takes advantage of the Stated Preference Techniques and of the Revealed Preference methods.

- *Social Media ROI* is described in more details in paragraph 3.3; in this context is sufficient to say that Social Media ROI represents an adaptation of a classical measurement of investments, which is the Return of Investments (ROI). ROI is measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; if the ROI is negative it means that the investment has a cost higher than the benefit it produces.
- *Stated preference methods, Priority evaluation method, and Revealed Preference methods*. Stated preference methods represent a set of pricing techniques where respondents are asked how much they would pay for avoiding an intervention perceived as negative for the themselves or their community (like a degradation of the environment) or how much they would ask as a compensation[11]. Similarly, the priority evaluation method is based on the simulation of choices in a market place. Normally, respondents are requested to use a hypothetical allocated budget, and use it for purchase a defined number of items choosing from a list. The hypothesis behind these approaches is that respondents will buy what they consider more valuable. Both approached ask people to directly state their values, rather than inferring values from actual choices, as the "revealed preference" methods do.
  There is a large debate on the pros and cons of stated and revealed preferences techniques, especially among economist, but IA4SI team see them as complementary and uses both of them in the analysis of users behavioural changes. Both methods inform the users survey that IA4SI will conduct by engaging CAPS projects users through the User Data Gathering Interface (UDGI, see par. 5.1). CAPS users will be asked, on one hand, to describe their actual habits with reference to volunteer activities, political participation, environmental-friendly habits, related expenses and so forth and, on the other hand, questions based on state preference methods and priority evaluation methods were also included.

2.3 Impact assessment for social innovation

The European Commission document "Strengthening social innovation in Europe" states: *"Assessment is an emerging agenda. (…) Unfortunately there is no simple, single solution to better assessment, no single tool that can transform understanding of how to tap into social innovation; instead better answers emerge from a broader range of experiences, insights and data" […]*

"It is unlikely that there will ever be one single social innovation indicator in the EU" (European Commission, 2012a: 7).

"*A central complain in the debate is the missing empirical data which is at least partially a result of a lack of approached to measure social innovation*" (Bund et all, 2013). These difficulties are also acknowledged by a document elaborated for the EC by the GECES Sub-group on Impact Measurement titled "Proposed Approaches to Social Impact Measurement in European Commission legislation and in practice relating to: EuSEFs and the EaSI" (2014).

All these documents stress the fact that effective assessment can be overcome in the field of Social Innovation by the following main potential issues:

[11] This definition is based on the OECD one available at http://stats.oecd.org/glossary/detail.asp?ID=6575

- Cross-cutting nature of social innovation: social innovation is more an approach than a sector so that impacts can be observable in very diverse field from education to health, from political participation to environment.
- Diversity of measures of impact: in the private sector there are accepted measure for the economic assessment, but for the analysis of CAPS projects we have to invent a completely new methodology related to the specific framework of analysis
- Definition of social innovation: as we shown in chapter one there is not an univocal definition of Social Innovation and also the BEPA reports link this issue with the lack of evidences: "*The lack of data on the social innovation sector has various causes — first and foremost, (…) the very concept of social innovation is far from having a clear definition*" (BEPA, 2011).
- Complexity of relationships in social innovation: different actors, new models of collaborations such as public private partnership (PPP).

Both the European Commission framework (2012a) and the TEPSIE "Blueprint of Social Innovation Metrics" (Bund et all, 2013) offered interesting inputs in the development of the IA4SI methodology. Both documents propose a methodological framework addressing policy-makers as main target and, especially in the TEPSIE document the focus is on evaluating enables, framework conditions and impacts of social innovation programmes at macro level. As the IA4SI focus is on micro and meso levels of analysis (the methodology considers projects as main point of analysis, not programs, not innovation systems); for this reasons their messages have been taken on board and their main components carefully considered but their approaches have been adapted to the IA4SI purposes.

For example, TEPSIE proposed a set of indicators for mapping the framework conditions at country level: these indicators have the goal of comparing countries and evaluate how they are able to facilitate social innovation. Among others, the indicators proposed refer to gender equality, environmental sustainability, policy awareness, membership in civic society organisation, academia resources deployed on social innovation. All these dimensions are also considered by the IA4SI methodology, as the underlining conceptualization of Social Innovation is very similar; moreover, some of the sources of data suggested in the document have been considered for:

- Building IA4SI indicators
- Supporting the aggregated analysis by considering them as external benchmarks.

Moreover, the TEPSIE document links and grounds social innovation to the research on innovation, especially the technological-driven one represented by the OECD Oslo manual (2005). This is an important term of reference that IA4SI also considered within the economic impact, under a specific dimension dedicated to innovation. At the same time, during the first IA4SI workshop, CAPS projects representatives warned the IA4SI consortium in taking only the Oslo Manual as point of reference because Digital Social Innovation is not only about products and services, but also processes and synergies among actors so that more indicators about open innovation and non-technological innovation have been added.

With reference to the framework provided by the European Commission (2012a), it focuses on three related aspects for supporting policy development: progress of social innovation take-up, extent of barriers to social innovation and impact of social innovation by field. All three aspects were taken in the consideration of the IA4SI methodology.

The GECES sub-group on Impact Assessment (2014) proposes a general framework for project impact assessment, but does not suggest indicators and variables. In this way, the possibility to merge results and compare the performance of different interventions in a quantitative way is precluded. By following the proposed framework it is still possible to create a narration about the interventions, but only considering them as single entities. IA4SI is trying to do something different allowing the EC to consider CAPS projects both as single entities and as part of a community,

which can deliver impact at aggregated level. For this reason, IA4SI is looking for a point of equilibrium between the need of personalisation of each CAPS project and the need to elaborate results at aggregated level. The solution proposed is a modular set of indicators mapping various potential areas of impact among which the CAPS projects were able to choose the most appropriate for their projects. In this way, there is a set of indicator common to all projects and another set of more personalised indicators with the aim of capturing the peculiarities of each project. The GECES document propose five key terms as a base for impact assessment which are the Impact Value Chain for which an intervention can be assessed by analysing its input, activities, outputs, outcomes and impacts.

In building the IA4SI methodological framework, others points of references came from the non-profit sector also labelled as the "third sector" or the "voluntary sector", consisting of stakeholders commonly involved in philanthropic donations or investments (Flynn and Hodgkinson, 2001). This sector can be engaged in social innovation initiatives and the non-profit sector is dealing with social issues as its main mission and shares with CAPS the need of assessing their impacts. For these reasons the IA4SI consortium decided to investigate how the sector is dealing with this issue.

2.3.1 Non-profit sector and impact assessment

Due to its valuable contributions in various areas of society, the non-profit sector has an impact globally that is believed to be quite substantial (Salamo et al, 2000). However, one of the hardest things to measure for this sector is the impact an organization. While numbers are relatively straightforward to measure and have been the go-to measurement and assessment of non-profit success (Sawhill & Williamson, 2001), they do not give a full or comprehensive view of the organizations contribution. Resources have tightened during the economic crisis and, at the same time, there is a clearer focus on the scope and structure of the non-profit sector. This all lays the ground for the increased interest and need for measuring third sector impact on society (Embrahim & Rangan, 2000; Salamon et al 2000).

Feeling the pressure of measurement, non-profits can rely on performance measurement systems, which are developed to evaluate success towards achieving their mission (Epstein & McFarlan, 2011; Ebrahim and Ragnan, 2010). Going beyond financial metrics, non-profit organizations are increasingly starting to use various methods to measuring performance aspects, such as efficiency, effectiveness, outcomes, and impact. Different approaches and methods depend on the organizations' field, focus, scope, size and target "clientele" (Salamon et al, 2000).

Different methods employed can be captured in three main categories: goals-based, outcomes-based and process-based. Goals-based evaluation assesses the extent to which programs meet goals and how they could progress in the future. Making a parallel with the CAPS domain, this recalls the European review process in which the DoW is used as a point of reference for evaluating achievements. Outcome-based measurement measures whether and how programs make a real difference in the lives of people. And, this is also what the IA4SI methodology is interested in doing. Process-based evaluations, by contrast, are less about goal achievement and more about understanding how a program operates, and the results are produced. Process-based evaluations are useful for on-going, long-term programs that appear to have developed inefficiencies over time (Anheier, 2005). Also, this dimension is covered by IA4SI in analysing some project activities, their success rate, and their capability to be sustainable in the future.

Though the task of social value measurement or impact assessment is not easy, several organisations have found ways to overcoming this challenge. Concepts like Social Return on Investment (SROI) and "Ongoing Assessment of Social Impacts "(OASIS_method) by REDF (Roberts Enterprise Development Fund) involves assigning a monetary value to social improvements in which a reduction in social costs is assumed to be accrued and constantly monitoring client's outcomes.

The complexity of this methodology, and the need to find economical proxies for the social benefit produced by the interventions is the reason why IA4SI in not using this methods and preferred the Multi-Criteria one, which allow to combine quantitative and qualitative data, monetised and non-monetised data. Moreover, it is difficult to create a system of proxy that is reasonable for all CAPS projects, active in rather different fields and it also requests a constant update, while the IA4SI methodology is meant to be stable so to be used also for future projects.

2.4 The process followed for developing the IA4SI methodology

The IA4SI methodology described in this section has been elaborated starting from an extensive literature review on Social Innovation, Digital Social Innovation, impact assessment methods for these domains and conceptually close domains such as the third sector, development-related investments and online communities assessments.

Beside this literature review, the IA4SI team carried out phone/online interviews with the representatives of all CAPS projects and, before doing so, analysed all their public available documents (presentations, fact-sheets, websites). The interviews were very useful for better framing their actual goals, activities and expected impacts, and the planned engagement strategies and community building processes. The information gathered through literature review, document review and interviews were used as starting point for a brainstorming session held in Brussels in February 2014 (during the First CAPS Concertation Meeting); all CAPS projects were present and actively participated. In that occasion the CAPS community exchanged ideas on their impacts and ways of mapping/measuring them.

As the figure below describes, the first version of IA4SI methodology including vertical indicators and a selected number of sub-categories and related indicators that were presented in the first IA4SI workshop, held in Rome on April the 4th. All CAPS projects were represented in the workshop; facilitation techniques and team-working techniques were used for gathering feedback about the proposed indices, subcategories and indicators.

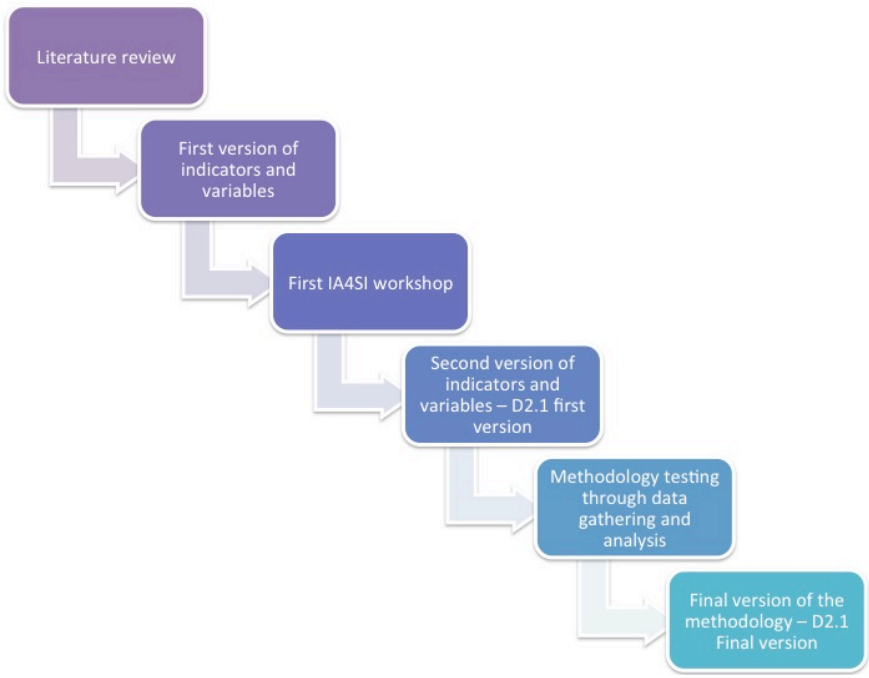

Fig. 4 - The process leading to the final version of the IA4SI methodology

Deliverable 5.2 “Report on the outputs of the first and second workshops” describes the activities performed during the workshop and its outputs in a detailed way. The interaction with CAPS projects, however, started well before the 1st project workshop; in fact, during the first Concertation Meeting held in Brussels in February 2014, a preliminary brainstorming about impact assessment was conducted together with CAPS projects. In that occasion the areas of impact emerged from the literature review, from the analysis of available information about CAPS projects and from phone interviews conducted with all CAPS projects representatives were proposed and discussed. In that occasion CAPS projects commented on the proposed areas of impacts and supported the elaboration of indicators and variables that, successively, informed this methodology.

3. IA4SI METHODOLOGY

3.1 The overall framework

As described in chapter 2, the IA4SI methodology finds its fundaments, mainly, in the Cost-Benefit analysis, in the Multi-criteria analysis and in the Social Media ROI; it is a quali-quantitative multi-stakeholders methodology that engages projects coordinators, their partners, project users and European citizens. The assessment is conducted by using 8 synthetic indices: 4 of them are related to specific areas of impact and related sub categories and are visualised in the figure that follows. These indices can be called vertical indices. Each vertical indices is composed of other indices each corresponding to a specific subcategory; for example the synthetic index Social impact is composed of 6 indices, one for each subcategory such as “Impact on Community building and empowerment”, “Impact on information”, etc. The vertical indices and their composition are described in detail in paragraph 3.2.

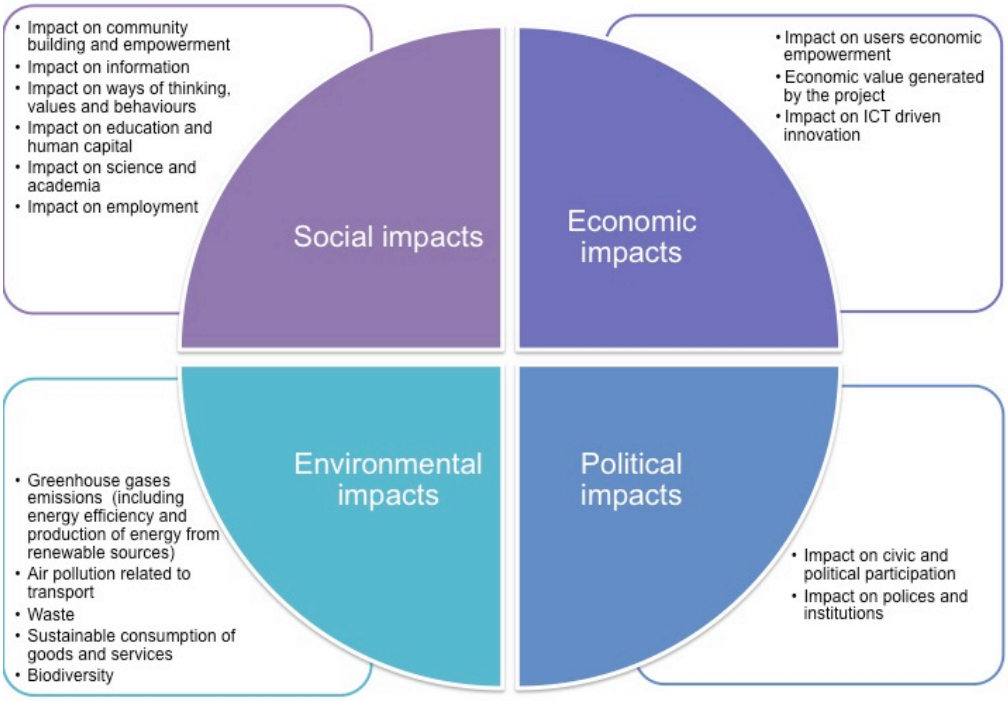

Fig. 5 – IA4SI vertical indices

Considering the FP7 - ICT work programme 2013 which financed the first CAPS projects, it is possible to recognise that the expected impacts stated in the work program are covered by the vertical index identified in the IA4SI methodology. In fact, the expected impact in the work programme is described as follows:

“The overall expected impact is the emergence and take-up of new sustainable organisational and behavioural models at individual and community levels, resulting in sustainable social and economical innovation improving the quality of response to societal and economic challenges, such as growth, employment, inclusion, education, community development, health, environment, energy, and quality of life at large” (http://cordis.europa.eu/fp7/ict/docs/ict-wp2013-10-7-2013-with-cover-issn.pdf).

The first societal and economic challenge identified (growth) is investigated at micro level by the economic impact index; employment, inclusion and community development are analysed by the social impact index while the environment challenge is analysed in the environmental index. Health is not covered in this version of the methodology, as current CAPS project are not dealing with this topic. It would deserve an ad hoc analysis. The last challenge mentioned, “quality of life,” is the result of positive impacts in the above-mentioned dimensions and cannot be synthetized in a single index, while it can be analysed by looking at the achievements of CAPS projects in all the areas of impact that the IA4SI methodology studies.

Besides the four vertical indices, the IA4SI methodology incudes 4 transversal indices that provide information about the process followed by the CAPS projects in determining their impacts. In other words, the transversal indices are related to the attributes of the innovation developed. The four indices, visualised in the figure below are: efficiency, effectiveness, sustainability and fairness. These four indices are inspired by Philip, Deiglmeier and Miller (2008:36), that describe social innovation as a solution which is meant to be more “more effective, efficient, sustainable, or just than existing solutions.”

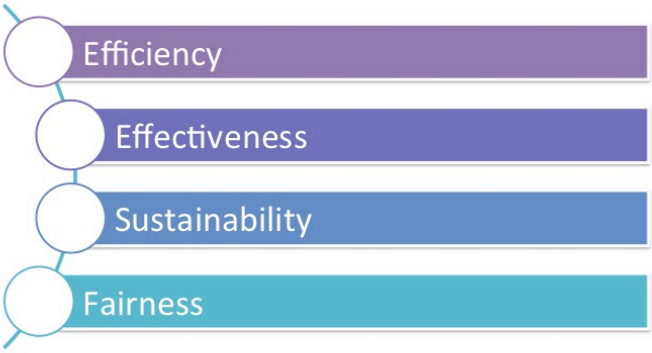

Fig. 6 - Transversal indices

The IA4SI transversal indices are described in paragraph 3.6

All the indices described here are visualised in the IA4SI self-assessment toolkit and constitute the core of the assessment analysis at the project and at aggregated/domain level.

3.2 Social impacts

This area of impact (and related index) considers the changes produced by CAPS projects to the specific aspects of social interaction at micro and meso level. At micro level we are interested in understanding the changes occurred at the individual level of project users and - to a certain extent – of project partners. At meso level we investigate the social relations at group and organisational level, such as impact on local communities and impact on specific social groups (like the ones at risk of social exclusion).

The social impact index is composed of the following 6 sub-categories (See Annex 1):

- Impact on community building and empowerment
- Impact on information
- Impact on ways of thinking, values and behaviours
- Impact on education and human capital
- Impact on science and academia
- Impact on employment

3.2.1 Impact on community building and empowerment

One of the central characteristics of Digital Social Innovation is that of engaging a certain number of users, able to create a network effect so that new forms of organisations, new opinions, behaviours and, more generally, new ways of tackling pressing social needs can be spread at social level. In the subcategory "impact on community building and empowerment", the IA4SI methodology:

- Maps the users of the CAPS platforms
- Describes how they use the platform
- Investigates the relationship between online communities facilitated by the CAPS platforms and local communities not directly engaged on the platforms
- Investigates how CAPS projects can support the empowerment of online and local communities
- Investigates the CAPS community itself, the internal level of collaboration and the relationship with other Social Innovation actors and actors from other domains.

This sub-category of social impact, which corresponds to a synthetic index, is composed of 5 dimensions, which are:

- Online community building
- Online community empowerment
- Local community building
- Local community empowerment
- Impact on Social Innovation and CAPS communities

3.2.2 Impact on information

CAPS are expected "to support environmentally aware, grassroots processes and practices **to share knowledge**, to achieve changes in lifestyle, production and consumption patterns, and to set up more participatory democratic processes" (*https://ec.europa.eu/digital-agenda/en/collective-awareness-platforms-sustainability-and-social-innovation*). Under the subcategory "impact on science and academia", scientific knowledge produced by CAPS projects, such as papers, conference proceeding, IPRS and similar, are covered. Under the subcategory "Impact on Information", the focus is on projects' capability to provide access to high-quality information, provide users with necessary tools for navigating information and positively influence information asymmetries. This subcategory investigates an aspect that has strong influence on other aspects, such as "Impact on way of thinking values and behaviours", "Impact on community building and empowerment" and political impacts as a whole. In fact, having access to information and being supported in sharing information is a condition sine qua non for changing opinions, habits and being civically and politically engaged.

The impact on information index comprises three dimensions:

- Access to information and sharing of information
- Quality of information
- Data management policies

3.2.3 Impact on way of thinking, values and behaviours

The Horizon2020 work programme 2014-2015, when introducing CAPS, declares:

"The resulting collective intelligence will lead to better informed decision-making processes and empower citizens, through participation and interaction, to adopt more sustainable individual and collective behaviours and lifestyles".

(http://ec.europa.eu/research/participants/portal/doc/call/h2020/common/1587758-05i._ict_wp_2014-2015_en.pdf).

The area of impact described in this paragraph tackles the last part of the sentence, i.e. the changes introduced in citizens way of thinking and behaviours, especially the ones related to more sustainable individual and collective behaviours and lifestyles.

It is not easy to monitor changes in opinions, ethical orientations and behaviours. The main challenge is attribution (Bund and others, 2013). In fact, even when observing a change, it is very difficult to associate that change to a defined input. The issue is complicated by the fact that changes in opinions and behaviours are influenced by the number of people that decide to assume certain behaviours: the more people assume a new behaviours the easier it becomes to see this change spreading across the population (network effect).

For overcoming the attribution problem normally researchers use user/target audience surveys and, when possible, compare them with control groups not exposed to the awareness raising campaign or related actions. Therefore, quasi-experimental research design is the most used one for this kind of analysis.

The IA4SI methodology follows this path and investigates this area of impact mainly through a user survey. CAPS projects were asked to describe the topics where a change in opinion or behaviours is expected (consumption models, environmental-friendly choices, etc.) and to describe the activities undertaken and the number of people reached in order to reach the behaviour change. The dynamic related to the number of users and participants (included in the index community building and empowerment) was also included in the analysis in order to monitor the potentiality in terms of network effect. In the following phase, CAPS users will provide data about their current values, opinions and behaviours trough the User Data Gathering Interface.

3.2.4 Impact on education and human capital

This subcategory investigates if and to what extent projects are working on the transfer of their research results and, more generally, the knowledge produced by the projects to users, the training system (the school system and universities) and to workers. With reference to human capital, we use this term referring to the competencies, skills and abilities that workers have or acquire through formal and informal education and on the job and that constitute one important productive factor of any organisation (profit or not-for-profit) (Schultz, 1961). We are, therefore, interested in knowing if CAPS projects improve the human capital of their users and/or of the professionals working in the projects. A special attention is dedicated to e-Skills as a lack of such skill may result in the impossibility to benefit from Digital Social Innovation.

This subcategory comprises the following three dimensions:

- Training provided by the project, which refers to projects outputs in terms of hours of training provided, number of persons trained, efficiency of the training provided, topic covered and contributions in the development of innovative tools for training and education;
- Impact on human capital. It refers to the capability of the project to promote e-Skills, personal development and an increment in users investment in education as well as the enhancement of human capital of persons employed in the CAPS projects;
- Change in training curricula, educational policies and personal investments in education. It refers to the impact of the projects on the training/educational sector and related policies.

3.2.5 Impact on science and academia

Under this subcategory information about the projects' outputs in terms of knowledge creation and on the channels they use for transferring such knowledge outside the CAPS domain are gathered. It investigates the scientific impact of projects and their capability to make their research results available to a wide audience.. This is in fact the condition sine qua non for reaching an impact in the scientific domain, on academia and beyond. Through this subcategory it is also possible to see if the projects are able to support new research or positively influence the research-related working routines (Passani et al, 2014). Attention is dedicated to the interdisciplinary dimension of the CAPS projects, which is particularly evident when looking at the consortium composition and which deserves a closer analysis.

This subcategory rely on the following three dimensions:

- Knowledge production
- Knowledge sharing
- Impact on research processes and academia

3.2.6 Impact on employment

Through this subcategory IA4SI analyses two related impacts: on one hand it investigates if and to what extent projects contributes to the creation of new job places and, on the other hand, it sees if and how their outputs will change the working routines of their users and stakeholders.

The EU 2020 Agenda, as the previous Lisbon agenda, expects the investment in research and innovation to have a positive impact on European employment in terms of more and better jobs. Therefore, the IA4SI team considers this subcategory as relevant even if we are aware of the fact that these impacts occur, generally, after the end of EU projects, when and if the product/service developed by the projects is exploited. In this sense, the creation of start-ups is already a good proxy of a possible positive impact on employment. This subcategory also identifies the contribution of the project to improve the working practices of social innovation institutions and of the third sector.

3.3 Economic impacts

This area of impact and associated indices consider all the relevant economic results that CAPS projects develop along their lifetime. IA4SI provides an economic assessment of CAPS projects focused on their microeconomic impacts, especially in terms of positive economic results for each partners of the Consortium, end-users and general stakeholders of the projects. Indeed, IA4SI is neither aiming to explore the macroeconomic impacts (i.e. the effects produced on Gross Domestic Product) nor to discover the direct impacts at program/policy level.

Starting from the analysis of these impacts, the IA4SI team has identified several indicators and related variables that have been used for assessing meso-economic[12] impacts of CAPS projects. The methodology takes into account the difficulties emerged during the discussions developed in the First Workshop in Rome of providing an economic and monetary value to the impacts developed by CAPS projects.

Economic impact has been articulated in 4 subcategories. Each subcategory is defined here below (See Annex 2):

- *Your Output*

[12] The term meso-economic indicates impacts that are between the micro and the macro level.

- *Users Economic Empowerment*
- *The Economic Value Generated by the project*
- *Impact on ICT driven innovation*

3.3.1 Your Output

This subcategory is really different from the section called “Output” included in the second dimension of the toolkit. Indeed, the “Your Output” section is aimed at assessing the economic impact of each CAPS project’s output. In fact, an Output developed by a project can achieve a relevant economic impact, but this is not always the case. It is relevant to analyse the economic result achieved by each technological output. This dimension takes into account the costs of development and maintenance of the outputs, the willingness to pay or to donate of the users of the outputs. This subcategory is also relevant for the analysis of the future sustainability of the CAPS project outputs.

3.3.2 Users Economic Empowerment

This subcategory of impact aims to analyse the contribution of CAPS projects to support users to increase their incomes and reduce their costs. The dimension called “Impact on access to finance” is divided in two main parts. The first section is aimed at analysing the project capability to increase the access to finance of its users and specifically also the access to emergency finance. This is relevant in the case of Social Innovation projects, as stated in Murray (2010a), a wide range of financial tools should be used especially at early stages of each projects and this constitutes a driver for the success of the project. The second part of the “Impact on access to finance” is aimed at assessing the increase of money for the users and it dedicated only to the projects that are developing crowdfunding initiatives. Even if within the current CAPS projects framework only 1 project (CHEST) is developing activities on crowdfunding, we expect that in the next future more CAPS projects improving crowdfunding activities will be funded.

The second sub-dimension of the Users economic empowerment area of Economic impact is Impact on entrepreneurship and income generation for the users. This dimension is aimed at analysing the impact of CAPS projects on encouraging their users to develop new business activities, entrepreneurial initiatives and new business ideas. Related to this dimension is also the capability of the project to increase income for the users of the project, to diversify income resources and the resilience of users coping with potential unexpected financial crises. As stated in the Social Guide developed by the European Commission (2013b), the enhancement of the adoption of Social Entrepreneurship is one of the main objectives of European Union. Many social enterprises in Europe can achieve a greater impact if their specific solution really meet social needs and is applied on a larger scale. Within this context, one of the potential impacts of the CAPS projects can be that of supporting their users to create new business and develop new entrepreneurial activities. The indicators identified for the evaluation of the “Impact on entrepreneurship” of CAPS projects are mainly focused on Kramer (2005), which explore the various approaches to evaluate the specific field of Social Entrepreneurship, a research based on a scan of the relevant literature and on interviews with funders, Social Entrepreneurs and scholars in the field.

3.3.3 Economic Value Generated by the project

This subcategory is aimed at assessing the economic impact developed by the CAPS projects through their outputs. The third dimension called “Economic results” aims to evaluate the economic impact of the outputs developed by the CAPS projects in terms of Cost-benefit and Return on Investments (ROI). From the analysis were excluded time saving and cost-saving, as required by

the CAPS projects during the First Workshop in Rome, as explained more in detail in paragraph 2.4.

Within this first dimension is included also the analysis of Digital Social Innovation ROI of CAPS projects, derived from Etlinger and Li (2011) that the IA4SI team adapted to the specific context of the Digital Social Innovation. With reference to the definition of the ROI applied to the context of Digital Social Innovation, as defined by the IA4SI team, we dedicated a specific section in paragraph 3.3. This dimension includes another indicator relevant within the context of Social Innovation, which is the analysis of the altruistic use, aiming to analyse if and how much the users of CAPS projects are potentially willing to pay for the services developed by them as defined by Murray et al. (2010b).

The second dimension analyses the contribution of the project for the creation of new business models, the development of new market opportunities for the partners of the project, the increasing of informal collaborations with business partners and the collaboration with the industry. According to NESTA (2011a), the indicator relevant for the analysis of business models within the Social Innovation field is the analysis of business collaborations developed during the lifetime of the project.

The third dimension aims at providing an analysis of competitiveness of the projects and their capability to keep pace with competitors. This area considers also the success of the exploitation and transfer activities of the CAPS projects, in terms of number of persons dedicated to exploitation and innovation transfer within the consortium of each project, number of activities for the transfer of each project output and Project self-evaluation of the success of transfer activities, as required by the European Commission within the Framework of Horizon 2020 (2013a).

3.3.4 Impact on ICT driven innovation

This area assess the impact of the CAPS projects in terms of developing innovation and is divided in 4 main dimensions: product innovation, process innovation, organizational innovation and user-driven and open innovation.

More in detail, the first area identifies the type and nature of the product innovation, including the analysis of technological readiness level of the platform, the contribution of the project for increasing the efficiency of already existing technologies and quality of products. The second dimension, the impact on process innovation, analyses the ability of the project to improve the processes for the creation of new social ideas, to introduce a new or significantly improved service offering that will reduce the actual delivery time and the delivery time of new service offerings.

The third dimension, impact on organizational innovation, analyses the impact of the project on the definition of new organizational models enabling the users to better structuring their activities, to improve the access to spaces for collaboration, to develop routinized processes for capturing and using new ideas in new or improved service offerings and to implement new concepts for the structuring of users activities. Moreover, this area of impact is aimed to analyse if and how the projects contribute to improve the working practices of CAPS users, as required by the European Commission (2012).

The last dimension considers both the impact of the CAPS projects on user-driven innovation, defined as *"the innovation created by the user to obtain a higher user value as opposed to commercial innovations taking place within companies"* (2005); and open innovation defined as *"the process of harnessing the distributed and collective intelligence of crowds. It is based on a number of principles, including: collaboration, sharing, self-organisation, decentralisation, transparency of process, and plurality of participants"* (2010b, p. 38).

Hence, the impact on user-driven innovation is aimed at evaluating the contribution of the CAPS projects for implementing new methods for identifying user needs, the collaboration of the users in the development of the technological outputs producing a cost saving and improving the quality of the technological outputs. All the indicators used in this subgroup can be found in.

3.3.5 Digital Social Innovation ROI

A complete model for assessing the economic value of Digital Social Innovation projects should take into account not only the costs and the benefits developed by the CAPS projects, but also the ROI generated, in order to evaluate the efficiency of the investment. This is very relevant especially for the projects entering the phase of product/service development. To this end, the IA4SI team has decided to develop a model for the analysis of Digital Social Innovation ROI, adapted from the traditional model used for assessing the "Social Media ROI".

The analysis of the literature developed by the IA4SI team considered also the standard measures commonly used for providing a monetary value of Social Networks. More in detail, we considered a study developed by the P2P value project (2014:13), which provides the following methods applied to the peer-to-peer platforms:

1) Monetary achievement regarding value of the multi-sided markets built upon a commons (i.e. selling services on the top of a FLOSS; selling advertising in a commons platform; (P2P or not P2P) markets built upon information, evaluations, reputation systems generated as commons by the collaborative production; commercialization of the trade-mark in different ways; markets of applications built upon a platform; etc.)

2) Monetary achievement regarding fundraising: sponsors, donations, venture capital number of sponsors and amount of donations.

Within the context of CAPS projects, the IA4SI team decided that the first method cannot be applied as the CAPS projects are not developing services that will be sold on the market, neither selling advertising through their digital platforms. For the same reason we decided to avoid using the metrics developed for estimating the value of a Social Network such as Facebook, as in Deloitte (2012), as each Social Network is a stand-alone unit producing different economic results.

The second typology of analysis has been applied to the IA4SI methodology for assessing the Impact on users Economic empowerment and more specifically through the following indicator: Number of instruments and type (Microfinance instruments, seed-funding, crowdfunding initiatives, community currency, digital currency).

Indeed, most of the CAPS projects are developing online platforms and social networks are used not as the main output of the project but as an instrument for dissemination and exploitation of their results. Hence, for the evaluation of the ROI generated by the CAPS projects we used Social Media metrics adapted for the context of Digital Social Innovation.

Before explaining the process for the identification of the ROI model for Digital Social Innovation, it is needed to provide a definition of Social Media ROI. There is no still a clear and accepted definition of Social Media ROI. However, according to Blanchard (2011), ROI is a business metric and not a media metric. Social Media ROI is determined by Lead Generation, Social Mention Website traffic, Followers/Fans and Sales, as specified by the following figure (Blanchard, 2012), which provides also several concrete examples of Social Networks used in order to increase Social Media ROI.

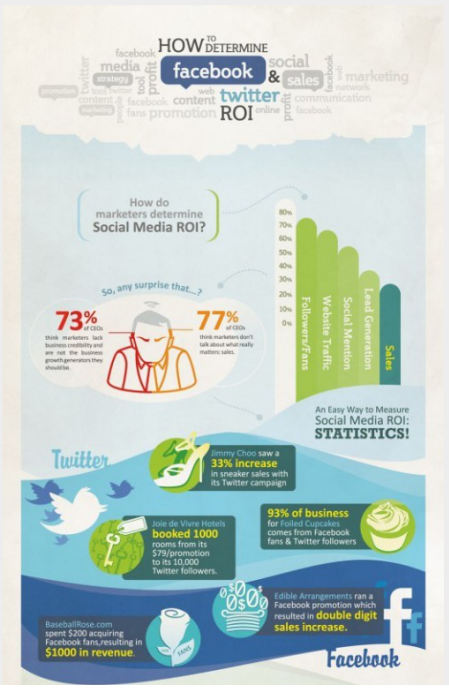

Fig. 7- Social Media ROI, Blanchard, 2012

Blanchard provides a definition of the elements that should be included in the Social Media ROI Pyramid and that are needed in order to evaluate the Social Media ROI. At the bottom of the pyramid there are an engagement data provided by community managers, developers, designers, agency partners and IT. This layer includes social networks analytics and traditional web analytics. A measurement of this layer is provided by taking into consideration aspects as for example number of clicks, fan, followers, views, etc. … The second layer is called Social Media Analytics and is developed by the Social Strategist and by the internal stakeholders/clients. This layer is constituted by the share of voice, resonation, Word of mouth (WOM), support response and insights intake. The last layer on the top of the pyramid is called Business Metrics and is managed by the Executives. This layer includes Revenue, Reputation and the Customer Satisfaction Index (CSAT). The following figure explains the entire process.

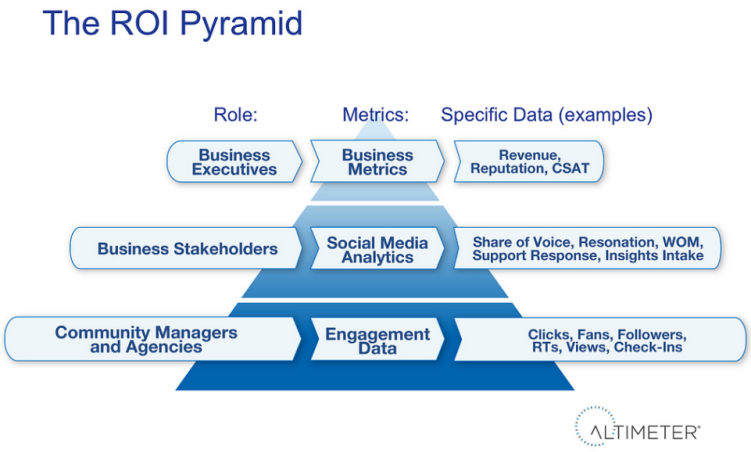

Fig. 8 -The Social Media ROI Pyramid

From the analysis of the literature review emerged a model for the calculation of Social Media ROI that can be easily adapted to the context of CAPS projects. The model has been developed by Susan Etlinger (2011) of Altimeter. She identified the following sample measurement that can be seen on Figure 8

Use Case	Example	Sample Formula
Brand Health	Social Share of Voice	Brand Mentions --- Total Competitive Mentions on Social Channels [Brand + Competitor A + Competitor B + Competitor C ...]
Marketing Optimization	Relative Campaign Engagement	Retweets + likes + fans per dollar spent of Campaign A --- Retweets + likes + fans per dollar spent of Campaign B
Revenue Generation	Visit Loyalty by Social Channel	Total Website Visitors from [Social Network] Who Have Returned Within Past 30 Days --- Total Website Visitors from [Social Network]
Operational Efficiency	Community Impact	Average purchase value on [Social Network or community] --- Average Purchase Value [all channels]
Customer Experience	Social Service Level	Number of Service Issues on [Social Network] Acknowledged within 4 Hours --- Total Number of Service Issues Noted on [Social Network]
Innovation	Idea Acceleration	Number of [IDEA] Topic Mentions in [END DATE] --- Number of [IDEA] Topic Mentions in [START DATE]

Source: Altimeter Group

Fig. 9 - Social Media ROI Model, Etlinger and Li C., 2011:18

The formulas proposed in the model are a starting point for reflection in order to allow other researchers to develop the metrics that best describe value for their specific field and context. To this end, the IA4SI team has adapted these formulas to create a Digital Social Innovation ROI. We started from the consideration that CAPS projects are developing online platforms and not social networks. According to these preliminary considerations, the ROI model developed by the IA4SI team provides the 2 following composite indices:

1. Revenue generation
2. User experience

From this model is excluded the analysis of the operational efficiency and Innovation evaluated by the model of Etlinger, as the IA4SI team already included the analysis of the efficiency of CAPS projects as a transversal index and Innovation within the Economic impact methodology. Within the context of IA4SI where the CAPS projects are developing Digital Social Platforms we can only use the Revenue Generation and the Customer Experience indices, as the CAPS projects will not develop marketing campaigns and they will not sell brands on the market. Instead the other two indices are relevant for analysing the revenue generation and the user experience of CAPS projects. Below we provide more in detail the 2 composite indices and the related formulas.

1. The IA4SI team assesses the revenue generation of CAPS projects by comparing the total number of platform returning visitors and the total number of visitors of the platform.

$$\text{Revenue generation} = \frac{Total\ platform\ visitors\ returned\ within\ past\ 30\ days}{Total\ platform\ visitors\ within\ past\ 30\ days}$$

2. The IA4SI team assumed that the CAPS projects are or will be put in place the ticketing or service support systems for the platforms they would develop. The user experience is analysed by comparing the number of service issues on the platform within 4 hours and the total number of the service issues noted on the platform.

$$\text{User experience} = \frac{\text{Number of bugs reported on the platform noted within 24 hours}}{Total\ \text{number of the service issues noted on the platform}}$$

From the exchange of feedback with project we identify the following variables relevant for the analysis of Digital Social Innovation ROI of CAPS projects, which calculated dynamically considering the projects answers:

- Number of project mentions
- Number of competitors mentions
- Number of retweets, followers
- Total budget for dissemination
- Number of project outputs mentions
- Number of project outputs mentions in other media

3.4 Environmental impact

As illustrated in the first chapter of this deliverable, it is explicitly stated that CAPS should provide "societally, environmentally and economically sustainable approaches and solutions to tackle societal challenges", and among the examples of CAPS targets we find "comparing individual lifestyles against some ecological / environmental benchmark" and "promoting sustainable and collaborative consumption, as a basis for an effective Low-Carbon economy". The environmental component is, hence, among the priority targets of these specific projects, whose aim is to produce intangible goods such as networking platforms, knowledge sharing, virtual tools, and to try to intercept and involve the highest possible flows of users, upon which the effectiveness of the projects themselves are said to depend.

This means that CAPS' impacts on the environment are bound to be quite similar in their nature to the ones of social media and computer-mediated social networks (CMSN, as in Oakley and Salam, 2014), and can be seen to show their effects within two main dimensions:

- The environmental impact of the projects themselves, and
- The impact on users environmental behaviour.

3.4.1 Environmental Impact: approach, dimensions and areas

The indicators and variables against which the projects were assessed have been mainly extrapolated from the methodology developed by the Organizational Environmental Footprint (OEF), "a multi-criteria measure of the environmental performance of a goods/services-providing Organisation from a life cycle perspective" (EC 2013c/179: 112).

After having selected the appropriate literature for analysing CAPS environmental impacts, IA4SI has identified four areas of environmental impact relevant for CAPS projects:

- Greenhouse gases emissions (including energy efficiency and production of energy from renewable sources)
- Air Pollution related to transport
- Solid Waste
- Sustainable consumption of goods and services (see Annex 3)

The selection has been made taking into account the very concrete activities and targets of the projects. Each impact area will be shortly explained according to this criterion. As already mentioned in the second chapter, it is important to note that the data gathering process underpinning environmental indicators requires time as well as to develop adequate environmental internal policies. Improvement in the projects' environmental impacts needs to be assessed by periodically repeating the self-assessment.

3.4.2 Greenhouse Gases emissions (including energy efficiency and production of energy from renewable sources)

As hinted at in the introduction, climate change has risen as a major issue within the scientific and political scenario over the last decades, mainly for two reasons: the availability of data and it being the issue at heart for people, project and administration in everyday life.

Greenhouse Gases (GHG) emission are the major cause for climate change, since they are "those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds. This property causes the greenhouse effect" (IPCC 2001: 274). Given the nature of CAPS activities, IA4SI established that the only significant source of greenhouse gases emissions comes from travel. To calculate the resultant carbon accounting IA4SI assessment relies on internationally validated calculation tools, such as the Greenhouse Gases Protocol. The GHG Protocol is "the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions". [13]

The methodology also takes into account compensation activities, energy consumption and for the percentage of renewable/efficient energy purchased. About users' behavioural change, four indicators could be identified to assess the most likely output of a CAPS project that engage in GHG reduction and energy efficiency: users' compensation activities, users' shift to renewable/efficient energy provider, users' awareness and users' activation. Table of indicators

3.4.3 Air Pollution related to transport

Among the various pollutions that human activities can diffuse in the environment, air is one of the most critical one for human health and it entails the "contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere", as defined by WHO[14] . One of the main causes for the quick increase of urban air pollution is the inefficient use of fuel for transport, together with power generation and other human activities related to household management.

IA4SI assesses that, although is not possible to ask CAPS to be accountable for the exact measure of their contribution to urban air pollution, it is still very useful for them to conduct a qualitative assessment focusing on their sensitivity towards this issue, for both the project and their

[13] http://www.ghgprotocol.org/calculation-tools
[14] http://www.who.int/topics/air_pollution/en/

users. In case of indication of a high engagement with the issue, the projects are required to briefly list the undertaken actions (i.e. internal policies, awareness initiatives, etc.).

3.4.4 Solid Waste

Waste is another major issue in the project management and project environmental assessment framework, and is defined as "substances or objects, which the holder intends or is required to discard" (EC, 2008: 4). The methodology aims to make both a quantitative and qualitative assessment of how the projects dispose of the main waste they could produce via their activities. The high level of digitalization of CAPS work and tools makes the Waste Electrical and Electronic Equipment (WEEE), the most significant waste produced by this kind of projects. The European Union has developed the currently most advanced legislation about WEEE (Directive 2012/19/EU), but despite that only one third of the WEEE produced inside the European Union result correctly managed (Ongondo et al, 2011). CAPS projects are expected to reach a robust level of awareness about this issue and to act accordingly. Keeping this target in mind, self-assessment is considered as a first step in this.

The methodology also assesses the projects' engagement with user awareness and activation about the overall waste issue.

3.4.5 Sustainable consumption of goods and services

The introduction of the concept of "sustainable consumption" within the IA4SI framework for CAPS self-assessment has been thoroughly debated among the projects themselves. Other proposals from the IA4SI team (i.e. "raw materials consumption") were considered too specific or potentially confusing for projects that do not deal with environmental issues as a main target. On the contrary, sustainable consumption seems to be a quite popularized and accessible concept, as defined by the Oslo Symposium in 1994: "the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations".

Once again, the concreteness of CAPS activities has been taken into account, in order to ask the projects data about sustainable management of their procurement, events and services. The projects were also required to illustrate to what extent, if any, they contribute to their users transiting towards sustainable consumption and to raising overall awareness about this issue.

The methodology does not assess the sustainability of the projects' production in terms of raw materials purchasing and processing, as the projects generate mainly intangible goods.

3.5 Political impacts

As stated in the definition of CAPS proposed by the EC: "*The Collective Awareness Platforms are expected to support environmentally aware, grassroots processes and practices to share knowledge, to achieve changes in lifestyle, production and consumption patterns, and* ***to set up more participatory democratic processes****" (*https://ec.europa.eu/digital-agenda/en/collective-awareness-platforms-sustainability-and-social-innovation*).*

The political impact index was initiated by looking at the capability of a project to have an impact on "participatory democratic processes" but, more generally, to have an impact on the users and, of European citizens political participation in general.

The political impact index is divided into the following sub-categories:

- Impact on civic and political participation
- Impact on policies and institutions (see Annex 4)

The first sub-category, which corresponds to a dedicated index, is divided into the following dimensions:

- Impact on citizens/users political awareness
- Impact on citizens/users civic participation
- Impact on citizens/users political participation

The following dimensions compose the second sub-category:

- Project capability to influence policies and institutions
- CAPS users impact on policies and institutions.

3.6 Transversal indicators

In this paragraph we will introduce and define the four transversal indices of the IA4SI methodology. The indicators and variables that compose these indices are those already presented in the vertical ones, but re-arranged accordingly to the definitions that follow. The aim of the transversal indices is, as already mentioned, to capture attribute and characteristics of the project outputs and activities that, being a specific kind of social innovation, are expected to be more efficient, effective, sustainable and just that alternative solutions (Phills et all, 2008:36).

Efficiency: describes the extent to which time or effort are well used for achieving the expected results. It is often used with the specific goal of relaying the capability of a specific application of effort to produce a specific outcome effectively with a minimum amount of waste, expense or unnecessary effort. Efficiency has widely varying meanings in different disciplines. In general, efficiency is a measureable concept, quantitatively determined by the ratio of output to maximal possible output. In the IA4SI context we are interested in evaluating both the economic efficiency of project activities and its environmental efficiency.

Effectiveness: this term refers to the capability of producing an effect and is most frequently used in connection with the degree to which something is capable of producing a specific, desired effect. Effectiveness is, generally speaking, a non-quantitative concept, mainly concerned with achieving objectives. Therefore, it is normally used for evaluating the outputs of a project and to what extent the outputs produced are aligned with the planned outputs.

Sustainability*:* By assessing CAPS sustainability, IA4SI methodology intends to analyse if and to what extent the projects and their outputs are going to survive to the end of the funding period. It is of particular interest to try and predict whether the impacts produced by project are going to last over time and how long it will continue to deliver benefits to the project beneficiaries and/or other stakeholder after the EU's financial support is expired. A table of indicators used for measuring the CAPS projects. Qualitative data is not concur to the assessment calculation made by the SAT but they are used by the IA4SI team for: a) interpreting the quantitative data, b) enriching the projects reports and the analysis of the CAPS domain at aggregated level, c) investigate areas of research that are difficult, at least the present stage, to investigate thought quantitative variables.

Fairness index pictures the capability of projects to promote social innovation by taking into account equality issues such as the capability of engaging people belonging to categories at risk of social exclusion, foster equal opportunity between men and woman, support users in having access to no-biased information and avoid the re-production of social and economic disparities. As it emerged during the IA4SI first workshop, in fact, there is the risk to engage in project activities social actors that are already sympathetic with the social issues tackled by the project. In other terms, there is the risk to engage people that are already very active at social, economic and

political level and contribute to the widening of the gap between active citizens and un-active citizens (all four indices can be seen in Annex 5).

4 Construction of aggregated index and benchmarking

This chapter describes how the quantitative, numerical variables, are used by the SAT for the impact assessment of CAPS projects.

The data related to each variable may flow:

- Directly into an indicator that can be called “simple indicator” (i.e. number of project publications) or,
- Indirectly into “complex indicator” since it needs to be associated to the information provided by other variables (i.e. ENPV, B/C, publications weighted according to journals impact factors, etc. …).

The indicators considered have different measurement units such as monetary value, years, yes/no, relative values, 1 to 6 points Likert scale.

As regards the *Likert scale*, existing literature tested the usage of 5 to 7 points Likert scales showing that these scales are almost indifferent in terms of statistical meaning even if wider scales are slightly preferable because the data can have a higher variability. Within the IA4SI assessment model it was decided to use a 6 points Likert scale because with the 6 points scale it is possible to avoid the case where the respondent uses the choice in the middle (3 in a 5 points scale) when she/he is undecided on the right value. Moreover, for each Likert scale there is the option “not applicable” in order to have a clear interpretation of grade 1 which may be used, otherwise, when the question is not considered applicable or relevant.

Taking into account the specificities of the CAPS context and the fact that the projects are developing really different outputs, the IA4SI team has decided to include the additional option “Not Applicable” also for non Likert indicators in order to allow projects to decide whether or not the question is applicable to its specific case. If the user selects the “not applicable” option the variable/indicator does not concur to the assessment calculation.

Some variables foresee a yes or not value. Some of these variables do not concur in the assessment as they are associated to questions that have a filtering function. Some other yes/no variables, however, concur and in this case a numerical value is associated to the options Yes or Not.

As mentioned, as indicators come with different measurement units they need to be treated before their aggregation into indices. Indeed the final goal of the IA4SI methodology is to synthesize the vertical (per category or subcategory) or transversal impacts in indices expressed in a 0-1000 scale in order to make results easily comparable.

Therefore in order to pass from variables to indices there is the need to implement the following actions (Nardo M. et al., 2008):

1. Selection of variables as described in the previous paragraphs;
2. Selection and construction of indicators;
3. Normalisation of indicators;
4. Aggregation of indicators into indices and weighting.

4.1 Selection and construction of indicators

As described in paragraphs 5.2 and 5.3 most of the variables collected through the SAT – with the exception of qualitative, text-based ones - flow directly into the assessment model providing simple indicators. On the other hand, some variables have been aggregated in formulas in order to build complex indicators also through the use of external proxy values such as the ones derived from

official database and statistics (i.e. journal impact factors etc.). Once the proxy value of each impact has been identified, it is possible to calculate the related socio-economic benefit by simply multiplying the quantity of the indicator by its value.

The complex indicators calculated for the IA4SI assessment are the following:

- Economic Net Present Value offered and perceived (ENPV and ENPV*): the difference between the discounted total benefits and discounted costs generated by project outputs. The benefits were evaluated in terms of:
    - Willingness to pay (i.e. the users' average willingness to pay multiplied by the total number of users), or
    - Willingness to donate (i.e. the benefit for a single user for one year of use multiplied by the total number of users).

Consistent with the principles of multi-criteria analysis, when the monetary estimation of project impacts is not possible, it is better to express them in their most suitable metric, providing a multidimensional, disaggregated description of project performance.

Monetary estimation is possible using two quantitative values: the willingness to pay and the (estimated) time saving generated by the use of the service, both gathered from the users. The willingness to pay is expressed in Euro per year.

- Benefits/Costs ratio offered and perceived (B/C and B/C*): the ratio between discounted economic benefits and costs (as above). The B/C ratio measure what is the generated by the expense for the project (for example, if the B/C ratio is 2, this means that the expense of 1 € in the project generates 2 € (economic) benefits.
- Discounted Payback Period offered and perceived (DPP and DPP*): gives the number of years needed to break even from undertaking the initial expenditure. Also in this case cost and benefits are discounted to time "zero".
- Willingness to Pay over Costs ratio (WTP/C*): the Willingness to Pay is evaluated by the project users and it is compared to the costs of the project. The users' Willingness to Pay indicates how much a user is willing to pay for that service. If the total Willingness to Pay (WtP calculated by multiplying the average declared by the users to the number of total users indicated in the project scenario) is greater than the cost of the project, i.e. the ratio WTP/C*> 1, this means the services can be commercially sold on the market or at the very least considered. When, WTP/C*<1 this means it is most unlikely the project can sell this service and so it would be necessary to investigate alternative business models or at least think about mixed business models (finance and marketing).
- Reliability Indicator (RI): is the ratio between the number of the project users who have filled in the information in the Users Data Gathering Interface and the number of users declared by the project within the scenarios. A ratio that is considered acceptable is of the order of 10%, with 1 user response for every 10 declared. The more this ratio approaches 1, the greater the reliability of indices is as well as the ENPV*, B/C*. DPP* and WTP/C*.

In analytical terms, the indicators can be expressed as follows:

$$\text{ENPV}= \sum_{O=1}^{n}\left(\sum_{t=TBS}^{T+5}\frac{OB_t}{(1+i)^t}-\sum_{t=0}^{T+TC}\frac{OC_t}{(1+i)^t}\right)$$

$$\text{B/C}= \sum_{O=1}^{n}\frac{\sum_{t=TBS}^{T+5}OB_t\,(1+i)^{-t}}{\sum_{t=0}^{T+TC}OC_t\,(1+i)^{-t}}$$

$$DPP = \sum_{O=1}^{n} \frac{\sum_{t=0}^{T+TC} OC_t\,(1+i)^{-t}}{\sum_{t=TBS}^{T+5} \frac{OB_t\,(1+i)^{-t}}{T+5-TBS}}$$

$$ENPV^* = \sum_{O=1}^{n} \left(\sum_{t=TBS}^{T+5} \frac{OPB_t}{(1+i)^t} - \sum_{t=0}^{T+TC} \frac{OC_t}{(1+i)^t}\right)$$

$$B/C^* = \sum_{O=1}^{n} \frac{\sum_{t=TBS}^{T+5} OPB_t\,(1+i)^{-t}}{\sum_{t=0}^{T+TC} OC_t\,(1+i)^{-t}}$$

$$DPP^* = \sum_{O=1}^{n} \frac{\sum_{t=0}^{T+TC} OC_t(1+i)^{-t}}{\sum_{t=TBS}^{T+5} \frac{OPB_t\,(1+i)^{-t}}{T+5-TBS}}$$

$$WTP/C^* = \sum_{O=1}^{n} \frac{\sum_{t=TBS}^{T+5} WTP_t\,(1+i)^{-t}}{\sum_{t=0}^{T+TC} OC_t\,(1+i)^{-t}}$$

$$RI = \sum_{O=1}^{n} \frac{Ua_O}{Ud_O}$$

Where:

- *O* is the number of project output number
- *TBS* (Timing of the benefit) is the time t when project output O starts to produce some benefits. We assume that this can happen in the period between the end of the project *T* (with *TBS*=>*T*) and *T+5*
- *TC* is the time frame after the end of the project (with *TC*=<5) during which cost for updating/maintaining the output may occur
- *OB* is total amount of economic benefits at time *t* generated by the project output *O*. Economic benefits can be measured directly through revenues or indirectly through individual cost/time yearly savings multiplied by the number of *output end/users*
- *OPB* is total amount of economic benefits at time t perceived by the users of each output *O*. Economic benefits can be measured directly through Willingness To Pay or indirectly through individual cost/time yearly savings multiplied by the number of *output end/users*
- *OC* is the cost of development + updating/maintaining the output after the end of the project at time t
- *Ua* and *Ud* are respectively the number of actual users answering to the user questionnaire and the number of users declared by the project.

Another complex indicator is the *average scientific productivity of researchers*. CAPS project were requested to indicate the number of peer-reviewed articles with and without impact factor and the number of researchers working in the project. The number of papers with impact factors was multiplied by the impact factor of the related journal and the value generated was divided by the number of the researchers working in the project. For the papers without impact factors the number of papers was simply divided by the number of the researchers working in the project. In fact, it is important to consider the number of researchers in the consortium when looking at the project scientific production as consortia with a high number of researchers may appear more productive than others in absolute terms but the results should be different if the number of researchers is considered.

Normalisation of indicators

Considering the indicators included in the methodology, we have different measurement units as well as relative or absolute values. Therefore, before the aggregation of indicators into indices we need to put in place a mechanism that avoids of “adding up apples and oranges”. Therefore, normalisation is required prior to any data aggregation as the indicators in a data set often have different measurement units. According to Freudenberg (2003) the existing method of normalisation can be listed as follows:

1. Ranking
2. Standardisation (or z-scores)
3. Min-Max
4. Distance to a reference
5. Categorical scales
6. Indicators above or below the mean
7. Cyclical indicators
8. Balance of opinions (EC)
9. Percentage of annual differences over consecutive years

The methods of Min-Max and of the Categorical scales better fits with the IA4SI way to build the synthetic indices.

- **Min-Max** normalises indicators to have an identical range (0-1, 0-100, etc.) by subtracting the minimum value and dividing by the range of the indicator values. If extreme values/or outliers could distort the transformed indicator, statistical techniques can neutralise these effects. On the other hand, Min-Max normalisation could widen the range of indicators lying within a small interval, increasing the effect on the composite indicator. The calculation is performed as follows

$$I_{qp}^{t} = \frac{x_{qp}^{t} - min_p(x_q^t)}{max_p(x_q^t) - min_p(x_q^t)}$$

where
x_{qp}^{t} is the value of indicator *q* for projects *p* at time t.
$min_p(x_q^t)$ and $max_p(x_q^t)$ are the minimum and the maximum value of x_q^t across all projects *p* at time *t*.
In this way, the normalised indicators I_{qp}^{t} have values lying between 0 (laggard, $x_{qp}^{t} - min_p(x_q^t)$ and 1 (leader, $x_{qp}^{t} - min_p(x_q^t)$).

As it is described in the next paragraph dedicated to the benchmarking system, the maximum value of a certain number of variables is pre-fixed as a result of a consultation with the CAPS projects. In the case the maximum value is not known a priory, the SAT calculates it dynamically by considering the values entered by the various CAPS project. For this reason such a maximum value can change over time. For other indicators (such as number of papers developed, number of events addressing local communities, etc.) the maximum value is already known as the CAPS project provided the IA4SI team with their expected goals so that these are used as maximum values.

As an alternative, categorical scale methods could be used in case of need.

- **Categorical scale** assigns a score for each indicator. Categories can be numerical, such as one, two or three stars, or qualitative, such as ‘fully achieved’, ‘partly achieved’ or ‘not achieved’. Often, the scores are based on the percentiles of the distribution of the indicator across projects. For example, the top 5% receive a score of 100, the units between the 85th and 95th percentiles receive 80 points, the values between the 65th and the 85th percentiles receive 60 points, all the way to 0 points, thereby rewarding the best performing projects. Since the same percentile transformation is used for different years, any change in the definition of the indicator over time will not affect the transformed variable. However, it is difficult to follow increases over time. Categorical scales exclude large amounts of information about the variance of the transformed indicators. Besides, when there is little variation within the original scores, the percentile bands force the categorisation on the

data, irrespective of the underlying distribution. A possible solution is to adjust the percentile brackets across the individual indicators in order to obtain transformed categorical variables with almost normal distributions.

$$I_{qp}^{t} = \begin{cases} 0 & if\ x_{qp}^{t} < P^{15} \\ 200 & if P^{15} \le x_{qp}^{t} < P^{25} \\ 400 & if P^{25} \le x_{qp}^{t} < P^{65} \\ 600 & if P^{65} \le x_{qp}^{t} < P^{85} \\ 800 & if P^{85} \le x_{qp}^{t} < P^{95} \\ 1000 & if P^{95} \le x_{qp}^{t} \end{cases}$$

Aggregation of indicators into indices and weighting

After having normalised the indicators in a 0-1000 scale it is possible to calculate the aggregated index for each impact dimension simply by using the arithmetic mean of that indicators. Recursively, in this same way, it is possible to pass from dimensions indices to macro vertical and transversal indices.

This simple method implies that all the indicators and indices for impact areas are equally weighted. This essentially implies that all variables are “worth” the same in the composite, but it could also disguise the absence of a statistical or an empirical basis, e.g. when there is insufficient knowledge of causal relationships or a lack of consensus on the alternative. In any case, equal weighting does not mean “no weights”, but implicitly implies that the weights are equal. Moreover, if indicators are grouped into dimensions and those are further aggregated into the composite, then applying equal weighting to the variables may imply an unequal weighting of the dimension (the dimensions grouping the larger number of variables will have higher weight). This could result in an unbalanced structure in the composite index. This issue is not very relevant for the IA4SI methodology: each macro indices (vertical and transversal) is independent and will not be summed up with others so that each index can be composed of a different number of variables/indicators without causing distortions in the final analysis.

IA4SI methodology allows considering equally weighted indicators or alternatively to build the indices considering the relative weights of indicators. The methodology allows experts or policy makers to assign an index of relevance from 1 to 6 (1 is not applicable and not relevant, 2 is applicable but not relevant, 3 is applicable but not very relevant, 4 is applicable and relevant, 5 is applicable and very relevant, 6 is applicable and must have) to each variable of the model in order to create the connected weight that also determines the weight of indicators and indices. The possibility to develop an expert-based weighting system will be considered in the second year of the project, when the first data will become available.

The weighting system, if implemented, works according to the following analytical rules:

A. Number of Impact categories

$$\boxed{N}$$

B. Number of variables/indicators per impact category

$$\boxed{\prod_{j=1}^{N} N_j}$$

C. Total number of variables/indicators

$$NN = \sum_{j=1}^{N} N_j$$

D. Weights (absolute) [1…6] assigned from each expert to the indicators

$$\prod_{p=1}^{P} \prod_{j=1}^{N} \prod_{k=1}^{N_j} F_{j,k}^{p}$$

E. Scores (relative) [0…1000] obtained by projects for each indicator

$$\prod_{g=1}^{G} \prod_{j=1}^{N} \prod_{k=1}^{N_j} w_{j,k}^{g}$$

F. Average Weights (absolute) of each impact category

$$\prod_{p=1}^{P} \prod_{j=1}^{N} \bar{F}_j^p = \frac{1}{N_j} \sum_{k=1}^{N_j} F_{j,k}^{p}$$

G. Average Weights (relative) of each impact category among the impact categories

$$\prod_{p=1}^{P} \prod_{j=1}^{N} \bar{f}_j^p = \frac{\bar{F}_j^p}{\sum_{i=1}^{N} \bar{F}_i^p} = \frac{\frac{1}{N_j} \sum_{k=1}^{N_j} F_{j,k}^{p}}{\sum_{i=1}^{N} \frac{1}{N_i} \sum_{k=1}^{N_i} F_{i,k}^{p}} \qquad \prod_{p=1}^{P} \sum_{j=1}^{N} \bar{f}_j^p = 1$$

H. Weight (relative) of each indicator among each impact category

$$\prod_{p=1}^{P} \prod_{j=1}^{N} \prod_{k=1}^{N_j} f_{j,k}^{p} = \frac{F_{j,k}^{p}}{\sum_{h=1}^{N_j} F_{j,h}^{p}} = \frac{\frac{1}{N_j} F_{j,k}^{p}}{\bar{F}_j^p} \qquad \prod_{p=1}^{P} \prod_{j=1}^{N} \sum_{k=1}^{N_j} f_{j,k}^{p} = 1$$

I. Weight (relative) of each indicator among the entire set of indicators

$$\prod_{p=1}^{P} \prod_{j=1}^{N} \prod_{k=1}^{N_j} ff_{j,k}^{p} = \bar{f}_j^p \, f_{j,k}^{p} == \frac{\bar{F}_j^p}{\sum_{i=1}^{N} \bar{F}_i^p} \frac{\frac{1}{N_j} F_{j,k}^{p}}{\bar{F}_j^p} = \frac{\frac{1}{N_j} F_{j,k}^{p}}{\sum_{i=1}^{N} \frac{1}{N_i} \sum_{h=1}^{N_i} F_{i,h}^{p}} \qquad \prod_{p=1}^{P} \sum_{j=1}^{N} \sum_{k=1}^{N_j} ff_{j,k}^{p} = 1$$

J. Projects synthetic assessment indices [0…1000]

$$\prod_{g=1}^{G} \prod_{p=1}^{P} \beta^{g,p} = \sum_{j=1}^{N} \sum_{k=1}^{N_j} w_{j,k}^{g} \, ff_{j,k}^{p} = \frac{\sum_{j=1}^{N} \frac{1}{N_j} \sum_{k=1}^{N_j} w_{j,k}^{g} F_{j,k}^{p}}{\sum_{j=1}^{N} \frac{1}{N_j} \sum_{k=1}^{N_j} F_{j,k}^{p}}$$

K. Project global index calculated [0…1000]

$$\sum_{g=1}^{G} \beta^{g} = \frac{1}{P}\sum_{p=1}^{P}\beta^{g,p} = \frac{1}{P}\sum_{p=1}^{P}\sum_{j=1}^{N}\sum_{k=1}^{N_j} w_{j,k}^{g}\, ff_{j,k}^{p} = \frac{1}{P}\sum_{p=1}^{P}\frac{\sum_{j=1}^{N}\frac{1}{N_j}\sum_{k=1}^{N_j} w_{j,k}^{g}\, F_{j,k}^{p}}{\sum_{j=1}^{N}\frac{1}{N_j}\sum_{k=1}^{N_j} F_{j,k}^{p}}$$

In order to explain how the weighting system is working we use the following example with 3 projects (x,y,z) evaluated against the 3 vertical impact categories (1,2,3), a small set of variables (6) each one of them evaluated from 2 experts (a and b):

A. Number of impact categories 3

B. Number of variables/indicators per impact category 1, 2, 3

C. Total number of variables/indicators 6 = 1+2+3

D. Weights (absolute) [1…6] assigned from each expert to the indicators

Impact category		1		2			3			
Indicator		1.1	Tot	2.1	2.2	Tot	3.1	3.2	3.3	Tot
Experts	a	6	**6**	1	4	**5**	1	2	3	**6**
	b	2	**2**	3	2	**5**	1	4	4	**9**

E. Scores (relative) [0…1000] obtained by projects for each indicator

Impact category		1	2		3		
Indicator		1.1	2.1	2.2	3.1	3.2	3.3
Project	x	**1000**	**250**	**750**	**330**	**500**	**770**
	y	**500**	**200**	**500**	**1000**	**400**	**100**
	z	**100**	**900**	**700**	**300**	**200**	**100**

In order to build the weighting system to be associated to the projects' indicators, it is needed to derive the following quantities:

F. Average Weights (absolute) of each impact category (arithmetic mean of indicators'' weights in table D)

Impact category		1	2	3	Tot
Expert	a	**6**=6/1	**2.5**=(1+4)/2	**2**=(1+2+3)/3	10.5
	b	**2**=2/1	**2.5**=(3+2)/2	**3**=(1+4+4)/3	7.5

G. Average Weights (relative) of each impact category among the impact categories (ratio between Average Weights (absolute) and their sum in table F)

Impact category		1	2	3	Tot
Expert	a	**6**=6/1	**2.5**=(1+4)/2	**2**=(1+2+3)/3	10.5
	b	**2**=2/1	**2.5**=(3+2)/2	**3**=(1+4+4)/3	7.5

H. Weight (relative) of each indicator among each impact category (ratio between indicator absolute weight and the sum of all weights in the impact category in table D)

Impact category		1	2		3		
Indicator		1.1	2.1	2.2	3.1	3.2	3.3
Expert	a	**1**=6/6	**0.2**=1/5	**0.8**=4/5	**0.167**=1/6	**0.333**=2/6	**0.500**=3/6
	b	**1**=2/2	**0.6**=3/5	**0.4**=2/5	**0.111**=1/9	**0.444**=4/9	**0.444**=4/9

I. Weight (relative) of each indicator among the entire set of indicators (product between Average Weights (relative) of each impact category in table G and the Weight (relative) of each indicator among the impact category in table H)

Impact category		1	2		3			Tot
Indicator		1.1	2.1	2.2	3.1	3.2	3.3	
Expert	a	**0.571**= 0.571*1	**0.0476**= 0.238*0.2	**0.1904**= 0.238*0.8	**0.03173**= 0.190*0.167	**0.06327**= 0.190*0.333	**0.095**= 0.190*0.500	1
	b	**0.267**= 0.267*1	**0.200**= 0.333*0.6	**0.133**= 0.333*0.4	**0.044**= 0.400*0.111	**0.178**= 0.400*0.444	**0.178**= 0.400*0.444	1

J. The calculation of synthetic assessment indices (scale 0-1000) weighted according to the experts opinion can be now obtained by multiplying and sum the scores obtained by the project for each indicator (table E) with the relative weight of each indicator (table I)

		Projects		
		X	y	z
Expert	a	**842**=1000*0.571 +250*0.0476 +750*0.1904 +330*0.03173 +500*0.06327 +770*0.095	**457**=500*0.571 +200*0.0476 +500*0. 0.1904 +1000*0.03173 +400*0.06327 +100*0.095	**265**=100*0.571 +900*0.0476 +700*0.1904 +300*0.03173 +200*0.06327 +100*0.095
	b	**657**=1000*0.267 +250*0.200 +750*0.133 +330*0.044 +500*0.178 +770*0.178	**373**=500*0.267 +200*0.200 +500*0.133 +1000*0.044 +400*0.178 +100*0.178	**367**=100*0.267 +900*0.200 +700*0.133 +300*0.044 +200*0.178 +100*0.178

K. Project global index calculated on the arithmetic mean of the value per expert in table J

Projects		
x	Y	Z
749=(842+657)/2	**415**=(457+373)/2	**316**=(265+367)/2

This methodology can be used in order to build aggregated indices in every level of the assessment (impact subcategory, impact category, project level).

After the normalisation and aggregation, indices are then expressed in a 0-1000 scale and the results obtained can be interpreted as follows.

Table 1 - Projects' assessment results				
0 - 200	201 - 400	401 - 600	601 - 800	801-1000
				
Poor	Fair	Good	Very good	Excellent

Similarly, a set of benchmarks is built with the aim of making the assessment results useful and comparable.

4.2 Comparisons and benchmarking

Impact assessment is an important tool to measure "success", but as the literature has shown, in the social innovation context it is rather complex. Where in a market perspective measures tend to be fairly unambiguous such as in terms of scale and profit, in the social domain success measures as well as the tools to achieve results tend to be subject of argument, evaluation and assessment (Addari and Lane, 2014).

More recently, however, increasingly tools and metrics have been developed to guide the examination of particular programmes, meta-analyses and assessments of dynamics of social change, at large (Murray, Caulier-Grice & Mulgan, 2010b). The set-up of the proposed IA4SI impact assessment framework presented earlier also produces results that provide us with the opportunity to compare CAPS performances and to identify good practices. It also enables the assessment of what project (elements) was most successful and why – and why others were not. This has been done in the aggregated analysis, i.e. in the CAPS domain assessment.

The difficulties, however, can be said to emerge in the project-based assessment. In fact, the IA4SI self-assessment toolkit proposes an automatic analysis and visualisation of results. Here, each project is offered to see how it is doing via visualisation. Each vertical index can be scrutinised by visualising the results of the constituting dimensions. This process is guided by the following:

- 8 impact indices (4 vertical and 4 transversal indices)
- 16 indices for the dimensions composing the vertical subcategories

Yet, any data - in order to be correctly evaluated - need a mean of comparison. For example, a project which engages 150 users can see this value as positive if comparing these results with the start of his project when the users were let's say 10, but it considers this less positive if the average number of users engaged in other CAPS projects is 500. Benchmarking is an adequate method for this purpose[15]. For this reason, the results were "enhanced" by showing so-called functional, comparative benchmarks (i.e. mean, variance), which allows comparing common elements of a particular set of practices (Ziaie et all, 2011).

In the benchmarking literature, different approaches and methodologies can be discerned to develop such a study. And, while benchmarking approaches can be distilled from the social domain such as civic engagement, social capital, and well-being, there is no clear-cut, validated and widely adopted approach yet within the (nascent) digital social innovation context (BEPA 2011; Stiglitz et al., 2009; cf. UNDP's Human Development Index; The World Bank).

[15] Benchmarking is a continuous process of evaluation of products, services and practices with respect to those of the strongest competitors or of the enterprises recognized as leaders (Maire & Buyiikozkan, 1997: 1).

Due to the relatively small number of CAPS projects, and considering that they are dedicated to different topics and develop very different outputs, it does not make sense to use the average performance of the domain as a benchmark.

In the context of the CAPS projects, three possibilities could be distilled, and were presented to CAPS projects at the first IA4SI workshop:

- External benchmarks based on literature
- External benchmark based on previous assessment exercise held in other ICT-research related domains (SEQUOIA, ERINA+, MAXICULTURE)
- Internal, collaboratively developed, benchmark.

The first option was excluded because at the present stage, the literature on Digital Social Innovation impact assessment is very limited and this is true also for Social innovation initiatives more generally. Moreover, European projects show specific peculiarities so that their results tend not to be easily compared with national projects that, often, are more limited in scope, insist on a specific location and have a less research-oriented nature. The second option relies on IA4SI consortium previous experiences in EU projects impact assessment. The reasons for not selecting this option are two-fold: the methodologies applied to other domains are similar in structure, but only a limited number of indicators are comparable. Secondly, the domains assessed are very different in nature as they relate to Software as a Service, Internet of things, e-Infrastructures and DigiCult (ICT applied to cultural heritage).

Hence, the third option was selected as the most suitable one. In order to adhere to feedback gathered during the first workshop, the design of the benchmark framework is based on carefully scrutinizing the project's peculiarities based on KPIs and further co-creation with the projects. CAPS projects, at the time of writing, have been asked to collaboratively develop a set of goals to be used as benchmark. This is done only for a certain number of variables such as number of expected users at the end of the project life-circle, number of expected published paper, number of expected events targeting policy makers etc. For other variables, the benchmarking is - in a certain sense – internal to the variable as in the case of the Likert scales where the maximum value is 6 or in case of percentages where the maximum value is 100%. In these cases the "internal" maximum values were used as benchmarking.

For other variable is not possible to ask CAPS to declare their expectations (as an example: number of spin-off developed by project users; number of activities dedicated to the promotion of sustainable consumption performed by your users) and in these cases the maximum value indicated by all the CAPS projects was used.

The benchmark developed by the European CAPS research unit was also used for the related variables.

In this view, sample benchmarks can include:

- Involvement of new actors (project partners that did not participate to EU projects before at least in the ICT domain and Number of partners which are new to UE-funded ICT projects)
- Direct users
- Patterns of social interaction (demonstration of possible behavioural changes)
- Number of tools/instruments provided by the project in order to reduce power asymmetries
- Number of participants to events organised by the project
- Number of police recommendations developed
- Number of policy-makers aware of project police recommendations
- Scientific impact (number of papers with impact factor and without impact factor)
- Number of IPRs and software licences
- Project level of interdisciplinarity

- Level of empowerment
- Number of instruments provided by the project allowing users to verify the quality of the information he/she access
- Training efficiency
- New job places developed and expected as a result of project outputs
- Number of researchers employed by the project
- Tools developed
- Level and typology of innovativeness
- Sustainability
- Environmental impact

It is important to note that the benchmarking system described above was used in the SAT in order to provide an automatic assessment for the projects. It represents a simplification of the impact assessment process that supports CAPS projects in developing a first analysis of their results. The analyses that IA4SI had developed in deliverable 4.1 and deliverable 4.2 were more complex, taken all the indicators underpinning the methodology in consideration, including the qualitative ones and provided multiple comparisons and assessments.

5. DATA GATHERING PROCESS AND ASSESSMENT OUTCOMES

5.1 Data gathering process through IA4SI tools

This chapter introduces a new topic related to the methodology, e.g. how the information needed for the impact assessment have been collected. IA4SI gathered data from projects and from their users. Moreover, also European citizens not directly in contact with CAPS have been engaged through the means of a dedicated tool (the impact4you platform). In order to do so, ad-hoc tools have been developed. As said, the IA4SI toolkit is not merely constituted by different data gathering instruments, but it also supports the analysis of the data allowing the automatic impact self-assessment of CAPS projects. By using the toolkit, projects are not only able to enter data, but also to see the results of their assessment in real time, to save those results and compare them over time.

This chapter describes the data gathering process and the IA4SI toolkit. The figure below visualise the IA4SI toolkit, which is composed of three different tools:

- The Self-assessment toolkit (SAT)
- The User Data Gathering Interface (UDGI)
- The Citizens Engagement Platform (CEP)

Each tool is synthetically describe in the next paragraphs; for a more detailed analysis of each tool and all the related technical information please refer to the dedicated deliverable: “D.3.2 Self-Assessment Toolkit, User Data Gathering Interphase and Citizens Engagement Platform- Final Version”

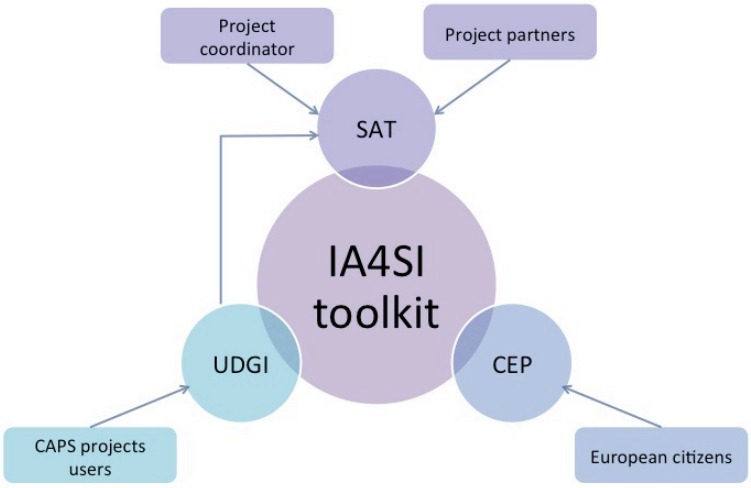

Fig. 10 –IA4SI toolkit

The data gathered through the IA4SI Self-Assessment Toolkit have not only be used by the CAPS projects for their self-assessments, but also by the IA4SI team that has use the data for:

- Analysing each project
- Analysing the CAPS domain at aggregate level.

5.1.1 Self-assessment Toolkit (SAT)

SAT allows the acquisition of project information. It has been structured to guide the users in gathering the information with simple wizard (a guided procedure). The IA4SI team designed and developed the tool by dedicating particular attention to user experience in order to make the tool as simple and intuitive as possible.

The tool has been used by project coordinators and by project partners. In order to access the dedicated online tool for data gathering, projects coordinators received a username and a password, then entered the information needed and, thirdly, were able to ask to specific partners (one or more) to fill-in specific sections. The wizard interface guides the user through the sections of information acquisition, at the end of which the user can set the parameters for the assessment and launch the project assessment.

The first sections are the focal point of the tool: they enable and give shape to all the other sections. In the first session the user has to provide basic information about the project (project budget, start date, end date, previous experience in the CAPS domain, information about the consortium, etc.), its stakeholders and the expected impacts. In this section, in fact, the user (project coordinator) has to rate the relevance of the four areas of impacts for the project and their sub-areas. The project coordinator do it by ranking in order of relevance the "icons" related to the impacts: economic impact, social impact, political impact and environmental impact and by following a similar process for the sub-areas/domains. In the second section, he/she listed the main outputs of the project. These two sections are fundamental because they dynamically generate the other sections of the questionnaire, used to gather information about the single outcomes and impacts. I this way, each project see only those sections and questions that are relevant for them.

The users can modify the information filled in these sections at any time by adding or removing output, or changing the order of importance of the impacts, changing therefore the results of his assessment. The relevance the project coordinators attribute to each area of impact create a weighting system that personalized the IA4SI methodology to project priorities. In fact, not all the projects expect to have the same degree of impact on all the three areas.

The central sections of the tool gather information about specific outcomes and impact showing quantitative closed questions, Likert scales and qualitative open questions. And the last section of the tool shows the result of the impact assessment, i.e. the expected impact of the project under analysis.

In order to facilitate the comprehension of results the SAT report section uses visual graphic tools such as dashboards and trees. The following figures shows an example about how project can navigate through their results and verify strengths and weaknesses.

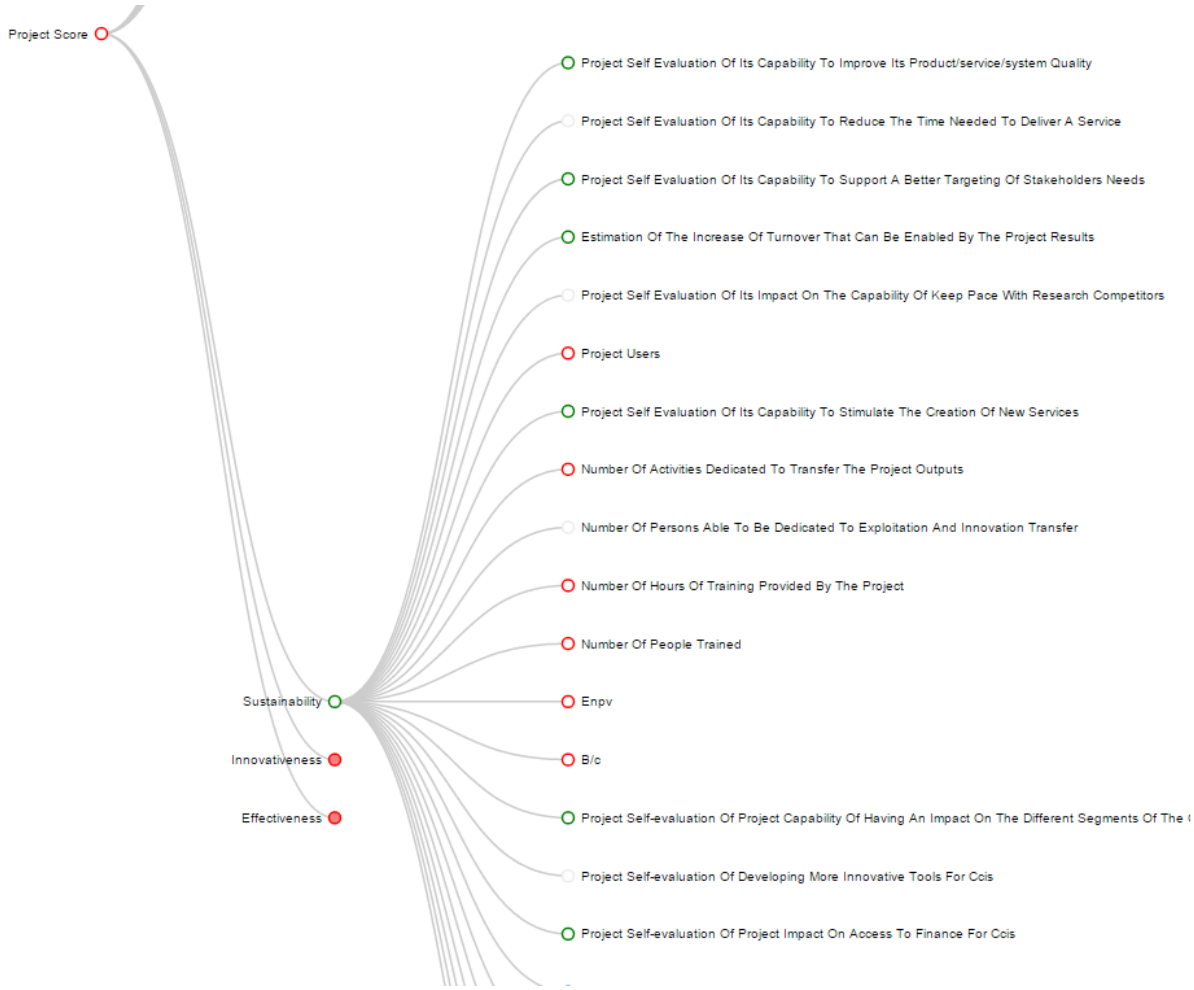

Fig. 11 - IA4SI SAT assessment tree

5.1.2 User Data Gathering Interface (UDGI)

The User Data Gathering Interface shows a simple front-end. Basically, it appears like an online questionnaire structured both for single users and organizations. By using this tool, projects users provide their opinion about the output/services they use and their potential impacts. This second tool gathers also some basic information about projects users, so that the IA4SI team is able to use these data in the analysis of the CAPS domain; it is interesting to see who are the project users in terms of working profile, age, nationality and so forth.

CAPS projects are able to contact their users autonomously by sending them an invitation by email and by providing a link for accessing the UDGI, alternatively if they prefer IA4SI to engage their users on their behalf, this can be also done. The information gathered by this tool is used during the assessment of the projects and are shown in the assessment report within the SAT.

5.1.3 Citizens Engagement Platform – Impact4you platform

The Impact4you platform is the main tool that IA4SI team used for engaging citizens in knowing more about CAPS projects and social innovation initiatives, approaches and opportunities. Through the on line platform European citizens not directly engaged in CAPS projects had the opportunity to express their opinion on CAPS outputs, discuss about the services offered them and their potentiality in terms of impacts at social, economical, political and environmental level. The platform is a dynamic online knowledge and collaboration platform supporting content production,

thematic discussions, and stimulates collaboration among the participants. The Impact4You platform is a channel for opening up the assessment process to European citizens and, at the same time, open up the European project domain to European citizens showing them the potentialities of European budget investments.

Moreover, from the point of view of CAPS project this platform can offer important insight about how to communicate their outputs to a larger audience and eventually improve their dissemination and exploitation strategies.

5.2 Outputs of IA4SI analysis

Besides the assessment made automatically through the SAT that CAPS project were able to access as many time as they wants, the IA4SI team developed a more in-depth analysis to the projects, to the EC and to the general public. In particular, three outcomes came from the project:

- A report regarding the assessment of CAPS projects realised by applying the IA4SI methodology in all its components to CAPS projects (D4.1"Project assessment and aggregated domain analysis")
- An assessment of the CAPS domain as a whole (also contained in D4.1)
- A Best Practice Report (D4.2, "Best practice report").

All the reports have been written by making the best use of the qualitative and of the quantitative information gathered. In fact, it is important for the IA4SI team, and it was also requested by CAPS projects in the first brainstorming session about the methodology, to keep together the necessity to provide synthetic information about the projects and, at the same time, create a narration about the project, "tell a story" about the activities developed, the innovation introduced and the lesson learned. In this last stage of the IA4SI project, the reports have already been submitted the EC and both D4.1 and D4.2 will be updated accordingly to the review outcomes. In particular, D4.1 will be integrated after a second round of data entry from the CAPS projects, while the Best Practice Report D4.2 will be expanded.

The next two paragraphs briefly describe the overall aim and the structure of these reports, which will not change.

5.2.1 Project based analysis

Deliverable D4.1 "Project assessment and aggregated domain analysis" offers, for each CAPS project having collaborated with IA4SI and having inserted their data in the toolkit, an analysis complementary to the assessment results visible in the SAT. The objective is to explain to the projects the result obtained, to offer a more in-depth description of the assessment results and to give suggestions on how to improve the projects' impact.

D4.1 contains a collection of short reports, one for each collaborating project, all following the same structure.

The first general part of each report shortly presents the project, its general objectives, the social issue addressed and the results and outcomes obtained up to date or expected. It contains also a presentation of its stakeholders and final users and information about the outputs developed during the project. Other information will regard the start and end date, the overall budget and the website of the project.

The second part presents the main impacts of the project for the indices identified by the methodology. For each indicator, IA4SI team analysed the results obtained for the subcategories and main indicators, both from a qualitative and quantitative point of view.

In the updated version of D4.1, a colour code ranking will help projects to easily read and understand their results in the context of their domain. Given the high variety of CAPS activities and aims, it is not effective to actually compare them and assess their results against each other. Nonetheless, for each area of impact better and worst level of impact are recognisable and the projects will be able to visualise their position in the overall picture.

The Best Practices Report (D4.2) presents five areas of engagement (about communities, technologies &research) about which CAPs projects demonstrated concrete innovation potential and tangible results.

Both reports have been developed through a constant exchange and involvement of CAPS projects.

5.2.2 Aggregated analysis

This activity used the knowledge base created from the IA4SI data collection, in order describe and quantify as much as possible the performance of CAPS domain at the aggregate level. The assessment is, as mentioned earlier, qualitative as well as quantitative.

With the data gathered through the IA4SI toolkit the team, first of all, described the eight IA4SI synthetic indices at aggregated level; i.e. the economic impact, the impact on society, the environmental impact and the political impacts will be discussed. Similarly it described the domain in term of efficiency, effectiveness, sustainability and fairness. Then the subcategories will be analysed at aggregated level so that it has been possible to analyse how CAPS project influenced users opinions and behaviours, how they improved their engagement in civic and political activities, how they fostered social inclusion and so forth.

6. CONCLUSIONS

The present deliverable describes the final version of the IA4SI methodology for digital social innovation impact assessment. The methodology focuses in particular on the CAPS domain (Ch. 1), and it allows delivering a quali-quantitative assessment of the project's value chain (Ch.2). It identifies four areas of impact (social, economic, environmental and political) and four transversal indices (efficiency, effectiveness, sustainability and fairness - Ch3), and it normalises and aggregates qualitative and quantitative data entered by the users, in order to compare and assess them against a selected benchmarking system (Ch4). The methodology is supported by an integrated toolkit system (Self Assessment Toolkit, Citizens Engagement Platform and User Data Gathering Interface), to develop single project assessments and aggregated analysis for the entire domain (Ch5). The modular structure of the approach allows the assessment of projects different in scope and activities.

Developing an impact assessment methodology for projects engaging with digital social innovation has been an innovative challenge in itself. The present methodology is the result of a scientific background integrated with a highly participatory approach and a long period of testing of the toolkit. The areas of the impact under assessment reflect the fields in which CAPS and similar projects can actually generate changes and can influence the society.

This does not imply that the methodology is meant to be a static tool: further use could and should lead to a constant update of the methodology itself. Through this work, IA4SI aimed to set a robust baseline for any future development in this field and to offer a concrete instrument to future CAPS to be used. The first objective has been reached, and the project hopes that the second one will be implemented by the second generation of CAPS.

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LINKS

Atmosfair https://www.atmosfair.de

Collective Awareness Platforms for Sustainability and social Innovation - Euroeapn commission page https://ec.europa.eu/digital-agenda/en/collective-awareness-platforms-sustainability-and-social-innovation

Digital Social Innovation project www.digitalsocial.eu

ERINA+ project http://www.erinaplus.eu/

International Association for Impact Assessment: http://www.iaia.org/publicdocuments/special-publications/What%20is%20IA_web.pdf

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Summary of SEQUOIA project and deliverables: http://www.lse.ac.uk/media@lse/WhosWho/AcademicStaff/PaoloDini.aspx

ANNEXES

Annex 1

Social impact

Community Building and empowerment						
Dimensions	**Number of question**	**Indicators**	**Variables**	**Questions**	**Description**	**Type of question**
ONLINE COMMUNITY BUILDING	**1**	Description of project platform	Description of project platform	Please define and describe your platform		Long text
	2	Change in number of users signed in	Link between the CAPS initiative and pre-existing online platforms/communities	Does your project build on pre-existing online platforms or online communities of users?	This question and the following ones are needed in order to understand your starting point, the scenario before the beginning of the EU-funded project your are assessing	Radio button Yes/No
	3		Description of pre-existing platforms/online communities	Please describe them		Long text
	4		Number of platform users at the beginning (day one) of the project	Please indicate the number of users of pre-existing online platforms or online communities of users		Number
	5		Number of platform users at the time of the assessment	Please indicate the number of users of your platform at the present stage.		Number

	6		Number of users that left the network since the beginning of the project until the time of the assessment	Please consider now the users who decide to get cancelled from you platform. Please indicate how many users left in this way your platform since the beginning of the project up to now.		Number
	7	Change in time spent on the platform by users	Time spent by the users, on average	Please indicate the average time spent on the platform by one of your user	Please indicate this value in hours for one month, considering an average user	Number
	8		Change in time spent on the platform by users	Since the beginning of your project, the time spent by your users on the platform increased, decreased or remained stable? Please consider the average of your users		Single Selection (List: Increased; Decreased; Remained stable; I don't know, Not applicable)

	9	Features avaialble on the platform and used by users	Features avaialble on the platform and used by users	Please indicate which features are available on your platform. For each of the features selected, please indicate the percentage of your users actually using it	For estimating this percentage consider, for each features, the total number of your users as equal to 100; then define the percentage of them that use a specific feature. In this way it is possible that the sum of the various percentage is higher than 100. Identity : a way of uniquely identifying people in the system Presence : a way of knowing who is online, available or otherwise nearby Relationships : a way of describing how two users in the system are related Conversations : a way of talking to other people through the system Groups : a way of forming communities of interest Reputation : a way of knowing the status of other	Checkbox: Identity, Presence, Relationships, Conversations, Groups, Reputation, Sharing, Other. For each feature selected, percentage

	10	Communication on the platform	Communication on the platform	Considering the "conversation" dimension of your platform, please indicate the percentage of posts that get a reply on the total number of post		Percentage
	11	Other analytics	Other analytics	Do you collect analytics other than the ones mentioned in this section?		Radio button Yes/No
	12			Please list them and add a short definition		Long text
ONLINE COMMUNITY EMPOWERMENT	**13**	Number of groups spontaneously created by the users	Number of groups spontaneously created by the users	Please indicate the number of groups, clusters, circles and similar, created by users on your platform/s	With this question we are interesting in understanding to what extent your users, self-organise themselves on your platform. Or, in other terms, how your platform supports the networking among users.	Number

	14	Project capability to influence trust among users	Self-assessment on project capability to influence trust among users	To what extent do you agree with the following sentence: “Our project positively influences the trust among platform users and/or local communities”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”		Likert
	15		Sharing of personal data among users	To you best knowledge, which is the percentage of your users that interact with other users using their personal emails or that share with others personal information such as name, addresses, age and similar?	If some of your users do both the actions mentioned (use personal email and share personal information) please add up the two percentages. If, for example, 10% of use their email and 20% share personal info, the percentage to be indicated here 30%.	Percentage

	16	Number and description of tools/instruments provided by the project in order to reduce power asymmetries on their platform	Project attention to power asymmetries in online interactions	With reference to your platform, does you project tackle the issue of power asymmetries among users or in local communities?	With the term "power asymmetries" we refer to disparities between different social groups and between different persons within the same social group	Radio button Yes/No
	17		Number of tools/instruments provided by the project in order to reduce power asymmetries	Please indicate the number of tools/instruments provided by your project with the aim of reducing power asymmetries in local communities/groups on the platform.		Number
	18	Project capacity of empowering users by providing features/tools for data management/privacy management	Presence of features/tools allowing data management/privacy management	Do you provide any features/tools supporting users in effectively manage their data and privacy?		Radio button Yes/No
	19			Please describe the features/tools you provide		Long text
	20	Network diversity	Ratio between men and women on the platform	Considering all your users, please indicate the percentage of woman		Percentage
	21		Number of project activities dedicated to	Number of activities dedicated to foster Gender Equality within the consortium and outside		Number

	22		fostering gender equality success rate	Average success rate of the activities dedicated to foster gender equality	Please value the overall success of these initiatives by attributing a value from 1 to 6 were one is "totally unsuccessful" and 6 is "totally successful"	Likert
	23		Ratio between young, adult and old people	Considering all your users, please indicate the percentage of young users	Young people are between the ages of 15 and 30.	Percentage

	24		Self-assessment of user belonging to categories at risk of social exclusion	To what extent do you agree with the following sentence: “Our project and its outputs are used by people belonging to categories at risk of social exclusion and/or discrimination” Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”	With the term "groups at risk of social exclusion" we refer to people at risk of poverty or severely materially deprived or living in households with very low work intensity (European Social Protection Committee Indicators Sub-group). With the term "groups at risk of discrimination" we recognise the following grounds for discrimination: sex, age, gender, racial or ethnic origin, religion or belief, sexual orientation and disabilities (Art.13 of the Treaty establishing the European Community).	Likert

	25			Please specify the categories at risk of social exclusion represented and their number if available		Long text
LOCAL COMMUNITY BUILDING	**26**	Project self-assessment of its capacity to foster the creations and the enlargement of local communities/groups	Project self-assessment of its capacity to foster the creations and the enlargement of local communities/groups	To what extent do you agree with the following sentence: “Our project fosters the creation and enlargement of local communities/groups”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”	With the term “local community” we refer to groups of people that self-represent themselves as a community, share a territory, certain values and norms.	Likert
	27	Project capacity to provide to local communities/groups instruments for better organise themselves	Project self-assessment of its capacity to provide to local communities/groups instruments for better organise themself	To what extent do you agree with the following sentence: “Our project provides to local communities/groups instruments for better organise themself ”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”		Likert
	28		Instruments provided to users for self-organise themself locally	Please indicate the number of instruments provided to users for self-organise themselves online and for improving the organisation of local communities/groups		Number

	29	Number of events organised by the the project addressing local communities	Number of participants to events organised by the project addressing local communities	Please indicate the number of events organised by the project addressing local communities		Number
LOCAL COMMUNITY EMPOWERMENT	**30**	Number of participants to events organised by the project addressing local communities	Number of participants to events organised by the project addressing local communities	Considering all the events organised so far by your project for local communities, please indicate the overall number of participants	We are aware that if the same person participates to two or more events he/she will be counted twice or three times. However, we are interested in evaluating the average number of participants for event so that this value will be divided for the number of events indicated in the previous question.	Number
	31	Description and number of new civic society organisation and/or informal groups created at	Creation of new civic society organisation and/or informal groups at local level	Are you aware of new civic society organisation and/or informal groups created at local level thanks to your project activities?	-	Radio button Yes/No

	32	local level	Number of new civic society organisation and/or informal groups at local level created	Please provide the number of new civic society organisation and/or informal groups created at local level thanks to your project activities		Number
IMPACT ON SI AND CAPS COMMUNITY	**33**	Number and description of formal and informal collaborations with other CAPS projects	Number of formal and informal collaborations with other CAPS projects	Please select from the list the CAPS projects you collaborate with		List Menu (list CAPs projects)
	34		Description of formal and informal collaborations with other CAPS projects	Please describe the goal and the topic covered by the collaboration	For example: you can write that you are collaborating with IA4SI testing the self-assessment toolkit and the topic would be "impact assessment"	Long text
	35	Number of new partners (partners not collaborating before the project writing)	Number of new partners (partners not collaborating before the project writing)	Please select from the list project partners who represent for you a new collaboration (partners that were not collaborating with you in previous projects)		List Menu

	36	Number and description of formal and informal collaborations with SI initiatives outside the CAPS domain	Number of formal and informal collaborations with SI initiatives outside CAPS domain	Please indicate the number of formal or informal collaboration established with Social Innovation initiatives outside the CAPS domain		Number
	37		Description of of formal and informal collaborations with SI initiatives outside CAPS domain	Please describe the SI initiatives you collaborate with, the goal and the topic covered by the collaboration	For example you can write that you are collaborating with the Berlin Makers Lab for supporting a training programme for disadvantaged young people.	Long text
	38	Formal and informal collaborations with actors outside the SI and CAPS domain	Number of formal and informal collaborations with actors outside the SI and CAPS domain	Please indicate the number of formal or informal collaboration established with actors outside the SI and CAPS domain		Number

	39		Description of formal and informal collaborations with actors outside the SI and CAPS domain	Please describe the actors your are collaborating with, the goal and the topic covered by the collaboration	For example you can write about a collaboration protocol established with the university of Dublin, which is interested in using your project outputs and adapt them to their internal needs.	Long text
	40	Number and description of instruments/activities provided for CAPS networking and success rate	Number of instruments/activities provided to CAPS project for networking	Please indicate the number of instruments/activities provided to CAPS project for networking	This question is of special interest for support and coordination projects but can be of interest also for other kind of projects.	Number
	41		Description of instruments/activities provided to CAPS project for networking	Please list these instruments/activities		Long text
	42		Number of CAPS project participating	Please indicate the number of CAPS projects actually benefiting from the instruments/activities provided		Number

	43	Activities developed by the project to bring together public administrations, foundations, social investors and social finance intermediaries with civil society and the third sector	Number of activities developed by the project to bring together innovative public administrations, foundations, social investors and social finance intermediaries with social innovation initiatives, civil society and the third sector	Please indicate the number of activities developed by the project to bring together innovative public administrations, foundations, social investors and social finance intermediaries with social innovation initiatives, civil society and the third sector	One of the central characteristics of social innovation initiatives is to promote innovative partnerships between different social actors. With this question we are interested in investigating this aspect.	Number
	44		Average success rate of the activities organised	Please value the overall success of these initiatives by attributing a value from 1 to 6 were one is “totally unsuccessful” and 6 is “totally successful”	Success is intended as the capability to reach the expected objectives and possibly overcome them in a positive way.	Likert

	45	Project self-assessment of its capability to spread SI model	Project self-assessment of its capability to spread SI model	To what extent do you agree with the following sentence: “Our project is successfully spreading the social innovation model”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”		Likert
Impact on Information						
Dimensions	**Number of question**	**Indicators**	**Variables**	**Questions**	**Description**	**Type of answer**
	1	Typology of information- data available on the platform	Typology of information- data available on the platform (selection from a list including: • Articles/long post/structured content • Short post/status updated • Forum discussions • Forum entries • Images • Videos • Other contents)	We are interested in learning what shape does information takes on your platform. Please select from the list:		List Menu (Articles/long post/structured content Short post/status updated Forum discussions Forum entries Images Video Other contents (please specify...)

ACCESS TO INFORMATION	**2**	Change in the number of available information	Number of information for each typology selected in the previous question at the beginning of the project	Number of articles/long post/structured content available on the platform at the beginning of the project	Please consider only content available on day one of the project you are assessing; so the content coming from online communities and platforms your project builds on.	Number
				Number of short post/status updated available on the platform at the beginning of the project		
				Etc.....		
	3		Number of information for each typology selected in the previous question at the time of the assessment	Number of articles/long post/structured content available on the platform now		Number
				Number of short post/status updated available on the platform now		
				Etc.....		

	4	Project self-assessment of its capability to improve users access to a range of local and international news sources of information	Project self-assessment of its capability to improve users access to a range of local and international news sources of information	To what extent do you agree with the following sentence: “Our project improves users access to a range of local and international news sources of information”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”		Likert
	5	Project self-assessment of its capability to improve users access to media outlets or websites that express independent, balanced views	Project self-assessment of its capability to improve users access to media outlets or websites that express independent, balanced views	To what extent do you agree with the following sentence: “Our project improves users access to media outlets or websites that express independent, balanced views”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”		Likert

	6	Project self-assessment of its capability to improve user access to sources of information that represent a range of political and social viewpoints	Project self-assessment of its capability to improve user access to sources of information that represent a range of political and social viewpoints	To what extent do you agree with the following sentence: "Our project improves user access to sources of information that represent a range of political and social viewpoints". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"		Likert
	7	Project self-evaluation of its capability to influence information asymmetries	Project self-evaluation of its capability to influence information asymmetries	To what extent do you agree with the following sentence: "Our project reduce information asymmetries experienced by the users". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"	The term "information asymmetries" refers to the fact that certain individuals or social groups tend to have an easier access to strategic information than the rest of the population. This can lead to power asymmetries and unequal distribution of knowledge.	Likert

	8	Number of tools/activities developed by the project for influencing information asymmetries	Number of tools/activities developed by the project for influencing information asymmetries	Please indicate the number of tools/activities developed by the project for influencing information asymmetries		Number
QUALITY OF INFORMATION	**9**	Instruments provided by the project allowing users to verify the quality of the information he/she access	Number of instruments provided allowing users to verify the quality of the information he/she access to	Number of instruments provided allowing users to verify the quality of the information he/she access to	The concept of quality of information is multidimensional and includes (but is not limited to) fit-for-purpose, accuracy, consistency, security, timeliness, completeness, concise, reliability, accessibility, availability, objectivity, relevance, usability and understandability	Number

DATA MANAGEMENT POLICIES	**10**	Project policy in terms of standardisation	Project compliance with state-of-the art standards	To what extent do you agree with the following sentence: "Our project will build on top of the current state of knowledge and in compliance with (applicable) standards" Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is"totally agree"		Likert
	11	Project policy in term of content licences	Project supports to open standardizes licences	To what extent do you agree with the following sentence: "Our project will encourage publishing under compatible open standardized licenses (such as Creative Commons)" Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is"totally agree"		Likert
Impact on way of thinking, values and behavior						
Dimensions	**Number of question**	**Indicators**	**Variables**	**Questions**	**Description**	**Type of answer**

CHANGES IN OPINIONS / WAYS OF THINKING	**1**	Topics were opinion change is expected to happen	Topics were opinion change is expected to happen	Please selected from the list below the topic/s were you expect to see a change in users opinions (more than one option allowed):		List Menu (Energy and environment Social inclusion and human rights Participation and democracy Economy: production and consumption Finance Education, science and information Culture and art Health and wellbeing Community creation, renewal and reinforcement Work and employment Other)

	2	Activities performed by the project in order to achieve the expected change in users opinions, values and behaviours	Activities performed by the project in order to achieve the expected changes in users opinions, values and behaviours	Please indicate the number of activities/instruments developed with the aim of promoting a change in users opinions, values and behaviours		Number
	3	Number of people participating in the activities	Number of people participating in the activities	Number of people participating in awareness raising and campaigning activities		Number

CHANGE IN BEHAVIOURS	**4**	Topics were changes in behaviours are expected to happen	Topics were changes in behaviours are expected to happen	Please selected from the list below the topic were you expect to see a change in behaviours:		List Menu (Energy and environment Social inclusion and human rights Participation and democracy Economy: production and consumption Finance Education, science and information Culture and art Health and wellbeing Community creation, renewal and reinforcement Work and employment Other)
Impact on education and human capital						

Dimensions	Number of question	Indicators	Variables	Questions	Description	Type of answer
TRAINING PROVIDED BY THE PROJECT	**1**	Training efficiency	Hours of training provided by the project	Please indicate the number of hours of training provided by your project		Number
	2		Number of persons trained	Please indicate the total number of people trained	Please, in order to provide this data, consider all your training activities and add the participants to each of such activity. If one person followed more than one course/module you can count him/her two times	Number
	3		Topics covered by training activities	Please indicate the topics covered by your training activities		Long text
	4		Budget allocated to training	Indicate the percentage of total budget dedicated to training activities	Please consider only the training activities targeting persons and organisations outside the consortium	Money

	5	Tools for education/training developed by the project	Number of tools for education/training developed by the project	Please indicate the number of tools for education/training developed by the project	For example, Moodle modules, virtual classrooms, training toolkits, etc.	Number
IMPACT ON HUMAN CAPITAL	**7**	Impact on users eSkills	Number of activities supporting the acquisition of digital competences, digital literacies competences, eSkills and the reduction of digital divide	Do you know the number of activities supporting the acquisition of digital competences, digital literacies competences, eSkills and the reduction of digital divide?		Radio button Yes/No
	8			Please indicate the number of activities supporting the acquisition of digital competences, digital literacies competences, eSkills and the reduction of digital divide		Number
	9		Number of participants to activities supporting the acquisition of digital competences, digital literacies competences, eSkills and the reduction of digital divide	Please indicate the number of people participating in such activities		Number

	10	Project self-evaluation of its capability to improve the skills of people employed within the consortium	Project self-evaluation of its capability to improve the skills of people employed within the consortium	To what extent do you agree with the following sentence: “Our project improves the skills of people employed within the consortium”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”		Likert
	11		Descripion of project's support to the improvement of skills of people employed within the consortium	Please describe how your project supports the improvement of skills of people employed within the consortium		Long text
CHANGE IN TRAINING CURRICULA, EDUCATIONAL POLICIES AND PERSONAL INVESTMENTS IN EDUCATION	**12**	Project self-evaluation of its capability to influence changes in training curriculum of secondary and higher education	Project self-evaluation of its capability to influence changes in training curricula of secondary and higher education	To what extent do you agree with the following sentence: “Our project influence changes in the training curricula of secondary and higher education”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”	For example introducing new training methods, supporting the creation of new curses, etc.	Likert

	13		Description of the project influence on the training curricula of secondary and higher education	Please explain how		Long text
	14	Project self-evaluation of its capability to influence changes in educational policies	Project self-evaluation of its capability to influence changes in educational policies	To what extent do you agree with the following sentence: “Our project influence educational polices”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”	For example by promoting a different approach to training for students with special needs or opening up new channels for promoting education in disadvantages areas.	Likert

	15	Project self-evaluation of its capability to influence its users investment in education	Project self-evaluation of its capability to influence its users investment in education	To what extent do you agree with the following sentence: “Our project will have a positive impact on users investment in education (i.e. Number of hours per week spent on self study or homework and instruction time per year)”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”		Likert
	16		Description of project influence on users investments in education	Please explain how		Long text

Impact on Science and Academia						
Dimensions	**Number of question**	**Indicators**	**Variables**	**Questions**	**Description**	**Type of answer**
	1		Number of non-self citation of the works published	Indicate the number of non-self citation of the works published		Number
	2	Project level of interdisciplinarity	Number of disciplines	List the disciplines represented in your		List Menu (list of disciplines)

			represented	consortium		
	3		Project self evaluation of the relevance of interdisciplinary activities	How would you rate the relevance of interdisciplinary activities in your project? Please attribute a value from 1 to 6 where 1 I “no relevant” and 6 is “absolutely relevant”		Likert
	4		Description of interdisciplinary work	Describe your interdisciplinary work		Long text
KNOWLEDGE SHARING	**5**	Use of open access	Use of open access	Does you project follow an Open access policy		Radio Button Yes/No
	6	Sharing through social media	Use of social media for sharing its research outputs	Do you use social media for sharing project research results?		Radio Button
	7		Number of twitter followers	Please indicate the number of twitter followers		Number
	8		Number of “friends” on Facebook or equivalent in other social platforms (i.e. Research gate, Academia, LinkedIn, etc.)	Please indicate the number of “friends” on Facebook or equivalent in other social platforms (i.e. Research gate, Academia, LinkedIn, etc.)		Number
	9	Dissemination through project website	Use of project website for sharing project	Do you use your project website for sharing project research results?		Radio Button Yes/No

			research results			
	10	Sharing through events	Number of events in which your research results have been presented	Please indicate the number of events in which your research results have been presented		Number
	11		Number of average participant for each event	Please indicate the average number of people participating in such events	Considering all the events organised so far, calculate the average number of participants for each of them. For example, you organised three events, in the fist one 10 people were present, in the second 100 and in the third 40. The average number of participant is 50.	Number
	12	Sharing through other channels	Other channels used for sharing research results	If any, please describe other channels used by your project for sharing research results and their audiences in quantitative terms (if possible)		Long text
	13	Number of non-scientific dissemination outputs/activities	Number of articles published on non-specialised	Indicate the number of articles published on non-specialised magazines and on newspapers	Non-specialised magazines are the one addressing, as main target, the	Number

			magazines, newspapers and online magazines/blogs, etc.		general public.	
	14		Number of TV (including WebTV) appearances	Indicate the number of TV appearances	Please consider both national and local televisions.	Number
	15		Number of events organised addressing a non-academic audience	Please indicate the number of events organised addressing a non-academic audience		Number
	16		Average number of participants	Please indicate the average number of people participating in such events		Number
	17	Project self-evaluation of its capability to support knowledge transfer between universities/research centres and social innovation domain	Project self-evaluation of its capability to support knowledge transfer between universities/research centres and social innovation domain	To what extent do you agree with the following sentence: “Our project supports the knowledge transfer between universities/research centres and social innovation domain”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”		Likert
	18		Description of project support	Please describe how your project supports knowledge		Long text

			to knowledge transfer between universities/research centres and social innovation domain	transfer between universities/research centres and social innovation domain		
CHANGE IN TRAINING CURRICULUM AND EDUCATIONAL POLICIES	**19**	Project self-evaluation on its capability to improve research processes	Project self-evaluation on its capability to improve research processes	To what extent do you agree with the following sentence: "Our project will improve research processes within and outside our consortium". Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”	Your project main reach this objective developing new tools for accessing and processing information, by experimenting and disseminating new research methods, etc.	Likert
	20		Description of how the project improve research processes	How will the project improve research processes?		Long text
	21	Project self-evaluation on if and how it allows its partners and users to perform research activities that would otherwise have been impossible	Project self-evaluation on if and how it allows its partners and users to perform research activities that	To what extent do you agree with the following sentence: "Our project allows us to perform research activities that would otherwise have been impossible". Please attribute a value from 1 to 6 where 1 is “totally disagree”		Likert

			would otherwise have been impossible	and 6 is “totally agree”		
	22		Description of how project allows its partners and users to perform research activities that would otherwise have been impossible	How does the project allow you to perform these activities?		Long text
	23	Project self-evaluation of its capability to influence changes in the everyday life of academia institutions	Project self-evaluation of its capability to influence changes in the everyday life of academia institutions	To what extent do you agree with the following sentence: “Our project influence the everyday life of academia institutions”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”	For example by changing power and information flow dynamics.	Likert
	24		Description of project influence in the everyday life of academia institutions	How will the project influences the academia everyday life and with which results?		Long text
Impact on Employment						

Dimensions	Indicators	Variables	Questions	Description	Type of answer
IMPACT ON JOB CREATION (DIRECTLY DEVELOPED BY THE PROJECT)	New job places generated	Number of persons recruited specifically for the project	How many persons have been recruited specifically for the project under assessment? Please indicate them in FTE	Please consider the new contract that your organisation issued specifically for this project. FET stands for Full Time Equivalent. Full-time equivalent (FTE) is a unit that indicates the workload of an employed person (or student) in a way that makes workloads comparable across various contexts. An FTE of 1.0 means that the person is equivalent to a full-time worker, while an FTE of 0.5 signals that the worker is only half-time.	Number
	Number of persons recruited specifically for the project that will continue to work after the end of the project	Number of persons recruited specifically for the project that	Out of this number, how many people will be still working after the end of the project?		Number

		will continue to work after the end of the project			
		Number of researchers working in the project	Indicate the number of researchers in the project		Number
		Number of young researcher employment	How many young researchers work on your project? Please calculate the number of young researchers using FTE	Young researchers are persons 35 years old or younger	Number
	Impact on woman employment	Rate of woman in the project	Indicate the percentage of woman in the consortium	Please specify the percentage on the total number of persons working in the projects or researchers	Percentage
	Number of new job places generated (or expected to be generated) by the project outputs	Number of new job places generated (or expected to be generated) by the project outputs	Please indicate the number of new job places generated (or expected to be generated) by the project outputs (including those related to the creation of start-ups and spin-offs). Please consider a job place as a full-time position for on year-time.		Number
	Number of spin-off/start-ups developed as a result of the project	Number of spin-off/start-ups developed	Please indicate the number of spin-off/start-ups developed by the project		Number

		as a result of the project	and its partners as a result of project activities		
IMPACT ON EUROPEAN EMPLOYMENT AND WITHIN THE SOCIAL INNOVATION SECTOR	Project self-evaluation of its impact on employment	Project self-evaluation of its impact on employment	To what extent do you agree with the following sentence: "The project will have an impact on employment". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"		Likert
	Project self-evaluation of its capability to have an influence on the percentage of people employed in the third sector and in the SI sector	Project self-evaluation of its capability to have an influence on the percentage of people employed in the third sector and in the SI sector	To what extent do you agree with the following sentence: "The project will have an influence on the percentage of people employed in the third sector and, specifically, in the SI sector". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"	SI stands for Social Innovation	Likert
IMPACT ON WORKING PRACTICES AND ROUTINES	Project self-evaluation of its capability to contribute to improving the working practices of the third sector and of people/organisations working in SI	Project self-evaluation of its capability to contribute to improving the working practices of the third sector and of	To what extent do you agree with the following sentence: "Our project will contribute to improve the working practices of the third sector and of people/organisations working in the field of SI". Please attribute a value	Here we refer to project capability of improving working routines efficiency and effectiveness or, in other terms, to reduce costs, develop new working processes	Likert

		people/organisations working in SI	from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"	that deliver better and/or more sustainable results.SI stands for Social Innovation	

Annex 2:

Economic impacts

Economic impact: Your Output

DIMENSION	INDICATOR	VARIABLE
Output	ENPV; B/C	Cost of development or percentage of Budget
		Cost for updating/maintaining the output after the end of the project
		End users for the output
		Willingness to pay or to donate
		Timing of the benefit
	Price range of the output	Price range for using the platform after the end of the project
		Price range of altruistic use

Economic impact: Users Economic Empowerment

DIMENSION	INDICATOR	VARIABLE
IMPACT ON ACCESS TO FINANCE	Project self-evaluation of its capability to increase the access to finance of its users	Project self-evaluation of its capability to increase the access to finance of its users
		Total Funding distributed
		Type and description of instruments for increasing access to finance
		Project self-evaluation of its capability to reduce the need of users to access emergency finance
	Impact through crowdfunding	Money attracted by the project through crowdfunding
		Money attracted by the project through crowdfunding initiatives
		Project self-evaluation of improving investment risk diversification opportunities for the users of the project through crowdfunding
IMPACT ON ENTREPRENEURSHIP AND INCOME GENERATION FOR THE USERS	Project self-evaluation of its capability to support the creation of entrepreneurial initiatives by users	Project self-evaluation of its capability to support the creation of entrepreneurial initiatives of its users
	Number of enterprises or business ideas developed by the project users	Number of enterprises or business ideas developed by the project users
		Instruments stimulating entrepreneurial activities

	Number of test beds provided by the project supporting the users for testing business ideas	Number of test beds provided by the project supporting the users for testing business ideas
	Project self-evaluation of its capability of improving the support to users for diversifying income resources	Project self-evaluation of its capability to improve user support in diversifying income resources
	Project self-evaluation of its capability of increasing the incomes of the users	Project self-evaluation of its capability of increasing the incomes of the users
	Project self-evaluation of its capability of increasing the resilience of its users to cope with crises	Project self-evaluation of its capability of increasing the resilience of its users to cope with crises

Economic impact: Economic Value Generated by the project

DIMENSION	INDICATOR	VARIABLE
ECONOMIC RESULTS	Project self-evaluation of increasing the resource pooling of the users	Project self-evaluation of increasing the resource pooling of the users
	Cost saving related to resource pooling	Cost-saving related to resource pooling

	Percentage of use of shared resources	Percentage of use of shared resources
	Monetary value of shared resources	Monetary value of shared resources
	Digital Social Innovation ROI	Number of project mentions
		Number of competitors mentions
		Number of retweets, followers
		Total budget for dissemination
		Number of project outputs mentions
		Number of project outputs mentions in other media
		Total number of service issues noted on the platform
		Total n. of platform visitors returned within past 30 days
		Total n. of platform visitors within past 30 days
		Number of service issues, noted within 24 hours
BUSINESS MODELS	Business Models	Business Models
	Project self-evaluation of being able to generate a new business model	Project self-evaluation of being able to generate a new business model

	Project Business Plan	Project Business Plan
	Partner Business Plan	Partner Business Plan
	New market opportunities for partners	New market opportunities for partners
	Number of business collaborations	Number of business collaborations
	Collaboration with the industry	Collaboration with the industry
	Value chains	Value chains
COMPETITIVENESS AND EXPLOITATION	Project competitors	Project competitors
	Project self-evaluation of its impact on the capability of the project team to keep pace with competitors	Project self-evaluation of its impact on the capability of the project team to keep pace with competitors
	Number of persons able to be dedicated to exploitation and innovation transfer	Number of persons able to be dedicated to exploitation and innovation transfer
	Number of activities for the transfer of each project output	Number of activities for the transfer of each project output
	Project self-evaluation of the success of transfer activities	Project self-evaluation of the success of transfer activities

Economic impact: Impact on ICT driven innovation

DIMENSION	INDICATOR	SOURCE OF INSPIRATION
IMPACT ON PRODUCT INNOVATION	Project self-evaluation to increase the efficiency of existing technologies	Impact on existing technologies' efficiency
		Description of the nature of innovation for each output
	Project self-evaluation to increase the quality of pre-existing products	Project self-evaluation to increase the quality of pre-existing products
	Technological readiness level of the outputs	Technological readiness level of the outputs
IMPACT ON PROCESS/SERVICE INNOVATION	Project self-evaluation of having an impact on process innovation	Project self-evaluation of having an impact on process innovation
		Description of typologies of process innovation
	Project self-evaluation of routinized processes for capturing and using new ideas for new or improved service offerings	Project self-evaluation of routinized processes for capturing and using new ideas for new or improved service offerings
	Project self-evaluation of management strategies or business practices for new or improved service offerings	Project self-evaluation of management strategies or business practices for new or improved service offerings

	Project self-evaluation of reduction in delivery time of new service offerings	Project self-evaluation of reduction in delivery time of new service offerings
IMPACT ON ORGANISATIONAL INNOVATION	Project self-evaluation of implementing a new organisational method for users	Project self-evaluation of implementing a new organisational method for users
	Percentage of performance improvement by reducing administrative or transactions costs	Percentage of performance improvement by reducing administrative or transactions costs
	Project self-evaluation of implementing new concepts for the structuring of activities for project users	Project self-evaluation of implementing new concepts for the structuring of activities for project users
	Project self-evaluation of its capability to contribute to improving the working practices of CAPS users	Project self-evaluation of its capability to contribute to improving the working practices of CAPS users
	Project self-evaluation of its capability to increase the access to spaces for its users	Project self-evaluation of its capability to increase the access to spaces for its users
IMPACT ON USER DRIVEN & OPEN INNOVATION	Project self-evaluation of developing a user-driven innovation project	Project self-evaluation of developing a user-driven innovation project

	Project self-evaluation of implementing new methods for identifying users' needs	Project self-evaluation of implementing new methods for identifying users' needs
	Project self-evaluation of cost saving developed thanks to the users engagement in the technological outputs development	Project self-evaluation of cost saving developed thanks to the users engagement in the technological outputs development
	Project self-evaluation of improvements in the quality of the technological outputs thanks to the users collaboration	Project self-evaluation of improvements in the quality of the technological outputs thanks to the users collaboration
	Gathering feedback mechanism	Gathering feedback mechanism
	Research on users demand	Research on users demand
	Project self-evaluation of developing an open innovation project	Project self-evaluation of developing an open innovation project
	Project self-evaluation of increasing transparency for the users	Project self-evaluation of increasing transparency for the users
	Implementation of open standards	Implementation of open standards
		Description of open standards used

	Existence of API	Existence of API
	Access through API	Access through API
	Implementation of open source	Implementation of open source
	Number of core developers (internal) contributing to open source	Number of core developers (internal) contributing to open source
	Number of external developers contributing to open source	Number of external developers contributing to open source
	Number of downloads of project open source outputs	Number of downloads of project open source outputs

Annex 3

Environmental Impacts

Impact on Greenhouse Gases Emissions						
Dimensions	**Number of question**	**Indicators**	**Variables**	**Questions**	**Description**	**Type of question**
PROJECT ENVIRONMENTAL IMPACT CONCERNING GREENHOUSE GASES EMISSIONS	1	Greenhouse gases production	Travels by flight within Europe and the Mediterranean region	Indicate the number of travels by flight within Europe and the Mediterranean region to carry out the project activities	Number of travels by flight to countries that belong to the European continent or that surround the Mediterranean Sea	Number
	2		Travels by train within	Indicate the number of	Number of travels by	Number

			Europe and the Mediterranean region	travels by train within Europe and the Mediterranean region to carry out the project activities	train to countries that belong to the European continent or that surround the Mediterranean Sea	
	3		Travels by flight outside Europe and the Mediterranean region	Indicate the number of travels by flight outside Europe and the Mediterranean region to carry out the project activities	Number of travels by flight to countries that belong to the European continent or that surround the Mediterranean Sea	Number
	4	CO2 compensation	Tons of CO2 compensated	Do you perform any compensation activity?		Radio button
	7	Renewable /efficient energy purchasing in kWh or percentage	kWh or percentage of purchased renewable/efficient energy	Indicate how much renewable/efficient energy you purchase in kWh or percentage		Number/percentage
	8		Unit	Please indicate your unit of renewable/efficient energy		List menu
	10			Please describe how		Long text (if more than 4 to Likert in question 10)
	11	N. of compensation activities performed by the users since their engagement with the project (perception of the	N. of compensation activities performed by the users since their engagement with the project according to the project	Do you know the number of compensation activities performed by your users since their engagement with the		Radio button + N/A

		project vs. users questionnaire)		project		
	12			Indicate the number of compensation activities performed by your users since their engagement with the project	Only if the activities are a result of their participation into the project	Number (if Y to question 11)
	13	Project self assessment of its capability to contribute to the change in users participation to environmental-related actions (earth hour, earth day, local car free days, critical mass, etc.)	Project self assessment of its capability to contribute to the change in users participation to environmental-related actions (earth hour, earth day, local car free days, critical mass, etc.)	To what extent do you agree with the following sentence: “Participating to the project enhance users willingness to participate to environmental-related actions (earth hour, earth day, local car free days, critical mass, etc.)” On a scale from 1 to 6, where 1 indicates total disagreement and 6 total agreement		Likert

Impact on Air Pollution related to transport						
Dimensions	**Number of question**	**Indicators**	**Variables**	**Questions**	**Description**	**Type of question**
PROJECT ENVIRONMENTAL IMPACT CONCERNING	1	Project self evaluation of internal sensitivity towards the air pollution related to transport issue	Project self evaluation of internal sensitivity	To what extent do you agree with the following sentence: "Project's partners are		Likert

AIR POLLUTION RELATED TO TRANSPORT			towards the air pollution related to transport issue	encouraged to demonstrate their sensitivity towards the air pollution related to transport issue " Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is " totally agree"		
	2			Please explain how		Long text (if more than 4 to Likert in question 1)
PROJECT IMPACT ON BEHAVIOURS RELATED TO AIR POLLUTION RELATED TO TRANSPORT ISSUE	5	Project self evaluation of contribution to the increase in users' sensitivity towards the issue of air pollution related to local, everyday transpor	Project self evaluation of contribution to the increase in users' sensitivity towards the issue of air pollution related to local, everyday transpor	To what extent do you agree with the following sentence: "Project's users are encouraged to demonstrate their sensitivity towards the issue of air pollution related to local, everyday transport" Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is " totally agree"		Likert
	6			Please specify to which kind of actions projects participants		Long text (if more than 4 to Likert in

				perform (e.g. taking the public transport or bike instead of taking the car)		question 5)
	7	Project self-assessment of its capability to provide easier access to innovative solutions for a sustainable transport choices	Project self-assessment of its capability to provide easier access to innovative solutions for a sustainable transport choices	To what extent do you agree with the following sentence: "The project contributes to provide easier access to innovative solutions for sustainable transport choices " Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is " totally agree"	Please evaluate the effectiveness of applications, tools and networking platforms developed by the projects which enhance users possibility to access more sustainable transport choices	Likert
	8			Please provide examples (development of applications, tools, networking platforms)		Long text (if more than 4 to Likert in question 7)

Impact on Solid Waste						
Dimensions	**Number of question**	**Indicators**	**Variables**	**Questions**	**Description**	**Type of question**
PROJECT ENVIRONMENTAL IMPACT CONCERNING	1	Production of waste in kg or in percentage	Number of brochure printed	Indicate the number of brochure you printed		Number
	2		Number of publications	Indicate the number of publications you		Number

WASTE			printed	printed		
	3		Number of books printed	Indicate the number of books you printed		Number
	4		Number of gadget produced	Indicate the number of gadget you produced		Number
	5		Number of WEEE (Waste Electrical and Electronic Equipment) produced	Indicate the number of WEEE you produced	WEEE: " Waste Electrical and Electronic Equipment "	Number
	6	N. of different sorted waste	N. of different sorted waste	If in your office you sort the waste produced, how many kind of waste you collect?	Please indicate how many different kinds of waste (i.e. organic, plastic, paper...) your office collect	Number
	7	Level (in %) of recycled / reused waste in relation to total waste production	Percentage ofbrochure recycled / reused	Percentage of brochure recycled / reused	Please indicate which percentage of the brochure produced by the project and exceeding after their intended use are destined for recycling/reusing	Percentage
	8		Percentage publications recycled / reused	Percentage publications recycled / reused	Please indicate which percentage of the publications produced by the project and exceeding after their intended use are destined for	Percentage

					recycling/reusing	
	9		Percentage of books recycled / reused	Percentage of books recycled / reused	Please indicate which percentage of the books produced by the project and exceeding after their intended use are destined for recycling/reusing	Percentage
	10		Percentage of gadget recycled / reused	Percentage of gadget recycled / reused	Please indicate which percentage of the gadgets produced by the project and exceeding after their intended use are destined for recycling/reusing	Percentage
	11		Percentage of WEEE recycled / reused	Percentage of WEEE recycled / reused	Please indicate which percentage of the WEEE produced by the project are destined for recycling/reusing	Percentage
	13			Please specify through which kind of contribution (development of applications, tools, networking platforms).		Long text (if more than 4 to Likert in question12)
	16	Project self evaluation of the increase in users' sensitivity towards the waste issue (e.g. participation to community-based	Project self evaluation of the increase in users' sensitivity towards the waste issue	To what extent do you agree with the following sentence: "Project's users are encouraged to demonstrate their		Likert

		reusing/recycling initiatives, etc.)	(e.g. participation to community-based reusing/recycling initiatives, etc.)	sensitivity towards the waste issue " Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is " totally agree"		
	17			Please specify to which kind of actions projects participants perform (e.g. participation to community-based reusing/recycling initiatives, etc).		Long text (if more than 4 to Likert in question 16)

Impact on Sustainable Consumption of Goods and Services						
Dimensions	**Number of question**	**Indicators**	**Variables**	**Questions**	**Description**	**Type of question**
PROJECT ENVIRONMENTAL IMPACT CONCERNING SUSTAINABLE CONSUMPTION OF GOODS AND SERVICES	1	N. of green / local / ethical products used by the project compared to the total number of products used - in percentage	N. of green / local / ethical products (i.e. project equipment, publications, gadgets) used by the project compared to the total number of products used -	Indicate the of green / local / ethical products (i.e. project equipment, publications, gadgets) used by the project compared to the total number of products used in percentage		Percentage

			in percentage			
	2		N. of green / local / ethical green events (i.e. green menu, green location) organized by project compared to the total number events - in percentage	Indicate the number of green / local / ethical green events (i.e. green menu, green location) organized by the project compared to the total number of events in percentage		Percentage
	4		N. of green / local / ethical services (i.e. car for rental, hotels) chosen by the project compared to the total number of services used - in percentage	Indicate the of green / local / ethical services (i.e. car for rental, hotels) chosen by the project compared to the total number of services used - in percentage		Percentage
PROJECT IMPACT ON ENVIRONMENTAL BEHAVIOURS RELATED TO THE SUSTAINABLE CONSUMPTION ISSUE	6	Increase of green / local / ethical products purchased by users in relation to start of the project- in percentage	Increase of green / local / ethical products purchased by users in relation to start of the project- in percentage	To what extent do you agree with the following sentence: "Project's users are encouraged to demonstrate their sensitivity towards the sustainable consumption issue.		Likert

				Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is " totally agree"		
	7	N. of promotion of sustainable consumption activities performed by the users since their engagement with the project (perception of the project vs. users questionnaire)	N. of promotion of sustainable consumption activities performed by the users since their engagement with the project according to the project	Do you know the number of promotion of sustainable consumption activities performed by your users since their engagement with your project		Radio Button + N/A
	8			Indicate the number of promotion of sustainable consumption activities performed by your users since their engagement with your project		Number (if Y to question 8)
	9	N. of organization/companies/products intending to introduce eco labels as a result of the project	N. of organization /companies/products intending to introduce eco labels as a result of the project	Do you know the number of organization/companies/products looking into having their activities eco-certified as a result of the project		Radio Button + N/A
	10			Indicate the number of organization/companies/products looking		Number (if Y to question 10)

				into having their activities eco-certified as a result of the project		
	11	N. of green labels or certifications for products or services promoted by the initiative	N. of green labels or certifications for products or services promoted by the initiative	Does the project promote green labels or certifications for products or services?		Radio Button + N/A
	12			Indicate the number of green labels or certifications for products or services promoted by the project		Number (if Y to question 12)

Annex 4

Political impact

Impact on Civic and Politic Participation					
Dimensions	**Indicators**	**Variables**	**Questions**	**Description**	**Type of answer**
IMPACT ON CITIZENS/USERS POLITICAL AWARENESS	Project self evaluation of changes in the time spent by users in getting informed about local, national and international political issues	Project self evaluation of changes in the time spent by users in getting informed about local, national and international political issues	To what extent do you agree with the following sentence: "Our project increases the time spent by users in getting informed about local, national and international political issues". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is	Please consider the average time spent by your users before entering your platform (interacting with your project) or the changes occurred in the last three months.	Likert

			"totally agree"		
	Project self assessment of changes in the time spent by users in persuading friends, relatives or fellow workers about social/political issues	Project self assessment of changes in the time spent by users in persuading friends, relatives or fellow workers about social/political issues	To what extent do you agree with the following sentence: "Our project increases the time spent by users in persuading friends, relatives or fellow workers about social/political issues". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"	Please consider the average time spent by your users before entering your platform (interacting with your project) or the changes occurred since your last data entry or in the last three months (in case this is the first data entry)	Likert
			Please described those changes		Long text
IMPACT ON CITIZENS/USERS CIVIC PARTICIPATION	Instruments developed by the project offering new channels/way for civic participation	Number of instruments developed by the project offering new channels/way for civic participation	Number of instruments developed by the project offering new channels/way for civic participation	Please consider any technological or non-technological solutions developed.	Number
	Project self evaluation of its capability to increase the number of citizens participating to civic-society organisation	Project self evaluation of its capability to increase the number of citizens participating to civic-society organisation	To what extent do you agree with the following sentence: "Our project improves the civic and/or political participation of citizens belonging to group at risk of social exclusion and/or discrimination". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"	With the term "groups at risk of social exclusion" we refer to people at risk of poverty or severely materially deprived or living in households with very low work intensity (European Social Protection Committee Indicators	Likert

				Sub-group). With the term groups at risk of discrimination we recognise the following grounds for discrimination: sex, age, gender, racial or ethnic origin, religion or belief, sexual orientation and disabilities (Art.13 of the Treaty establishing the European Community).	
	Project self evaluation of its capability to increase the time spent by citizens in participating to civic-society organisation	Project self evaluation of its capability to increase the time spent by citizens in participating to civic-society organisation	To what extent do you agree with the following sentence: "Our project produces an increment in the time spent by citizens in participating to civic-society organisation". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"	Please consider the behaviours of your average users.	Likert + add "don't know"
	Project self evaluation of its capability to increase the number of bottom-up/grassroots actions	Project self evaluation of its capability to increase the number of bottom-up/grassroots actions	To what extent do you agree with the following sentence: "Our project produces and increment in the number of bottom-up/grassroots actions". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"	With the term bottom-up/grassroots terms we refer to initiatives started by a group of citizens, without the support of institutions or public authorities.	Likert

IMPACT ON CITIZENS/USERS POLITICAL PARTICIPATION	Instruments developed by the project offering new channels/way of political participation	Number of instruments developed by the project offering new channels/way of political participation	Number of instruments developed by the project offering new channels/way of political participation	Please consider any technological or non-technological solutions developed.	Number
	Project self-evaluation of its capacity to increase citizens/users participation to national and local election	Project self-evaluation of its capacity to increase citizens/users participation to national and local election	To what extent do you agree with the following sentence: "Our project increases citizens/users participation to national and local election". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"		Likert
	Project self-evaluation of its capacity to increase citizens/users participation in: signature campaigns, boycotts and manifestations	Project self-evaluation of its capacity to increase citizens/users participation in signature campaigns, boycotts and manifestations	To what extent do you agree with the following sentence: "Our project increase citizens/users participation in the following forms of political idea manifestations: signature campaigns, boycotts, manifestations, other". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"		Likert

Impact on policies and institutions					
Dimensions	**Indicators**	**Variables**	**Questions**	**Description**	**Type of answer**
PROJECT CAPABILITY TO INFLUENCE	Number of policy recommendations produced by the project	Number of policy recommendations produced by the	Number of policy recommendations developed by the project		Number

POLICIES AND INSTITUTIONS		project			
	Number of policy makers and institutions representatives aware of the policy recommendations	Number of policy makers and institutions representatives aware of the policy recommendations	Please indicate the number of policy makers and institutions representatives aware of the policy recommendations	Please consider only the policy makers that you contacted personally, that participated in events you organised and that for sure read the recommendations. Do not consider, for example, all the policy-makers to which you sent the policy recommendation or that will probably visit your website.	Number
	Meetings/conferences organised/attended for influencing policy-makers	Number of meetings/conferences organised/attended for influencing policy-makers	Number of meetings/conferences organised/participated for influencing policy-makers		Number
		Number of policy makers/institutions represented in the meeting	Number of policy makers/institutions represented in the meeting		Number
	Project self-evaluation of its capability to influence institutions/governments transparency	Project self-evaluation of its capability to influence institutions/governments transparency	To what extent do you agree with the following sentence: "Our project positive influences institutions/governments transparency". Please attribute a value from 1 to 6 where 1 is	Instruments that can improve institutions/governme nt transparency are those related to the Open Government,	Likert

			“totally disagree” and 6 is “totally agree”. Please describe how.	including actions supporting the monitoring of institutions spending or making publicly available the activities performed by policy-makers, parties or interest groups.	
	Project capability to influence parties/democratic processes transparency	Project capability to influence parties/democratic processes transparency	To what extent do you agree with the following sentence: “Our project positive influences parties/democratic processes transparency”. Please attribute a value from 1 to 6 where 1 is “totally disagree” and 6 is “totally agree”. Please describe how.		Likert
	Policies/regulations/laws changed or updated by the project	Number of policies/regulations/laws changed or updated by the project	Number of policies/regulations/laws changed or updated by the project		Number
	Number of institutions created or changed by the project	Number of institutions created or changed by the project	Number of institutions created or changed by the project	Social innovation is able to create new institutions, such as consumer associations or to change existing institutions by attributing, for example, new roles	Number

				to civic society organisations. Please let us know if something similar happened as a result of your project activities/outputs	
CAPS USERS IMPACT ON POLICIES AND INSTITUTIONS	Project self-evaluation of its capability to influence the capability of citizens/users and civic society organisations of influencing policies	Project self-evaluation of its capability to influence the capability of citizens/users and civic society organisations of influencing policies	To what extent do you agree with the following sentence: "Our project positive influences the capability of citizens/users and civic society organisations of influencing policies". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"		Likert
	Number of policy recommendations/documents/petitions produced by users	Number of policy recommendations/documents/petitions produced by users thanks to the use of the project outputs	Number of policy recommendations/documents/petitions produced by users thanks to the use of the project outputs	Beside the policy recommendations a project can develop, there is also the possibility that project users – thanks to the activities performed by the project and its outputs – are enabled to take action and develop policy proposals., recommendations, petitions and similar. Please refer to this scenario.	Number

	Project evaluation of users capability to influence institutions/governments transparency	Project evaluation of users capability to influence institutions/governments transparency	To what extent do you agree with the following sentence: "Thanks to our project, citizens/users are more capable to influence institutions/governments transparency". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"		Likert
	Project evaluation of users capability to influence parties/democratic processes transparency	Project evaluation of users capability to influence parties/democratic processes transparency	To what extent do you agree with the following sentence: "Thanks to our project, citizens/users are more capable to influence partiers/democratic processes". Please attribute a value from 1 to 6 where 1 is "totally disagree" and 6 is "totally agree"		Likert
	Number of policies/regulations/laws changed or updated by project users	Number of policies/regulations/laws changed or updated by project users	Number of policies/regulations/laws changed or updated by your users		Number
	Number of institutions created or changed by project users	Number of institutions created or changed by project users	Number of institutions created or changed by your users		Number

Annex 5

Transversal index

Efficiency

Indicators	**Variables**
Outputs development efficiency	Number of outputs development
	Cost of development
Project self-evaluation of its capability to increase the resource pooling of users	Project self-evaluation of its capability to increase the resource pooling of users
Impact on existing technologies efficiency	Impact on existing technologies efficiency
Project self-evaluation to increase the quality of pre-existing products	Project self-evaluation to increase the quality of pre-existing products
Project self-evaluation of cost saving developed thanks to the users engagement in the technological outputs development	Project self-evaluation of cost saving developed thanks to the users engagement in the technological outputs development
Project self-evaluation of improvements in the quality of the technological outputs thanks to the users collaboration	Project self-evaluation of improvements in the quality of the technological outputs thanks to the users collaboration
Average impact factor of project publication per researcher	Number of publications with impact factor
	Number of researchers in the project
Training efficiency	Hours of training provide by the project
	Number of persons trained

	Budget allocated to training
Project self-evaluation on its capability to improve research processes	Project self-evaluation on its capability to improve research processes
Greenhouse gases production	Travels by flight within Europe and the Mediterranean region
	Travels by train within Europe and the Mediterranean region
	Travels by flight outside Europe and the Mediterranean region
CO2 compensation	Tons of CO2 compensated
Energy consumption	kWh or percentage of energy consumption
Renewable /efficient energy purchasing in kWh or percentage	kWh or percentage of purchased renewable/efficient energy
Project self evaluation of internal sensitivity towards the air pollution related to transport issue	Project self evaluation of internal sensitivity towards the air pollution related to transport issue
Production of waste in kg or in percentage	Number of brochure printed
	Number of publications printed
	Number of books printed
	Number of gadget produced
	Number of WEEE produced
Number of different sorted waste	Number of different sorted waste

Level (in %) of recycled / reused waste in relation to total waste production	Percentage of recycled / reused
	Percentage publications recycled / reused
	Percentage of books recycled / reused
	Percentage of gadget recycled / reused
	Percentage of WEEE recycled / reused
Number of green / local / ethical products used by the project compared to the total number of products used - in percentage	Number of green / local / ethical products (i.e. project equipment, publications, gadgets) used by the project compared to the total number of products used - in percentage
	Number of green / local / ethical green events (i.e. green menu, green location) organized by project compared to the total number events - in percentage
	Number of green / local / ethical services (i.e. car for rental, hotels) chosen by the project compared to the total number of services used - in percentage

Effectiveness

Indicators	**Variables**
Project self-evaluation of its capability to support the creation of entrepreneurial initiatives by its users	Project self-evaluation of its capability to support the creation of entrepreneurial initiatives by its users
Number of test beds provided by the project supporting the users for testing business ideas	Number of test beds provided by the project supporting the users for testing business ideas
Project self-evaluation of its capability to support the personal	Project self-evaluation of its capability to support the personal development of

development of its users	its users
Project self-evaluation of its capability to improve the skills of people employed within the consortium	Project self-evaluation of its capability to improve the skills of people employed within the consortium
Project self-evaluation of its capability to influence its users investment in education	Project self-evaluation of its capability to influence its users investment in education
Project self-assessment of its capability to improve users access to a range of local and international news sources of information	Project self-assessment of its capability to improve users access to a range of local and international news sources of information
Project self-evaluation of its capability to influence changes in training curriculum of secondary and higher education	Project self-evaluation of its capability to influence changes in training curriculum of secondary and higher education
Project self-evaluation of its capability to influence changes in educational policies	Project self-evaluation of its capability to influence changes in educational policies
Project self-evaluation of its capability to influence changes in the everyday life of academia institutions	Project self-evaluation of its capability to influence changes in the everyday life of academia institutions
Activities performed by the project in order to achieve the expected change in users behaviours	Activities performed by the project in order to achieve the expected change in users behaviours
Number of people participating in the activities	Number of people participating in the activities
Other activities performed with the aim of changing users opinion, values and behaviours	Other activities performed with the aim of changing users opinion, values and behaviours
Project self-assessment of changes in the time spent by users in persuading friends, relatives or fellow workers about social/political issues	Project self-assessment of changes in the time spent by users in persuading friends, relatives or fellow workers about social/political issues
Instruments developed by the project offering new channels/way for	Number of instruments developed by the project offering new channels/way

civic participation	for civic participation
Project self-evaluation of its capability to increase the number of citizens participating to civic-society organisation	Project self-evaluation of its capability to increase the number of citizens participating to civic-society organisation
Project self-evaluation of its capability to increase the number of bottom-up/grassroots actions	Project self-evaluation of its capability to increase the number of bottom-up/grassroots actions
Project capability to improve civic participation of citizens belonging to group at risk of discrimination	Project self-evaluation of its capability to improve civic participation of citizens belonging to group at risk of discrimination
Project self-evaluation of its capacity to increase citizens/users participation to national and local election	Project self-evaluation of its capacity to increase citizens/users participation to national and local election
Project self-evaluation of its capacity to increase citizens/users participation in: signature campaigns, boycotts and manifestations	Project self-evaluation of its capacity to increase citizens/users participation in signature campaigns
Project capability to improve political participation of citizens belonging to group at risk of discrimination	Project self-evaluation of its capability to improve political participation of citizens belonging to group at risk of discrimination
Project self-evaluation of its capability to influence institutions/governments transparency	Project self-evaluation of its capability to influence institutions/governments transparency
Project capability to influence parties/democratic processes transparency	Project capability to influence parties/democratic processes transparency
Number of policies/regulations/laws changed or updated by the project	Number of policies/regulations/laws changed or updated by the project
Project evaluation of citizens/users and civic society organisations capability of influencing policy-making	Project evaluation of citizens/users and civic society organisations capability of influencing policy-making
Project evaluation of users capability to influence	Project evaluation of users capability to influence institutions/governments

institutions/governments transparency	transparency
Project evaluation of users capability to influence parties/democratic processes transparency	Project evaluation of users capability to influence parties/democratic processes transparency
Number of policies/regulations/laws changed or updated by project users	Number of policies/regulations/laws changed or updated by project users
Number of institutions created or changed by project users	Number of institutions created or changed by project users

Sustainability

Indicators	**Variables**
Project self-evaluation of its capability to increase the access to finance of its users	Project self-evaluation of its capability to increase the access to finance of its users
	Total Funding distributed
	Number, type, description of instruments for increasing access to finance
Project self-evaluation of its capability to reduce the need of users to access emergency finance	Project self-evaluation of its capability to reduce the need of users to access emergency finance
Number of enterprises or business ideas developed by the project users	Number of enterprises or business ideas developed by the project users
Project self-evaluation of its capability to improve user support in diversifying income resources	Project self-evaluation of its capability to improve user support in diversifying income resources
Project self-evaluation of its capability to increase the incomes of	Project self-evaluation of its capability to increase the incomes of users

users	
Project self-evaluation of its capability to increase the resilience of users coping with crises	Project self-evaluation of its capability to increase the resilience of users coping with crises
Project self-evaluation to increase the resource pooling of users	Project self-evaluation to increase the resource pooling of users
ENPV; B/C; DPBP; B/C*; ENPV*, DPBP*	Output cost of development
	Output cost for updating/maintaining after the end of the project
	Output end/users
	Willingness to pay
	Willingness to donate
	Timing of the benefit
Digital Social Innovation ROI	Revenue generation
Project Business Models	Project Business Models
Partner Business Plan	Partner Business Plan
New market opportunities for partners	New market opportunities for partners
Project self-evaluation of being able to generate a new business model	Project self-evaluation of being able to generate a new business model
Project Business Models	Project Business Models

Partner Business Plan	Partner Business Plan
Number of users for each technological output	Number of users for each technological output
Number of patents developed by the project	Number of patents developed by the project
Number of policies/regulations/laws changed or updated by the project	Number of policies/regulations/laws changed or updated by the project
Number of institutions created or changed by the project	Number of institutions created or changed by the project
Number of policy recommendations/documents/petitions produced by users	Number of policy recommendations/documents/petitions produced by users thanks to the use of the project outputs

Fairness

Indicators	**Variables**
Number of tools/instruments provided by the project in order to reduce power asymmetries in online interactions	Number of tools/instruments provided by the project in order to reduce power asymmetries in online interactions
Number of tools/instruments provided by the project in order to reduce power asymmetries in local communities/groups	
Network diversity	Ratio between men and women on the platform
	Number of project activities dedicated to fostering gender equality * success rate
	Ratio between young, adult and old people

	Self-assessment of user belonging to categories at risk of social exclusion
Project self-evaluation of its capability to make local communities more inclusive	Project self-evaluation of its capability to make local communities more inclusive
Number of project activities/outputs dedicated to fostering social inclusion and non-discrimination in local communities	Number of project activities/outputs dedicated to fostering social inclusion and non-discrimination in local communities
Number of project activities dedicated to fostering gender equality in local communities	Number of project activities dedicated to fostering gender equality in local communities
Number of partners which are new to UE-funded ICT projects	Number of partners which are new to UE-funded ICT projects
Impact on users eSkills	Number of activities supporting the acquisition of digital competences, digital literacies competences, eSkills and the reduction of digital divide
	Number of participants to activities supporting the acquisition of digital competences, digital literacies competences, eSkills and the reduction of digital divide
Project self-assessment of its capability to improve users access to media outlets or websites that express independent, balanced views	Project self-assessment of its capability to improve users access to media outlets or websites that express independent, balanced views
Project self-assessment of its capability to improve user access to sources of information that represent a range of political and social viewpoints	Project self-assessment of its capability to improve user access to sources of information that represent a range of political and social viewpoints
Project self-evaluation of its capability to influence information asymmetries	Project self-evaluation of its capability to influence information asymmetries
Number of tools/activities developed by the project for influencing information asymmetries	Number of tools/activities developed by the project for influencing information asymmetries

Project self-evaluation of its capability to improve civic participation of citizens belonging to group at risk of discrimination	Project self-evaluation of its capability to improve civic participation of citizens belonging to group at risk of discrimination
Project capability to improve political participation of citizens belonging to group at risk of discrimination	Project capability to improve political participation of citizens belonging to group at risk of discrimination
Number of young researcher employment	Number of young researcher employment
Rate of woman in the project	Rate of woman in the project