

## A Digital Platform to Support the Design and Creation of Digital Social Innovations

Kornelia BATKO

University of Economics in Katowice, Katowice, Poland  
kornelia.batko@ue.katowice.pl

Kamila BARTUŚ

University of Economics in Katowice, Katowice, Poland  
kamila.bartus@ue.katowice.pl

Correspondence should be addressed to: Kornelia BATKO; kornelia.batko@ue.katowice.pl

\* Presented at the 38th IBIMA International Conference, 23-24 November 2021, Seville, Spain

Copyright © 2021. Kornelia BATKO and Kamila BARTUŚ

### Abstract

This article presents definitions of social innovation and digital social innovation and describes the stages of the process of creating digital social innovation. The purpose of this article is to present the author's model of an online platform for supporting the creation and development of social innovations. The concept of this solution was developed on the basis of literature review, case study and authors' own experience. The proposed system, the platform for supporting social innovation is to support the authors in subsequent stages of creating and developing digital social innovations.

**Keywords:** Social Innovation, Digital Social Innovation, Computer Assisted Digital Social Innovation, Digital Platform Assisted Social Innovation.

### Introduction

Social innovation is seen as a necessary condition for the progress of civilization. This is due to the fact that the world needs not only new technologies, but also new solutions of a social and political nature, conducive to the achievement of social goals. Social innovations are activities aimed at achieving social goals, especially those aimed at improving the lives of individuals and social groups. The modern world is saturated with various social innovations, including digital innovations, which are innovations of a technological nature. The idea is to use IT solutions to support the solution of social problems. Digital innovations include information systems, web or mobile solutions.

With the emergence of digital tools to support the generation of social innovations, it is possible for many people to actively participate in the generation and implementation of new ideas. However, when looking for digital platforms to support the design and creation of social innovations, we have not identified platforms that support the entire process of designing and creating digital social innovations. Therefore, the purpose of this paper is to present the author's platform for supporting the creation and development of social innovations. The platform, the concept of which is presented, is intended to support the process of creating social innovations, from the moment of identifying a social problem to be solved, to the stage of implementing a social innovation. The proposed concept of the platform is based on a model of creating digital social innovations, case studies describing systems of computer-aided innovation and the authors' own experience in designing IT solutions.

## Digital Social Innovation

Until recently, when considering issues of innovation, the subject of research in the field of management sciences was, above all, technological innovations, identified with product and process innovations. Currently, in addition to those mentioned, other types of innovation are increasingly mentioned, most often referred to as organizational innovation, non-technological innovation, soft innovation, management innovation, organizational innovation, eco-innovation or social innovation (Wronka-Pośpiech, 2015).

There are many definitions of social innovation in the literature. In many cases, they differ from one another. However, they usually include general criteria about social goals, social interactions between community groups, or social outcomes.

Some definitions emphasize approaching innovation through the lens of process or outcome. For example, Flew et al. (2008), for example, define social innovation as the application of a new concept or a new use of an existing concept that contributes to sustainable social value. Social innovation is presented here as new ideas or solutions in the form of new: products, programs, services, processes, activities, practices or social movements (van Niekerk et al. 2021).

A common element in many definitions of social innovation is an emphasis on "novelty." Social innovation is then defined as, for example, "new ideas that work to meet important unmet needs," "new ideas that solve existing social, cultural, economic, and environmental challenges for the benefit of people and the planet," or "ideas that work for the public good" (Wronka-Pośpiech, 2015). However, it is worth emphasizing that social innovation is rarely based on something new, in many cases it is a combination of several ideas, concepts, solutions, theories or products.

Another common part of the definition is to emphasize that social innovation is designed to solve a social problem. Phills et al. (2008) indicate that social innovation should aim to develop a new solution to a social problem that is more effective, efficient, sustainable, or equitable than the existing solution, and that its generated value is directed primarily to society as a whole rather than individuals (Phills et al., 2008, p. 39). Social innovation encompasses a range of activities that aim to improve the quality of life of individuals, organizations, or entire communities by introducing unique solutions, new ideas, products, services that meet a wide range of social needs.

When considering social innovation, it is important to remember that its essence is co-creation, co-production and co-design. For this reason, social innovations can go beyond the economic sector, and therefore can relate to both the broader state (the state) and society. Accordingly, the following are distinguished as stakeholders in social innovation: individuals (citizens); social movements; organizations, including state and non-state actors (governments, charities, community-based organizations); and new hybrid organizations such as social enterprises (Abijiro et al., 2014; Hubert, 2020).

When defining social innovation, it is important to note that it is largely based on the open innovation paradigm, which means its open rather than closed nature in terms of knowledge sharing (Lopes, de Carvalho, 2018). An example of this is the development of open-source software.

In summary, social innovation is a research stream focused on the development and implementation of solutions (products, services, models) to improve and support any social change. This is because the progress of civilization occurs only as a result of sustainable development in economic, social and environmental terms. The purpose of social innovation is to improve people's quality of life, create values and share those values both economically and socially. Social innovations have the potential to solve problems in various areas of socio-economic life. Therefore, their overarching role is to improve the life of society in areas of its functioning and to obtain sustainable social value. This approach is based on the understanding that people from different backgrounds can be competent interpreters of their own lives and know best how to solve the problems they encounter. But it is worth remembering that social innovation is just problem solving, providing creative and unconventional approaches to solving complex problems that we would not be able to solve otherwise. As defined by the OECD, social innovation refers to the design and implementation of new solutions that imply conceptual, process, product or organizational change with the ultimate goal of improving the well-being and welfare of individuals and communities (OECD, 2021).

According to the literature, four types of social innovation can be distinguished (Mason et al. 2015):

- Social movements (social movements or networks of informal interactions between multiple individuals, groups and/or organizations formed to achieve a goal or solve a problem),
- services (service-related social innovation - aimed at improving services through collaborative and cross-sectoral design and delivery of services),

- Social enterprises (innovative forms of social entrepreneurship - that is, businesses that exist to achieve a social purpose and typically reinvest a significant portion of their profits or surpluses to achieve that purpose),
- digital products (digital social innovations, based on collaborations between innovators, users, and society using digital technologies to co-create knowledge and solutions for a wide range of social needs).

For the purpose of this article, the focus will be on digital social innovations. Digital innovation, as can be seen from the above classification is one type of social innovation. Many different definitions of Digital Social Innovation (DSI) can be found in the literature. Their definition has evolved in recent years, but they are still not clearly perceived.

Digital social innovation can be understood as the generation and implementation of new ideas for interactions between people in a social system, the success of which depends on the development of new technologies (Mumford et al., 2003). Indeed, digital innovation is based on the combination of digital and physical components, consequently offering objects that propose valuable new applications of goods, services or procedures (Yoo et al., 2010; Kolloch and Dellermann, 2018).

Millard, on the other hand, defines digital social innovation through the lens of using ICTs as online networks and other digital tools to support and/or enable social innovation or new approaches to meeting social needs that are both social in means and ends, and that engage and mobilize beneficiaries and help transform social relationships by improving beneficiaries' access to power and resources (Millard, 2014).

Further definitions identify digital social innovations as digital platforms or applications. According to Suri, these are: "platforms and applications that enable citizens to connect and collaborate with each other and the government" (Suri, 2013). Also as online platforms and new forms of interaction promote value generating collaboration and social progress that changes individual behavior for the better are presented by Annania and Passani (Anania, Passani 2014).

An important aspect addressed in the definitions is collaboration. Stokes et al. (2017), define digital social innovation as a type of social and collaborative innovation in which end users and communities collaborate through digital platforms to create solutions to a wide range of social needs and at a scale unimaginable before the advent of Internet-enabled network platforms (Stokes et al., 2017).

From the definitions provided, it is clear that social innovation can sometimes force the development of certain technologies, but other times technology can force the adoption of proposed social innovations. Digital innovation is the use of technology and digital applications to improve existing business processes, workforce productivity, improve customer service, introduce new products or business models or improvements. Such a product could be a mobile application or a website that facilitates connectivity between actors in society. The term digital social innovation largely overlaps with other terms such as "technology for good," "civic technology," and "social technology." The overarching goal of implementing digital innovation is to reorient technology for social purposes and use it to improve lives and create value for society. Among these benefits, we can mention first and foremost: enabling citizens to take more control over their lives and positively use their collective knowledge and skills. Digital technology is a way to solve social problems.

## **The process of creating digital social innovation**

The creator of a social innovation can be an individual, a group of individuals, or an organization (Desmarchelier et al. 2020). Usually these are non-profit organizations specializing in social innovation. Entire networks of related actors (individuals, groups, public organizations, companies) focused on creating digital social innovations may be involved. The activities of these networks can be both intentional, predetermined, and spontaneous.

The process of creating social innovations itself is carried out according to certain established stages. The literature on the subject provides many more or less complex models of creation and implementation of digital social innovation projects.

Here, a simplified framework model of the digital social innovation process will be presented to highlight the necessary steps to be taken in the development of the project and in its implementation. The model of digital social innovation is an accepted scheme of actions to be taken, from the identification of a social problem to the implementation of the solution, divided into specific tasks assigned to specific performers. It can have a linear course or more often it can create more elaborate structures. It is worth emphasizing here that the social innovation model is not a way to develop or create more innovations. The idea behind its use is to establish the stages of the innovation process in order to manage the different phases of the innovation process.

The best known model of social innovation is the one proposed by Murray, Caulier-Grice and Mulgan (2010), which shows different stages in the life of an innovation that start as hints highlighting the need for social innovation, develop into proposals, test in practice as prototypes, become everyday practice (sustaining), grow and spread further (scaling) and finally lead to systemic change.

Murray et al. (2010) suggests a life cycle of six stages:

- **Prompts**, inspirations, and diagnoses: in this phase, factors underlining the need for social innovation are structured.
- **Proposals and ideas**: in this phase, ideas and proposals of a solution of identified problem are structured. We focus on generating ideas and finding solutions using methods that support creativity that help generate new approaches and perspectives to the problem.
- **Prototyping and pilots**: in this phase, ideas and concepts are tested in prototypes and pilot projects. Any changes to the concepts must be tested, so many different alternatives must be tested to find the perfect match.
- **Sustaining**: in this phase, structures and processes for a sustainable organization should be developed ie. governance structures, financial stability and performance measurement.
- **Scaling and diffusion**: this phase seek to scale innovation, disseminate results, and facilitate innovation through imitation. When considering the rapid dissemination and scaling of social innovation, the most promising are open-source approaches and collaborative networks and the identification of funding sources for innovation. Since social innovation is targeted at large groups of people and not at individual consumers, further development must be paid for by a third party, such as state institutions or foundations.
- **Systemic change**: it is the last stage of social innovation and involves the inclusion of social innovation in the system of interaction with other innovations and other social activities. Social innovation is part of social change. However, only a few social innovations reach this stage in a single action. The change of the system is based on new connections, new standards or procedures. Systemic change suggests an architecture that supports other innovations.

A similar model of social innovation is presented in Fig. 1. It is divided into four main phases: identification phase, pilot phase, evaluation phase and mainstreaming phase (Germaine, 2019).

As part of the identification phase, we should identify a social problem and gather around it entities (stakeholders) interested in solving it.



**Fig. 1. Fundingmaster model of social innovation**

Source: (Germaine, 2019).

In the pilot phase, a problem solution is created and tested in real life. At this stage, you can test new methodologies, processes, concepts using the design thinking method or the "trial and error" method.

The third phase is the evaluation, i.e. testing the correctness of the model pilot. The assessment can present three results: the pilot project worked (the problem was and the solution solved it, therefore no further action is required), the pilot project has failed (check why the solution did not work, then add it to the mainstream as a failed solution), the project has worked and can be mainstreamed (therefore a mainstreaming model must be adopted to move the project forward).

In the final phase of mainstreaming, the pilot project turns into a long-term solution. This usually requires the establishment of a new organization, corporate governance, personnel and an agreed way of working.

On the other hand, S. Bates (2012) proposes a model of creating social innovations divided into three phases:

- **investigation:** in this phase, the social challenge is defining also determining the unmet needs, and examining opportunities to achieve them is crucial,
- **innovation:** in this phase, a workable solution and a powerful, effective social business model must be developed,
- **implementation,** in this final phase, it must be ensured that the developed, unique solution creates common value for all stakeholders and does not become an orphan innovation.

Taken together, these phases describe a pragmatic approach to analyzing social innovation, but the development is not linear or consistent. Instead, each social innovation has its own dynamics and course.

## Concept of a system to support digital social innovation

As mentioned earlier, digital social innovation involves generating and implementing new ideas for interactions between people in a social system with the support of information technology. The implementation of information systems and the use of Internet solutions in the area of social innovation is aimed at making improvements in the functioning of society. Many definitions equate digital social innovation with platforms or applications that enable citizens to connect and collaborate.

The development of the Internet and ICT technology allows the development of information flows and communication between different stakeholder groups, which enables different actors in the economy to initiate cooperation and implement new communication strategies with the environment. Thus, technology can be a tool to support and/or enable social innovation or new approaches to meeting social needs. Information technology offers tremendous opportunities to support the creation of social innovations, if only by using ICT to create virtual links of stakeholders interested in designing and creating social innovations. The interaction between stakeholders is multifaceted, digital and IT tools play a key role in changing the way individuals interact: such technologies help to unify information and enable participants to stay connected and solve social and societal problems faster and more effectively (Maiolin et al., 2016).

In the literature, we have ample evidence that digitization and the use of IT are crucial in supporting the creation of innovations, by increasing the level of knowledge diffusion and the development of new processes and products, while lowering the cost of access to innovative ideas (Katz, Rice, 2002; Pisano, Verganti, 2008; de Souza, Júnior, 2013; Maiolin et al., 2016).

With the emergence of an extremely large set of digitized tools to support social innovation generation, it is possible for many people to actively participate in the generation and implementation of new ideas (Hutter et al. 201; Maiolin et al., 2016). However, when looking for digital platforms to support the design and creation of social innovations, we identified platforms that were either focused on a specific, very narrow social domain or only provided support within a single step of the digital social innovation generation process e.g. funding or idea generation. There are platforms that support the process of managing the creation of innovations in an enterprise or institution, e.g. HYPE Enterprise (analyzes trends, allows for idea generation and creation of projects and portfolios), MindMeister (online mind mapping tool that lets users share maps with an unlimited number of users and collaborate with them in real-time), Ideanote (an all-in-one innovation platform that promises to help teams and businesses around the world capture, develop, prioritize and act on more of the right ideas), Innovation Cloud (free web-based tool for idea management. It enables users to submit, codevelop and execute ideas), or allowing to add petitions regarding social problems e.g. change.org.

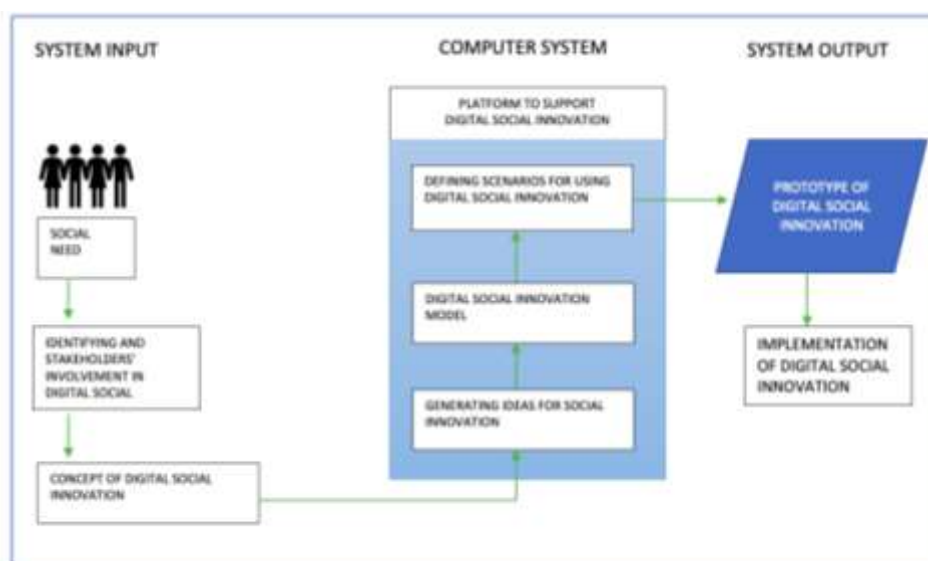
What is missing is a platform that supports the entire process of designing and creating digital social innovations. Therefore, based on the models of digital social innovations presented in the previous section, the author's model of a web platform for supporting the creation and development of social innovations was designed. The proposed system, the platform for supporting social innovation is to provide support for creators in subsequent stages of creating and developing digital social innovations. Digital platforms are solutions commonly used in the business models of the world's largest companies,

supporting their activities in various areas. Technical features of platforms vary depending on their type and purpose. However, their main purpose is to automate activities within a process and support the user in achieving a specific goal.

Platform assumptions:

1. The platform should connect different stakeholders interested in solving social problems.
2. The platform should enable creation and assignment of different roles in the process of social innovation generation: roles of beneficiary, innovator, prototype creator, social initiative coordinator etc. For each of these roles, a user account with rights should be defined. New users should fill in their profile.
3. The platform should have a built-in calendar or project management tool with the ability to assign people to tasks and resources on specific dates.
4. The platform should enable social innovation beneficiaries to define the need, social problem.
5. The platform should enable communication between stakeholders and offer communication and collaboration tools to support teamwork.
6. The platform should support document management, knowledge sharing and provision of background information and materials.
7. The platform should offer IT tools that support the user at different stages of innovation creation, e.g. communicators, voting tools, brainstorming tools, data analysis and visualization systems, recommendation systems.
8. The platform should enable prototyping of digital services, i.e. design tools or access to an external service enabling prototyping. It should also provide a database of people who have the technical skills to do so and who are willing and able to work towards solving social problems.
9. The platform should provide fundraising tools for the project.
10. The platform should provide digital support for facilitating social innovation should therefore focus on digitizing a task that can be optimized or increase the availability of resources: human or physical.
11. The platform should offer an option to evaluate and get feedback from beneficiaries. People submitting a social need should have an opportunity to evaluate the concept of solving the submitted problem and provide feedback on the initiative developed by innovators.
12. The platform should provide support for the entire project and creation of a digital social innovation, not just individual phases.
13. The platform should enable the team working on the innovation to present the progress of the project, ask for support and share their experiences.

Fig. 2 presents a model of a platform to support digital social innovation.



## Fig. 2. The concept of the platform to support digital social innovation

Source: Own elaboration.

The operating scheme of this platform is to be as follows:

1. **Social need.** In the first stage, social needs will be identified. In this stage, someone identifies a major social problem that matters to them. This may be a single individual or a group of like-minded people, but there are initiators who can be understood as social innovator(s). Social needs will be submitted by completing a Social Need Request Form. Once the form is completed, the need goes into a database for further processing.
2. **Identifying and stakeholders' involvement in digital social.** In the second stage, people interested in solving this reported problem apply. Registration is also done by filling out a form. Initiators develop a common understanding of a social problem and raise awareness. They attract other like-minded people and build a core of key stakeholders.
3. **Concept of digital social innovation.** The initiators of the social need, together with the identified stakeholders, develop a potential solution to the problem. If these key stakeholders manage to develop a credible solution to the problem and attract sufficient support from public and private funders and policy makers, the project can move to the next phase. Once the activity is refined, all necessary information and inputs for the activity are sent to those interested in solving the social problem to move to the next phase.
4. **Generating ideas for social innovation.** In this stage, based on the submitted solution concept, ideas are generated with what specific digital solution: app, website, platform, online event, etc., can solve the social challenge. It is a digitally assisted brainstorming, allowing for collaborative solution development and prioritization of ideas that can address the social challenge through the platform. Ideas are also submitted through a form. Several tools are also used during the development of ideas and solutions, which should be accessible from the platform. From the submitted ideas, one that solves the problem as much as possible is selected.
5. **Digital social innovation model.** In this stage, a solution model is developed, i.e. this stage corresponds to the beginning of the materialization of the solution to be implemented as a digital social innovation. From the presented ideas, one idea is selected for further development. It is necessary to discuss the idea and exchange opinions. Once the idea is well defined, planning begins to organize its implementation. Its components, tasks and required materials are identified and a mock-up of the solution is created here using system design methods and User Experience standards. Therefore, the platform should be equipped with software for group work that enables designing such solutions. The developed product should meet the real needs of users, therefore, it is important that they take an active part in the process and co-create the final solution. The target group of solution beneficiaries is more or less involved throughout the process.
6. **Defining scenarios for using digital social innovation.** Based on the previously prepared mockup, scenarios are generated for the use of the digital social innovation by different potential users of the system.
7. **Prototype of digital social innovation.** This stage involves materializing the idea in a simple way so that it can be done quickly and with relatively few resources. A group of people working on the project, together with people who have technical programming skills, develop a prototype solution and then test it. At this stage the scalability of the solution must also be taken into account. Information from the originators, i.e. those submitting a social problem, can be helpful in this process. Their ideas for potential further extensions of the system can be crucial here.
8. **Implementation of digital social.** The stage of putting the designed solution into practice and communicating it to the beneficiaries and the public. This stage corresponds to bringing the technology prototype to the market as a solution.

Once the innovation starts working and has an established user base, you can think about its further development, such as expanding the innovation itself or developing it towards a wider audience

## Conclusions

Nowadays, new technologies make it possible to support business operations. However, they are increasingly used also to support various social initiatives. Digital social innovations are seen as one of the conditions of civilization progress. New solutions that foster the achievement of social goals, aimed at improving the lives of individuals and social groups, are recognized as drivers of economies and sustainable development of society. Therefore, the world is saturated with various social innovations, including digital innovations, the idea of which is to use IT solutions to support the solution of social problems. In order to effectively design and implement digital social innovations, it is necessary to involve many people who

are stakeholders in social activities and their joint work on solving a social problem. For this reason, digital platforms supporting the work of such teams seem to be a good solution.

However, both globally and in Poland, these organizations are just beginning to learn how to take advantage of this opportunity. Their success will also depend on technical abilities to effectively integrate and analyze information using new technologies, develop systems to support the creation of digital social innovations.

The presented digital platform that supports designing and creating digital social innovations is supposed to be a place where different stakeholders can propose social needs, ways of solving them and participate in their implementation. Very important are the first stages, in which it is necessary to well define the social need and choose the right solution from the potential ideas generated by the platform. Once the idea is selected, i.e. the solution is already conceptualized, an iterative development project is created with prototypes used to work with beneficiaries until the solution is released. Creating ICT-based social innovations is a process that requires the involvement of the target users in both the design and implementation of the innovation.

In the following work, the focus will be on the evaluation of the proposed concept of the platform for supporting social innovation in different stakeholder groups of digital social innovation. Direct research will also be conducted to gather requirements for supporting the process of designing and creating social innovations.

## References

- Anania, L., Passani, A. (2014), 'A Hitchiker's guide to digital social innovation'. Proceedings of the 20th ITS biennial conference: the net a presented at the 20th ITS Biennial Conference, Rio de Janeiro, Brazil.
- Antonopoulou L., Begkos Ch. (2020), 'Strategizing for digital innovations: Value propositions for transcending market boundaries', *Technological Forecasting and Social Change*, vo. 156, 120042, <https://doi.org/10.1016/j.techfore.2020.120042>
- Bates S. (2012), *The Social Innovation Imperative*, Stanford Social Innovation Review, March 2012, [Accessed Nov 06, 2021]. Available: [http://www.ssireview.org/articles/entry/the\\_social\\_innovation\\_imperative](http://www.ssireview.org/articles/entry/the_social_innovation_imperative)
- Castro Spila, J., Luna, A., Unceta, A. (2016): 'Social Innovation Regime. An Exploratory Framework to measure Social Innovation'. SIMPACT Working Paper, 2016(1). Gelsenkirchen: Institute for Work and Technology. [Accessed Nov 06, 2021]. Available: [https://www.researchgate.net/publication/317098762\\_Social\\_Innovation\\_Regimes\\_An\\_Exploratory\\_Framework\\_to\\_measure\\_Social\\_Innovation](https://www.researchgate.net/publication/317098762_Social_Innovation_Regimes_An_Exploratory_Framework_to_measure_Social_Innovation)
- de Sousa, E. G., & Júnior, V. M. V. (2013). 'Social Enterprises in Brazil: Socially Produced Knowledge Versus Social Innovation'. *Journal of Technology Management & Innovation*, (8), 166-176.
- Desmarchelier B., Djellal F., Gallouj F. (2020), Mapping social innovation networks: Knowledge intensive social services as systems builders, *Technological Forecasting and Social Change*, Vol. 157.
- Flew T., Cunninglem S., Bruns A., Wilson J. (2008), 'Social innovation. User-created content and the future of the ABC and SBS as public service media'. [Accessed Nov 06, 2021]. Available: <http://eprints.qut.edu.au>
- Germaine K. (2019), *A Practical Guide to Social Innovation*. [Accessed Nov 06 2021], Available: <http://fundingmaster.eu/a-practical-guide-to-social-innovation/>.
- Hutter, K., Hautz, J., Füller, J., Mueller, J., & Matzler, K. (2011). 'Com-munitition: the Tension between competition and collaboration in community-based design contests'. *Creativity and Innovation Management*, 20(1), 3-21.
- Katz, J. E., & Rice, R. E. (2002). *Social consequences of internet use: Access, involvement, and interaction*. MIT press.
- Kolloch M., Dellermann D. (2018), 'Digital innovation in the energy industry: the impact of controversies on the evolution of innovation ecosystems', *Technol. Forecast Soc. Change*, 136, pp. 254-264
- Lopes A, de Carvalho M. (2008), 'Evolution of the open innovation paradigm: Towards a contingent conceptual model', *Technological Forecasting and Social Change*, Vol. 132, pp. 284-298.

- Maiolini R., Marra A., Baldassarri C., Carlei V. (2016), 'Digital Technologies for Social Innovation: An Empirical Recognition on the New Enablers', *Journal of Technology Management & Innovation* vol.11 no.4, <http://dx.doi.org/10.4067/S0718-27242016000400004>
- Mason Ch., Barraket J., O'Rourke K., Stenta Ch. P., (2015), 'Social innovation for the promotion of health equity', *Health Promotion International*, Volume 30, Issue suppl\_2, pp. ii116–ii125, <https://doi.org/10.1093/heapro/dav076>
- Millard J. et al (2014) Social Innovation: What it is, why it matters and how it can be accelerated, The Young Foundation. Skoll Centre for Social Entrepreneurship Working Paper, 376.
- Mumford M.D., et al (2003), 'Cases of SI: Lessons from Two Innovations in the 20th Century'. *The University of Oklahoma. Creativity Research Journal*, 2003, Vol. 15, Nos. 2 & 3, 261–266
- Murray, R., Caulier-Grice, J., Mulgan, G. (2010). *The Open Book of Social Innovation*. London: The Young Foundation & NESTA.
- OECD (2021), Social Innovation. [Accessed Nov 06 2021], Available: <https://www.oecd.org/regional/leed/social-innovation.htm>
- Phills J.A. Jr., Deiglmeier K., Miller D.T. (2008), 'Rediscovering Social Innovation', *Stanford Social Innovation Review*, Vol. 6, No. 4, s. 34-43.
- Pisano, G. P., & Verganti, R. (2008). 'Which kind of collaboration is right for you'. *Harvard business review*, 86(12), 78-86.
- Stokes, M., et al (2017), What next for digital social innovation? NESTA. Mayo 2017.
- Suri M.V. (2013), 'From Crowdsourcing Potholes to Community Policing: Applying Interoperability Theory to Analyse the Expansion of "Open311"'. The Berkman Center for Internet & Society. Harvard University No. 2013-18, 7641.
- van Niekerk L., Manderson L., Balabanova D. (2021) The application of social innovation in healthcare: a scoping review, *Infect Dis Poverty* (2021) 10:26. <https://doi.org/10.1186/s40249-021-00794-8>.
- Wronka-Pośpiech M. (2015), 'Innowacje społeczne – pojęcie i znaczenie', *Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, No. 212, pp. 124-136.
- Yoo Y., Henfridsson O., Lyytinen K. (2010), 'Research commentary—the new organizing logic of digital innovation: an agenda for information systems research', *Inf. Syst. Res.*, 21 (4), pp. 724-735