20 Demola – global Innovation Engine for effective Co-Creation

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20.1 Abstract

Co-creation is a process which brings different parties, including customers and other stakeholders together to jointly produce mutually valued outcome through new forms of interaction, service and learning mechanisms. Co-creation strives to generate new practical co-operation methods between different actors to foster interaction and interplay amongst them. Co-creation requires a new set of skills and capabilities in which companies and universities do not often have sufficient capacity or experience.

Currently, 28 cities have Demola node in 15 countries. Demola is operated by local teams and facilitators in every location with 56 university partners and has engaged more than 900 companies into co-creation with students.
Despite an existing and successful global co-creation network, there is an ongoing need to explore new opportunities to improve the co-creation expertise in the local and global scale in Demola network.

Demola has recently launched a global “co-facilitation” program to support different Demola nodes by providing co-creation facilitator experts to facilitate the multidisciplinary teams and company partners together with the local facilitators. Co-facilitation is a method and not an outsourced facilitation service replacing or taking away the role of the local facilitators. Co-facilitation brings in and integrates knowledge, insights and diverse skill sets to be part of the global co-creation ecosystem to benefit the teams, companies, and R&D.
Demola co-facilitation program has been reaching out internationally to research communities and R&D infrastructure providers into open innovation process to connect different players to increase the quality and outcome of the co-creation projects. With the co-facilitation program, Demola has generated new practical co-operation method between different actors to have a sustainable model for utilization of researchers and academic R&D facilities globally. Co-facilitated co-creation and learning environment is also recognized as an international education program and has a legal entity to provide ECTS credit points. The education program and credit points are not targeted only to university students, but it also serves as continuing education program for the participating staff of the companies.
The Demola co-facilitation program has been piloted in 10 countries, and it has shown to be effective where cooperation between universities and companies has been infrequent, and the collaboration models have been weak.

Keywords: Demola, Co-creation, Open innovation, R&D, Co-facilitation

20.2 Introduction

Co-creation is a concept closely linked to open innovation. It is a process which brings different parties, including customers and other stakeholders together to jointly produce a mutually valued outcome through new forms of interaction, service and learning mechanism [1]. Co-creation can lead to better, quicker and less risky innovations that are beneficial to customers and companies. Co-creation includes direct innovation outcomes, like increased speed to market, lower cost, resulting in increased profits for companies and reduced sales prices for customers, improved product quality and higher customer satisfaction, reduced risk of innovation efforts not meeting customer needs [2]. Demola is a platform to experiment and test new ideas effectively, but also to validate and solve problems. Demola project offers the possibility to work in a multidisciplinary, talented team in fully facilitated innovation environment consisting of university students, researchers, and various companies. The project team includes 4-6 university students and project partner. For both students, company mentors and university professors, Demola provides a common framework and an inspiring atmosphere of creative co-creation and new learning environment. At Demola, university students and professors develop product and service demonstrators together with companies and public sector and create new solutions to real-life problems, business ideas and start-up challenges in multidisciplinary teams.
The Demola model is operating in various countries and has especially proved useful where cooperation between universities and companies is infrequent, study programs lack practical aspects, and the collaboration models are weak, based on traditional internships. Currently, Demola operates in 15 countries running local teams in every location.

20.3 Opportunities for open innovation

Open innovation offers significant opportunities for companies and SMEs. It is an innovation process in which companies use external knowledge and external paths to market to advance and commercialize their technology. The open innovation paradigm addresses the need to increase linkages for innovation and speed up knowledge diffusion. The idea is related to the need to combine and integrate different technologies, various (often multidisciplinary) types of knowledge, and diverse skill sets[3]. IP is intimately linked to open innovation. Efficient management of intellectual property combined with business acumen can assist firms in developing effective open innovation strategies [4]. For research-intensive SMEs, open innovation processes provide new opportunities to license IP instead of having to develop them into own products and services. For innovation-driven SMEs, open source and co-creation are the basis for the development and exchange of knowledge

20.4 Lack of the co-creation culture and skills

SMEs do not usually facilitate thinking out of the box, which leads to closed innovation, subcontracting, etc. They lack understanding and skills of connecting to different knowledge providers and partners and perceive high risk in such partnership modes.
Companies lack how to design cases for co-creation. For the majority of companies, innovation and R&D processes are mainly organized around internal development and project-based subcontracting models. Co-creation requires a new set of skills and capabilities where companies, and especially SMEs, do not have sufficient capacity or experiences. Often limited resources of companies and their focus on today's business result ininsufficient effort and capabilities required to develop future approaches and opportunities. European economies are often dominated by SMEs, and thus their capacity for co-creative innovation is crucial for business renewal.
Co-creation as a process and relevant discipline engaging different parties, including changing the focus from company-centric to end user-consumer centric, has been identified as one of

key factors facilitating the overcoming of the above limitations and gaining an advantage for all kinds of SMEs [5].
One major challenge in the co-facilitated co-creation process is the companies' limited perception, skills, and knowledge about co-creation specific aspects. The co-facilitation will raise awareness and increase the knowledge among the companies about the potential of co-creation processes, which will increase the absorptive capacity of companies in general and provide a methodology for formulating the companies demands for innovative ideas.
Demola projects create a novel approach to engage companies and improve their capacity for co-creation and to utilize under-leveraged research output. Efficient global linkages and matching of end users, innovative firms and research partners for team co-creation, and access to other resources such as knowledge and prototyping facilities is a critical success factor for co-creation scale-up and growth.
Transnational linkages are a mean that allows organizations to tap into a broader base of ideas and technology, find complementary expertise, and pool competencies to overcome barriers, such as lack of management resources and technological competencies. New ideas emerge from the combination of existing knowledge from various sources and, therefore, the diffusion of innovations is critical for future progress [6]
This approach includes elements focusing on the design of viable co-creation cases, customer and researcher involvement and linkage with innovation system stakeholders and research facilities. The co-facilitation program is based on the ideas of co-creation and open innovation that by definition mean "innovating together." Co-creation and open innovation strive to generate new practical co-operation methods between different actors to foster interaction and interplay amongst them [7]

20.5 Cross-disciplinary multi-stakeholder co-creation project teamwork

The local teamwork is facilitated by team facilitator and supported by co-facilitator expert engagement at specific project milestones to support the co-creation. Knowledge sharing and innovation management is key to successful process development and sustainability. The social network-based community of team facilitators already exists in Demola network, with online communication, dedicated taskforce groups, and annual meetings. Demola co-facilitation provides experienced facilitators while using a proven Demola model as a core process with essential co-creation elements. While utilizing the existing resources and knowledge, the co-facilitation includes access and connection to a vast knowledge base and numerous innovation actors in other Demola locations and regions outside the local project partnership. The model is mature enough to match end users, companies, research, and to build teams of various stakeholders, talents, and experts to meet innovation demands globally. Business, academia, government and public work together in end-user demand focused teams to co-create the future and drive structural changes far beyond the scope of what any one organization or person could do alone. This model also encompasses user-oriented innovation models to take full advantage of ideas' cross-fertilization leading to experimentation and prototyping in a real-world setting, The co-facilitated co-creation flow of knowledge is cross-cutting through all sectors and can easily be transferred to other countries. The methods developed and piloted in the project can be utilized in finding solutions to companies as well as applied to solve grand societal challenges, and will, therefore, contribute to increasing the socio-economic value for citizens. The co-creation process has also proven to be very successful regarding increasing students' learning capabilities which is also a socio-economic benefit. Working on multidisciplinary teams equips students with valuable skills for working life. Also, they learn cross-discipline collaboration which improves their employment opportunities [8].
The co-facilitation program will add a new element to the co-creation process by developing methods for involving researcher communities and piloting international mechanisms to connect relevant research to the co-creation process. The co-facilitation program will also

enhance the change of the mindset of companies and faculties at the universities, and create a win-win-situation where more companies will get involved in cross-disciplinary co-creation and create an interdisciplinary approach at the universities. Ultimately, the co-facilitation program is about a paradigm shift concerning the origins of innovations: The concept of the innovation ecosystem stresses that the flow of ideas, technology, and information among people, enterprises, and institutions is the key to a vibrant and productive innovation environment.

20.6 Conclusions

Demola co-facilitated Co-creation project program builds on quadruple helix notion with the aim to bring innovation system actors, including businesses, end-users (whether citizens, businesses, government or NGOs), academia and government to co-create together. It is of great importance for a successful co-creation process that all stakeholders have the same level of knowledge and understanding what are the specific issues and challenges of partnering with others in end-user centric co-creation, follow the same process and engage with trust and clear commitment. Demola provides a systematic method with clear roles and responsibilities for the co-facilitated co-creation platform, which is managed by experienced, well-connected and trusted Demola facilitators. A legal framework defining the goals, major milestones in the process, intellectual property (IP) rights, allocated resources and other specific issues is a crucial foundation for building commitment and trust.
One of the key concepts in Demola is based on a notion that universities are an essential source of knowledge and ideas for companies. However, the company's range of means to exploit university-based know-how is limited and therefore underutilized [9].
The Demola multi-disciplinary concept enables efficient collaboration between universities and industry, running concrete co-facilitated co-creation activities between companies, public sector, university students, and professors. Demola platform presents a cost-effective way for companies and public sector organizations to broaden their R&D bases and develop alternative avenues of access to the market.
International partnership in co-creation and business activities can open for firms a broader geographic market. By creating an active co-facilitating service that matches relevant links at international level increases the economic impacts of co-creation.

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