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Facilitating Innovation for Complex Societal Challenges: Creating Communities and Innovation Ecosystems for SDG Goal of Forming Partnerships

Amalya L. Oliver * and Rotem Rittblat

Department of Sociology and Anthropology, Hebrew University of Jerusalem, Mount Scopus Campus, Jerusalem 9190501, Israel; rotem.rittblat@mail.huji.ac.il
* Correspondence: amalya.oliver@mail.huji.ac.il

Abstract: This study applies a social transformation perspective and aims to provide a conceptual framework for different innovation-driven communities and platforms designed to answer complex problems. Based on the SDG goal # 17 (The United Nations Sustainable Development Goals) on the importance of creating partnership, we examine the structures, strategies, and processes designed by the Israel Innovation Institute (III) in the creation of communities and innovation ecosystems. Our research questions are what are the processes and strategies applied to create an ecosystem for an innovation community and to advance partnerships, and how do they evolve and develop. Based on data from interviews, participant observations, and document analysis, we analyzed the pre-conditions for establishing these communities and innovation ecosystems, the community managers' main strategies, and the processes in which these ecosystems evolve and develop. We find that the III creates a bottom-up process based on three inter-related functions: the creating encounters or partnerships within the community, leading to a second level of collaboration based on bringing various actors, knowledge, and resources from institutions or large organizations outside the original community. These functions lead to further reconfiguring the system higher-order change by setting additional encounters with multinational actors, state actors, and more. This study has significant policy implications for facilitating innovation for complex societal challenges.

Keywords: innovation; platforms; communities; ecosystem; strategies; management; learning; open-innovation; partnerships

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1. Introduction

Organizational innovation is said to be gained through collaboration among different organizations [1–3]. This claim is based on the understanding that the knowledge and expertise needed for innovative outcomes (including products, services, processes, or technologies) are rarely located under one organizational roof [4,5]. Organizations increase their ability to innovate when they can access and absorb capabilities and competencies sourced from external organizations. These competencies are learned through interactions and the recombination of external knowledge with the internal knowledge of the organization [6,7], as well as through "open innovation" practices [8].

Over the past few decades, we have witnessed new organizational forms that have reshaped how people participate in collaborative knowledge creation. Examples of these new approaches are scientific consortia [9,10] and online communities for open-source software development [11]. The innovative element in these approaches is organizations' ability to create open and collaborative knowledge-forming practices and digital platforms [12] and the ability to create university, industry, and government partnerships [13,14]. Among non-technological ecosystems, new collaborative platforms include the assumptions of self-organization [15] to create interdependencies among individual organizations. Such

organizational forms facilitate the creation of new knowledge development in serendipitous ways through emerging collaborations between knowledge agents [16]. In these new collaborative forms, different from traditional organizational knowledge-creation practices, the exploration of opportunities is based on knowledge experts' interests and self-efficacy beliefs [12,17–19].

Recent advances in the institutional landscape have led to the development and establishment of three key institutions: innovation platforms, innovation communities, and innovation ecosystems. We define innovation platforms as institutional structures that facilitate the formation of communities and ecosystems for knowledge creation. In these platforms, community members with related interests, motivation, knowledge, and technological capabilities, join together in spaces for inter-organizational encounters where new associations and partnerships emerge [20,21]. Such platforms are designed as innovation-driven platforms, are characterized by taking the role of "simplifiers", "catalysts", or "enablers" [19], and are community-based. However, counter to the understanding that communities emerge informally and from the bottom up, these platforms for knowledge community building are facilitated by top-down initiation. They are intended to create knowledge sharing and learning practices through events, activities, formal and informal spaces, face-to-face encounters, and online spaces, aiming to facilitate partnerships and create complementarities among strangers. Innovation platforms aim to provide a structure that facilitates interactions within clusters of interested parties. The participants encompass a large range of specializations and a differentiation of knowledge, capabilities, and skills. Such platforms modify the role of actors by shaping the structure of their potential interactions with other actors [20]. Effective innovation platforms provide opportunities for interactions and partnerships that are both vertical (i.e., between actors at different levels, such as technology people and clients) and horizontal (i.e., between actors at the same level in the community, that is, between technology experts or between first-tier suppliers). Previous research has found that a very high degree of cooperative orientation between parties results in a high degree of innovativeness and economic growth [22,23]. Thus, it is important that innovation platforms create a high level of collaboration. Repeating encounters within such platforms leads to the creation of innovation communities where members continue to share knowledge and technologies and form interactions and partnerships. These communities can later become institutionalized ecosystems.

Adner [24] defines an ecosystem by the alignment structure of the multilateral set of partners that need to interact for a focal value proposition to materialize. According to Adner, the ecosystem is established when four basic components are set. The first component is when the members have defined positions and activity flows among them; this should be a mutual agreement among the members regarding the positions and flows. Here, actors may have different goals, yet they will create a "consistent construal of the configuration of activities" [24] (p. 42). The second component is when there is a multiplicity of partners as well as a set of relationships that "are not decomposable to an aggregation of bilateral interactions" [24] (p. 42). The third component is when membership is defined, meaning that the participating actors in the system put joint value-creation effort toward the general goal. Last, the fourth component is when the value proposition of the ecosystem is achieved with the required activities that lead to its instantiation. Since different actors may have different values, Adner [24] claims that the analysis of an ecosystem must account not only for divergence in interest but also divergence in perspectives for value creation. A similar definition for an ecosystem is offered by Granstrand and Holgersson [25], who claim that "an innovation ecosystem is the evolving set of actors, activities, and artifacts, and the institutions and relations, including complementary and substitute relations, that are important for the innovative performance of an actor or a population of actors". These two definitions are based on defined positions and flows of collaborations, including complementary and substitute relations, the multiplicity of partners, joint value creation efforts, and general goals, yet with the divergence of interest perspectives. To this end, we add the process of institutionalization [26], where the ecosystem establishes mechanisms

that support its development and maintenance [27–29]. These institutional mechanisms include social, cultural, and cognitive elements that are legitimized by the participating actors.

Yet, despite the definitional clarity of an innovation ecosystem, it remains unclear how such ecosystems are created, evolved, and sustained [30]. Thus, the contribution of our study is in its focus on whether a non-governmental organization (NGO) can facilitate the creation of an innovation ecosystem and communities, and what strategies are used for developing these communities. The novelty of our paper is in offering a process perspective with different multi-level functions. In our study, we ask: What are the processes and strategies applied to create an ecosystem for an innovation community and advance partnerships, and how do they evolve and develop? Our study aims to contribute to both developing sustainability goal, SDG # 17 on the creation of partnerships and to theory on innovation platforms, communities, and ecosystems for complex societal challenges [31]. SDG # 17 is based on 19 sub-goals (https://www.sei.org/wp-content/uploads/2020/01/sdg-17-review-of-research-needs-171219.pdf, accessed on 1 June 2023). The most relevant one is SDG # 17, that claims for the need to: "Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries" (https://www.sei.org/wp-content/uploads/2020/01/sdg-17-review-of-research-needs-171219.pdf).

This paper is organized as follows. First, we discuss related organizational theories, including open innovation and communities of innovation platforms. Next, we review the elements by which innovation platforms and communities can be compared, and then, describe our methodology, followed by the findings. We conclude by discussing our findings and integrating them with the related literature.

2. Related Theoretical Framings and Conceptualizations

Innovation platforms constitute a new mode of encounter-facilitation environments in which interactions between various technology stakeholders can be formed. Such platforms can be defined as forums for interactions between participants aiming for innovation-related collaborations [32]. Similar to technological conferences, these platforms facilitate encounters; unlike conferences, however, they are based on the participation of multiple stakeholders through multiple modes of interaction and information sharing. This is also one of the challenges, since the participants perform many tasks such as inviting and searching for other stakeholders, giving talks, attending presentations, integrating the various stakeholders, and competing amongst themselves. They can also participate in many knowledge- and information-sharing events, ranging from large sessions to small face-to-face encounters. All these activities are facilitated by community organizers, and they combine top-down organized and designed structures with bottom-up activities that encourage serendipity-based encounters. These communities cannot be classified simply, and they encompass a combination of outside-in (open innovation), epistemic (knowledge sharing), and competitive features [33].

Several organizational theories can provide the underlying assumptions of these processes. We next describe two related theories that are relevant for understanding innovation platforms: open innovation and communities for innovation.

2.1. Open Innovation

In the past 15 years, the concept of open innovation (OI) has flourished in the organizational and strategy literature [3,34], as well as in science and technology policy research in different sectors [35,36]. A key feature of open innovation is the assumed beneficial opening of organizational boundaries and blurring them towards the environment [37,38]. Chesbrough and Bogers [34] (p. 17) define open innovation as "a distributed innovation process based on purposively managed knowledge flows across organizational boundaries,

using pecuniary and non-pecuniary mechanisms in line with the organization's business model". This approach makes the concept applicable to a variety of organizations and sectors.

While interactions with crowds [39] or dyadic interactions between organizations (e.g., in the form of dyadic alliances [40]) are comparatively well understood, fewer theory-building efforts have targeted interorganizational networks, understood as three or more organizations collaborating for joint purposes [28]. Recently, West and Bogers [35] stated that there is a need to focus more on network collaboration within the framework of open innovation. They claim that:

"Another important extension has been moving beyond the bilateral collaborations of Chesbrough (2003) [41] to various network typologies of collaboration [. . .] These network forms include alliances, communities, consortia, ecosystems, and platforms, and require firms to orchestrate (or negotiate) the joint value creation and value capture of the firms across the network [. . .] Little OI research has been done on such networks" (2017, pp. 44–45).

Randhawa et al. [3] (p. 758) joined this conversation, arguing that the "management of OI networks is a theme that has attracted limited research". Thus, the need to examine the formation of interorganizational networks and collaborations [42–46] is important for advanced open-innovation learning. These very network structures can become a major facilitating force that can enhance large-scale open innovation processes; increase knowledge sharing and reciprocating; and increase firm, industry, regional, and national levels of innovation [47]. This leads to our framing that regards the advancement of open innovation when there is access to exchanges within large networks of knowledge organizations.

2.2. Innovation Communities

Next, we discuss the meaning of the term "community" in the context of innovation platforms. A community is a setting designed to assist encounters between various stakeholders, including entrepreneurs, technology experts, companies, state-level institutions, policymakers, academics, investors, and users in finding partnerships to solve problems and create innovative products, services, or processes. Platforms are used for "open source" partnerships, "open innovation" interactions [48], or any other specialized areas where actors are searching for encounters and partnerships.

In discussing the concept of community, we return to sociological terminology and conceptual framing. In an early theoretical approach, Gusfield [49] distinguished between two major uses of the term community. The first use of the term refers to the geographical and territorial features of communities. These can include physical spaces such as neighborhoods, villages, or cities. The "relational" quality of the community is the second use of the term, and this refers to the aspect of the human interrelations, regardless of the physical location. These features are not mutually exclusive and can be combined. These combinations differ from the exclusive features offered by Durkheim [50], who claimed that, in modern societies, communities were developed around surrounding topics, capabilities, and skills more than around physical locations. Currently, the existing technological advancements made possible by internet access can disentangle communities from a physical aspect and offer relational interactions outside of any territorial context. The question is how strong and cohesive such communities will be and how long they will last, without any face-to-face interactions in specific physical locations.

In general, a community as a sociological structure is based on three main elements: membership, influence, and integration and fulfillment of needs [51]. However, in our context, we need to examine how these features apply. In the case of the top-down platform for innovation-driven communities, we need to understand the conditions under which they are established, the strategies applied by their managers, and the characteristics of the ecosystem in which they operate.

2.3. Summary: Knowledge Innovation Platforms for Solving Complex Problems

Our goal is to develop a conceptual framework for different platforms for innovation-driven communities. We propose three main constructs that capture the main essence of each platform and the model of change they offer:

1. Conditions under which innovation-driven communities are established. These conditions include the overall mission statement, the outcome needs of the public, the infrastructure available for the platform, the resources needed for the innovation community, and the definition of community membership. With these elements, the knowledge and practices are unfolding over time through negotiations between the partners.
2. Strategy and activities of community organizers and work processes and procedures. Each platform is built upon specific strategies and activities and is therefore associated with different events, work processes, and procedures for defining the members and their characteristics, designing the activities, and defining the expected outcomes.
3. Characteristics of the ecosystem in which each platform operates. The design of platforms for innovation communities operates in different environments. In our context, the environment includes issues of clarity and predictability of resources, needs, and anticipated changes; the institutional context of interest and legitimacy for the major area operation of the platform and the local/global context, and the demand and supply side associated with their activities.

Thus, our general research question is: What are the processes and strategies applied to create an ecosystem for an innovation community and advance partnerships, and how do they evolve and develop?

3. Method

Context: This study is based on the activities of a unique NGO, the Israel Innovation Institute (III). The III is introduced as a "'Think and do tank' bringing innovation technology and knowledge into real-world settings". The institute's self-introduction is presented on its website as follows:

"The institute enables and facilitates the development, testing, and demonstration of scalable, innovative solutions to global challenges—in indispensable fields such as healthcare, agriculture, transportation, and climate change. Moreover, the institute promotes a structured process of innovation management in organizations. We support innovation managers by developing various tools and advancing open innovation in Israel. Collaborating with public and private organizations, the institute and its partners are fueling a holistic sustainable change to deliver the highest quality of life in Israel and worldwide" (https://www.israelinnovation.org.il, accessed on 1 June 2023).

3.1. Data Sources

Interviews: We conducted in-depth, open-ended interviews with the head of the institute and the leaders of four communities and the team members of each community. These interviews focused on the value proposition of each community, the goals, structures, and processes designed and applied to each community, and how and why these changed over time. Additionally, we interviewed 20 participants in these communities during the community events in which we participated. These interviews aimed to understand the experience of participating in the community and the goals gained through participation.

Documents and existing materials: From III, we received all materials designed and published in general and on the four communities over the years. These materials provided information on the value proposition of the institute and the different communities, the tools applied for designing and operating each community, the programs and activities planned, and the processes of each community over time.

3.2. Data Analysis

Data were analyzed using multiple methods. We first conducted a text analysis of the interviews, seeking to identify the main themes [52] that emerged from their description of the planning of the platforms and the events conducted [53]. We also identified which networking methods and practices were applied by the platforms and how these were utilized by the active participants. Finally, we analyzed the archived data [54], the artifacts that were developed and utilized by each platform (including posted materials, discussion summaries, event participation accounts, event photos, short videos, etc.), and discussed the relationship between the physical design and structure of the events in each platform and the significance attributed to them [55] by the management of the Israel Innovation Institute that designed them.

4. Findings

4.1. The Israel Innovation Institute—Community General Strategies

To better understand III strategies, we share their value proposition, published in 2020:

"The Institute focuses on issues with the most public impact and advances those issues through a unique methodology of building innovation communities and open innovation programs. The Institute supports entrepreneurs and startups with finding resources, making connections, and exchanging knowledge with industry players. The Institute also initiates open innovation processes in organizations based on identifying challenges and needs and matching to the most relevant solutions. In addition, the Institute accompanies and supports international organizations that join the Israeli innovation ecosystem".

"The Institute works in collaboration with entrepreneurs, corporate entities, academia, investors, governmental offices, policymakers, municipalities, NGO's and service providers. This allows organizations to accelerate open innovation processes using designated tools and adapt them to real needs" (https://www.israelinnovation.org.il/about, accessed on 1 June 2023).

The value proposition depicts the focus on creating partnerships at the local and global levels while facilitating the participation of a wide range of stakeholders. From the interviews and documents, we found that the main strategies developed by the Institute include ecosystem management, access to information on funding and collaboration opportunities, and support for open-innovation practices between large organizations and entrepreneurs.

Figure 1 describes the three main functions of the dynamic community processes. Function 1 refers to creating encounters or partnerships within the community by bringing players from different sectors into the community platform. Function 2 refers to the second level of collaboration based on bringing various actors, knowledge, and resources from institutions or large organizations outside the community (such as universities). Function 3 aims to reconfigure the system or focus on high-order change by setting the third level of collaboration through multinational actors, inter-community ties, state actors, and more. Therefore, Function 1 is the source of innovation, sparked by the participating actors, and this leads to collaboration for new knowledge and other resources. This process ultimately leads to the reconfiguration of the system. Thus, we depict a bottom- up process of the innovation communities, as orchestrated by the III.

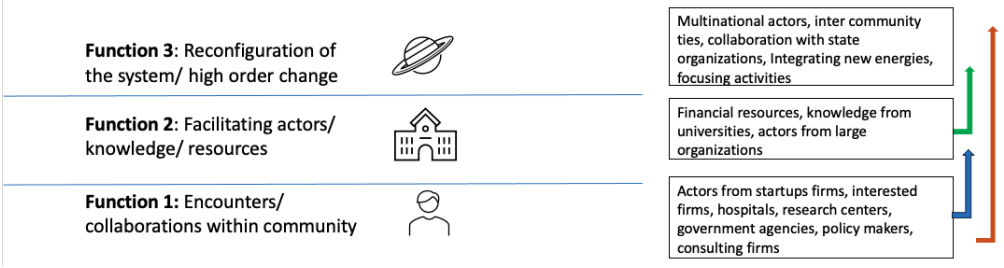

Figure 1. Ecosystem management: a holistic view of the process of the three dynamic functions orchestrated by the III.

4.2. Strategies of Ecosystem Management

From interviews with ecosystem managers, we learned about the main strategies they apply to establish and manage communities. These strategies are facilitated by the main events and the properties of digital information. The main events for each community include the invitation of prestigious experts and experienced participants from all related stakeholders in each area (including start-ups, universities, hospitals, government agencies, NGOs, and investors). The events are very engaging, well planned, and architecturally designed to create spaces for facilitation encounters and partnerships. The large open spaces include many different areas for prestigious lectures and panels, round table discussions, exhibitions, and personal meetings. There are food and drink areas all around and areas for informal gatherings. The main events attract many ecosystem members and allow formal and informal (organized serendipity) encounters. They also strengthen the commitment of participants to further participate in the ecosystem's events and conferences. Specialized digital properties are developed for each community by creating a website for the community featuring valuable information. These digital properties include information on events, lectures, a list of participating individuals and firms, and a marketplace.

The strategies of ecosystem management include an increase in the supply side of interest and knowledge about new technologies, and an increase in the demand side for the adoption and implementation of new technologies. The increase on the supply side includes the following:

1. Increasing human capital and knowledge in designated knowledge and technology areas—new knowledge development in the areas of technology and management is a complex task; to facilitate knowledge development, community members must understand the needs and structure of the market and be able to identify and understand new trends. Knowledge about the main issues that need attention is developed through discussions with key ecosystem experts. For example, in the context of health ecosystems, hospital managers are asked about their needs for innovative solutions, and these needs are given to teams of experts in collaborative workshops where they offer potential solutions and evaluate them (including costs, advantages, and disadvantages) in the search for optimal solutions. Later, in challenge competitions [56,57], where ecosystem members participate in staged competitions, innovative solutions are presented and ranked by ecosystem experts.
2. Increasing social capital, trust, and collaborations among community members—the community is based on the mutual interest of experts and stakeholders in the technological area. However, they need to interact to learn about new technologies and needs and understand the potential of new technological integration. These encounters are based on exposure to alternative technologies and solutions, developing trust in the interactions, and establishing partnerships.
3. Raising funds for the community—the mutual interest of community members in advancing and absorbing new technologies can benefit from additional funding by investors or other stakeholders, such as large companies. Funds raised for the activities of each community enable appealing events in attractive and accessible locations, with pre-event information and strategic space planning. Moreover, the aim was to offer free refreshments to the participants. Refreshments served during the events increase the commitment of participants to the community and create important locations for serendipitous encounters between members.
4. Advancing governmental and municipal support for the community—government agencies and municipalities have an interest in supporting technological communities that are associated with them. An example is the cities of the southern periphery (in the desert) that have an interest in supporting the DeserTech community.
5. Increasing the number of active participants in the community—all communities need to have a sufficient number of members. This is the role of community managers who review the applications of potential members, create interest, provide information, and recruit important technological players. These members are encouraged to

exhibit commitment to the technological field and continue to share their knowledge and abilities with members of the community. Increasing the demand side is also important. Activities and strategies by community managers at this level include the following:

6. Increasing the demand for innovation in large organizations by increasing knowledge and encouraging innovation experts within large organizations—large organizations are not always aware of the existing technologies and needs and do not seek potential partnerships in innovative fields. The III supports large organizations in the identification of needs and challenges through the development of a structured innovation-related work plan. Inviting members of these organizations to community events creates interest and opens opportunities for innovative partnerships with them.
7. Supporting open-innovation management systems within large organizations—open innovation involves the formation of knowledge and technology partnerships with external experts. However, large and established organizations do not always have the capabilities for open-innovation collaborations. The III managers work with open-innovation managers and enhance organizations' practices for such collaborations. The III developed methodologies and broad experience that provide organizations with hands-on tools and the know-how of mechanisms and practices to initiate, reinforce, and efficiently achieve innovation processes within their organization.
8. Supporting technological adoptions in organizations by acquiring practices and advancing the benefits of open innovation—the support for acquiring the practices needed to enhance open innovation is facilitated by the III managers who provide mentorship to innovation experts that are community members within organizations. Additionally, access to information on opportunities assists these experts in the advancement of open innovation and impacts the decisions made by top management in their organization. III established a global database (titled "marketplace") on potential members and information on opportunities in the areas of the different communities' platforms.

An example of information-integration support, which is needed in particular when environmental necessities are changing, is offered by the HealthIL community. The categories of "issues of clarity and predictability of resources" and "needs and anticipated change" in the platform for health-related innovation community experienced a major shift and operation boost under the coronavirus pandemic. This happened when the government and health-related state agencies asked the Israel Innovation Institute to direct the focus of the platform to issues that could bring innovative solutions for the medical system's new needs, including hospitals, community health clinics, and health organizations. The novel activities of the platform required a new definition of the problems and solutions needed timeously, the prioritization of their urgency, the analysis of collaborative complementarities, track information on potential partners, meetings with potential partners, and the choosing of the best collaboration.

5. Conclusions and Discussion

The research literature on organizational innovation claims that innovation results mainly from inter-organizational collaborations and coordination [58,59]. This literature ranges from the analysis of collaborations between individual knowledge experts to the analysis of inter-organizational collaborations [4], and macro-level issues of innovation-based collaborations within industries [60] or within and between countries [61]. These partnerships include various collaborations between universities, industries, and governments [13,14]. However, the literature offered limited evidence on how innovation platforms and communities can be established and developed by applying a process perspective. The contribution and novelty of our paper is in the additional level of research that focuses on communities organized by a non-profit innovation booster and enhancement organization. This study introduces an emphasis on a new case study area that allows us to analyze bottom-up and top-down innovation community platforms and disentangle its

main components. From the data collected on four innovation communities designed by III, we learned that innovation communities are planned structures that invite relevant ecosystem participants to join in searching for partnerships that can lead to innovative products needed to solve complex societal challenges. The III offers a top-down strategic approach where the communities are orchestrated by the III by establishing a central information database/marketplace and creating meetings that attract and bring together community members and maintain their participation and interest in the shared goals.

Our paper follows Adner's [24] classification of an ecosystem as a structure, yet we add to it a process-based analysis coupled with strategy issues that are important for policy implications. The novelty of our paper is in acknowledging the importance of central processes operating on different inter-dependent levels and functions that explains the operation of the innovation platform.

Limitations and Suggestions for Further Research

Innovation processes operate within different social structures and exhibit the dynamic, complex, uncertain, and diverse interests of the various actors involved [62]. Due to uncertain economic and organizational environments and complex societal challenges that require innovative solutions, we need to better understand how innovation community ecosystems can be constructed and managed [45]. In our study, we aimed to depict and analyze the ongoing structures and processes designed by III. Our study has three main limitations that should be further examined in future research: the need for longitudinal examination of the platforms and the outcomes; the comparison to other organizational forms of innovation platforms; and the context of national culture and social issues in designing and managing such platforms. III was able to establish various knowledge communities and innovation ecosystems for learning and collaboration. The four communities shared some features, yet were designed to fit the needs of their specific societal challenges. These are four platforms designed to become communities and ecosystems by combining top-down structuring, strategizing, and bottom-up interest and commitment. These two forces created grounds for various forms of innovative collaboration. However, this design is still in process, clear outcomes need to be accounted for and evaluated, and we need to move on from connecting people platforms to more analytical and complex thinking about community engagement and management. An ongoing study that focuses on the measurement of outcomes and effective facilitation strategies needs to follow this study.

Moreover, III operates and starts with all communities within Israel. Some have become global, while some are still local and focus on the specific advantages or opportunities for innovation in Israel. The growth rate of all communities thus far depicts the high interest of community actors and the potential for significant outcomes. However, other innovation platforms must be examined. For example, innovation platforms within universities, large high-tech organizations, or nationally funded consortia are alternative organizational forms where the selection of participating actors is strategic, funding for participation is granted, and the close monitoring of milestones is enacted (see, for example, Kalish and Oliver [9]). Such designed platforms may not aim for a bricolage combination of resources, serendipity of interactions, or building communities of innovation, yet they offer an effective solution to solving societal challenges.

Finally, context is important for understanding the success of platforms for innovation ecosystems. Israeli culture is known to be highly entrepreneurial and innovative [63] within industries]; in January 2019, Israel was ranked fifth in the 2019 Bloomberg Innovation Index, which offers an annual ranking of the world's 60 most innovative countries. Additionally, the culture is based on low levels of formality, social networks are dense and serve as a strong connecting force [64,65], and there is a low level of power distance and ambiguity avoidance. Recent studies have found that the combination of collectivistic and individualistic cultures, accompanied by local factors, leads to exceptionally high levels of innovation. The lack of formality leads to an open sharing of ideas and low distance between people in a hierarchy. Hubris, or in Hebrew *chutzpah*—a characteristic associated

with the "breaking of rules" or thinking outside of the box—encourages creativity in new ideas generation and the long-term sustainability of the innovation system [66]. These cultural factors contribute to enhanced partnerships and knowledge exchanges within community platforms. Other studies on innovation platforms should also explore the general norms and cultures in which these platforms operate.

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