Chapter 5

Building Cocreation Platforms

Abstract

This chapter explains how cocreation can be supported by establishing platforms, which provide knowledge, resources, and opportunities for local actors to come together in cocreation arenas. Platforms make it easy for local actors to connect, interact, and engage in productive joint activity. The chapter provides an overview of different types of platforms and describes their distinctive organizing logic, which includes mediating the relationship between different stakeholders, scaffolding their joint action, and leveraging their capacity for change. The chapter identifies important platform dynamics, such as attractor and amplifier effects, synergy, scaling, and social learning, that enable them to successfully support cocreation. Finally, the chapter discusses how platforms themselves can be designed to enhance these dynamics.

Keywords: Platforms; types of platforms; roles of platforms; platform tools; platform design; platform dynamics

All Hands-On-Deck: What Are Cocreation Platforms?

Platforms are relatively permanent, yet flexible, infrastructures that provide knowledge, resources, and organizational templates that local conveners can use when constructing, adapting, and multiplying temporary arenas for the cocreation of novel solutions. Sometimes, local governments or NGOs work with local conveners to create platforms that reduce the transaction costs of convening relevant actors and facilitate collaboration between them. At other times, central governments, international NGOs, or other more or less remote sponsors provide such platforms. In the latter case, local sponsors and conveners must work together to ensure the social embedding of the platform so that it is tailored to the local context. This section describes the basic architecture of cocreation platforms.

A few decades ago, governments only resorted to collaborative problem-solving strategies when hierarchical and market-based strategies did not perform as expected. This has changed in recent years. Governments no longer regard collaboration as a last resort but tend to consider it an integral part of their strategic toolbox. The UN's recommendation of stimulating partnerships as a recipe for achieving the SDGs attests to this development. Since cocreation now tends to be a recurrent and increasingly popular strategy for public problem-solving, rather than a contingent one-off event, it makes good sense for sponsors to either build on, or make use of, collaborative platforms. This chapter will reflect on the design choices relevant to the construction of cocreation platforms.

Many sustainability developments must convene participants across both different policy sectors and between the public and private sectors, and platforms may play the role of facilitating the coordination of sustainable development efforts (Prescott & Stibbe, 2020). The concept of a "multi-stakeholder platform" originally grew out of work on natural resource management where effective management called for coordination and cooperation among stakeholders with different agendas. Cocreation platforms can also provide tools and organizing frameworks that help civil society to engage in sustainability efforts. For example, collaborative platforms might promote "participatory rural appraisal" strategies to aid local fishers in managing small scale fisheries sustainably (De la Cruz-González, Patiño-Valencia, Luna-Raya, & Cisneros-Montemayor, 2018).

Platforms promote connectivity, both horizontally among platform stakeholders and vertically across governing levels and scales (Prescott & Stibbe, 2020). They often play an intermediary or interlocutor role in cocreation (Fowler & Biekart, 2017). In a South African municipality, for instance, a *Raising the Citizen's Voice* project created a platform to encourage interaction between local citizens and government to improve water sanitation (Sutherland, Hordijk, Lewis, Meyer, & Buthelezi, 2014). Platforms can also help to facilitate arenas that bring participants together in ways that facilitate problem-solving and ease the costs of collaboration. By facilitating communication among an expanded network of community members participating in cocreation and by increasing access to wider range of community members, platforms can be understood to be performing what Kauffman (2016) calls a "network activation" strategy.

Platforms can also serve as incubators of change and governments can productively learn from the nonprofit and philanthropic sectors about how they may sponsor grassroots change efforts through the construction of platforms. The literature on collective impact, for instance, has found that so-called "backbone organizations" are particularly important for coordinating action between multiple parties (DuBow, Hug, Serafini, & Litzler, 2018). Whether as incubators or backbone organizations, cocreation platforms create the conditions in which self-organizing change can occur. Even research that focuses on grassroots (bottom-up) innovation recognizes that government can promote enabling conditions for innovation (Grabs, Langen, Maschkowski, & Schäpke, 2016).

Table 5.1. U.N. Platforms Related to the SDGs.

Platform	Central Activity Related to SDGS
The SDG philanthropy platform	Online collaboration platform to facilitate action among foundations and other funding organizations for SDG action
Sustainable development knowledge platform	Supports capacity development for achieving the SDGs and for conducting Voluntary Reviews
Partnership for SDGs platform	Encourages networking and partnership formation to advance the SDG agenda
Regional collaborative platforms	Bring together different U.N. bodies on a regional basis to support the SDGs
U.N. Global platform	Supports collection and use of big data for supporting the post-2015 development agenda
U.N. Global compact action platforms (in multiple areas)	Supports the SDG agenda by fostering sustainable business practices
Sustainable development solutions network	Mobilizes expertise to promote integrated solutions for sustainable development
Local2030	Supports localization of the SDGs
2030 agenda partnership accelerator	Supports the formation of multi-stakeholder partnership platforms, including training support in partnership development

As demonstrated in Table 5.1, the U.N. has been particularly prominent in supporting a range of important platforms with relevance to the SDGs. The U.N. distinguishes a number of types of platforms: *dialogue platforms* promote discussion and deliberation among stakeholders around particular problems and issues; *knowledge platforms* are designed to share knowledge and best practices in certain policy or technical areas; *reporting and standard-setting platforms* support the development of collective principles or standards for action and facilitate commitment or compliance with these principles or standards; and *transformative partnership platforms* facilitate coordinated action to achieve particular goals (Prescott & Stibbe, 2020).

Platforms can also create conditions that promote accountability, both vertically across governing levels and between different platform participants. In Guatemala, for example, a network of indigenous groups in 35 rural

municipalities created a platform to pool information about health service problems, thus enhancing their ability to hold health providers accountable for service provision (Flores & Samuel, 2019).

Platforms may operate at different scales. Many U.N. platforms operate on a global scale and promote collaboration on a national basis. Scaling Up Nutrition (SUN), UNDISDR's Platform for Disaster Risk Reduction, and UNDP's Green Commodities Program all support national or multi-national regional platforms (Beinsheim et al., 2018; Djalante, Holley, & Thomalla, 2011). The UNDP's Green Commodities Program, for example, creates national commodity platforms like Indonesia's platform for promoting the sustainability of palm oil production. This platform promotes efforts relevant to several SDGs, including gender equality, small producer livelihoods, and natural habitat conservation. The UNDP has facilitated the organization of similar programs in other countries – including platforms on cocoa in Ghana and pineapples in Costa Rica (Mintrom & Thomas, 2018).

While some platforms facilitate action on a global or national scale, many platforms have a local focus. Cities have led the way as local platform sponsors. In Kitakyushu, Japan, for example, the city created a platform called *Palette for the Future* in a bid to make it a world capital of sustainable development (Ofei-Manu et al., 2018, p. 378). With active support from the mayor and overseen by a multi-stakeholder steering committee, the platform promoted citizen participation in the development of the city's sustainable development plans. Similarly, Okayama City, Japan, initiated an Education for Sustainable Development project in 2005 that includes over 240 organizations (Didham, Ofei-Manu, & Nagareo, 2017). Sponsored by a partnership between the municipality and a Regional Center of Expertise (organized under the auspices of the U.N. University), this project built on existing community institutions (*kominkans*) that encourage local citizen participation and serve as an umbrella for several specific initiatives. A central strategy of this platform is to cocreate sustainability knowledge.

While some platforms are organized broadly around place, others focus on promoting sustainability in certain policy sectors. For example, in the Dutch city of Rotterdam, the *Concept House Village Lab* is a place for co-designing more sustainable building technologies with residents, while the *Blue City Lab* has sought to encourage cocreation initiatives around a "circular economy" and another innovation platform, *Mooi Mooier Middelland*, has sought to improve public spaces (Puerari et al., 2018). In the United Kingdom, *Newcastle City Futures* (NCF) has helped to facilitate a range of demonstration projects related to housing and transportation (Vallance, Tewdwr-Jones, & Kempton, 2020).

Types of Cocreation Platforms

Beyond these distinctions related to scale presented in the previous section, there are also a number of different types of cocreation platforms that have been

recognized. Although these platform types overlap in many respects, it is useful to distinguish them.

Knowledge Cocreation Platforms

Knowledge platforms serve as intermediaries between different stakeholders and focus on jointly creating and sharing information (Dlouhá, Barton, Janoušková, & Dlouhý, 2013). Environmental virtual observatories, for instance, collect and share data and provide analytical tools that encourage distributed cocreation of knowledge (Karpouzoglou et al., 2016). Knowledge-creation platforms may work together with citizen science to develop distributed data collection (Wilson et al., 2018), though such efforts can run into resistance or incentive problems (Wilson et al., 2018). Platforms can also take the form of collaborative research platforms for developing policy-relevant knowledge for sustainable development (Didham & Ofei-Manu, 2020). They may also pool information or knowledge from a network of similar organizations, such as watershed organizations (Medema et al., 2017).

Living Labs

Living labs have become a popular platform for sustainability, particularly in Europe (Compangnucci et al., 2021). As the name implies, living labs are understood to foster experimentation and innovation in real-world settings to develop solutions and strategies for sustainability. They have been used in a range of areas related to the SDGs, from aging and long-term care to energy conservation and tourism. For example, the Altona Mobility Lab focuses on sustainable mobility in Hamburg, Germany (Tatum et al., 2020).

The living lab movement explicitly adopts a strategy of cocreation (Haug & Mergel, 2021), with a focus on "having stakeholders either make or learn together, or both, in a single project or broader network" (Van Geenhuizen, 2019, p. 4). It focuses specifically on the cocreation of experimentation, though the actual degree of cocreation can vary significantly in different living labs (Menny, Palgan, & McCormick, 2018). An ambitious example of trying to scale-up living labs is the EU's UNaLab project, which has created living labs that focus on climate issues in 10 different European and non-European municipalities (Chronéer, Ståhlbröst, & Habibipour, 2019).

A specific type of living lab of relevance to the SDGs is the urban transition lab, which seeks to support the innovation necessary for sustainability transitions in particular urban areas (Nevens, Frantzeskaki, Gorissen, & Loorbach, 2013). Such labs are understood as helping to bring together the teams of actors relevant for sustainability innovation. A related idea is the transformation lab, which is conceptualized as creating a transformative space for "safe enough" experimentation that supports sustainability transitions by facilitating dialogue and interaction (Pereira, Karpouzoglou, Frantzeskaki, & Olsson, 2018, 2020). The ability

of living labs to encourage significant innovation depends on who is mobilized to participate (Voytenko et al., 2016).

Living labs have been primarily a local and an urban strategy, though nothing in theory limits them from operating at larger scales or in rural areas. They are also less common in developing countries but have made some inroads in these contexts where they are generally understood to be community platforms for enhancing knowledge cocreation for addressing community problems (Hooli, Jauhiainen, & Lähde, 2016).

Innovation Platforms

Innovation platforms bring together citizens and stakeholders for the explicit purpose of innovation. Perhaps the best-known innovation platforms focus on farmers and attempt to bring stakeholders (farmers, service providers, researchers, distributors, etc.) together across the value chain to introduce and develop innovative agricultural practices (Adekunle & Fatunbi, 2012). An important goal of these agricultural innovation platforms is to improve the livelihoods of small farmers – an agenda that supports the SDGs anti-poverty mission (Florini & Pauli, 2018). Other agricultural innovation platforms focus more on promoting sustainable farming practices. The *Better Rice Initiative Asia* (BRIA) takes on both goals – aiming to improve farmer livelihoods and to support sustainable rice farming practices. BRIA is affiliated with the *Sustainable Rice Platform*, which describes itself as a multi-stakeholder platform that collaboratively sets standards for sustainable rice production. Although agricultural innovation programs may be costly and vary in their effectiveness, they have a track record of promoting positive sustainability gains (Schut et al., 2019; van Ewijk & Ros-Tonen, 2021).

Smart City Platforms

Smart city platforms promote the possibilities of using the internet and digital technologies to improve the sustainability of cities, as well to achieve other urban objectives. They provide the institutional and technological frameworks in which smart city initiatives can be promoted and developed. Typically, these platforms actively promote citizen participation and cocreation and often focus on developing apps that can reduce energy use or improve service. Like Living Labs, they often support various types of experimentation (Matschoss & Heiskanen, 2017). Openness and transparency and partner alignment are found to be important success factors in successful cocreation on smart city platforms (Akterujjaman, Mulder, & Kievit, 2020).

Deliberation Platforms

Deliberation platforms typically encourage consultation with citizens, though they may also help to create the conditions of active citizenship necessary to promote cocreation (Fuster Morell & Senabre, 2020). For example, a German

consultation program – the *Mitreden-U Platform* – found that it received a surprising quantity and quality of submissions that led to new issues being placed on the sustainability agenda (Schulz & Newig, 2015). Online consultations like this can increase the number of citizens who can participate in sustainability processes over wider geographical areas. In the German city of Hamburg, a public forum called *Future Council Hamburg* has provided a platform to engage civil society around sustainability issues, and notably the SDGs (Krellenberg, Bergsträßer, Bykova, Kress, & Tyndall, 2019). Finland has been particularly advanced in integrating local participatory platforms into urban development issues (Anttiroiko, 2016).

Partnership Platforms

Partnership platforms help to facilitate the creation of partnerships for various purposes, including sustainability (Reid, Hayes, & Stibbe, 2015). For example, the Global Environmental Facility's *Small Grants Program Partnership Platform* and The United Nations' *Fund for International Partnerships* have actively supported the creation of partnerships to advance sustainability goals (Andonova, 2017). Partnership platforms often aim to encourage cross-sectoral collaboration between public and private actors (Selsky & Parker, 2010).

Sharing and Crowdsourcing Platforms

Sharing platforms enable citizens to share or exchange goods, tools, or services. They do not necessarily require cocreation and are perhaps better described as exchange platforms, but they often have elements of cocreation in their design. Under the leadership of Mayor Park Won-soon, the city of Seoul, South Korea has become a particularly vibrant example of developing a city-wide sharing platform (Moon, 2017).

Crowdsourcing platforms bring forth and aggregate ideas, funding, and activities. They may cultivate cocreation to a limited degree but may be important in supporting sustainability solutions. Crowdsourcing platforms like *OpenIDEO* in Detroit or *Give a Minute* in New York, Chicago, and Memphis have provided a framework for crowd-sourcing solutions to urban problems (Certoma, Corsini, & Rizzi, 2015).

This list of different types of platforms attests to the fact that platforms may have different purposes and designs. They all support cocreation to some degree but they vary in the extent to which cocreation is central to their operations.

The Organizing Logic of Cocreation Platforms

A key aspect of the organizing logic of cocreation platforms is that they make it easy for others to organize and pursue joint projects. They do this in several ways. First, platforms *enable connections* between citizens, stakeholders, and public authorities. They may do this by creating physical meeting places or by providing

digital tools that facilitate matchmaking and quick and easy two-way communication. Second, they *facilitate high quality interaction* between cocreators and between cocreation projects. They may do this by providing leadership and intermediation that facilitates high-quality group deliberation and problem-solving or by helping cocreators access and align their projects with available resources and authority offered by other projects. Third, platforms *provide tools or templates* – such as decision support or process management tools – that can be customized in specific settings and that make it easy for cocreators to carry out successful projects.

While platforms may play many roles, we suggest that they can play at least three crucial roles in facilitating action toward sustainability: intermediating, scaffolding, and leveraging. COVID-19 has been an eye opener about the importance of platforms that provide these different roles to support cocreation of solutions to pressing problems. At the same time, the pandemic has accentuated the value of digital means of communication and coordination over the use of face-to-face interaction in order to curb the spread of infection.

The Intermediating Role of Platforms

Platforms connect and mediate the relationship between different platform stakeholders. They typically work to forge productive interconnections between people, programs and ideas – a role that can be described as *intermediation* (Moss, Medd, Guy, & Marvin, 2009). In performing this role, they often strive to align action between local and higher levels of government or action (Perry, Patel, Norén Bretzer, & Polk, 2018) and they serve to bridge the divide between public and private sectors and different industry or policy sectors (Kilelu, Klerkx, Leeuwis, & Hall, 2011). This intermediating role is sometimes described as *bridging and brokering* (Crona & Parker, 2012). Platforms not only connect and broker between individual people but also between projects, organizations, and even entire networks (Kanda, Kuisma, Kivimaa, & Hjelm, 2020; van Lente, Hekkert, Smits, & Van Waveren, 2003).

As stressed in the literature on innovation platforms, platforms can play the role of innovation brokers. These brokers help to articulate the collective demand for innovation by convening appropriate discussions and envisioning exercises; they facilitate linkages between important stakeholders; and they help to align the actions and efforts of stakeholders to foster coordinated and effective action. Innovation brokers often need to maintain a certain degree of neutrality vis-à-vis participating stakeholders to ensure that their needs and ideas are being considered and respected. Platforms must often walk a tightrope between maintaining neutrality and moving the agenda forward and attracting funding from particular donors (Klerkx, Hall, & Leeuwis, 2009).

To play an effective intermediating role, it is important for platforms to be strongly embedded in the domain or sector in which they are operating – that is, to have strong connections to the relevant stakeholders. However, an interesting tradeoff may be present in terms of the degree of embeddedness in local contexts

(Haveri & Anttiroiko, 2021). Platforms with strong local roots may be highly capable of facilitating action among local stakeholders but will often be less able to bridge across levels, jurisdictions, and sectors. Conversely, more globally or nationally initiated platforms may be better at forging cross-boundary connections but may fail to draw the attention of local actors because knowledge of the platform and what it can do does not penetrate to the local level. Another possible tension is related to the degree that platforms monopolize the intermediation role. Many different actors may serve as connectors and brokers, roles that often develop in an organic, bottom-up fashion (Manning & Roessler, 2014). When platforms find that they have difficulty reaching out to and connecting a particular group of actors, they may find it effective to rely on other people or organization who can better serve this role (van Hille, de Bakker, Ferguson, & Groenewegen, 2020). For example, young people are often better than adults when it comes to mobilizing youth to participate in sustainability projects.

The Scaffolding Role of Platforms

Another key role played by platforms is to provide scaffolding that supports cocreation. This scaffolding often involves the provisions of templates that provide certain preestablished or preformed guidelines, strategies, and organizational forms that reduce the cost of communicating and organizing and help to sustain interaction of stakeholders over the lifetime of the project. These templates are particularly important where the costs of organizing are high and when enduring collaboration is necessary to achieve the desired results.

Some templates are designed to help organizers and participants to rapidly assemble effect project, campaigns, or strategies (Ansell & Miura, 2020). These templates are typically generic institutional frameworks that have proven useful in other places but that can be customized for specific uses. Templates may provide norms and routines for how to attract and recruit participants, how to organize day-to-day governance, and how to create ground rules that facilitate communication and interaction. They may also provide guidelines for how to initiate and conduct activities that advance common agendas and how to monitor and evaluate processes and results to improve performance and accountability.

Templates may vary in terms of how restrictive or flexible they are and to what degree they can be customized. Some templates operate like franchises with strict rules and demands for how local instances of cocreation should be organized (Ansell & Gash, 2018). Other templates may only consist of general organizational guidelines that may or may not be followed. In this case, local participants are free to pick and choose between different organizational ingredients and add new one. There is a tightrope to walk here between overly restrictive versus overly loose templates. Restrictive templates can undermine necessary customization to local conditions whereas loose or minimalist templates can fail to provide the necessary scaffolding of cocreation processes.

One of the most common and important forms of platform scaffolding is the organization of workshops. By organizing processes of cocreation using a

pretested template, workshops can help participants identify opportunities for collaboration and innovation. Workshops are learning-based interactions that bring stakeholders together to engage in creative activities. They are an essential and common strategy for facilitating intensive communication among stakeholders with a view of exploring possible solutions to common problems. Strategies of effective facilitation of cocreation workshops need to be sensitive to the different situations and starting points of diverse communities (Amenta et al., 2019).

Workshops require the creation of neutral spaces while also being mission-driven. To satisfy both needs, they must strategically mobilize relevant stakeholders, connecting them and enabling them to work together. To do so, it is important to bring different stakeholders up to speed by providing a common baseline of knowledge and information. Likewise, it is important to identify resource complementarities and patterns of interdependence among stakeholders. In the early stages of cocreation, workshops can help stakeholders to *see* the value of working together, perhaps by helping them achieve early "small wins."

Workshops often introduce various tools to assist participants in the cocreation of new ideas (Sanders & Stappers, 2014). For example, participatory mapping can create a shared object (the map) that becomes a basis for communication and knowledge-sharing, which can in turn reveal possibilities for more ambitious projects (Akhar et al., 2020). Participatory mapping for Dengue control in Cambodia found that the mapping process itself created new community relationships and knowledge and the maps themselves became the basis for improved control interventions (Echaubard et al., 2020). Design methods also offer many possibilities for cocreation workshops (Jones, 2018). Such methods include "geodesign" that often works interactively with mapping approaches (Moura et al., 2020). Scenario planning, visualization, and role playing can all be used to facilitate stakeholder communication and brainstorming (Akoglu & Dankl, 2021; Quist & Vergragt, 2000; Segelström & Holmlid, 2009).

The Leveraging Role of Platforms

A key feature of platforms is that they try to make tools available to facilitate common action among a broad range of actors (Ansell & Miura, 2020). A broad range of tools and strategies can be used by platforms to facilitate the mobilization and organization of relevant stakeholders to advance sustainability. Two important types of tools include participatory planning and modeling tools that both assist actors to expand their capacity to analyze situations and make effective decisions. Participatory planning tools allow local stakeholders to investigate different future scenarios that help to understand issues related to sustainability decision-making (Fuldauer, Ives, Adshead, Thacker, & Hall, 2019). Modeling tools allow stakeholders to explore a range of sustainability options at low cost and to evaluate how different strategies may produce synergies in relation to different SDGs (Moallemi, 2020). As shown in Table 5.2, there is a range

Table 5.2. Platform Tools for Facilitating Cocreation.

Platform Tools for Facilitating Cocreation	Description
On-line training	On-line training programs may help to build capacity for pursuing SDG goals (Bloomfield et al., 2018).
Decision support tools	Decision support tools, such as the sustainable value mapping and analysis methodology (Winans, Dlott, Harris, & Dlott, 2021), or Adaptation support tools (Van De Ven et al., 2016), can provide systematic support for multi-actor decision-making.
E-participation tools	ICT can support "e-participation" that in turn facilitates cocreation (Szarek-Iwaniuk & Senetra, 2020).
Process management methodologies	Process management methodologies typically provide an ordered process of engagement around specific collaborative tasks. Examples such as the Life Cycle Co-Creation Process (LCCCP) have been developed to support stakeholder engagement (DeLosRíos-White, Roebeling, Valente, & Vaittinen, 2020).
Digital design and fabrication tools	Fab labs provide tools that allow cocreation around digital design and fabrication (Fleischmann, Hielscher, & Merritt, 2016).
Planning Support tools	Some planning support tools are interactive (such as "maptables") and facilitate working together on planning issues (McEvoy, van de Ven, Santander, & Slinger, 2019).
Serious games	Serious games can be used to foster communication and social learning among stakeholders (Jean et al., 2018).
Simulation and scenario modeling	Simulation and scenario modeling may be very useful for modeling the interactive effects of different factors on SDGs (Allen, Metternicht, & Wiedmann, 2017; Collste, Pedercini, & Cornell, 2017).
Qualitative system models	Qualitative systems models like iModeler may be useful for working with stakeholders (via stakeholder modeling workshops) to develop

Table 5.2. (*Continued*)

Platform Tools for Facilitating Cocreation	Description
	analyses of the interaction of the SDGs (Neumann, Anderson, & Denich, 2018).
Conceptual methodologies	Some concepts and tools, such as water footprints (Berger et al., 2021), can be used to help communities understand and track their use of scarce resources.

of other and more specific tools that can empower joint inquiry and decision-making.

Such tools may facilitate cocreation processes. For example, an interactive platform supporting low carbon housing in Tampere, Finland has provided civil society with communication tools to support building coalitions (Kabisch et al., 2019). Other tools may help stakeholders engage in planning, design, or implementation. Planning support tools, for example, provide analytical frameworks for developing improved planning processes. While these tools have generally been found to strengthen participation in planning, they still remain somewhat exploratory (Flacke, Shrestha, & Aguilar, 2020). Moreover, they need to be "fit for purpose" in the local contexts in which they are deployed (Jiang, Geertman, & Witte, 2020). A general finding is that facilitation is often needed to make generic tools useful to communities, particularly if they represent complex or unfamiliar technologies.

Essential Dynamics for Platform Success

Platforms need to make it easy for others to connect, interact, and engage in productive joint activity. In this section, we investigate more deeply what it takes to do that. In very broad terms, platforms are relatively lean institutions that rely on soft rather than hard power to steer interaction processes. Thus, platforms tend to be more successful when they can leverage or mobilize action in ways that create positive experiences and opportunities for platform participants.

One important platform dynamic capitalizes on *attractor effects* – the notion that "success begets success." This idea suggests that platforms need to be strategic about building up momentum and interest by carefully targeting opportunities for early successes. Strategically engaging citizens and stakeholders in ways that produce wider interest or awareness, or that are entertaining, enjoyable, or fulfilling, can stimulate attractor effects. Attractor effects may also be encouraged through thoughtful intermediation that produce immediate benefits to participants or through the provision of tools that create interest, motivation, or commitment, among stakeholders.

A second and related dynamic is the importance of discovering and exploiting *synergies* because gains from bringing skills, resources, and authority together can provide important positive advantages. For platforms, finding and developing synergies is often a matter of strategic intermediation that helps to facilitate connections and exchange between different parties who bring different resources, skills, and perspectives to the table. In a cocreation context, the mobilizing power of platforms can encourage the discovery of possible synergies or reduce the transaction costs for citizens and stakeholders. Platform tools may illuminate the interdependence between stakeholder goals and thus foster the exploration of possibilities for mutually beneficial outcomes.

The third dynamic is the pursuit of *amplifier effects* – that is, where the outputs of cocreation are much greater than the inputs that individual participants originally invested. Such effects often depend on the ability of platforms to make low-cost generic templates and tools available to distributed user groups, who can then customize them for their own specific agendas and context. However, amplifier effects may also be produced when groups cocreate frameworks, products, or strategies that can be imitated or appropriated – in part or whole – by other groups.

A fourth dynamic, often closely related to both attractor and amplifier effects, is *scaling*. Platforms often achieve positive outcomes by making it possible to scale up certain solutions, programs, or agendas in relatively flexible or low-cost ways in order to enhance their usage and impact. For example, a generic cocreation tool can be used in many communities at once. Through effective intermediation, platforms can also facilitate connections between stakeholders at much larger scales.

A fifth and final positive dynamic is *social learning*. By encouraging cocreators to learn from and about one another, new possibilities for fruitful exchange and cooperation may appear and galvanize participant interest and motivation. The scaffolding power of platforms is fundamental for encouraging social learning that rarely develops in the absence of structured dialogue among different stakeholders. Platform scaffolding and intermediation can facilitate dialogue and reduce the transaction costs of social learning.

The five positive platform effects easily translate in to recommendations for changemakers who take on the task of developing cocreation platforms as a means of tackling the SDGs. Table 5.3 summarizes our recommendations.

Platform Design

As these positive dynamics suggest, platforms need to be designed so that they enhance stakeholder motivation to engage in cocreation. Studies of agricultural innovation platforms have found that the distance people must travel to participate can affect their motivation (van Ewijk & Ros-Tonen, 2021) and that farmers are more motivated to participate when immediate benefits are clear (Mulema & Mazur, 2016). Motivation is also partly internal to the platform's operation, i.e., motivation to participate is partly the result of how platforms strategically

Table 5.3. Recommendations for Achieving Positive Platform Effects.

Platform Dynamics	Recommendations for Action
Attractor effects	Build up momentum and interest among stakeholders by making it easy and rewarding to participate and by strategically targeting opportunities for early successes that demonstrate the value of cocreation
Synergy	Look for opportunities to connect stakeholders with complementary resources, skills, and perspectives and make sure that stakeholders feel that their distinctive assets are being put to good use
Amplifier effects	Make low-cost generic templates and tools available to participants that allow them to achieve tasks and goals beyond their initial expectations and investments
Scaling	Use generic tools and templates to extend platform action to many different locations and sectors to maximize the overall impact
Social learning	Create opportunities for social learning among different stakeholders by sponsoring workshops and other forms of structured dialogue that allow them to engage in cross-frame reflections and question tacit assumptions

design and lead cocreation. To produce positive effects, platforms typically need dynamic leadership and supportive champions among participating stakeholders. They must also operate in a flexible, adaptive fashion that is tolerant of failure and supportive of entrepreneurial action.

While motivation is partly internal to the operation of the platform, it is important to recognize that it is also shaped by outside forces, i.e., in ways that may be partially beyond the control of the platform or its participants. A series of workshops aimed at addressing social and water sustainability issues conducted in an Indian village provide an example of the interplay between internal and external forces. After several workshop meetings the motivation of villagers began to decline. The reason was that they could not figure out how to effectively engage the local village government (an external factor). With some degree of support and facilitation by a group of researchers, the villagers reorganized themselves as a farmers' *sangha* (or community) and promoted their work as a demonstration project in sustainable farming practices that would be useful for the entire community. This strategy (an internal factor) strengthened the motivation of participants to carry on with the project (Rist, Chidambaranathan, Escobar, Wiesmann, & Zimmermann, 2007).

The degree of participation in platforms may vary considerably, with some participants becoming much more committed and engaged than others. It is important to recognize that differential participation may place undue workloads on some participants, which can be problematic if this labor is contributed voluntarily (Rist et al., 2007). Research suggests that it can be difficult to extend a sense of ownership beyond a core circle of participants to a more casually participating outer circle, though the setting of cocreation may itself be an attraction for potential participants (Puerari et al., 2018).

An important point is that positive effects are central to how platforms work, but they must operate within concrete political, social, and economic contexts that will make these effects more or less practical. The Rockefeller Foundations 100RC program has created a network of cities working on climate resilience, providing member cities with financial support for a Chief Resilience Officer, a methodological framework for organizing their resilience projects, support for accessing the tools and services from a wide network of NGOs and private firms, and support in sharing their knowledge about projects and activities undertaken. A lesson from research on the 100RC program suggests that a challenge for activities is that they must navigate complex local politics (Bellinson & Chu, 2019).

Another challenge is that platforms may be instrumentalized for the purposes of certain elites or political parties (Rist et al., 2007). Platforms that primarily serve the interests of platform sponsors, as opposed to users, are less likely to encourage successful civic participation (Menny et al., 2018). A related tension is that less inclusive participation may enhance innovation processes in some cases, but more inclusive participation may enhance broader-based ownership and legitimacy of innovations. As intermediary institutions, platforms tend to work only if they have both higher and lower-level support (Djalante et al., 2011). As a result, how they connect different scales of governing is an important consideration (van Ewijk & Ros-Tonen, 2021).

To facilitate collaborative design and problem-solving, platforms often need to be aligned to the local policy context (Waardenburg, Groenleer, & De Jong, 2020). The political embeddedness of platforms in local communities is important and platform leadership must therefore be sensitive to political and social context (Biekart & Fowler, 2018). While externally organized platforms confront tightly cohesive local communities, they may confront significant resistance. Knowledge-creation platforms, for example, can be regarded as threats to local community experts (Rist et al., 2007). The key to this challenge is to find ways that platforms can empower or add value to local communities. In Korea, for instance, a knowledge platform sponsored by the local sustainability alliance was embraced because it provided a conduit for local sustainability commissions to provide input into national sustainability discussions (Oosterhof, 2018).

Platforms must deal with inequality and differences in the power of participants and must design participation arenas in ways that accommodate these inequalities and differences (Menny et al., 2018). Research on innovation platforms has found that such power differentials can limit platform effectiveness (Cullen, Tucker, Snyder, Lema, & Duncan, 2014). However, a study of two New

Zealand agricultural innovation platforms found that they provided opportunities for less resourced or powerful actors to stage conflicts with more resourced or powerful actors. This staging of conflict can make inequalities more visible and become a basis for stimulating change (Turner et al., 2020).

What this brief analysis of platform dynamics suggests is that platform designers should carefully consider the possible positive and negative effects of different designs on the promotion cocreation of sustainable solutions.

Conclusion

As a strategy for advancing the SDGs, cocreation has bubbled up in many nations and policy domains but remains a relatively limited and ad hoc strategy for advancing Agenda 2030. Platforms provide a strategy for promoting sustained cocreation efforts on a grander scale and they serve a critical support function in promoting the sustainability agenda. Notably, they can serve to integrate across different sustainability goals, connect actors with different skills, resources, and perspectives, incubate innovation and change, and ensure alignment across levels of governing.

There are many possible specific platform types, and they may operate at quite different scales – global, national, regional, and local. We identify three roles that platforms typically play in the production of cocreation: first, they serve an intermediating role between stakeholders and between levels of governing; second, they scaffold cocreation processes by providing templates that can reduce the cost of organizing; and third, they provide tools that empower citizens and stakeholders to advance their own agendas. Through these three roles, platforms create a powerful basis for scaled-up cocreation.

None of this happens without careful strategic action on the part of platforms and their designers. Platforms typically achieve their mobilizing effects through realizing a variety of positive dynamics – via attractor, synergy, amplifier, scaling, and social learning effects. Achieving these effects requires effective platform leadership that is sensitive to political context and that pays great attention to the motivation of citizens and stakeholders to participate in platform-sponsored cocreation. Like all social institutions, platforms require investment and work to realize their potential. But with proper leadership and the right design, platforms can greatly extend the power of cocreation to advance the sustainability agenda.