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Strengthening Innovation Ecosystems

Prepared By IDIA and the Ecosystem Strengthening Working Group

The International Development Innovation Alliance (IDIA)

About the International Development Innovation Alliance (IDIA)

IDIA is a unique collaboration platform that brings together the senior leadership from the innovation teams, labs and departments of some of the world's leading development agencies with the shared goal of "actively promoting and advancing innovation as a means to help achieve sustainable development". IDIA is committed to the development of new products, services and ways of working ensuring that the lessons arising from both success and failure can be disseminated to inform the adaptation and scaling of innovations within different countries, populations and contexts. In partnership with in-country actors, IDIA is dedicated to identifying and developing models and approaches for strengthening the efficiency and effectiveness of local ecosystems to enable innovation to flourish.

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About the Innovation Ecosystem Strengthening Working Group

IDIA has been interested in innovation ecosystems since its inception in 2015 and explored strengthening strategies through its in-country IDIA Principals Meetings in Kenya (2018) and Vietnam (2019). In 2020, IDIA members agreed to formalise ecosystem strengthening as one of three new goals within the IDIA 2020-22 Strategy. This provided a mandate for IDIA members to come together in a more intentional and targeted way. The Ecosystem Strengthening Working Group was established in late 2020 in the midst of the pandemic to consider how development agencies might strengthen innovation ecosystems in low and middle-income countries to better use innovation to address in-country challenges.

The group brings together IDIA members — innovation specialists and development practitioners from a range of bilateral, multilateral, philanthropic, organisations, as well as Global Innovation Advisors (GIA), a pool of country-level experts, established as part of IDIA's 2020-2022 strategy, who bring knowledge, expertise and insights that can inform different components of IDIA's work. Specifically, the group formed to explore two questions:

- What are the most effective ways in which development agencies might strengthen innovation ecosystems?
- How might IDIA members work together to accelerate in-country ecosystem strengthening priorities?

This paper begins to answer the first question by outlining definitions and concepts of innovation ecosystems and mapping the interventions of IDIA members. We are grateful for the insights from members of the ESWG and partners, with special acknowledgment for consultations with Global Innovation Advisors, including: Gordon Adomdza of Ashesi University in Ghana, Dr. Moses Alobo of the African Academy of Sciences, Catalina Escobar Bravo of MAKAIA in Colombia, Josiah Kwesi Eyison of Ghana Hubs Network, Franklin Owusu-Karikari of Ghana's Office of Pres, National Entrepreneurship and Innovation Programme, Amma Lartey of Impact Investing Ghana, Patrick Joram Mugisha of Uganda's Ministry of Science, Technology & Innovation (MoSTI), Will Senyo of Impact Hub Accra and Sudha Srinivasan of The/Nudge Centre for Social Innovation in India. Many thanks also to Felicia Khan, Thomas Feeny and Amy Fallon at Results for Development (R4D) for the creation of this paper, with research support from Anna Gillespie and Sonaly Patel. This research continues and comments are welcome (contact **fkhan@r4d.org**).

This document presents approaches and insights that have been collected through a multi-disciplinary and collaborative process led by the IDIA Ecosystem Strengthening Working Group. This document does not represent the official policies, approaches or opinions of any single contributing agency or IDIA member, nor reflect their institutional endorsement or implementation of the approaches contained herein.

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Ecosystem Strengthening Working Group — Learning Agenda

Strengthening innovation ecosystems has been a continuous area of interest for members of the International Development Innovation Alliance (IDIA) since its inception in 2015 and has been explored in different ways — most immediately through the in-country IDIA Principals' meetings in Kenya (2018) and Vietnam (2019). Both of these meetings adopted an ecosystem lens, and provided IDIA members with opportunities to test their assumptions around how international development agencies like themselves could best contribute in building stronger innovation ecosystems at the country level.[1]

In 2020, ecosystem strengthening was identified as one of three goals as part of IDIA's 2020-2022 strategy, and the following two questions were outlined as a learning agenda:

1. **What are the most effective ways in which development agencies might strengthen innovation ecosystems?** This question was answered: i) By establishing an IDIA Ecosystem Strengthening Working Group, in order to bring together IDIA members focused on ecosystem strengthening with the wider IDIA Global Innovation Advisory network (GIA).[2] ii) By conducting an analysis of current definitions of ecosystem strengthening approaches and learning from different IDIA member ecosystem interventions using a comparative framework (shown below). This paper begins to capture this learning, presenting insights gathered from conducting consultations with 12 IDIA agencies and 10 innovation ecosystem actors in Asia, Africa and Latin America.

   Third, the group is continuing this research through roundtables and workshops with in-country actors and external ecosystem experts to contribute their views on the relative merits of the various ecosystem interventions undertaken by IDIA members, and their broader thoughts on optimising the contributions of international development agencies in strengthening innovation ecosystems.

2. **How might IDIA members work together to accelerate in-country ecosystem strengthening priorities?** The group seeks to answer this question through the following:

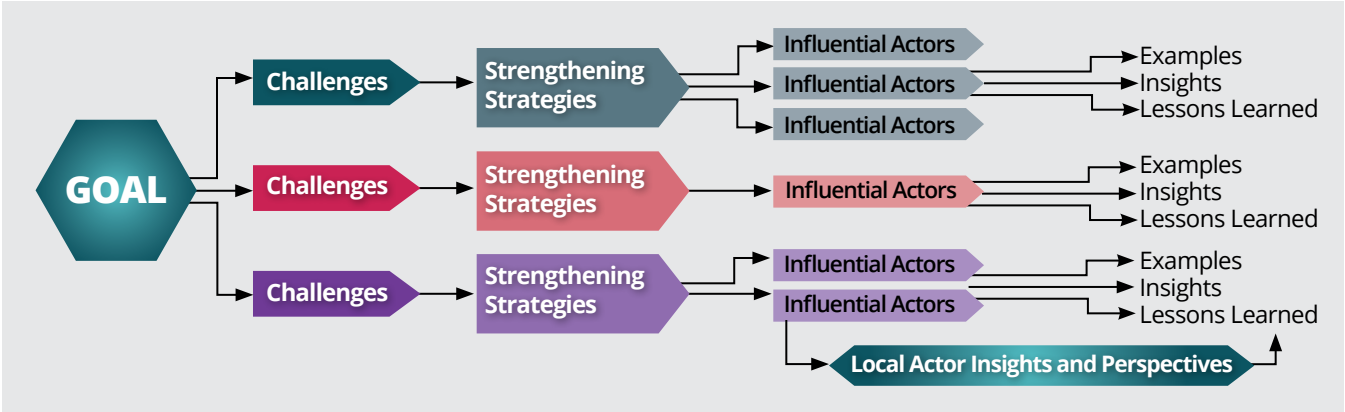
   a. **Inspire:** The IDIA Ecosystem Strengthening Working Group (ESWG) continues to explore new approaches and emerging practices in partnership with country-level actors to better understand demand-driven priorities and deepen collaboration.

   b. **Translate:** Creatively package and disseminate the learnings from this paper and consultations with IDIA members, Global Innovation Advisors and partners to enable active learning and uptake by different audiences.

   c. **Collaborate:** Use this research and the ESWG to deepen partnerships across IDIA, identifying comparative advantage, shared priorities, and matchmaking to improve coordination and approaches to achieve greater collective impact.

   d. **Influence:** Use the findings of this research and the ESWG's efforts to bring together IDIA members, Global Innovation Advisors and partners to support their integration into agency innovation strategies and ecosystem partnerships.

Comparative Framework: To capture learning around ecosystem interventions



[1] For more on the learning that emerged from the Kenya and Vietnam meetings, please refer to the IDIA website: https://www.idiainnovation.org/role-of-dev-agencies

[2] The IDIA Ecosystem Strengthening Working Group (ESWG) had its first meeting on 4 March 2021, co-chaired by GIZ and FCDO. The IDIA Global Innovation Advisory Network (GIA) has also been established as part of the IDIA 2020-22 Strategy and comprises a pool of local (country-level) experts, principally from East and West Africa, who bring knowledge, expertise and insights that can inform different components of IDIA's work.

PART 1: Understanding Innovation Ecosystems

- **Defining ecosystems:** There are many definitions of an 'innovation ecosystem' in use today, but in its broadest sense a strong or successful ecosystem is commonly defined by its ability to mobilise actors, assets and relationships to provide a supportive enabling environment for innovation and social entrepreneurship to flourish. In practice, the definitions that actors use tend to fall along a continuum depending on which actors, assets or relationships they emphasise.
  - At one end of the continuum the focus is on ***entrepreneurial*** support, where the innovator is placed at the centre of the model and the primary focus of strengthening efforts is filling in gaps and resources for entrepreneurship. Accordingly, the strength of the ecosystem is determined by how well the innovator's needs are met.
  - In the middle of the continuum are models that place emphasis on ***innovation***, broadening the range of actors and strengthening the overall process and capacity of an ecosystem to translate ideas into solutions and reinforce connections among actors to facilitate scaling through public and/or private pathways and partnerships.
  - Finally, at the other end of the continuum are ***mission-driven*** approaches, in which the emphasis is on creating a shared sense of purpose and identity among a wide variety of ecosystem actors and mobilising them to address a shared mission or challenge. This may include sector specific approaches and a subset of actors (e.g. to establish public sector scaling pathways for priority health innovations). ***See Figure 1 for a summary of these three approaches***

FIGURE 1: Summary of Entrepreneurial, Innovation-Oriented and Mission-Driven Ecosystem Approaches

	Entrepreneurial	Innovation-Oriented	Mission-Driven
PURPOSE	Establishing/strengthening the enabling environment for entrepreneurship as a foundation of broader social and economic growth	Helping different actors realise and fulfil their roles along the various stages of the innovation and scaling process	Mobilising specific ecosystem actors and assets to address a shared mission or challenge
TARGET ISSUES	◆ Lack of entrepreneurship culture/incentives ◆ Inadequate or missing resources/assets ◆ Limited skills/expertise among entrepreneurs ◆ Poor visibility/awareness of ecosystem actors and roles	◆ Lack of mutual awareness among ecosystem actors ◆ Inefficient trust or incentives to collaborate	◆ Lack of a prioritised agenda among actors ◆ Lack of leadership and accountability
SCOPE	◆ Usually not sector specific ◆ Usually not tied to a specific geography ◆ Focused on specific needs of innovators	◆ Often sector specific ◆ Often tied to a specific geography ◆ Focused on general needs of different actors	◆ Usually sector specific ◆ Usually tied to a specific geography ◆ Focused on specific areas of expertise among a subset of ecosystem actors
TYPICAL INTERVENTIONS	◆ Entrepreneurial asset mapping/ analysis ◆ Funding incubators and accelerators ◆ Challenge funds	◆ Convening/awareness-raising ◆ Collective ecosystem diagnosis ◆ Partnership facilitation	◆ Convening/awareness-raising ◆ Collective ecosystem diagnosis ◆ Partnership facilitation
EXAMPLES	**GIZ:** Guide to Mapping the Entrepreneurial Ecosystem **USAID:** Partnering to Accelerate Entrepreneurship Initiative (PACE) **DFAT:** Scaling Frontier Innovation	**Sida:** Support to Innovation & Innovation Systems **UNDP:** Anchor Labs	**GCC:** Mountain Model for Enhancing public sector demand and scaling **Dutch MoFA:** Initiatives for a Circular Economy

PART 1: Understanding Innovation Ecosystems (CONTINUED)

- To date, most ecosystem-strengthening interventions have focused on the entrepreneurial and innovation areas of the continuum, providing general support to innovators and other ecosystem actors without explicitly determining what that ecosystem should look like or prescribing any particular goals around which the ecosystem should align. More recently, mission-driven approaches to ecosystem support have started to gain traction, targeting different kinds of assistance to help ecosystem actors address a specific development challenge. It is important to note that while presented separately within this paper, the different approaches remain largely interdependent. In fact, research suggests that a balanced approach which combines elements of each of these models is likely to deliver the most sustainable impact.
- **Ecosystem Characteristics:** Innovation ecosystems are dynamic, comprising an ever-changing array of actors and institutions with shifting patterns of power, resources and relationships that are continually influenced and moderated by changes in different parts of the ecosystem. Who or what is within an ecosystem is largely subjective, as there are rarely clear boundaries at which an ecosystem 'starts' or 'stops'. As such, ecosystems might be framed in terms of a specific sector (e.g. agriculture or health) but will typically include a range of actors, assets and relationships that are spread across multiple levels or geographies (e.g. city, regional, national or international).
- **Ecosystem Actors:** The range of actors that form an innovation ecosystem is diverse and can include; government, the private sector, research institutions, and the start-up or social enterprise community, supported by friends and family, professionals, incubators and accelerators. They also encapsulate the financial sphere including: angel investors, venture capitalists and private equity firms; as well as development agencies, market facilitators, intermediaries and other professionals who provide support or facilitate the transfer of ideas, technology, resources, and other important bridging functions within the ecosystem. It is important to recognise the diversity of actors in the innovation and scaling process, and ensure interventions build trust and connectivity among actors, contribute to reducing inequities, and support collaborative processes of co-creation to drive ecosystem-level ownership, impact and sustainability. (See Figure 3: Typical Ecosystem Actors along the Scaling Pathway)
- **Ecosystem Measurement:** Over the last decade, a range of indicators and approaches have emerged to map, measure and analyse innovation ecosystems. These typically vary depending on how that ecosystem is defined or analysed. Measurement is typically a common conflation of greater ecosystem 'maturity' (e.g. innovation and entrepreneurial capacities, or clusters etc) and 'performance' (e.g. economic or social progress, innovation outcomes). Greater investments are needed to make it possible for development agencies to share diagnostics and measurement frameworks and better understand how and where progress is being made toward innovation system strengthening, in terms of relationships, partnerships, trust in institutions and other more nuanced areas required to enable local innovation. (See Table 3: Innovation Ecosystem Measurement)

PART 2: Goals, Challenges & Strategies for Ecosystem Strengthening

This section explores the effectiveness of ecosystem strengthening initiatives supported by IDIA members and other development agencies. Given the wide variety and complexity of these initiatives, the IDIA Ecosystem Strengthening Working Group created a simple framework through which to start mapping and comparing ecosystem strengthening interventions. The top level of this framework comprises nine goals which represent the main objectives that ecosystem strengthening initiatives typically focus on.

The goals are broadly mapped across the continuum of entrepreneurial > innovation-oriented > mission-driven interventions, as shown in Figure 2 below.

FIGURE 2: Ecosystem Strengthening Goals

1. Building informed **human capital**
2. Ensuring accessibility of **finance** for innovation processes
3. Establishing supportive research, **markets**, energy, transport, and communications **infrastructure**
4. Creating enabling **policies and regulations**
5. Nurturing a **culture supportive of innovation** and entrepreneurship
6. Supporting **networking assets** that enable productive relationships between different actors
7. Ensuring **equitable and inclusive ecosystem** governance and participation
8. Creating **smoother pathways to scale** for specific innovations
9. Mobilising a **collective ecosystem approach** to address a particular development challenge

It is important to note that these goals are not mutually exclusive. Many of them are overlapping, such as 'building a culture of innovation', 'supporting networking and relationship-building', or 'mobilising a collective ecosystem approach'. Others cut across all goals, such as 'equitable and inclusive participation'. The aim is to capture the intention of an IDIA agencies' ecosystem strengthening initiative and to specifically identify which goals development agencies and partners are prioritising and investing in.

For each Goal, the framework in this paper unpacks the typical **Challenges** that may hinder the achievement of that Goal within an ecosystem, and the **Strengthening Strategies** that different interventions have employed to try and mitigate or resolve those challenges. The ecosystem **Actors** that are likely to have the most influence/capacity with regard to achieving that goal are identified and **Insights** from IDIA members and partners involved with ecosystem strengthening are outlined. **Resources** for further reading are also included.

PART 3: Ecosystem Strengthening Interventions among IDIA members

Overarching Trends

- Development agencies and their partners are increasingly recognising the **importance of ecosystem-level interventions**, having previously focused their support around searching for and building a pipeline of single-point solutions identified through challenge funds, competitions and other modalities. Part of the reason for this is the understanding that those solutions will rarely reach sustainable impact at scale if they are not supported in various ways by a strong ecosystem.
- Development agencies are also now appreciating the ecosystem-level impacts of their historical approaches, particularly as regards to the duplication of effort and the potential to unintentionally undermine ecosystem development by creating distorted incentives and further entrenching elitist patterns of power. This has led to a **greater interest in facilitating and advocating for more inclusive ecosystem approaches**, particularly regarding ecosystem development and participation (i.e. who is around the decision-making table).
- Moving toward ecosystem-level interventions has led many development agencies to reflect on their roles within ecosystems, and what the most valuable and impactful contribution they can make might be beyond funding. To this end, many agencies are **exploring ecosystem facilitation models**, in which their role is less focused on finding and supporting specific solutions and more focused on helping different ecosystem actors connect to define problems and solutions themselves. In this way, they are becoming more intentional in funding facilitation of the ecosystem (e.g. collaboration infrastructure and partnership mechanisms) rather than specific solutions within it.
- Overall, while more and more development agencies now have intentional ecosystem-strengthening initiatives within their portfolios, this is still an **exploratory space with openings to contribute to the evidence base** on what does and what doesn't work. Providing more space for ecosystem actors to lead the design, implementation and evaluation of these interventions will help to clarify some of the critical success factors. There is opportunity for development agencies and ecosystem actors to test hypotheses and assumptions before good practices can be confidently defined, and to further collaborate to understand where and how different agencies are contributing to systems strengthening.

Opportunities for knowledge exchange and improved coordination

- There is appetite and interest among members to share knowledge and learning in this space as the foundation for a larger collaborative effort. This was exemplified in the first meeting of the IDIA Ecosystem Strengthening Working Group, which attracted 43 participants from across member agencies and other innovation experts and collaborating organisations.
- From the mapping below in Table 6 (in Part 3), IDIA members appear to be supporting the range of ecosystem goals, with a greater emphasis on entrepreneurial and innovation-oriented, along with some mission-driven interventions. Goals that are receiving the most investment include:
  - Building informed human capital (Goal 1)
  - Ensuring accessibility of finance for innovation processes (Goal 2)
  - Establishing supportive research, markets, energy, transport & communications infrastructure (Goal 3)
  - Supporting networking assets that enable productive relationships. (Goal 6)

- Convening a collection of actors associated with: 'Nurturing a culture of innovation' (Goal 5) and 'Mobilising around a development challenge' (Goal 9)

- From a sectoral perspective, there is a strong shared emphasis among IDIA member ecosystem interventions focused on developing an enabling environment to facilitate digital innovation, healthcare innovation, contributions to circular economies, renewable energy and agriculture (although others contribute to a wide range of other sectors). Most interventions reviewed as part of this research are targeting ecosystems in Africa. See Table 5 (in Part 3) for a summary of IDIA efforts in this space.
- Donors or development partners in a given ecosystem should always collaborate / coordinate. The limiting factor is usually information, differing theories of change, staff time/capacity / prioritizing / institutional setup, and we believe that the synthesised framework and learning in this paper — in combination with other harmonising assets such as the **Whistler Principles** — has the potential to help overcome some of these challenges.

Opportunities for shared learning and experimentation

- Some IDIA members are branching out into less-explored areas of ecosystem strengthening, and these may be vehicles around which to build wider agency interest and engagement. For example, at the **entrepreneurial** end of the continuum, the Bill & Melinda Gates Foundation is looking at new ways to stimulate and use blended financing to support enhanced delivery of health products and services. Within the **innovation-oriented** space, GIZ is supporting the Government in Ghana through a Tripartite Agreement with Israel and Mastercard to strengthen Ghana's Digital Innovation Ecosystem. Finally, on the **mission-driven** end of the continuum, Grand Challenges Canada is testing a new model supporting enhanced demand for, and scaling of, health innovations by the public sector. There are a number of additional opportunities for potential collaboration, including: Dutch MoFA's Initiatives for Circular Economy, USAID's 'Power Africa', Rockefeller's 'Smart Power Africa' or Sida's 'BioInnovate Africa'.
- With many options and potential directions identified, it will be important to ensure that the rationale for IDIA members coming together is clearly articulated, supported by evidence and crucially, validated by country-level ecosystem actors if it is to go beyond a shared belief that 'together we can do more'.

Understanding Innovation Ecosystems

1.1 Definitions of an Innovation Ecosystem

In 2015, IDIA members came together around a common definition of innovation as follows:

> ***"Innovation is a new solution[3] with the transformative ability to accelerate impact. The solution can be a product or service fuelled by technology, or involve new ways of working, new business models or other path-breaking improvements in delivering essential services to solve a complex problem. In order for an innovation to scale or flourish within a particular environment there are conditions that enable this — this is referred to as an innovation ecosystem."***

The 'conditions' that enable innovation noted in this definition were not articulated at that point, and so IDIA members then went further to identify these conditions in more detail, proposing that:

> ***"An innovation ecosystem is made up of enabling* policies and regulations*, accessibility of finance, informed human capital, supportive research* markets*, energy, transport and communications* infrastructure*, a* culture *supportive of innovation and entrepreneurship, and networking assets, which together support* productive relationships *between different actors and other parts of the ecosystem. These factors are all important, regardless of whether the innovation is scaling through public, private pathways, or a combination of both."***

Through its emphasis on the presence and interplay of these different factors — some tangible, others intangible — the IDIA definition is broadly in line with the majority of others that have been popularised in this space over the last few years. For example, **recent research** has shown that most definitions of innovation ecosystems include a strong emphasis on actors and collaboration in line with the IDIA interpretation. However, far fewer explicitly mention competition and the fact that empirically, innovation ecosystems tend to have a mix of actors working both collaboratively and competitively to produce new ideas and solutions. Whether actors are working in harmony or in competition reflects just one angle of the continuing debate around what an 'innovation ecosystem' actually looks like, and partly why it remains a contested and confusing concept to many (given that the words 'innovation' and 'ecosystem' are also themselves subject to a wide range of interpretation). In some ways, while the IDIA definition is likely to evolve as members progress along this learning journey, focusing efforts on finding the 'perfect', single definition is likely to prove unhelpful, as many interpretations can happily co-exist. The more important distinctions between definitions arise when considering the overall purpose / orientation of that ecosystem, and here we find three helpful perspectives:

1. **Entrepreneurial ecosystems** — where the focus is on the innovator and the ecosystem performance is measured in terms of how well it meets their needs.
2. **Innovation-oriented ecosystems** — where the focus is on the innovation process, and the ecosystem performance is measured in terms of how well different actors work together in supporting the production of great ideas and to create the enabling environment for innovations to reach scale — be it through public or private-sector pathways or through partnerships.
3. **Mission-driven ecosystems** — where the focus is on a particular development challenge (sectoral in nature), and the ecosystem performance is measured in terms of how well relevant actors work together to address that challenge, often within a specific timeframe or geographic location.

The Entrepreneurial Model

The most popular interpretation of an innovation ecosystem is one in which the innovator/entrepreneur is at the centre, and ecosystem performance is measured in terms of how well it meets their needs in a sustainable way. In these 'entrepreneurial' models,[4] ecosystem 'strengthening' typically comprises efforts to fill gaps in the size, quality and/or availability of resources that individuals need for entrepreneurship. While some of the latter can be objectively assessed, data around entrepreneur attitudes, abilities and aspirations will also come into play in determining how strong or mature that ecosystem is.[5]

As the needs of innovators are generally well-researched and common across different contexts, entrepreneurial ecosystems are often the most popular and well-

[3] An innovation solution can take many forms beyond technological innovations to include policy innovations, new partnerships or ways of working, behavioral insights, or innovative finance or business models. See IDIA's **Innovating to Address GBV** for examples.

[4] Hoffecker, Elizabeth. 2019. Understanding Innovation Ecosystems: A Framework for Joint Analysis and Action. Cambridge: MIT D-Lab. Available here.

[5] See, for example, the methodology utilised by the Global Entrepreneurship Index, which collects data on the entrepreneurial attitudes, abilities and aspirations of the local population and then weights these against the prevailing social and economic 'infrastructure' — this includes aspects such as broadband connectivity and the transport links to external markets.

supported model among development agencies and governments, who fund or provide a range of services that innovators directly access (e.g. innovation challenge funds providing grants to entrepreneurs, or local innovation hubs and accelerators that help social entrepreneurs to develop their skills).

These efforts to build entrepreneurial ecosystems are based on a premise that entrepreneurial activity is inherently good for a country/region's overall economic outcomes. While there is ample evidence to support this, there are also reasons to be cautious around concentrating support too strongly around one particular group or section of the ecosystem. For example, the tempting archetype of the innovator hero or 'lone genius' - often popularised by the media's celebration of individuals such as Steve Jobs or Bill Gates — has diminished in the face of increasing evidence around the equally crucial roles that other actors in the ecosystem play in turning those ideas into positive impact at scale. Equally, research suggests that cities that have narrowly (and in some cases blindly) invested significant amounts of money and effort in trying to replicate the place-based Silicon Valley model of entrepreneurship, were confronted with **associated increases in social and economic inequality due to the fact that capital flowed mainly to the already privileged, and other systemic inequalities or barriers**. The laudation of the entrepreneur comes at a cost, and as one commentator observed, *"we need to spend less energy helping only a small percentage of the considerable talent that created this success, and work to help groups of people left behind."* [6] Similar sentiments were expressed by ecosystem actors during the IDIA ecosystem conference in Kenya, where some of the potential unintended consequences of the historical prioritisation of the lone entrepreneur by development agencies were seen to be unbalancing and undermining broader ecosystem relationships.[7]

The Innovation-Oriented Model

While the support for entrepreneurial models has resulted in an explosion of entrepreneurship activity in many countries (with as many as 16,000+ innovations documented on the Global Innovation Exchange), it has not proven successful in terms of increasing the tiny proportion of those innovations that actually reach successful and sustainable impact at scale. In fact, just as it takes a community to raise a child, it is now widely understood that it takes an ecosystem to scale an innovation and that many more actors play a crucial role in achieving that scale than the innovator alone. Recognising this, many development agencies have shifted their focus from direct support to innovators to expand the focus of strengthening efforts to include other key actors, such as academic institutions, governments and the private sector, with the goal of optimising the role that each of these actors played in enabling the development of local innovation and strengthening the means to take a great idea to scale.

This approach, where the focus is on the *innovation process*, and the ecosystem performance is measured in terms of how well a larger subset of actors work together across the innovation and **scaling stages**[8], can be referred to as the 'innovation-oriented' model. **Recent research by the OECD** highlights this approach and the role of development agencies, noting that "Funders may play context-appropriate roles including as facilitators, ecosystem conveners and intermediaries in the innovation process."

This approach emphasises supporting a culture of innovation, relationship building among stakeholders, and developing the markets and infrastructure that go beyond supporting the entrepreneur/innovator alone to engage the private sector alone to further enable scaling innovations, but also through enhanced partnerships with civil society or the public sector to enable scaling.

The Mission-Driven Model

In the context of slow progress against the 2030 Sustainable Development Goals, and in light of the increasing complexity of development challenges, many development actors began to wonder whether supporting entrepreneurs and the innovation process in general was enough to truly tackle these challenges, and whether that ecosystem activity might be more effective if channelled into addressing a specific problem. To this end, we have seen a number of '*mission-driven*' ecosystem approaches emerge in recent years, where the focus is on mobilising and supporting a specific subset of ecosystem actors to work together in addressing a specific development challenge (often within a prescribed timeframe).

There are many benefits to a mission-driven model of ecosystem strengthening. In the context of the COVID-19 pandemic, we have already seen the powerful returns that can be generated when different actors within an ecosystem come together around a common goal, with

[6] Boitnott, J (2018) 'Why Silicon Valley Income Inequality Is Just a Preview of What's to Come for the Rest of the U.S.', Inc, 18 October 2018. Available at: **https://www.inc.com/john-boitnott/why-silicon-valley-income-inequality-is-just-a-preview-of-whats-to-come-for-rest-of-us.html**

[7] See, for example, reflections on the role of development agencies in strengthening innovation ecosystems that emerged from IDIA consultation with local actors in Kenya and Vietnam.

[8] To learn more about scaling innovation see the **IDIA Insight Guides** 'Good Practices for Scaling Innovation' and 'Scaling Innovation'

the astonishing acceleration of the vaccine development process being a clear example of this. There is a need to support LMIC governments in building the innovation foundations, as noted by recent OECD research: "Many governments in low income and middle-income countries have encountered serious financial difficulties and lack the financial and technical resources to build the domestic innovation capabilities and ecosystems that are needed to respond and build resilience to COVID-19 and future crises."[9]

Mission-driven approaches offer the ability to create a shared sense of purpose and identity among otherwise fragmented or distrusting ecosystem actors - an opportunity for actors to explore and understand their respective contributions to ecosystem growth and maturity. Buoyed by the spirit of common direction, ecosystem actors may also be more open to co-designing and testing new forms of partnership and collaboration, some of which may then cement longer-term, productive relationships that extend well beyond the timeframe of the mission that brought them together. By their specificity, mission-driven ecosystem approaches may also generate impact that is clearer and faster than the more diffuse social and economic benefits that are assumed to accrue from general entrepreneurship support or innovation-oriented approaches. Politically, mission-based ecosystem strengthening can provide a powerful platform for individual / country leadership and the elevation of certain actors within the ecosystem who have assets and resources most relevant to that mission.

Depending on their level of shared ambition and resourcing, ecosystem actors may even go beyond the achievement of a specific target or mission and take on the challenge of driving **systems innovation** — which describes fundamental shifts within either their own ecosystem or the larger economic, social or political systems that govern how they work. Examples of this larger, more ambitious agenda include interventions to build circular economies, or mobilising actors across multiple countries and contexts in a coordinated way to tackle specific global challenges (e.g. the **'10 in 10'** initiative addressing climate change or **CGIAR's new 2030 strategy which presents systems transformation approaches for food, land and water systems**.)

Of course, there are also many potential challenges with adopting a mission-driven /systems-innovation approach to ecosystem strengthening. For a start, the idea may actually be a luxury in contexts where the basic assets for sustainable innovation are still absent or still being established, with the risk that these ambitious agendas are built on unstable foundations. It may also be extremely difficult to secure enough consensus among ecosystem actors around which challenge to select, or the level of ambition to pursue. Given the long timeframes that are typically associated with mission-driven / systems innovation approaches, there is the constant challenge of different actors dropping out if progress is slow and interest or resources diminish.

1.2 A Continuum of Ecosystem Approaches

It is important to note that entrepreneurial, innovation-oriented and mission-driven approaches are all valuable in creating high-performing and productive innovation ecosystems. In many ways, while they may enjoy different levels of attention under the development spotlight, they do not reflect 'either /or' decisions, where one approach can be argued as inherently more important than another. In fact, it could be argued that the most impactful and sustainable ecosystem interventions will likely accommodate elements of — or an interaction between — all three, engaging a wide variety of actors around a common mission while using this to stimulate new forms of partnership and investment that will continue to strengthen the wider enabling environment.

[9] Ramalingam, B. and B. Kumpf (2021), "COVID-19 innovation in low and middle-income countries: Lessons for development co-operation", OECD Development Policy Papers, No. 39, OECD Publishing, Paris, **https://doi.org/10.1787/19e81026-en**. Pp. 12.

FIGURE 1: Summary of Entrepreneurial, Innovation-Oriented and Mission-Driven Ecosystem Approaches

	Entrepreneurial	Innovation-Oriented	Mission-Driven
PURPOSE	Establishing/strengthening the enabling environment for entrepreneurship as a foundation of broader social and economic growth	Helping different actors realise and fulfil their roles along the various stages of the innovation and scaling process	Mobilising specific ecosystem actors and assets to address a shared mission or challenge
TARGET ISSUES	◆ Lack of entrepreneurship culture/incentives ◆ Inadequate or missing resources/assets ◆ Limited skills/expertise among entrepreneurs ◆ Poor visibility/awareness of ecosystem actors and roles	◆ Lack of mutual awareness among ecosystem actors ◆ Inefficient trust or incentives to collaborate	◆ Lack of a prioritised agenda among actors ◆ Lack of leadership and accountability
SCOPE	◆ Usually not sector specific ◆ Usually not tied to a specific geography ◆ Focused on specific needs of innovators	◆ Often sector specific ◆ Often tied to a specific geography ◆ Focused on general needs of different actors	◆ Usually sector specific ◆ Usually tied to a specific geography ◆ Focused on specific areas of expertise among a subset of ecosystem actors
TYPICAL INTER VENTIONS	◆ Entrepreneurial asset mapping/ analysis ◆ Funding incubators and accelerators ◆ Challenge funds	◆ Convening/awareness-raising ◆ Collective ecosystem diagnosis ◆ Partnership facilitation	◆ Convening/awareness-raising ◆ Collective ecosystem diagnosis ◆ Partnership facilitation
EXAMPLES	**GIZ:** Guide to Mapping the Entrepreneurial Ecosystem **USAID:** Partnering to Accelerate Entrepreneurship Initiative (PACE) **DFAT:** Scaling Frontier Innovation	**Sida:** Support to Innovation & Innovation Systems **UNDP:** Anchor Labs	**GCC:** Mountain Model for Enhancing public sector demand and scaling **Dutch MoFA:** Initiatives for a Circular Economy

1.3 Characteristics of an Ecosystem

Regardless of whether we are referring to entrepreneurial, innovation-oriented or mission-driven approaches, the literature identifies a range of ecosystem characteristics that are important to note in designing and implementing an intervention:

- An innovation ecosystem is made up of **multiple actors and/or institutions** with **varying degrees of power, relationships and resources**.
- **It is rarely clear where the lines of inclusion and exclusion lie around an ecosystem**, given that it is a concept applicable at multiple levels (e.g. city, regional, national) and different sectors (e.g. agriculture, health, education). One approach to delineating the boundaries of an ecosystem more clearly is to clarify the purpose or function of the ecosystem, or the sector and problem that innovation outcomes are seeking to address (e.g. "identifying gaps in the education system and how innovation might address them"). This may make it easier to identify the specific actors, resources and contextual factors that may be relevant.
- The **effectiveness of each part within the ecosystem is moderated by other parts of the system** (e.g. entrepreneurs depend on being able to access financing). This means that a change to one part of the ecosystem leads to changes in other parts of the ecosystem (e.g. an increase in internet connectivity will accelerate the design and testing of new technologies).

Based on these characteristics, the IDIA Principals began in 2017 to articulate some early Guiding Principles (See Table 1 below) that would be important when designing or implementing ecosystem strengthening interventions. We expect these to evolve as the IDIA Ecosystem Strengthening Working Group continues on this learning journey.

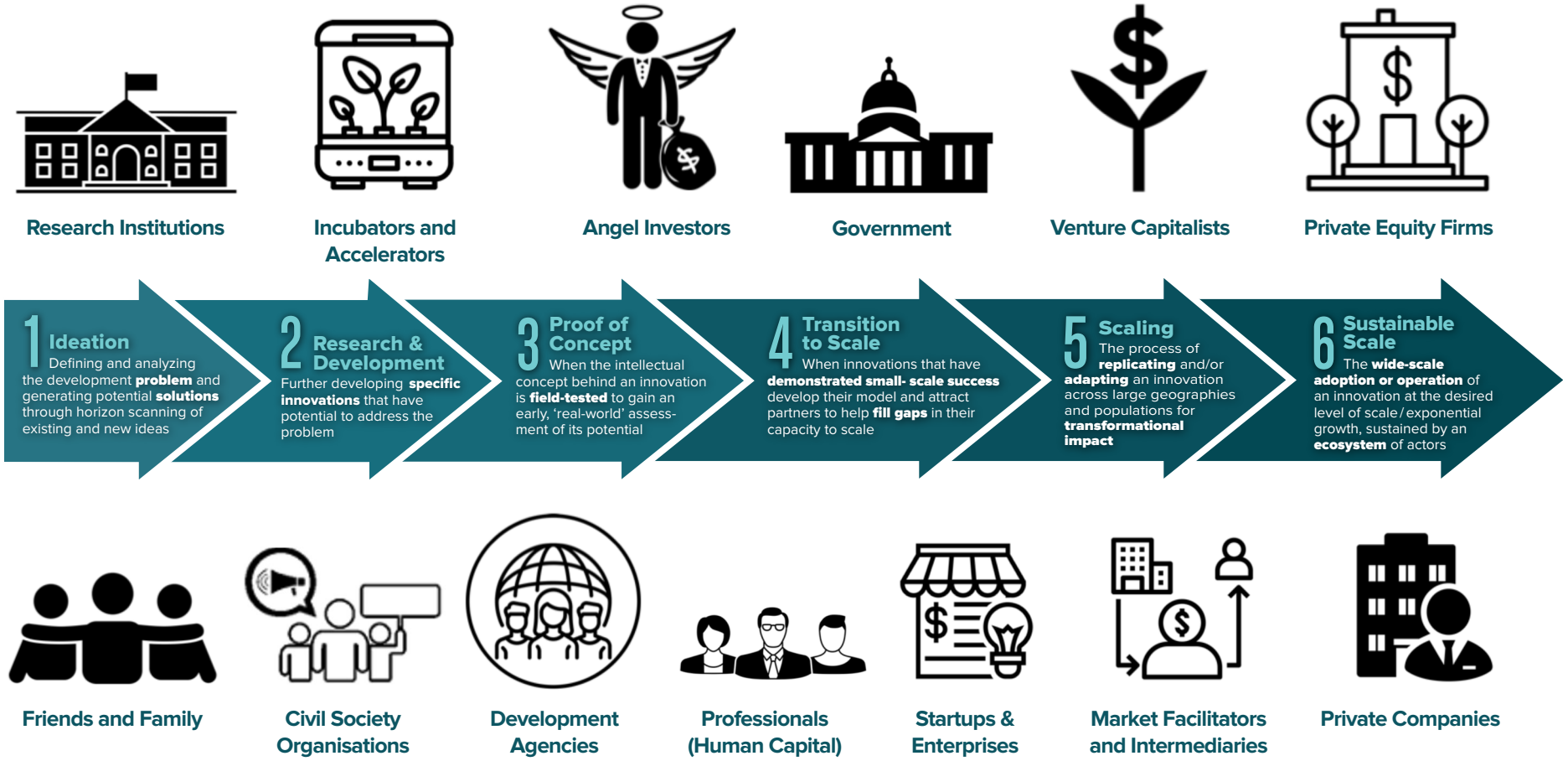
TABLE 1: Guiding Principles for Designing/Implementing Ecosystem Strengthening Initiatives

Guiding Principles For Designing / Implementing Ecosystem Strengthening Initiatives			
Recognise the diversity of actors who play a role in the innovation and scaling process, and ensure any intervention is contributing to strengthening the connectivity and trust among these actors.	Utilise political economy analysis tools to **understand inequities within the ecosystem** to do with power, resources, norms and values, and integrate ways to redress these inequalities within ecosystem strengthening initiatives.	**Engage governments at all levels from the very beginning** to maximise the depth, breadth and sustainability of any impact brought about through ecosystem-strengthening initiatives.	Consider how to **engage, learn from and help influence smaller, local level players and processes alongside the larger actors** and institutions, particularly where they have potential to deliver greater impact through collective organisation.
Ensure that interventions **prioritise local ownership of innovation processes** in order to support sustainability, and be cognisant that it may be more appropriate to help ready local actors in that system to drive change rather than going in to try and 'fix' problems that have been identified.	**Focus on one (or a subset of) ecosystem challenges**, rather than trying to tackle too many issues at once.	Recognise that while ecosystem-strengthening interventions are typically designed to promote incremental improvements, they can also **potentially be vehicles for driving larger systems innovation**.	**Embed feedback loops and agile monitoring and evaluation mechanisms** into any collaborative approach to capture learning and iterate models accordingly to ensure the benefits of the intervention are distributed in an inclusive manner.

1.4 Who is involved in an Innovation Ecosystem?

Drawing on its exploration of ecosystems in Kenya and Vietnam, IDIA has identified a range of actors who play different roles in creating enabling environments for entrepreneurship and goal-oriented collaboration. Positions of actors are indicative to their typical contributions. For example, governments can play a role in scaling innovations, potentially in Stage 4, but are also instrumental in Stage 6 to ensure wide-scale adoption or operation of innovations. Figure 3 below shows the range of actors who play a potential role in scaling an innovation.

FIGURE 3: Typical Ecosystem Actors along the Scaling Pathway



NOTE: Positions of actors are indicative relative to their typical contributions at different stages.

The typical contributions of these different actors within a scaling-focused innovation ecosystem are summarised in Table 2 below.

TABLE 2: Typical Roles of Different Actors in an Innovation Ecosystem

ECOSYSTEM ACTOR	ROLE
 **Research Institutions**	Research Institutions are crucial for innovation due to their role in knowledge creation and diffusion, and are a primary tool for governments seeking to spur research and innovation in their economies. Some perform "blue sky" research, while others focus on more short-term market-oriented projects. Importantly, research institutions also often provide tertiary education and training, which means they play an important role in creating entrepreneurial students who will contribute to the future human capital pool of innovators and inventors.
 **Incubators and Accelerators**	Incubators and accelerators play an important role in the innovation ecosystem in providing a supportive environment for start-up and fledgling companies. This typically includes a physical space for innovators to convene and share ideas while benefiting from shared technology infrastructure and equipment. They also often provide innovators with access to a network of business and technical advisors / mentors capable of providing guidance and assistance in product development, finance, business planning, marketing, legal consulting, manufacturing, etc.
 **Angel Investors**	Angel Investors play an important role in helping fast growing small firms overcome common funding gaps between Stage 2 (Research & Development) and Stage 4 (Transition to Scale) in the IDIA Scaling Pathway. They are often less risk averse than Venture Capitalists and can sometimes directly advance innovations by taking a position on the board of the start-up, assisting its management with their own knowledge and experience while also widening the range of contacts and networks that the firm needs to secure additional supporters and follow-on financing.
 **Venture Capitalists**	A venture capitalist is an investor who either provides capital to start-up ventures or supports small companies that wish to expand but do not have access to equities markets. Venture capitalists are willing to invest in such companies because they can earn a massive return on their investments if these companies are a success. Although venture capitalists can experience major losses when their picks fail, these investors are typically wealthy enough that they can afford to take the risks associated with funding young, unproven companies that appear to have a great idea and a great management team. Their investment is typically much larger than an Angel Investor, and can take the form of equity, quasi-equity and sometimes debt, straight or conditional (i.e. with the interest and principal payable when the venture starts generating sales).
 **Private Equity Firms**	Private equity firms manage money committed by pension funds, other institutional investors and high net worth individuals. In contrast to Venture Capitalists, Private Equity firms are typically interested in buying more mature, established companies, or those that may be deteriorating or not profitable due to inefficiency in order to revitalise their profits through more streamlined operations. Similarly, Private Equity firms often buy 100% ownership of the companies in which they invest and are therefore in total control of the firm after the buyout, as opposed to Venture Capitalists who are more likely to invest in 50% or less of the equity of the companies.
 **Government**	Governments play many critical roles in promoting innovation, primarily in terms of creating a supporting policy and regulatory environment in which start-ups are encouraged and able to thrive through a variety of tax or partnership incentives that enable the growth of scientific research, angel, venture capital and private equity communities. They are also essential in ensuring innovators have access to the technological infrastructure (e.g. internet) they need to advance their products and networks. Governments can even play an "entrepreneurial" role themselves by envisioning and financing the creation of entire new fields ripe for innovation (e.g. aquaculture), and then acting as a partner to help take successful innovations to scale.

TABLE 2: Typical Roles of Different Actors in an Innovation Ecosystem (CONTINUED)

ECOSYSTEM ACTOR	ROLE
 **Friends and Family**	Innovation is a difficult, frequently frustrating and often very lonely endeavour. For many innovators, their circle of supporting friends and family will often be critical in helping them take their idea forward, whether that support comes in the form of initial financial backing, an extra pair of hands or just confidence that all of that hard work will be worth it in the end.
 **Civil Society Organisations**	Civil Society Organisations (often referred to as non-governmental organisations or NGOs) are a subgroup of organisations founded by citizens and active at local, national or international levels. They are usually non-profit organisations that are task-oriented and independent of government. Many CSOs are active in humanitarianism or the social sciences and typically have a high degree of public trust, which can make them a useful proxy for the concerns of society and stakeholders. Within an ecosystem they often advocate and encourage political participation.
 **Development Agencies**	Development agencies - whether these are bilateral, multilateral or private foundations - are always looking for new and innovative ways to address social and economic challenges in country ecosystems. Most agencies have tended to focus on supporting very early stage innovators, helping them with relatively small amounts of seed capital funding to develop / test their idea. They often help stimulate innovation in a particular sector through launching competitive 'Challenge Prizes', while others are expanding their financial instruments and taking on roles more akin to that of Venture Capitalists and investing in businesses that have outgrown microfinance, but are too small for mainstream private equity or commercial bank investments.
 **Professionals (Human Capital)**	People are at the heart of an ecosystem, and the speed and efficiency of the process through which an innovation is designed, tested, adapted and scaled depends on the quality of the people involved in the process. For this reason, strong innovation ecosystems require a large and diverse group of professionals with a range of technical skills as well as the passion, determination and risk-taking behaviour to drive innovation forward even when faced with the inevitable and often significant challenges and obstacles that will arise along the way. If there is not enough human capital within an ecosystem, competition over the talent that does exist intensifies.
 **Startups & Enterprises**	A start-up is a company working to solve a problem where the solution is not obvious and success is not guaranteed. They are usually small and initially financed and operated by a handful of founders or one individual. For this reason, start-ups represent a powerful engine of innovation - they are inherently innovative, agile and adaptive which gives them an advantage over the more rigid structures prevalent in larger corporations. They also have the ability to pioneer new solutions that others perhaps may overlook or disregard.
 **Market Facilitators And Intermediaries**	Market facilitators and intermediaries play an important role in national as well as in regional innovation systems, especially in innovation policy. Their role is to link organisations within an innovation ecosystem, and to facilitate the transfer of ideas, technology and other resources to help commercialise them at scale. Ideally, they are small and agile entities (sometimes just individuals) who are perceived to be neutral or impartial within the ecosystem, which enables them to provide important 'bridging' functions between actors who might otherwise struggle to collaborate, understand or trust each other. As such, they are often the 'glue' that helps to hold an ecosystem together, and can help shape and improve how actors interact for different purposes.
 **Private Companies**	The private sector plays a crucial role in innovation ecosystems. Business-led initiatives, such as research and development partnerships, knowledge-sharing platforms, technology and skills transfer, and infrastructure investment have the potential to catalyse, develop and scale innovation, while also providing fertile ground for future innovation to emerge. While driven primarily by considerations of profit, private companies are increasingly recognising the importance of working in partnership with governments, research institutions, development agencies and civil society actors to collaboratively tackle large-scale social / economic issues that are hindering new markets and the efficiency of their business.

1.5 Measuring Innovation Ecosystems

In alignment with their relative popularity, the majority of available tools and frameworks for measuring ecosystem strength and maturity are associated with entrepreneurial approaches. Some of these are sophisticated enough to allow overlapping analysis of innovation-oriented ecosystems, but very few exist that address mission-driven innovation approaches in general (as these tend to be specifically designed around each particular mission and are not therefore easily transferable). Recent research emphasises the need for development agencies to further invest in shared measurement systems to enable greater understanding of progress toward strengthening innovation systems. OECD notes: "Development agencies, and especially bilateral agencies, need to invest in joined-up diagnostics and shared measurement frameworks that incorporate indicators on efficiency, dimensions of social capital and enhanced trust in established institutions."[10] Table 3 below unpacks a selection of the more practical and user-friendly measurement frameworks that have been influential in this space. See **Appendix A** for more detail.

TABLE 3: Innovation Ecosystem Measurement

ENTREPRENEURIAL		>>>>>>>>>>		INNOVATION-ORIENTED	
Tool / Framework	ANDE **Entrepreneurial Ecosystem Diagnostic Toolkit**	GIZ **Guide for Mapping the Entrepreneurial Ecosystem**	Kauffman **Foundation Entrepreneurial Ecosystem Vibrancy**	MIT D-Lab **'iEcosystems'**	World Bank **Framework for Urban Tech Innovation Ecosystems**	Cornell / INSEAD / WIPO **Global Innovation Index**
What is it?	This toolkit provides a synthesised set of resources for practitioners to assess the entrepreneurial ecosystem in developing countries. It is designed to be a starting point for entrepreneurial ecosystem assessment activities at a national level or local level.	This guide leads the reader through the process of observing, analysing and visualising the entrepreneurial ecosystem.	This approach centres on the performance of entrepreneurial ecosystems terms of outcomes and vibrancy at a community level.	A systematic approach for assessing 'innovation-driven entrepreneurship' in ecosystems	An approach to innovation ecosystem measurement includes boosting tech innovation ecosystems in cities	Provides data on innovation for economic growth and development ranking countries by their capacity for, and success in, innovation in order to assist economies in evaluating innovation performance and making informed policy decisions
Key indicators	This toolkit draws from 9 different models resulting in an evaluation which is a synthesis of 8 domains with 65 key indicators listed across the domains. These include policy, finance, infrastructure, markets, human capital, support (services and connections), as well as entrepreneurial culture, R&D and innovation.	Business environment and investment climate; Interacting actors; Entrepreneurial culture and attitude	The model uses four key indicators: density, fluidity, connectivity and diversity. Across these broad indicator groups, the model looks at 12 measures and provides suggested (US based) data sources for each	Foundational institutions; Separate innovation and entrepreneurship capacities; Comparative advantage; and Impact	A two-layer model of indicators comprising: LAYER 1: Human capital Physical assets Economic assets Enabling environment LAYER 2: Networking assets Relationships	Economic elements: Institutions, Human capital and research, Infrastructure, Market sophistication, Business sophistication Innovation Outputs Knowledge & technology outputs, Creative outputs

TABLE CONTINUES NEXT PAGE

[10] Ramalingam, B. and B. Kumpf (2021), "COVID-19 innovation in low and middle-income countries: Lessons for development co-operation", OECD Development Policy Papers, No. 39, OECD

TABLE 3: Innovation Ecosystem Measurement (CONTINUED)

ENTREPRENEURIAL			>>>>>>>>>>	INNOVATION-ORIENTED		
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Pros	This framework is incredibly extensive and achievable to use thanks to the links it draws between its indicators and existing datasets. It can be tweaked and applied to differing geographic units of analysis (institution, local, regional, state, national, and/or global) and domain (can be specific to a topic such as social enterprise, an industry such as agriculture, or other scope such as regional or public sector).	In this document, GIZ provides a simple, actionable process to map an entrepreneurial ecosystem over a 5-week timeline. The document also equips readers with useful lessons and tips for their own mapping processes, and provides informative summaries of different types of ecosystem map including: deep analysis maps, maturity maps and relationship maps.	The model focuses on the measurement of a local innovation system over time, finding a nice middle ground between attempting to capture every single dimension of an entrepreneurial ecosystem and overly focusing on only one or two indicators. The model also benefits from its focus on diversity (of actors, specialisms and opportunity) as one of its four broad indicator groups, something that is lacking from other models outlined in this section.	This model makes a key differentiation between the 'innovation' and 'entrepreneurship' capacities, and among 'inputs' and 'outputs' placing it apart from most other methods and making it particularly useful for development agencies who want to ensure an innovation lens as well as/instead of a purely entrepreneurial.	This model benefits from clear cut categories but with a double layered metric that captures the nuances of ecosystem development (ie. the importance of beneficial 'collisions' between actors and ability of those within the ecosystem to build effective relationships).	The GII is an excellent resource that has been published annually since 2017. Its strength comes from the fact that it focuses on economic development through public and private sector actors at national level and bases its ranking system on a vast collection of over 80 indicators.
Cons	While extensive, the framework may be most applicable for entrepreneurial ecosystems rather than innovation ecosystems with the purpose of facilitating social goods. It could therefore benefit from additional markers which take on an E&I lens (e.g. ecosystems defined by this model are designed to facilitate entrepreneurial wealth, but there are no variables to measure how that wealth is applied).	The measurement section of GIZs tool is just one chapter of a larger document therefore lacks the extensive theory and case studies of some of the other documents listed. Furthermore, the focus is purely on entrepreneurial ecosystems with a strong concentration on start-up facilitation and tracking which may not be appropriate for more innovation oriented/ mission driven work.	The model has been developed and used for measurement in the US context and would therefore need adapting for development contexts. It is most appropriate for small localised communities rather than large scale systems.	Equating impact with comparative advantage could leave out analysis of impact from an equity and inclusion perspective.	This framework was designed specifically for mapping tech ecosystems and so would have to be adapted for a wider sectoral focus. Similarly, with its focus is on urban environments there is little room for measuring the impact/prevalence of actors outside of a geographically bound location.	This framework provides a more limited perspective in terms of measurement from other entry points and at local level. Also, unlike other models (such as MIT), it does not also capture entrepreneurial capacity nor highlight the links and overlaps between innovation and entrepreneurship within an ecosystem.

Goals, Challenges & Strategies for Ecosystem

2.1 Factors to consider in planning an ecosystem strengthening intervention

Because of their complexity, innovation ecosystems typically offer many different entry points for strengthening. Most interventions seek to address specific problems or weaknesses where that ecosystem is deemed to have gaps or is poorly performing. These 'deficit-based' approaches, while valid, encourage the perception that one-off targeted interventions can somehow 'fix' an ecosystem, and often ignore the dynamic interplay of different factors that will continually act to strengthen or weaken interdependent parts over time. For this reason, the language of ecosystem strengthening is arguably more appropriate in recognising that there are very likely some assets that may already exist on which to build, and that it is a continual (rather than isolated) activity.

Discussions with IDIA members and partners also surfaced some insights that are important for any agency to consider prior to engaging in innovation ecosystem strengthening (see box below).

Insights Before Starting your Ecosystem Strengthening Work

- **Establish a clear understanding of the development goals in country or a specific geography prior to engaging innovation ecosystem strengthening:** A partner from Ashesi University in Ghana emphasised the importance of understanding a countries' objectives and priorities for development (or region/communities' priorities) and realigning to them over time. For example, "*Pre-covid building of human capital focused on higher education, but now with the pandemic this priority has shifted to vocational training. It is important to understand and realign to these national objectives as part of the strengthening process.*"
- **Understand government priorities for innovation:** Begin by listening to understand the demand for innovation and the spending of resources. This focus on government policies and regulations was encouraged by an IDIA agency, who recommended that development partners: *"Listen to the government around what areas of innovation they are most excited, and which they are willing to prioritise as regard to really spending their resources — that's both their time as well as potentially their funding. This will allow your work to be truly demand driven."*
- **Development Agencies can play a key role in nascent innovation ecosystems** — bringing together key actors to spark something catalytic, that sets into motion a virtuous cycle that begins to support and embrace innovation. Sudha Srinivasa, CEO, The/Nudge Centre for Social Innovation describes a development chasm: *"it's ironic that India's poorest states attract the least amount of corporate grants and philanthropic capital. A funder would not go where there is no talent, and talent would not go where there is no funding. In addition, the political and regulatory environment is not friendly. When working in this situation, you get caught up in the absence of others. In these situations, you need an ecosystem player to go and bring people together and say 'let's get started'."*
- **Innovation requires a strong entrepreneurial foundation or base for innovation to thrive:** This was a lesson learned for those engaged in ecosystem strengthening work in Uganda, where there is a lot of entrepreneurial potential, however actors have struggled to take start-ups to scale and see the need to create an enabling environment. Patrick Mugisha, Commissioner for Innovations and Intellectual Property Management in the Ugandan Ministry of Science, Tech and Innovation states: *"At one point the World Bank positioned Uganda as one of the most intrapreneurial country in the world. We beat all these big giants, but the question is, how has that helped us? The challenge is that today you come up with an idea of making this kind of product. Tomorrow, the taxman wants you to start paying taxes. There is always ideation that grows to a new emerging business, but the challenge is for you to grow and mushroom into a stable enterprise. The (entrepreneurial) base does not exist. So that is why Uganda is focused on two are very critical goals — i) National innovation cluster program to scale innovations through the public sector, and ii) the National Start-up Ecosystem Development program*

2.2 A framework for analysing ecosystem strengthening interventions

For the purposes of this research, we have focused on nine Ecosystem Goals that represent the main focus of initiatives across the continuum of entrepreneurial > innovation > mission-driven interventions.

FIGURE 2: Ecosystem Strengthening Goals

1. Building informed **human capital**
2. Ensuring accessibility of **finance** for innovation processes
3. Establishing supportive research, **markets**, energy, transport, and communications **infrastructure**
4. Creating enabling **policies and regulations**
5. Nurturing a **culture supportive of innovation** and entrepreneurship
6. Supporting **networking assets** that enable productive relationships between different actors
7. Ensuring **equitable and inclusive ecosystem** governance and participation
8. Creating **smoother pathways to scale** for specific innovations
9. Mobilising a **collective ecosystem approach** to address a particular development challenge

Together, these nine goals offer a helpful and comprehensive framework within which the vast majority of ecosystem strengthening activities can be categorised.[11] Table 4 on (pages 22-23) summarises these goals before each of them is then unpacked in more detail below using the following structure:

1. Why is this goal important?
2. What are some of the challenges to achieving this goal?
3. What are some of the strategies for strengthening ecosystems in support of this goal?
4. Who are the relevant and influential actors with a role to play in achieving this goal?
5. What insights have IDIA members and partners gleaned from strengthening this goal in practice?
6. What are some helpful resources for further reading / analysis around this goal?

[11]To this end, we focus on the challenges and strategies that IDIA members, GIA, and partners have so far had some experience with, and for which there is therefore some evidence and learning available.

TABLE 4: Summary of Ecosystem Goals, Challenges, Strengthening Strategies & Actors

Ecosystem Goal	Key Challenges	Strengthening Strategies — Examples	Influential Actors
1. Build informed **human capital**	◆ Limitations in skills, knowledge, or knowledge-sharing among partners ◆ A fragmented policy environment that does not prioritize a national research agenda (e.g. most African governments allocate less than 0.5% of GDP to research); poor implementation of research systems ◆ Lack of diversity in talent pool, or structural, financial support to incentivise pursuing research and innovation	◆ Support the development of innovation-enabling spaces ◆ Deliver training and support to innovators, hubs, incubators and accelerators ◆ Align and develop a research agenda to meet national/local needs and opportunities, including: strengthening national research funding capacity; supporting training and mentorship to build research capacity in new areas; involving top national researchers in high level policy-making institutions; and promoting research quality and mechanisms for monitoring and evaluation ◆ Enable the participation of marginalized groups in innovation processes and research, support research incentive mechanisms (e.g. creating career paths in research and innovation)	— Academic, Research & Training Institutions — Governments and philanthropy funding of labs for experimental research and innovation — Hubs, Incubators & Accelerators — CSOs / NGOs — Innovators
2. Ensure accessibility of **finance** for innovation processes	◆ Slow growth in the diversity of financing mechanisms ◆ Limited amounts of appropriate financing to match innovation and scaling needs ◆ Investment return uncertainty and risk-aversion ◆ Bias/discrimination funding allocation ◆ Dominant funding practices are ill-suited to support systems innovation or innovation processes (e.g. lack of financing for research and innovation)	◆ Experimenting with innovative financing mechanisms ◆ De-risk innovation by adopting balanced portfolio approaches ◆ Engaging local actors in sourcing and selection of innovation investments ◆ Financing advanced research to support innovation and invention (e.g. the new UK body to support high risk and high reward scientific research — the ARIA — Advanced Research & Invention Agency)	— Financial Institutions — Private Companies — Government — CSOs/NGOs — Start-ups
3. Establish supportive **research, markets and infrastructure**	◆ Inadequate and unreliable infrastructure ◆ Barriers to market entry and innovation uptake ◆ Disconnects among R&D institutions and innovation actors limit diffusion of research ◆ Lack of research data infrastructure	◆ Cluster innovation actors and activities within specific geographies ◆ Market shaping ◆ Facilitating market access ◆ Strengthen linkages and communications among stakeholders to enable research to support innovation ◆ Establish research data infrastructure across national stakeholders	— Government — Private Sector — Hubs / Accelerators, — Research, Training & Knowledge Institutions
4. **Create enabling policies and regulations**	◆ Lack of clarity of the role government should play, unsuitable policies to encourage innovation or siloed approaches ◆ Governments often have fragmented policy frameworks for research	◆ Encouraging multi-sectoral, multidisciplinary policy frameworks for innovation ◆ Encouraging collaboration, partnerships and a culture of innovation ◆ Strengthening collaborative relationships between academia, private sector, government and civil society ◆ Strengthening research capacity by taking a systems approach to respond to needs at different levels, including individual, organisational, environment or network, and is tailored to the context	— Governments at all levels — Research Institutions — Private Sector — Civil Society

TABLE CONTINUES NEXT PAGE

TABLE 4: Summary of Ecosystem Goals, Challenges, Strengthening Strategies & Actors (CONTINUED)

Ecosystem Goal	Key Challenges	Strengthening Strategies — Examples	Influential Actors
5. Nurture a **culture** supportive of innovation	◆ Culture of innovation/mindset is not well understood or narrowly focused on technology ◆ Ecosystem is fragmented or actors siloed ◆ Short-term views prevail over long-term planning ◆ Lack of a culture of research collaboration across actors	◆ Encourage multi-stakeholder dialogue, knowledge sharing and capacity development for and between partners ◆ Facilitate productive triple or quadruple helix relationships ◆ Support and promote an innovation mindset and culture (adaptive learning, human centred design, nimbleness etc.) ◆ Facilitate learning opportunities that are inclusive (to dismantle the idea that innovation is 'not for everyone') ◆ Support a culture of South-to-South research collaboration	— Government — Research & Training Institutions — Private Sector — Hubs / Incubators — CSOs / NGOs
6. Support coordinated **networking** of assets that enable productive collaborations between actors	◆ Low awareness / recognition of operating as an ecosystem ◆ Confusion over Intellectual Property Rights ◆ Externally-designed networking interventions that undermine ecosystem productivity and inclusion	◆ Investing in 'Triple, Quadruple and Quintuple Helix' connections ◆ Funding Entrepreneur Support Organisations / Innovation Intermediaries ◆ Mapping ecosystem actors and using network analysis techniques to elevate the most impactful connections ◆ Coordinate research management systems and better match supply and demand	— Government — Research Institutions — Private Sector — Hubs / Incubators — Innovators — Civil Society
7. Ensure **equitable and inclusive ecosystem** governance & participation	◆ Marginalised groups remain underrepresented in talent pool ◆ Strengthening efforts do not address inequalities and can risk exacerbating them	◆ Donors to shift role from 'solution providers' to 'solution enablers' ◆ Enable representation, consultation and decision-making from different parts of the ecosystem, address power imbalances ◆ Ensure community/target customer uptake and demand ◆ Diversify innovator and research talent pool ◆ Consider diversification of metrics used to evaluate success and failure	— Government — Civil Society — Research Institutions — Private Companies — Range of actors
8. Create smoother **pathways to scale** for specific innovations	◆ Lack of incentives to seek out new innovations / pathways / coordination ◆ Strong emphasis on 'supply' with limited emphasis on 'demand'	◆ Enable scaling through public sector, private sector or partnerships ◆ Be enablers of innovation, ensure community uptake and demand ◆ Diversify innovator talent pool and metrics used to evaluate success and failure	— Government — Range of partners
9. Mobilise a collective ecosystem to address a particular **development challenge**	◆ Lack of visibility, coordination or alignment among actors ◆ Ensure diversity and inclusion of important actors ◆ Centering actors around addressing complex or controversial issues	◆ Coordinate and mobilise actors in ecosystem to organise around a particular issue to work towards a solution ◆ Employ macro-level approaches to explore values, demographics, or economic/political context, or meso-level approaches that involve institutions and their frameworks, rules and norms and how they may support/inhibit innovation around a challenge ◆ Employ micro-level approaches where new innovations, practices or lifestyles may take hold	— Range of actors

1 Building Human Capital

Building informed human capital

Why is this goal important?

'Building informed human capital' refers to the process of growing the knowledge, capacities, skills, relationships and expertise that enables people to innovate and support innovation processes. The importance of investing in the development of people, particularly innovators, within an ecosystem cannot be understated. As outlined in countless studies, including **OECD work on 'Promoting Growth in All Regions'**, informed human capital is essential to productivity and is a core driver of societal growth. **Some research** has even gone as far as to say that sustainable development is only possible when human and social capital intervene and result in innovation ecosystems. Furthermore, this goal is fundamentally important in enabling the increasing calls for greater local ownership of innovation, and the shift away from the practice of importing 'expertise' and solutions from elsewhere. For this, prioritising and developing a national research development agenda is critical, alongside supporting social entrepreneurs. Supporting social entrepreneurs to innovate for the issues and communities with which they are intimately connected not only **produces** more effective, highly tailored solutions but also contributes to the sustainability and longevity of the solutions developed.

What are some of the **challenges** to achieving this goal?

- **Limitations in skills and knowledge (or knowledge sharing) among innovation actors.** Upgrading the skills and knowledge of a population is not easy and requires a coordinated effort from a diverse and interconnected array of actors within a country. Many countries have suffered from the de-prioritisation of specialised education and a leakage of homegrown talent to more established markets. Progress has also been undermined by international actors that focus on the direct delivery of products and services rather than sharing necessary skills and knowledge.
- **A lack of diversity in the innovator talent pool.** It has been well established that diversity is a key driver of innovation and the implications of not focusing on cultivating a diverse innovator talent pool have been well charted. For example, UK-based group **Start-Ups Without Borders**, **estimates** that a lack of diversity is costing the global tech industry almost $400 billion dollars in revenue per year. Implications, however, extend far beyond potential financial loss. The barriers to access faced by migrants, women, ethnic minorities or those without a 'traditional background' constitute **a huge missed opportunity** in the discovery of new ideas and important perspectives from and access to underserved populations which could benefit from representation within an innovation ecosystem and contribute to important solutions.
- **A lack of structural and financial support incentivising individuals to pursue research and innovation.** To succeed, innovators require an enabling environment ripe with structural and financial support and opportunities. Without a culture that nurtures the innovative aspirations of its population through access to different levels of support and favourable policy which encourages risk taking, it becomes extremely difficult for individuals to rationalise a focus on entrepreneurship and innovation from a personal risk perspective.
- **A fragmented policy environment that does not prioritise a national research agenda to meet local needs and opportunities.** Most African governments allocate less than **0.5% of GDP on research**, resulting in poor implementation of research systems and thus limiting the supportive environment required for research and innovation. An enabling research environment is needed to ensure that a dedicated research agenda exists at multiple levels, that it is aligned with stakeholder needs, and that there are adequate incentives and funding in place for the production, coordination and diffusion of research to other actors within the innovation ecosystem.

What are some of the **strategies** for strengthening ecosystems in support of this goal?

- **Supporting the development of innovation-enabling spaces.** Innovation hubs and accelerator programs provide tailored support to innovators and create a collaborative environment. In recent years they have dramatically increased in popularity especially in countries within the African continent. However, many hubs **struggle to source sustainable financing** for themselves and the innovators that they support. Donor agencies are appropriately placed to either establish enabling spaces in-country or contribute to the development of existing hubs.
- **Innovation training and capacity building.** Targeted training in innovation skills and techniques has become a huge global industry, with many actors

(including incubators, accelerators, NGOs, research and academic institutions) offering different kinds of mentoring, technical assistance or degrees to growing populations of would-be innovators. Examples of this work include the Dutch MoFA's **Orange Corners initiative** which supports young entrepreneurs in Africa and the Middle East with training, mentorships, funding and facilities to grow their businesses. IDIA itself also established a dedicated innovation training program on **'Managing Innovation for Impact'** in 2018.

- **Align and develop a research agenda to meet national/local needs and opportunities.** Many countries often struggle with a fragmented policy framework for research as a result of weak linkages between higher education, researchers, the private sector and government, as well as low demand for research in policy making. **Research has found** that long term donor support can help deal with these structural deficiencies, as long as interventions are aligned with national priorities and are defined alongside national stakeholders. Support may include: strengthening national research funding capacity to support research across national institutions, universities and intermediaries (e.g. think tanks); involving top national researchers in high level policy-making institutions; supporting training and mentorship to build research capacity in new areas (e.g. use of randomised controlled trials — which cut across STEM and social sciences); and promoting research quality and mechanisms for monitoring and evaluation (e.g. the Research Excellence Framework (REF) in the UK since 2014). The IDRC's **Nigeria Evidence-Based Health Systems Initiative (NEHSI)** is a good example of how to engage with all relevant levels of governments and civil society to raise awareness of the importance of research and generate support for interventions. Groups, such as the **Coalition for Africa Research and Innovation**, have also made great progress in helping to drive national and local priorities for human capital development in this space.
- **Practice inclusion in innovation processes and research.** Enabling the participation of marginalised groups in an innovation ecosystem is a strategy which can take many forms but can drastically contribute to the successful development of an equitable and inclusive ecosystem. Supporting research incentive mechanisms (e.g. creating career paths in research and innovation) or supporting women in STEM fields can enhance diversity in innovation processes and research. The work of Global Affairs Canada with its **'Innovation for Women's Economic Empowerment'** in Ghana is one example that may not have ecosystem strengthening as a core goal yet still contributes to the cultivation of a more diverse, gender balanced workforce/entrepreneurial population which will benefit the ecosystem in Ghana and of other target countries.

Who are the **principal actors** with a role to play in achieving this Goal?

Academic, education and training institutions have a leading role in building the human capital needed for an entrepreneurial population. Increasingly, they are designing new courses and degrees around innovation and entrepreneurship that are helping to professionalise and normalise this as a valuable career pathway. The support they receive from governments and private sector actors in helping fund these opportunities and connect students to innovation opportunities is also crucial. Hubs, incubators and accelerators may also play a role in building human capital, along with NGOs and research institutions.

CONTINUED

What **insights** have been gleaned from IDIA members and partners in strengthening Goal 1: Build Human Capital in practice?

- **Development agencies could update their internal processes surrounding funding, and seek to build capacity of the truly innovative, grassroots innovators or innovation leaders:** The Chairman of the Ghana Hubs Network noted how often innovators with the longest financial history or who most easily meet due diligence criteria are granted funding over newer, yet possibly more effective, partners. He proposed the idea that *"funding agencies should come together and have conversations on their funding processes and identify who are the true grassroots innovators and impact builders, and then find a way to work with them to build their capacity."* **Development agencies may also provide financial support to strengthen and standardise innovation hubs among urban and rural areas and help them become more financially sustainable:** A government official from Ghana's National Entrepreneurship & Innovation Program explained how their office received donor funding to standardise offerings to hub offerings to innovators across Ghana and in this way, *"donor agencies reduce the duplication of efforts and can enter and contribute meaningfully to the ecosystem and help to support key government priorities."*
- **"Talent is a lever that unlocks other levers" in social innovation:** Sudha Srinivasan, an IDIA Global Innovation Advisor in India, describes the importance of developing innovation talent to solve complex societal challenges. She notes: *"No problem in poverty can be solved by a single organisation or a single theory of change. Every sector of industry has been disrupted through start-ups, but this is challenging when there is not an established culture of innovation or there's very little competitiveness in the job marketplace for talent for non-profit and development work. This needs to change — young people leaving universities need to see this space as challenging and aspirational so they will be inspired to apply their skills to solving these challenges."*
- **Innovation can be a 'change strategy' that contributes to building human capital:** Development agencies with missions centred on building health or educational systems may not focus on strengthening innovation ecosystems directly. UNICEF pointed out that *"Innovation is used as a change strategy in various sectors but UNICEF does not focus on the actual innovation ecosystem, however the process of building human capital is easier if there is a strong innovation ecosystem in place. These foundations [in the innovation ecosystem] make scaling new ideas and innovations in health or education easier."*
- **Human capital is a key enabler of long-term success but also one of the biggest bottlenecks holding up progress.** FCDO emphasised *"Re-skilling and re-training a population is a continuous process and therefore can be extremely difficult to do given constant learning and rescaling of human capital required. If you look at the education sector or the health sector or many of the sectors development agencies work in, the biggest challenge for many of the governments is to continuously retrain and rescale their workers, and in doing that effectively, and hopefully, efficiently in a way that that enables the workers within different sectors to feel committed to their work and thus have limited turnover and a career path. For most of the sectors that non-profits work, human capital is an incredible enabler of success if it works. But it's also quite often one of the other major bottlenecks."*

What are some helpful **resources** for further reading / analysis around this Goal?

- **Research capacity strengthening to meet LMIC Needs, UK FCDO (2019)** | **Here**
  This paper presents the results of a Rapid Evidence Assessment (REA) of the literature on international donor led interventions to strengthen research systems and organisations.
- **Support to innovation and innovation systems, SIDA (2015)** | **Here**
  This paper formulates some principles guiding Sida's work towards strengthening innovation and innovation systems at the global, regional and bilateral level. It highlights some new possible areas where this type of support might be expanded in relation to the general innovation framework objectives of Sida's development cooperation.
- **Capturing learning from tech innovation hubs across Africa, The Indigo Trust (2017)** | **Here**
  This report summarises conversations with actors working at technology innovation hubs across seven countries with Sub-Saharan Africa about the challenges they face in terms of sustainability, income generation and attracting a diverse array of innovators and social entrepreneurs.

2
Access to Finance

Ensuring accessibility of finance for innovation processes

Why is this goal important?

Lack of access to appropriate and sufficient finance remains one of the most important factors contributing to productive and sustainable entrepreneurship. As GIZ elaborates in a **recent report**, strong entrepreneurial ecosystems need a multifaceted range of financial institutions to provide various financial products and services. These institutions include (but are not limited to): accelerators/incubators, angel investor networks, private foundations, impact investors, venture capital firms, private equity firms, crowdfunding platforms, public/semi-public funders and banks. Grants won through international innovation competitions have also made development agencies a key player in providing innovation financing, especially towards the early stages of the innovation process.

What are some of the **challenges** to achieving this goal?

- **Slow growth in the diversity of financing mechanisms.** Many funders typically offer one or two forms of finance in supporting innovation, which has required entrepreneurs to engage and develop relationships with a wide range of supporters as they work through the different financing requirements at various stages in the scaling process. Recently, funders have begun to expand the diversity of their financing instruments to allow for a greater mix of funding mechanisms and different rates of returns on their investments. However, risk appetite for financing innovation remains low overall, and there are few efforts to provide greater continuity across different funding mechanisms within the funding ecosystem.
- **Limited amounts of appropriate financing to match innovation and scaling needs.** Start-ups face a range of challenges around the availability of finance, including very limited risk-tolerant grant financing, minimal access to credit from banks (who see them as high-risk), high interest rates and cost of debt, and low engagement from private equity investors in start-ups that are 'too small'.
- **Investment return uncertainty and risk-aversion.** Financing innovation is often particularly difficult since the outcome of an innovation process is uncertain and the returns on innovation investments are not perfectly appropriable. These may jeopardise the capacity of firms to pay back lenders and increase investors' risks. Similarly, assessing the risks of innovative projects might be more difficult and more costly than assessing the risks of other kinds of projects. It may require experts with specific knowledge (e.g. technical or scientific knowledge), which raises assessment costs. This can be especially problematic for entrepreneurs, who typically lack collateral and a track record showing to creditors their ability to conduct innovative projects and their trustworthiness.
- **Bias and discrimination in the allocation of funding.** Familiarity bias — whereby innovators who look, sound and act like the funder are more likely to be selected for funding than those who do not — remains a key challenge in the innovation space. Powerful evidence exists around the extent of **racial discrimination in grantmaking** among philanthropic organizations, while gender discrimination has led to a situation where approximately **70% of the world's women-led small and medium enterprises (SMEs) do not have access to finance** or lack the amount of finance needed to grow, and SMEs also borrow at higher than market rates (according to research under BMFG's Salient Initiative). These are just two of the lenses that come into play — whether consciously or unconsciously - in perpetuating the 'usual suspects' syndrome of innovation grant making.
- **Dominant funding practices are ill-suited to supporting systems innovation or innovation processes.** Innovators who are seeking to fundamentally disrupt existing markets, paradigms or practices often struggle because current funding practices are generally built to support short-term projects with clear, measurable results rather than collaborative, evolving approaches to create lasting change. Short funding horizons, restricted financial resources, short term staff postings and funders' interference with initiatives pose major challenges. Furthermore, **policy frameworks for research and innovation are often incomplete or fragmented in LMIC's**, and even when policies are in place, their implementation is poor due to lack of adequate financial and human resource support. Donors may provide support to strengthen advanced research to support innovation and invention.

What are some of the **strategies** for strengthening ecosystems in support of this goal?

- **Experimenting with innovative financing mechanisms.** More and more funders of innovation are now exploring new (or new combinations of) financing instruments to (a) generate additional development funds by tapping new funding sources (especially the private sector); (b) enhance the efficiency of existing financial flows, by reducing delivery time and/or costs, especially for emergency needs and in crisis situations; (c) make financial flows more results-oriented, by explicitly linking funding flows to measurable performance on the ground. Approaches include public-private partnerships where FinTech companies work with governments to finance innovations in their network or cluster (e.g. The UK and India governments are funding FinTech companies to facilitate research and innovation in the two countries, in line with UK-India trade in FinTech and Fin-Tech-enabled services). Some of these approaches are seeking to use blended finance to accelerate the growth of start-ups and distributors to improve the availability, affordability and quality of essential health products. Other approaches, such as **gender-lens investing**, are revealing how gender and other potentially discriminatory factors like race, ethnicity, age and disability, can be integrated into all stages of the investment process to increase the impact of that financing on broader equality and inclusion outcomes.
- **De-risk innovation by backing up loans or adopting balanced portfolio approaches.** Innovation funders are increasingly embracing portfolio approaches to their investment, in which they implement a strategy to finance a range of innovations with different levels of risk that balance each other out and create an overall strong bottom line. Given the inherent uncertainty of innovation, it is safe to expect that some projects will fail, and others will succeed — the focus is instead on portfolio performance overall. Governments may also play a role in de-risking innovation. A government official in Ghana's National Entrepreneurship & Innovation Program described how the government backs-up loans that banks make available to innovators, providing a government guarantee that de-risks investments for development agencies. The benefit is that "a young person with a brilliant industrialisation idea can get an interest rate of 10% while the government absorbs the interest charge of the 14% — to support the government's agenda of industrialisation and to push more young people to take financing with the government guarantee and protect financing directly from the bank. If funding organisations realize that there's a backup guarantee from the government, they can come into the ecosystem and provide funding to Ghana's entrepreneurs, and the government can guarantee that we'll be able to push our entrepreneurs to pay back within a certain time frame."
- **Engaging more local actors in the sourcing and selection of innovation investments.** The development community is arguably more aware of its inherent biases now than at any other time in their history, and this is giving rise to some promising new approaches designed to help level the playing field. One of these is the "Innovation scouting" model, which involves funders sending or stationing scouts to locate talent and existing processes requiring scaling. This ensures that scouts are immersed in the environment, helping them to see the world from the perspectives of those that innovations are intended to reach. Given their continuous engagement with the place they live in, scouts (ideally people from these places rather than from abroad) can then pick up on not only those things that are captured in donor reporting mechanisms, but also tacit knowledge about how things work along with the peculiarities of the place they are working in and how to navigate them.
- **Governments or donors can provide funding support to innovation processes or to enable advanced research.** Both governments and philanthropy are increasingly seeing the need to fund innovation processes and finance advanced research to support innovation and invention. They may fund labs for experimental research and innovation, such as the **"Feed the Future Innovation Lab for Markets, Risk and Resilience"** in Ghana (by Chris Udry, PI), or the new UK body to support high risk and high reward scientific research — **Advanced Research & Invention Agency or ARIA**.

Who are the **principal actors** with a role to play in achieving this Goal?

A wide range of financing institutions are influential here, including banks, private equity/angel investors and grant-making development agencies. In addition, governments can play a role in funding hubs or research institutions and other programs in support of innovation processes, though often coordination among ministries and actors remains limited.

What **insights** have IDIA members and partners gleaned from strengthening Goal 2: Access to Finance in practice?

- **Development agencies should be demand driven and seek input on government innovation priorities:** One lesson identified by several informants and emphasised by one IDIA agency was: *"To be much more demand driven and country-led, with one of the first steps having the country government and country stakeholders identify what area of innovation they want to focus on, and what innovations would be most appropriate (for scaling in the public sector)."* For example, development agencies may provide financial support to innovation hubs: Donors may provide financial support to strengthen and standardise innovation hubs among urban and rural areas: A Ghanaian government official in the National Entrepreneurship & Innovation Program explained how their office received donor funding to standardise offerings to hub offerings to innovators across Ghana and in this way, *"donor agencies reduce the duplication of efforts and can enter and contribute meaningfully to the ecosystem and help to support key government priorities."*
- **Development agencies may support the accessibility of finance**, such as the need for financial institutions to offer investment deal sizes that innovators in the ecosystem actually need. Donors could explore pooling resources for comprehensive programs in partnership with ecosystem players to fill these gaps, work with local ecosystem players in the program delivery wherever possible. One successful example of this is the **BUSAC** fund which was set up as a pooled fund to support business associations to engage with government and advocate for policy change.
- **Actors should prioritise working to build a sustainable public procurement model to develop and scale social innovations:** In the longer term, the big challenge is for countries to lead in developing an effective and sustainable public procurement model, through which governments can pay for and promote local innovations. Building on the idea for a sustainable public procurement model, one donor noted that one of the challenges they have faced is: *"Working with governments to mobilize finance to go towards ecosystem strengthening and mobilising the stakeholders towards actual decision making. As donors we may not come in with a lot of money but are able to convene and bring together some design experts and some facilitators...and are certainly looking for partners to put in funding into a pool to fund some of the innovations (that are ready to scale through public pathways), but in the longer run it is challenging to figure out how this becomes a public procurement model."*
- **Encourage interest and buy-in from the private sector to pursue social impact work (even without immediate return on investment) through creative finance arrangements**: UNICEF emphasised that, *"Financing is a is a big, big issue... market shaping is a is a huge one as well. From the donor perspective, and from a non-profit perspective as well — the majority of the finance is not in government, it is in private sector. So how do you bring the private sector to have an interest or buy in doing social impact either for themselves or actually for a potential return on investment? How do you frame that return on investment? UNICEF lacks commercial incentives, so one option is to bring in the public sector to de-risk the private sector investment — for example to fund internet access to schools (through UNICEF's GIGA initiative). In this way the donor could put some funding on the table and work with the government to pay some portion to incentivise the private sector — it's all about syndicating these funding sources in a way that make a particular investment attractive to people who have the money to invest."*

What are some helpful **resources** for further reading / analysis around this Goal?

- **Embracing Complexity — Towards a Shared Understanding of Funding Systems Change, Catalyst 2030 Consortium (2020)** | **Here**

  A report aimed to reach those in the funding community who want to evolve their current model to invest in systems change approaches.
- **Implementing a Gender Strategy: GCC's Story, Criterion Institute (2017)** | **Here**

  A white paper demonstrating how a thorough gender analysis that documents patterns in how gender and its relationship with other factors like race, ethnicity, age and disability play out in a specific context, can be integrated into all stages of the investment process to increase a fund's impact on gender equality.
- **Funding Innovation: A practice guide, Nesta (2018)** | **Here**

  This guide provides insights into different financial tools that can be used to support innovations – what they are, how they can be used and what some of the challenges are around using them.

3
Supportive Markets and Infra-structure

Establishing supportive research, markets, energy, transport and communications infrastructure

Why is this goal important?

While the literature provides consistent evidence on the importance of research for public health, economic development and policy development, a number of factors limit the positive effect of research across LMICs: weak linkages between higher education, research, private sector and government; poor alignment of research with national needs and priorities; and a weak demand for research in policy making.

Collaborations with the private sector can provide opportunities to enhance research and innovation. Access to markets also determines both the resources that innovative businesses have access to and the market opportunities that ultimately shape success or failure. For the vast majority of social entrepreneurs, the market is the main route to scale for the innovations they develop. Strengthening their understanding of (and access to) relevant markets in which to promote their product/service is therefore an important part of enhancing their chances of success in both testing demand and reaching impact at scale. In fact, as a **global survey of entrepreneurs conducted by the World Economic Forum** revealed, market access is one of the 'big three' ecosystem pillars that they see as most important in the growth of their companies.

Equally, as it is domestic rather than global markets that are usually most important for entrepreneurs (very few innovations are 'born global'), the maturity of infrastructure supporting the functioning of these domestic markets is therefore very influential. This includes (for example) the availability of comprehensive telecommunications services enabling different kinds of stakeholder interaction and ecommerce; transport networks enabling the efficient transfer of goods; and/or reliable and affordable energy resources such as electricity to power basic equipment.

What are some of the **challenges** to achieving this goal?

- **Inadequate and unreliable infrastructure.** In many low-resource contexts — particularly rural and remote geographies — access to basic infrastructure remains challenging and where it does exist it is frequently unreliable. For example, around **10% of the world's population still do not have access to electricity**, with the proportion increasing in countries such as Burundi and Chad where close to 90% of the population remain without access. Similarly, while access to the internet is today recognised as a core pillar of the modern information society, as of January 2021 only **just over half (59%) of the global population were registered as active internet users**. While this proportion is increasing every year thanks to advancing mobile technology and the ongoing development of telecommunication networks and infrastructure, it means that a large number of (potential) entrepreneurs outside urban areas still lack the ability to use the internet to inform the development/promotion of their innovations.
- **Barriers to market entry and innovation uptake.** Innovations are by definition not always products or services around which a vibrant market already exists, and actors at both ends of the market — producers and purchasers — may face high transaction costs, critical knowledge gaps or imbalanced risks that hamper their participation in the market. In addition, **markets typically function to resist the introduction of new innovations** because the latter challenge the status quo of consumer choice and expectation. This is particularly the case in today's digitally connected world, where markets function as networks and participants will switch to a new product only when it believes others will do so too. Combined with the noise of thousands of new ideas, products and services that jostle for the attention of investors every day, it can be very difficult for an entrepreneur to be even noticed within, let alone gain access to, those markets.
- **Disconnects among R&D institutions and innovation actors and lack of research data infrastructure limit diffusion of research.** Research is critical to solve development challenges, yet the diffusion and uptake of research is often limited. Little attention is paid to how to create linkages and coordinate research among higher education, research, private sector and government actors within the innovation ecosystem for example. Research is critical to solve development challenges, yet the diffusion and uptake of research is often limited (from local to national policies). Lastly, research data infrastructure across stakeholders at a national level — and within innovation ecosystems — is limited.

What are some of the **strategies** for strengthening ecosystems in support of this goal?

- Clustering innov**ation actors and activities within specific geographies.** One way in which national governments and large established private companies are seeking to support early-stage companies in their growth and development is by consolidating high-quality infrastructure and resources for innovation within place-based science, technology and innovation parks. These 'innovation zones' typically provide all the relevant infrastructure (e.g. high-speed broadband, modern office/lab facilities and even on-site accommodation) designed to help support and accelerate innovators in developing solutions. Many of them also intentionally co-locate larger, established companies on site to make the exchange of learning, scaling networks and uptake of solutions easier.[12]
- **Market shaping.** Country governments, international donors and procurers can use their purchasing power, influence and access to technical expertise to address root causes of these shortcomings and proactively help to stimulate, de-risk and shape demand for new innovations. Proven strategies here include providing Advance Market Commitments, pooled procurement, subsidies to optimise pricing and incentives to encourage take-up.
- **Facilitating market access.** Another approach that global development agencies are using is leveraging their networks to connect innovators they are supporting to domestic and international markets through direct Business to Business (B2B) connections and public-private partnerships (B2G). A Ghanaian government official, for example, highlighted that "development partners have the oversight of bigger markets and can play a key role in providing that international market linkage from Ghanaian businesses to European, US or South American markets." In addition, development agencies may also provide innovators with access to relevant information on tariffs, legal requirements and other conditions that may constrain or enable their access to international markets.[13]
- **Strengthen linkages and communications among stakeholders to enable research to support innovation.** In order to maximise the positive impact of research, interventions should focus on generating long-term commitment to research between relevant stakeholders in government, civil society and the private sector. The use of intermediaries, such as national or international organisations with a permanent foothold in the country (e.g. African Development Institute of the African Development Bank, of which Victor Murinde was founding Director), is seen as an effective long-term strategy. In addition, supporting the establishment of national infrastructure for research communication (e.g. shared platforms for new research evidence — the evidence and policy platforms; the Research Excellence Framework in the UK provides such as example that could be customised to other contexts.)
- **Establish research data infrastructure across national stakeholders.** Research data infrastructure — including hardware, software, cloud services, services and storage — is required to support the production and diffusion of research among stakeholders and within in innovation ecosystems

Who are the **principal actors** with a role to play in achieving this Goal?

Governments, private sector actors and development agencies can all play important roles in strengthening research and establishing connections among government, higher education and the private sector, and in facilitating innovator access to different kinds of domestic or international markets.

[12] The 'Special Impact Zones' within Dutch Mofa's Initiatives For Youth program are a good example of this strategy.

[13] GIZ's Tripartite Agreement with Israel, Mastercard and the Government of Ghana, for example, works on this strategy, as does FCDO's Africa and Technology Innovation Partnership. For more on these initiatives, see Appendix B.

What **insights** have IDIA members and partners gleaned from strengthening Goal 3: Supporting Markets and Infrastruture in practice?

- **Align development agencies efforts with national infrastructure priorities.** Patrick Mugisha, Commissioner for Innovations and Intellectual Property Management for the Ugandan Ministry of Science, Tech and Innovation, states, *"Ensuring adequate infrastructure should be a key priority. In particular, aligning work with national infrastructure priorities so that through scoping exercises the need to develop or scale up specific innovations — biomedical devices which may require 3D printing for prototyping, for example — we can ensure that the infrastructure and regulatory framework align."*
- **Development agencies could partner with existing ecosystem building initiatives such as collaboration platforms, industry associations and other networks set up to bring innovators together to work on common issues or to foster collaboration, knowledge sharing and system change.** Collaborations like this are essential for tackling the system level issues such as engaging with regulators, generating data to benefit the entire ecosystem and capacity building. For example, the CEO of Impact Investing Ghana shared that, *"Development partners are supporting the development of a baseline ecosystem map of catalytic investments to drive the growth of SMEs in Ghana. The map will track the evolution of the ecosystem, its gaps, successes and failures and serve as a reference point to drive collaborative action based on the data."*
- **Prioritise building the enabling environment in order for innovation to flourish:** FCDO described how its Africa Technology & Innovation Partnerships (ATIP) seeks to strengthen markets and harness technology for development. *"For decades, efforts have been made to strengthen markets and infrastructure within the agricultural sector, or look at financial inclusion, or at climate and most will have some sort of programme that looks at the use of technology for that sector. Within those programmes, they often have an element of ecosystem strengthening to help address these fragmented industries. Internet access, is a foundational element of an innovation system, just as having a good and inclusive energy system is, so that people have the ability to access the energy they need to innovate. So there's a number of these foundational aspects that we've got programmes for. But **what we didn't have, and this is where ATIP comes in, we didn't have something that focused on what the enabling environment for innovation is specifically, rather than looking at it as an adjunct to sectoral work or to giving grants to innovators. And the benefit of having something that specifically focuses on innovation, is that the enabling environment is cross sectoral.** We can then look at some of the cross sectoral kind of factors within the enabling environment in a way that programmes that are sectoral can't, and programmes that focus just on the impact through direct grants to innovators can't. The downside is that they are fragmented, and that it's not a very well-coordinated package. One of the other things that is a really important thing for us to tackle going forward is how to increase the coordination between that sort of portfolio of programmes that looks at the innovation system."*

What are some helpful **resources** for further reading / analysis around this Goal?

- **Strengthening Research Systems in Africa (SRIA)** | **Here**

  This report summarises the key findings from a needs assessment from **seven African countries**, which explores the ability of a country's research system and stakeholders to produce high-quality research and disseminate it effectively to support knowledge-driven sustainable development. SRIA, along with the Africa Technology & Innovation Partnerships Initiative (ATIP) (described in the insights above) are part of FCDO's Research & Innovation Strengthening in Africa (RISA) program.
- **Innovation Policy Platform, Market Access and Innovation (2020)** | **Here**

  A series of resources answering questions including: How do market development and access affect innovative businesses? And what are key policy dimensions regarding market development and access and innovative businesses?
- **Healthy Markets for Global Health: A Market Shaping Primer, USAID (2018)** | **Here**

  A primer that takes an inventory of successful market shaping interventions and assesses the commonalities. It then offers a high-level roadmap for how market shaping could advance global health goals.
- **Entrepreneurial Ecosystems Around the Globe, World Economic Forum (2014)** | **Here**

  A report based on extensive polling of entrepreneurs focused on answering two questions: 1) What do entrepreneurs see as differences among entrepreneurial ecosystems, and 2) Which pillars of an entrepreneurial ecosystem do entrepreneurs view as most important to the growth/success of their companies?

4 Policies and Regulations

Creating enabling policies and regulations

Why is this goal important?

The policy and regulatory environment plays a powerful role in determining how well innovation processes and actors are able to operate. Despite increasing evidence pointing to the crucial contribution innovation can make to a country's long-term economic growth and competitiveness, it is by no means a given that governments recognise or incentivise innovation activity within their policy frameworks. Some contexts can actively prohibit innovation (whether intentionally or not) through strict rules, high levels of risk-adversity and institutional regulations and practices that actually encourage resistance to change rather than creativity and adaptation. Part of the problem may be the wide range of disparate policies that countries must coordinate in order to create enabling environments for innovation, which stretch across ministerial boundaries and can include policies shaping research, technology commercialization, IT investments, education and skills development, tax, trade, IP and government procurement.[14]

What are some of the **challenges** to achieving this goal?

- **Lack of clarity about the role that the government should play to encourage innovation.** Governments can play an incredibly important role in enabling innovation at every level of an ecosystem. Yet the numerous options and pathways for government involvement can be a hindrance, resulting in a lack of clarity or direction in public sector actions in this space.
- **Unsuitable policies and regulations, including for research.** Policies and regulations that create bottlenecks and fail to provide incentives and pathways for public or private sector scaling can constitute huge barriers to the growth of thriving innovation ecosystems. Governments in Africa and elsewhere often have incomplete or fragmented policies that do not support a dedicated research agenda necessary to enable innovation.
- **Government processes that are incompatible with innovation.** The process of innovating often means dealing with uncertainty and requires both agility and coordination, all of which can be extremely challenging to manage within large, risk-averse government bureaucracies.
- **Siloed approaches and a lack of policy coherence.** A lack of visibility, coordination or alignment amongst public sector actors can constitute a huge, missed opportunity when it comes to enabling innovation ecosystems. While siloed approaches to innovation, be they geographic or sectoral, may result in short term benefits, they typically do little to evolve a holistic innovation ecosystem. This requires a more targeted approach that prioritises coordination of research, shared learning, collaboration across the public sector and advocacy for a joint vision for growing innovation capacities.

What are some of the **strategies** for strengthening ecosystems in support of this goal?

- **Encouraging multi-sectoral, multidisciplinary policy frameworks for innovation.** Innovation driven economic growth requires the right mix of multi-sector and multidisciplinary policy actions — in education, research, science and technology, finance and public procurement, among others. Entrepreneurs globally note that government and regulatory policies are viewed by entrepreneurs as both potential growth accelerators and growth inhibitors. The challenge is to find the policy solutions that work best in a given country context. Innovation ecosystem theory typifies government approaches to supporting innovation into two broad categories. The first is a 'top-down' approach in which the public sector acts as a planner in or orchestrator of the innovation process. This includes the creation of direct 'demand factors' for innovation such as policy, regulation or innovation targets that cause the market to change direction. Examples of this approach include the Swedish government which directly creates mechanisms to enable university industry interactions (**see here**) or Japan's Ministry of International Trade and Industry which provides subsidies in research and promotes technology commercialization of Japanese firms (**see here**).[15]
- **Encouraging collaboration, partnerships and promoting a culture of innovation.** This more 'bottom-up' approach involves the public sector acting as a facilitator, promoting innovation through more indirect means such as through the market and drawing on soft power to promote the benefits of innovation through setting values that celebrate innovation, encouraging collaboration and building a tolerance of failure. An example includes the U.S. government setting up competition-based rules to

[14] Global Trade and Innovation Policy Alliance (2019) National Innovation Policies: What Countries Do Best and How They Can Improve. Available here.

[15] GIZ's Tripartite Agreement with Israel, Mastercard and the Government of Ghana, for example, works on this strategy and the subsequent strategy for building collaboration and a culture of innovation (as does FCDO's Africa and Technology Innovation Partnership).

facilitate linkages and networks among universities, entrepreneurs, accelerators, forms and venture capitalists. Typically, **most governments adopt more of a hybrid of both 'top-down' and 'bottom-up' approaches** based on their national priorities, capabilities and what works best for the economy in general.

- **Strengthening the collaborative relationships between academia, the private sector, government - known as the Triple Helix, or with the involvement of civil society - the Quadruple Helix** (described further under Goal 6). Government policy plays a role in and encouraging university-industry interactions, in supporting public-private partnerships, enabling public sector scaling of impactful innovations (see Goal 8) and through involvement of civil society who are often the end users of innovative services or products.
- **Strengthening research capacity by taking a systems approach.** The government plays a key role in supporting and contributing to an innovation research agenda. In order to be sustainable, research capacity strengthening must take a systems approach that responds to capacity needs at different levels (individual, organisational, and environment or network) and must be tailored to the context where implemented. FCDO's **Strengthening Research Systems in Africa (SRIA)** program provides an example.

Who are the **principal actors** with a role to play in achieving this Goal?

Governments at all levels are the main actors in designing and implementing policy frameworks for innovation, although many other actors such as think tanks and development agencies can also provide input and technical assistance into the policy development process.

What **insights** have IDIA members and partners gleaned from strengthening Goal 4: Politics and Regulations in practice?

- **Engage with governments early for support:** A partner with the African Academy of Sciences who leads the Grand Challenges Africa program noted, *"Governments can be net purchasers of innovation (as seen with both the Grand Challenges Africa program and the Grand Challenges family) and they can create demand for innovations, and they also regulate innovations. So if one can bring in government then you do, you will have moved significantly quicker, rather than leaving them out. Because eventually, at some point, whether the pathway for private enterprises, but especially the pathway for public policy and public support, if it's not supported by government or government departments, then your innovation is as good as dead. We really need to understand what governments are thinking about innovation and how best we can work with them."*
- **Ensure that decision makers at each level of government (ministers to local or district officials) are included in the prioritisation/decision making processes at the earliest stage possible to ensure maximum buy in and eventual ownership of innovation.** A lesson drawn from an IDIA donor's approach to public sector scaling of health innovations and first round of demonstration projects highlights: *"Government procurement is the dominant pathway. We certainly welcome private sector, but just don't think it will be as effective of a learning experience if the government isn't there. Our vision is to include government stakeholders at all levels. We certainly expect all the various departments of governments — ministers of finance, ministers of health, possibly ministers of Science, Technology and Innovation if they have them and at the same time the other development actors. Certainly, in many locations like Kenya, the procurement decisions are pushed down often to the district level and making sure that those decision makers are incorporated into the prioritisation process [of identifying priority health innovations] upfront will be important."*

What are some helpful **resources** for further reading / analysis around this Goal?

- **Innovation Policy Platform, OECD, World Bank** | **Here**
  A web-based interactive space that helps users learn how innovation systems operate, identify good practices across different countries, conduct statistical benchmarking and devise and evaluate effective innovation policies.
- **Global Innovation Index (GII)** | **Here**
  The GII ranks countries by their capacity for, and success in, innovation based on a collection of over 80 various singular and composed indicators to study the innovation and its environment.
- **The Global Competitiveness Index (GCI)** | **Here** **with recent data at GovData360** | **Here**
  The GCI Index develops a report annually that looks at the sets of institutions, policies, and factors that determine the level of productivity of a country. The Index structures itself onto 12 pillars that make up a region's competitiveness, ranging from Institutions to Good Market Efficiencies.

5
Innovation Culture

Nurturing a culture supportive of innovation

Why is this goal important?

Culture is both a starting place and an underlying foundation for the entire innovation process. However, creating a culture supportive of innovation and entrepreneurship will sometimes require changing the mindset of a population who may view it as a wasteful or luxury activity and as less of a viable or respected career option than other more traditional/established professions. To this end, contributions from a wide range of actors over a long time period are typically required to help nurture a positive culture of research feeding into innovation processes and where innovation can flourish.

What are some of the **challenges** to achieving this goal?

- **The culture of innovation (or innovation mindset) is not well understood and is narrowly focused on technological innovation.** New forms of and uses for technology products often take centre stage in mainstream discussions around innovation, which can encourage a wrongful conflation of innovation and technology that omits all of the other kinds of innovation (e.g. those that are reshaping different areas of policy or practice, or frugal innovations which minimise the use of resources or leverage them in a new way to outperform others). In order to become embedded in a culture, innovation needs to be widely understood as a mindset rather than a synonym for technology.
- **The ecosystem is fragmented, and innovation actors are siloed geographically or sectorally.** The strength and culture of an ecosystem is rooted in the connections through which it is formed and the emergence of shared values among different actors. At their strongest, ecosystem connections are cross-sectoral, cross-societal and transcend the boundaries of metropolitan hubs. However, this is rarely how ecosystems naturally develop. Many people believe that innovation is found only within the private sector and exists as an expression of for-profit competition and companies pursuing greater market share. Similarly, governments are often rarely perceived as innovative, because of their size and bureaucratic complexity. These are just some of the myths around innovation that, if left unchallenged, can become significant barriers to an effective, inclusive and sustainable innovation culture.
- **Long term visions are hard to maintain in the face of limited contracts and organisational preference for 'quick win outcomes'.** An IDIA donor struggled with the short-term appointments of Foreign Service Officers observing: "The cycles for a lot of the Foreign Service Officers are two years or three years and so developing an ecosystem is sort of beyond their scope in a way or beyond their timeframe. And it's difficult. How do you how do you come to terms with these, these different incentives that the development actors have?" There is a need to invest in the long-term view to support innovation ecosystem building, to work at changing the protocols to develop incentives for development actors in the system.
- **Lack of a culture of research collaboration across actors.** Research plays a key role in the innovation process, and linkages of research to other innovation actors is often limited, as well as collaboration among research institutions.

What are some of the **strategies** for strengthening ecosystems in support of this goal?

- **Encouraging multi-stakeholder dialogue, knowledge sharing and capacity development for and between partners.** Ecosystems thrive on connections therefore, creating or investing in initiatives that facilitate these connections and help set norms regarding collaborative, cross-sectoral/cross-societal learning is a crucial method through which a supportive culture can be nurtured. This was a strategy employed by the Ghana Tech Lab program Makers Assemble, which leveraged digital innovations to fight COVID-19, connecting actors to produce pandemic related solutions and contributing to the framing of innovation as an endeavour with extremely tangible societal results.
- **Facilitate/broker productive triple helix relationships.** The triple helix model advocates for the strengthening of collaborative relationships between academia, the private sector and government to improve the flow of ideas and innovation resources across ecosystems (see Goal 6 for more on the triple, quadruple and quintuple helix models). All three of the actors outlined in the triple helix model are regarded as major catalysts in the cultivation of a supportive culture, be it through their agenda setting power, thought leader status or control over resources. Facilitating collaboration between these actors in the innovation space — and beyond to include civil society and the environment — can therefore act as an extremely

powerful stimulus for the growth of a supportive culture.

- **Support a culture of South-to-South research collaboration.** As discussed previously, triple and quadruple helix relationships are beneficial to the innovation process, collaboration among researchers may also strengthen the ecosystem. Governments and donors may support research collaboration, such as intra-African research collaboration or regional research hubs (e.g. South to South Initiative by AfrEA in Ghana).
- **Provide support to innovators and intermediaries to promote an innovation mindset and culture (adaptive learning, human centred design, nimbleness etc.).** At its core, innovation is about effective learning, therefore creating an innovative culture is necessarily intertwined with creating a learning culture. With this in mind, it is important that support given to innovators and intermediaries is artfully oriented toward cultivating mindsets built around curiosity and creativity - with initiatives that set explicit goals to share adaptive learning and skills development knowledge with partners and innovators.
- **Facilitate learning opportunities that are inclusive (dismantling the idea that innovation is 'not for everyone').** Learning opportunities that focus on building the capacity of social entrepreneurs and innovators should be as inclusive as possible of marginalised populations. In many countries around the world, necessity drives innovation which is un-recognised because of its sources. For instance, research shows that now more than ever women in Africa are turning to entrepreneurship as a path to escape unemployment, yet women are still vastly underrepresented in hubs and accelerator programs. In an inclusive ecosystem, the work of the 'unlikely suspects of innovation' should be better harnessed and more widely celebrated.

Who are the **principal actors** with a role to play in achieving this Goal?

Governments are perhaps one of the most influential actors in creating a culture supportive of innovation at different levels of society, and this can be expressed through policy initiatives, the profile of innovation within their approach and their contributions to sharing and celebrating stories of innovation (including those that may have failed but from which valuable learning emerged). A Global Innovation Advisor from India notes the how the government must balance promoting innovation with the risks of experimentation, emphasising the importance of the triple helix relationships. She says, "the government is the largest funder for development work, but there's a certain bottleneck to them curating and discovering innovations. The government has to manage the risks of stepping out of the status quo when they potentially may invest in a large-scale change and transformation program. Experimentation is not in the DNA of the government, as anything they do has a very large footprint of impact because of the sheer scale at which they work."

Other influential actors include academic institutions (whose portfolios may embrace or ignore entrepreneurship to varying extents) and the innovators themselves both from the private sectors and CSOs/NGOs. Innovators may promote a culture of innovation to the degree to which they are able to break down myths and the tendency to fetishise innovation among the general population.

What **insights** have IDIA members and partners gleaned from strengthening Goal 5: Innovative Culture in practice?

- **Convening a range of actors at a country-level can begin to strengthen the culture of innovation and establish relationships between actors.** FCDO explained how it worked to bring together different sectoral teams: *"Where we're having the most success is at a country-level, where we look at how to bring together all the different programmes working on innovation system within a specific country (e.g. Kenya). There's a fragmented approach to working with other donors and that's something that we're also trying to do better on. But it's been a problem for as long as there's been a development industry around and I don't think we're going to fix it anytime soon. We're just trying to do a bit better on it for innovation systems as I think there is more promise doing it at a country level, because then you are also doing it with the people that we really need to be working with, which are the national innovation stakeholders."*
- **Government officials may take part in training fellowship to further embrace a culture of innovation:** Sudha Srinivasan — CEO, The/Nudge Centre for Social Innovation in India, describes how one might build this culture in an 18-month fellowship program which pairs senior executives from the corporate world — who've led successful change and transformation, together with bureaucrats within the government. Together they work through a problem of strategic importance and design a blueprint for change. She describes: *"Through this training fellowship, government officials can achieve greater comfort in stepping out of their comfort zone and the status quo way of doing things. When they go through training to be able to deeply evaluate various models and intentionally resolve the potential risks, you remove a lot of barriers to change. These officials grow their ability to become change leaders and bring innovation right into the core of their organisations."*
- **Recognise that ecosystems involve actors working both in cooperation and competition:** Often the idealistic perspective of an ecosystem depicting actors working in collaborative harmony appears as the aspirational norm — a situation recognised as problematic at the IDIA Principals' meeting in November 2020, when Will Senyo (CEO of Impact Hub Accra) observed that: *"Ecosystems are made up of healthy competition as well as selfless altruism, but in their framing and convening many funders naïvely only address the latter and, in the process, exclude a number of key actors whose instinct may be more aggressively competitive but who are highly influential within that ecosystem."*

What are some helpful **resources** for further reading / analysis around this Goal?

- **The Global Entrepreneurship Monitor (GEM)** | **Here**

  The GEM is developed by a consortium of corporations, universities, top research institutions and government laboratories that annually publishes studies on the state of entrepreneurship in over 70 countries.

- **The Global Entrepreneurship Index (GEI)** | **Here**

  The GEI creates a framework to study individual and institutional factors that lead to entrepreneurial activities. The Index focuses on studying the entrepreneurship environment and its outputs, looking at a number of parameters to define attitudes, abilities and aspirations of individuals, and institutional factors affecting those.

- **Global Startup Ecosystem Report** | **Here**

  The GSE is a new study from 2017 by Startup Genome that looks into a number of selected tech Ecosystems. It looks in great detail at the demographics, performing, funding and infrastructure.

6
Networking Assets

Supporting coordinated networking of assets that enable productive collaborations between different actors

Why is this goal important?

For an innovator, networks are crucial in order to stay abreast of developments, search for funding / supporters, expand their market reach, tap into a larger base of ideas and technology, find complementary expertise, access specific skills and competences and get new products or services to market before their competitors. For those who help build innovation talent (e.g. universities), who seek investment opportunities (e.g. angel investors) and/or those who are searching for solutions to seemingly intractable development challenges (e.g. governments), networking assets are equally important. These networking assets may come in many different shapes and sizes, and operate with many different purposes / goals, with access to finance being one of the most common. They include:

- **Formal networks** based on contractual relationships among organisations, such as strategic alliances, buyer-supplier contracts and joint ventures
- **Informal networks** that are typically informational in nature and which rely on connections between people and technology-enabled social networks
- **Industry networks** that connect actors operating in the same industry, e.g. business associations;
- **Supply chain networks** that connect actors involved in a common production chain
- **R&D networks** that seek to improve the flow of innovations between universities and businesses and better coordinate research among actors
- **Geographical clusters** of different actors co-locating in a specific place for the purposes of frequent interaction (e.g. science and technology parks).

Being embedded in the social networks can therefore greatly enhance the skills, capacity and potential of success for an innovator. Social capital, trust and openness in information exchange are essential to networking and shared learning among ecosystem actors. Social networks are discussed repeatedly in research, for example, success in Silicon Valley is **often attributed to** its 'regional industry structure and vibrant social networks which encourage knowledge sharing, labour mobility, collaboration and competition'. However it is important to recognise that networks can be exclusionary, and thus critical to ensure that intentional inclusion is designed from the start to overcome challenges or barriers faced by marginalised Groups.

What are some of the **challenges** to achieving this goal?

- **Low awareness/recognition of operating as an ecosystem.** Many actors involved in the innovation process are unaware of how the actions and contributions of others — or of themselves — might be influencing the development and scaling of their innovations.
- **Confusion over Intellectual Property Rights**. The more actors involved in developing an innovation, the more potential complication there is around who actually 'owns' the IP to that product / service. Ideas can quickly leak across collaboration networks, and unless they are designed to be 'open source' in nature this can create a lack of trust that undermines potential collaboration in further developing / scaling the innovation.
- **Externally designed networking interventions that undermine ecosystem productivity and inclusion.** With the best intentions, many external actors (especially development agencies) are now increasing their efforts in playing a convening role within local ecosystems, bringing together different actors with a view to catalysing stronger awareness, relationships and collaboration in addressing ecosystem-level weaknesses. However, when poorly managed or not developed in coordination with local populations, such efforts have the potential to undermine more natural/locally led ecosystem formations which should be strengthened by development agencies rather than artificially imposed.

What are some of the **strategies** for strengthening ecosystems in support of this goal?

- **Investing in 'Triple, Quadruple and Quintuple Helix' connections.** The Triple Helix Model advocates for the strengthening of collaborative relationships between academia, the private sector and government to improve the flow of ideas and innovation resources across ecosystems. The emphasis here is on helping each actor more systematically connect their contributions to each other, with academia acting as the main source of knowledge production, industry as the primary vehicle of commercialisation and the government as the overarching regulator. In

2009, following criticism that the triple helix model encouraged innovations that did not always match the demands and needs of society, the model was extended to become the 'Quadruple Helix', adding in the public (comprising civil society and the media) in an effort to bridge the gap. A year later, the model was expanded again to become the 'Quintuple Helix', this time adding in the natural environment as a fifth helix to ensure innovations developed through this approach are environmentally sustainable.

- **Funding Entrepreneur Support Organisations / Innovation Intermediaries.** Over the last couple of decades, the global innovation landscape has seen a surge in the number of entrepreneur support organisations (ESOs) in the form of accelerators, incubators and community innovation hubs — many funded by international development agencies. In addition to providing technical expertise and assistance to early-stage entrepreneurs in developing scalable business models, these ESOs have — to different degrees — included network connectivity as part of their core offering. Accelerators, for example, offer two types of networking benefits: the first being to connect the entrepreneur with potential customers and partners, and the second being to connect them with other like-minded entrepreneurs who can provide peer-level support and insights. In addition to this broader networking support, we are also now seeing the emergence of more targeted 'innovation intermediaries' — individuals or institutions who operate at the interface of multiple ecosystem actors to understand innovation needs and broker potential solutions in consultancy-style engagements.
- **Mapping ecosystem actors and using network analysis techniques to elevate the most impactful connections.** Many innovation ecosystems have now been 'mapped' in terms of creating inventories of actors and assets available to entrepreneurs (see, for example, ANDE's series of country-level **Entrepreneurial Ecosystem Snapshots** that map the different providers of financial and non-financial support). Increasingly, these are being accompanied by more rigorous 'network analysis' studies exploring the strength and nature of the relationships between those actors, and the implications of these on scaling and ecosystem productivity. For example, **one such piece of network analysis research** into the innovation ecosystem in Nairobi, Kenya, revealed that the most impactful networks for local entrepreneurs were in receiving experience, mentorship or investment from other entrepreneurs who have already successfully led a company to scale.
- **Coordinate research management systems and better match supply and demand.** Given the important role research plays in innovation processes, there is a need for coordinated research management systems, For example, the hub-and-spoke model (where the 'hub' is the central research centre and the 'spokes' are secondary centres) used for Centres of Research Excellence by the World Bank Group and the Centres of Excellence funded by the **UKRI African Research Universities Alliance**.

Who are the **principal actors** with a role to play in achieving this Goal?

Everyone within an ecosystem is responsible for the quality of their relationships. However, some actors, such as governments, can be useful in establishing platforms for networking as well as standards and norms for interaction. Development agencies can also leverage their more 'neutral' role in helping convene and facilitate

What **insights** have IDIA members and partners gleaned from strengthening Goal 6: Networking Assets in practice?

- **Design convenings to build trust and collaboration among stakeholders to enable partnerships to form and make progress on broader coalition goals:** A Director with the Rockefeller Foundation emphasised a focus on convenings and the overlap in Goal 5 'Building a culture of innovation', Goal 6 'Building relationships' and Goal 9 'Mobilising an ecosystem around a particular challenge' as follows: *"We use convenings as a bridge to accelerate actions and make progress on broader coalition goals. It is important to invest in the capabilities for convening — to curate the right group of people towards a specific goal. You need a trusting network of partners, recognising respective strengths, capabilities and complementarities in order to collaborate....It is important to define the bounds of a partnership. We have found this allows honesty around goals and the ability to map out visions collectively and individually. Designing these partnerships is something to really invest in."*
- **It is critical to have a touch point in country who knows the nuances of a particular ecosystem and can act as a relationship builder, ensuring the buy-in for a strategy to address a particular challenge:** FCDO articulated the importance of relationship building in its African Technology & Innovation Partnership (ATIP) program, *"Finding an opportunity to deliver an ecosystem strengthening project is as much about relationship building as it is about understanding the ecosystem — and I think both are hard and so having someone in country who can build those relationships, and who can understand the nuances of the national innovation system is basically critical."*
- **Ecosystem actors need to be connected to facilitate scaling of innovation:** Patrick Mugisha of the Ugandan Ministry of Science, Tech and Innovation (MoSTI) described the importance of bringing together actors in the innovation ecosystem and plans for Uganda to focus on the quadruple helix approach to bring together government partners, research institutions, the private sector and civil society: *"The approach we're going to take through the National Innovation Cluster Programme [which is designed to scale health innovations] is unique in itself because it will bring on board every stakeholder during the stakeholder mapping to assess our ecosystem. There is a lot of work to be done, because the process is going to be inclusive."*

What are some helpful **resources** for further reading / analysis around this Goal?

- **Global Accelerator Learning Initiative (GALI)** | Here
  Collects data on accelerator programs globally and the entrepreneurs that they attract and support.
- **Fostering Productive Entrepreneurship Communities, Endeavor (2018)** | Here
  Shares critical lessons on entrepreneurship communities and productivity as well as practical recommendations on how to implement Entrepreneur-Led Economic Development in cities.
- **The Triple Helix, Innovation in Action, Henry Etzkowitz (2008)** | Here
  This paper outlines the Triple Helix model and addresses key questions about its application as well as highlighting key challenges and lessons associated with reaching the goals of the model.

7
Equitable and inclusive Participation

Ensuring equitable and inclusive ecosystem governance and participation infrastructure

Why is this goal important?

Growing social, economic and environmental challenges have shone a harsh light on the inadequacies and inequalities entrenched in our global systems. Such stark inequity has reignited calls to re-examine and reimagine the systems which guide and govern us with a renewed focus on mainstreaming equity and inclusion into systemic practices, goals and processes. As such, a core part of our approach to ecosystem strengthening is the examination and interrogation of ecosystem strengthening work through an equity and inclusion lens. In practice, this requires a stronger focus on the process of strengthening initiatives as well as their outputs, in recognition of the concern that if we are not intentional about assessing how innovation is applied, we risk re-creating the inequalities of established systems. Central to this goal is ensuring that innovation is not something that is non-consensually transplanted into communities, but rather allowed to emerge through collaborative processes of co-creation and the establishment of contextually specific support and incentives to ensure maximum impact and uptake in the communities we work.

What are some of the **challenges** to achieving this goal?

- **Disadvantaged groups remain underrepresented in the innovation talent pool and face additional hurdles**. Diversity among entrepreneurs is limited due to a host of barriers, and successful scaling limited due to bias, discrimination or intersectional dynamics. While donors have made efforts to ensure aspects of program financing, design and targeting are responsive, systemic inequalities remain (e.g. large scale challenge funding to innovators in LMICs is under 50% thus perpetuating systemic inequality).
- **Ecosystem strengthening efforts do not address and can even exacerbate inequalities in a society.** While it may seem logical to assume that start-up activity and the development of an innovation ecosystem always has a net positive contribution to societal well-being, concerns have been **raised** that these developments can contribute to an increase in embedded regional inequality, especially when attention is not paid to how wealth created through ecosystem strengthening efforts is distributed.
- **Lack of gender equality and social inclusion in research.** Disadvantaged groups remain underrepresented in the innovation talent pool and face additional hurdles. Diversity among entrepreneurs is limited due to a host of barriers, and successful scaling limited due to bias, discrimination or intersectional dynamics. While donors have made efforts to ensure aspects of program financing, design and targeting are responsive, systemic inequalities remain (e.g. large scale challenge funding to innovators in LMICs is under 50% thus perpetuating systemic inequality).

What are some of the **strategies** for strengthening ecosystems in support of this goal?

- **To bridge the gap between the international donor community and innovators in LMIC countries, development agencies should reassess their role 'from solution providers to solution enablers'.** Recent research by OECD notes that this will entail reassessing the value for money for LMICs in such a way as to not unfairly tilt towards high-income country innovators and involve incorporating equity and inclusion lenses into frameworks: "To improve efficient and effective support of LIC and MIC innovation and local ecosystems, bilateral development agencies should reassess their role in light of their specific comparative advantages and in consideration of their general evolution from 'solution provider to solution enabler.' Doing so requires a more open discussion of trade-offs between balancing national interests and expanding markets for domestic innovators from donor countries, on one hand, and investments in local capabilities, ecosystems and markets, on the other."[16]
- **Enable representation, consultation and decision making from different parts of the ecosystem and consider reframing the innovation discourse, narrative or frameworks.** Consider how to bring together the public, private, labour and third sector together in a human-centred fashion and reframe using innovation (or innovation ecosystem strengthening approaches) to ensure value in terms of productive, people and planetary targets that move toward advancing the SDGs in an equitable manner.
- **Ensure community/target customer uptake and demand.** When considering funding innovations within an ecosystem or developing strengthening projects and programs, it is critical to ensure the value to the target community, and potential consequences of interventions. As **emphasised** by the WHO, while

[16] Ramalingam, B. and B. Kumpf (2021), "COVID-19 innovation in low and middle-income countries: Lessons for development co-operation", OECD Development Policy Papers, No. 39, OECD Publishing, Paris, https://doi.org/10.1787/19e81026-en. Pp. 9

innovations are often assumed to be purely beneficial, they may have unintended and sometimes undesirable consequences, or alternatively, simply be of little use or value to a particular community. One example given by WHO is the introduction of digital health technologies, which they have found may exacerbate existing health inequalities if implementation strategies fail to consider the persistent digital divide in the population. Due attention therefore needs to be paid to who will benefit and how, and what the consequences could be (in particular, those related to access, uptake and sustainability). Implementers also need to be aware of competing or complementary innovations or strategies, which may lead to disengagement and fatigue among ecosystem actors.

- **Diversify innovator and research talent pool.** Reaching beyond the usual suspects when it comes to engaging with existing and potential innovators is an incredibly important part of creating an equitable and inclusive innovation ecosystem. Accelerators, incubators and other hubs can seek a balanced and diverse portfolio of innovators to support from different social, economic, ethnic and cultural backgrounds. Research institutions may target campaigns to promote gender equality in research and social inclusion in research and education, address gender biases in admission protocols or deliver training and support services using locations, fee structures and times that enable and sustain the participation of excluded groups.
- **Consider diversification of metrics used to evaluate success and failure.** When measuring the success of entrepreneurial ecosystems, attention commonly turns to traditional metrics which are often grounded in economic prosperity — profit, number of new start-ups, changes to local GDP etc. However, evaluating the success of an innovation ecosystem with equity and inclusion at its core, requires a re-imagining of these traditional metrics, a re-orientation of the definitions of success and failure to include a greater focus on aspects such as progress made toward a more equitable and inclusive society or effect on environmental sustainability and so on. This move away from purely financial indicators of success in this field has already begun in earnest. For example, the **Global Competitiveness Index in 2020 has revised its approach** to include a new target: People and the planet, calling for countries to "create incentives that favour patient investments in research, innovation and invention, support the creation of new markets of tomorrow and incentivise firms to embrace diversity, equity and inclusion to enhance creativity." It calls for governments to "include greater digitalisation of public services and to ensure that public institutions embed strong governance principles and regain public trust by serving their citizens."

Who are the **principal actors** with a role to play in achieving this Goal?

A broad range of actors may be involved in this goal, given its cross-cutting nature. Governments in particular may be a principal actor given their central role to set policy and as a potential convenor of actors for ecosystem strengthening. In addition, civil society plays a key role given their advocacy efforts, and development agencies and research institutions can provide technical and financial inputs to encourage greater equity and inclusion more broadly in ecosystem interventions.

What **insights** have IDIA members and partners gleaned from strengthening Goal 7: Equitable and Inclusive Participation in practice?

- **Champion diversity, equity and inclusion in its many forms in innovation process:** Donor agencies are working to achieve greater inclusion in their innovation management and support processes: An IDIA partner who leads the Grand Challenges Africa program described its approach how they were working to broaden the talent, science and innovations in Africa. He noted: *"The African countries are so different. So if you were to take the innovation powerhouses of the continent--South Africa, Nigeria, Kenya, Egypt, and Uganda — and then there are other countries that we will probably just get one application during a full year. We do think about equity and inclusion, not just for giving out funding support, but also in terms of the idea. For example, we had a 'transition to scale' call recently and had an application from one of the bush forest people to develop a cultural school education system, and it actually made it through because of equity and inclusion, rather than anything else. With the consideration that, even if its highest level it will just be for that particular regional group, but it will have done a lot of for them, rather than just focusing on innovations that will benefit either the whole continent or the whole globe. When you say equity and inclusion, it's a mix of the types of innovations, gender (in terms of equity we do have a fairly neutral approach maybe four to six, female to male ratio in terms of gender), and then we try as much as possible to go to most parts of the continent. There's an interesting fracture of the continent along language lines, so this Anglophone Francophone and Arabic Africa. So again, trying as much as possible to be as inclusive of all those different areas. We do we do some interesting work there, but it's always a challenge. It's never easy."*

INSIGHTS CONTINUE ON NEXT PAGE

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- **Development agencies can help build the case for equity — at both the local and international level:** The Chairman of the Ghana Hubs Network stressed the importance of encouraging innovators/innovation leaders to include equity within their core mission. He notes: *"If you are running a women's program within one of Ghana's hubs, you need to invest in that. Ask, 'What financial resources do women lack? What kind of training do they need? You need to invest in them. You may let them bring their children in and hire somebody to look after those children."* The support must go beyond simply 'putting 50 men and 50 women in a room' to bring women's concerns, needs, and priorities to the innovation process. At the international level, **Development agencies can promote international inclusion:** The co-founder of Makaia, a non-profit in Colombia and innovation champion contributing to development in Latin America and the Caribbean, pointed out that *"Latin America is not always at the top of the agenda of international development agencies. Although many of the countries are middle income in terms of GDP, there are significant inequalities within these countries, and they need a lot of support and to be present in the international development space."*
- **Ensure demand, access and uptake by communities/marginalized groups:** Ensure that digital tech solutions are gender-responsive and do not exacerbate digital divides among marginalised groups. GCC's Humanitarian initiative 'Creating Hope in Conflict', stressed this point and their efforts to: *"Keep at the forefront of their programming — ensure demand and assess the chances of potential uptake before funding or implementing any of the innovations associated with the project."* Another IDIA member emphasised having community buy-in to ensure that you are solving a problem that the community is truly concerned by, rather than falling into the trap of having a 'solution that is looking for a problem'. *"To have that local buy-in is crucial — having that ability to take a human-centered perspective. Asking: Are you really solving a problem that the community feels concerned about?"*
- **To support equity in innovation design and management processes — be much more ambitious in shifting funding to countries in the Global South.** An IDIA member noted that Global Health President Trevor Mundel explicitly mentioned at the 2020 Grand Challenges Annual Meeting the need to go from spending 80% of Grand Challenges funds in the Global North to switching that and having 80% of funds going to the Global South.

What are some helpful **resources** for further reading / analysis around this Goal?

- **Poverty & Equity Data Portal (World Bank)** | Here

  The Poverty and Equity Data Portal is the World Bank Group's comprehensive source for the latest data on poverty, inequality and shared prosperity. The portal allows you to explore several poverty and inequality indicators for countries and regions as well as explore countries by various income levels — low income, lower middle income and upper middle income, and access poverty and inequality data for fragile, IDA and other country groupings.

- **The Global Competitive Index (2020)** | Here

  In 2020 the Global Competitive Index s Index (GCI) rankings were paused to instead elaborate on the priorities for recovery and revival, and consider the building blocks of a transformation towards new economic systems that combine "productivity", "people" and "planet" targets. In 2021, the report will revert to a benchmarking exercise that will provide a new compass for the future direction of economic growth.

- **Mariana Mazzucato, Assorted Policy and Research** | Here

  Founding director of the UCL Institute for Innovation and Public Purpose, Mariana Mazzucato challenges orthodox thinking about the role of the state and the private sector in driving innovation; how economic value is created, measured and shared; and how market-shaping policy can be designed in a 'mission oriented way' to solve the grand challenges facing humanity.

- **Rethinking Value Creation - Innovation Led Inclusive Growth (2019)** | Here

  A video conference hosted by the International Labour Organisation (ILO) and led by Mariana Mazzucato.

8 Pathways to Scale

Creating smoother pathways to scale for specific innovations

Why is this goal important?

All ecosystem goals discussed in this paper play a role in helping to progress innovations across different stages of the scaling journey; however, the road to scaling is often unclear and unique for each innovation, while the context in which it operates may require significant effort to navigate. Just as it takes a community to raise a child, it often takes an ecosystem to scale an innovation, and in order to help accelerate the pathways to scale for a particular innovation (or set of innovations) it may be beneficial to mobilise and coordinate the contributions of different ecosystem actors in a targeted and carefully choreographed way.

What are some of the **challenges** to achieving this goal?

- **Lack of incentives to seek out new innovations and partner for scale.** Donors, policymakers and private sector representatives — actors that often have the reach and resources to facilitate scaling — have incentives for low risk, quick, visible returns on investments to show results to board members, stakeholders and voters to avoid disruptions to the status quo. These incentives are in direct opposition to the inherent nature of the innovating and scaling process which requires time to seek out innovative solutions, a tolerance for risk and longer timeframes for results. Goal 2 describes additional financing disincentives. A lack of incentives for surfacing new innovations also contributes to a limited awareness of innovations that could address existing needs; awareness is often limited to the 'usual suspects' and innovations shared by trusted partners.
- **Strong emphasis on the 'supply' of innovation with limited emphasis on 'demand'.** While the supply of innovations addressing development challenges is abundant, few reach the level of scale needed for widespread impact. An often-missing ingredient is understanding demand from public sector, civil society, or other key partners at the early stages, along with their specific requirements for viable scale such as price points. While many scaling best practice guidelines, including GIZ's, recommend planning for scale and involving government and other demand-side actors from the onset, few do, limiting scaling potential in later stages.
- **Complex processes and funding are not designed for scaling of new innovations.** Due to their complexity and requirements, donor and government procurement procedures and partnerships often place undue burden on innovations that have limited resources (or frugal innovations) and tend to favour larger organisations. Innovations also have more difficulty accessing larger pots of funding that are designed with the flexibility and longer time horizons needed as innovations scales. Donor funding timeframes are limited to a few years. Public sector funding in key sectors such as health and education are earmarked for specific uses, with limited funds available for scaling new innovations.
- **Lack of coordination between actors in the scaling ecosystem.** As noted in Goals 5, 6, and 7, when innovation ecosystem actors work in silos, progress is slowed, and scaling becomes more difficult. These goals elaborate on challenges and strategies for creating stronger networks and coordination between key scaling actors that in addition to strengthening innovation ecosystems, can also help specific innovations scale.

What are some of the **strategies** for strengthening ecosystems in support of this goal?

- **Align demand and supply throughout the innovation lifecycle.** Creating clearer pathways to scale requires alignment between demand and supply-side actors early in the innovation lifecycle. To ensure alignment, a common language is needed where demand-side actors — including government, donors, civil society and private sector partners — translate needs from broad policies and objectives to specific and clear gaps that innovations can fill. An innovator's ability to communicate and frame their innovation within the terminology used by demand-side actors is also critical for working effectively with them, as evidenced by BRAC's scaling experience. Underlying incentives and motivations, often unspoken, are also important for innovators to understand. Continued engagement between innovators and demand-side actors beyond initial interactions facilitates relationship building, ongoing dialogue and learning. With clarity early on and ongoing engagement, innovations can adapt and grow in directions that meet concrete development demands and can more easily tap partnerships and resources for scaling at later stages.

- **Facilitate access to diverse finance instruments and flexible support.** As innovations move from proof of concept and transition to scale to scaling, they require a varied package of support and financing that is flexible and grows and shifts with their needs over a period of years. Realising the need for blended support that spans the scaling stages, some donors have begun to offer blended support and innovative financing models. **Co-impact Initiative**, a funding collaborative (including the Bill and Melinda Gates Foundation, Rockefeller Foundation, and GIZ) that seeks to support systems change, offers flexible $10-25 million 5-year grants pooled from multiple donors, and emphasises partnership, reduced reporting burdens and organisational strengthening as innovators navigate the scaling process. **GIF** provides a range of financing types including grants, traditional debt, convertible loans and equity investments to support innovations at different stages in their scaling journey.
- **Enable public sector scaling.** One of the primary methods innovators choose to reach scale is by engaging with governments. This approach provides greater potential reach and access to sustainable resources, but it usually also requires supplying rigorous evidence of impact, clear plans and projection for implementation and working within government regulations and processes. The engagement process may build slowly over time. Innovations follow three main pathways to public sector scaling in: gaining formal government approval as the innovation continues to expand its reach on its own (approval or accreditation), providing a service or product through a government contract or support (procurement or public-private partnership) and transferring implementation of the innovation to government in full or in part (adoption and integration). Examples of public sector scaling include Sanivation (early stages) and Pratham (at sustainable scale, initially supported by UNICEF). Through public-private partnerships with local governments in Kenya, **Sanivation** transforms faecal sludge into a sustainable biomass fuel source to reduce pollution and create safe, hygienic communities and jobs. **Pratham** deploys low-cost, quality, education interventions to fill gaps in India's education system and has worked closely with government at all levels to reach millions of children, at times complementing government efforts and at others supporting state governments to adopt its education models.

Who are the **principal actors** with a role to play in achieving this Goal?

A range of actors may be involved depending on the pathway to scale — and whether through the private sector, through partnerships with non-profits, or through the public sector, which might involve actors at the national, district or local levels.

What **insights** have IDIA members and partners gleaned from strengthening Goal 8: Pathways to Scale in practice?

- **Supporting innovations in transition to scale requires public sector involvement:** Grand Challenges Canada has now shifted its approach to support from innovators – and focus on Goals 1,2 and 3, to Goals 6,7,8 and 9 given the maturity of their portfolios. GCC describes: "*GCC has supported a number of transition to scale innovations, which is the second level of investment and now our goal under this new funding round is really to transition to scale the most promising innovations that we've supported in the past — that's to say, to really support uptake by scaling partners, potential scaling partners. For the* ***vast majority of GCC's innovations that we support — even the commercially-oriented ones — they will have some need to engage with the public sector to some degree in order to achieve scale. That is something that we've learned****. We're seeing now that our role really needs to be more pronounced in our interactions with the public sector. And we're no longer necessarily supporting the development of innovation, but more so the systems that support the scale of innovation. It's a little bit of a paradigm shift for many of our portfolios, our programs, to be looking more at the intersectionalities of our programmatic areas, and the partners that we work with in order to be able to achieve scale and support scale for our most promising innovations that are floating to the top so to speak.*"

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- **With government support, innovations can thrive, without it they can fall flat.** An IDIA partner described how a problem solved through public sector scaling of an innovation in one country is more likely that a neighbouring country will adopt it too, highlighting the success of M-PESA in Kenya versus Nigeria and South Africa where regulators blocked success. Moses Adobo, with the African Academy of Sciences and lead of the Grand Challenges Africa program shared this insight and plans to encourage scaling of public health innovations: *"Regulation is very interesting. I'm sure you've heard of M-PESA, the mobile money that started out in Kenya and has gone global? The regulators were very open to support them. They understood why it was important to do so and they eventually found a way of supporting that particular innovation. In some countries like Nigeria and South Africa, the banks have really fought back. They have used the regulator to fight back so that mobile money has never really taken off in those countries — it probably has by now but at least for the first 10 years, it never took off. So, government regulation becomes quite important in the scaling process."*
- **Local public sector involvement can enable systems change for innovation:** A Global Innovation Advisor in India notes: *"When programs are jointly designed with participation from the local administration and funding from private agencies, good quality innovations can be developed with a high level of affordance for local actors. This model of collaboration can be particularly useful when slightly deeper pockets are required for longer innovation gestation periods, whether that be building out technology, infrastructure or building out platforms to deliver services at scale. Those are all, you know, the ideal spaces for such collaborations and a model that brings in the government's skin in the game and opens up distribution channels that are currently managed by the government, the public system, and allows for systems change in a collaborative manner."*
- **Development agencies can help to co-design a clear pathway to scale:** R4D's Ethiopia Country Director highlighted that one of the biggest challenges for innovators in-country is bringing their innovation to scale and sustaining its scale. He points out that *"development agencies can use the pilot phase as an entry point in helping innovators to overcome barriers and prioritise their activities, and to assist in feasibility or pilot testing. If successful, development agencies can then assist the innovators in generating a greater buy-in and engagement from various stakeholders in the ecosystem to continue scale-up."*

What are some helpful **resources** for further reading / analysis around this Goal?

- **Leveraging Government Partnerships for Scaled Impact Study, Innovation Investment Alliance, Skoll Foundation, and CASE at Duke (2018)** | **Here**

  Provides strategies and advice for ventures that are exploring or engaging in government partnerships.
- **Insights on Scaling Innovation, IDIA (2017)** | **Here**

  Presents insights and lessons learned collected through a multi-disciplinary and collaborative process led by the IDIA Working Group on Measuring Impact.
- **Enhancing Public Sector Demand for and Scaling of Health Innovations, Results for Development & Insight Health Advisors (2020)** | **Here**

  This report suggests that successful scale-up of innovations through the public sector requires a much more sophisticated understanding of, and support for, the demand-side of the process. It identifies six key barriers to public sector scaling and a facilitated model to enhance demand.
- **Scaling Innovations for Every Child, UNICEF (2019)** | **Here**

  This paper reflects on the body of work on scaling innovations and shares patterns and typologies that have emerged. It also identifies some of the strategies and critical factors for scaling, looks under the hood and shares some of the inner workings of how we scale.

9 Collective Approach

Mobilising a collective ecosystem to address a particular development challenge

Why is this goal important?

Actors within an ecosystem are often disconnected and are unaware of common challenges or of the mutual benefits deeper than a targeted collaboration might provide. Connecting and mobilising actors within a particular ecosystem provides opportunities to raise awareness of specific issues and gaps, share ideas and encourage participation and relationship-building among various actors, stakeholders and communities, identify institutional strengthening needs and enable the appreciation, use and uptake of innovation for a specific purpose or to address a complex problem. In mapping the actors involved in an ecosystem, in gaining an understanding of the relationships and resource flows among them, and in galvanizing them around a specific purpose, there is greater potential to make progress toward that shared mission.

What are some of the **challenges** to achieving this goal?

- **Lack of visibility, coordination or alignment among actors:** Actors and organisations are often siloed geographically or sectorally and have competing priorities and goals. Similarly, innovation is relegated to certain spaces and under the realm of certain actors. Both can have a debilitating effect on the development of a vibrant ecosystem. Without appropriate levels of coordination and collaboration amongst ecosystem actors and their involvement in innovation, mission-driven innovation initiatives will likely struggle to reach scale or ensure sustainability.
- **Ensuring diversity and inclusion of important actors.** The majority of those represented in convenings and networks are often from positions of power and privilege or homogeneous background. To ensure diverse perspectives, innovative thinking, and relevance of solutions, diverse actors must be engaged as **diversity has proven to be a key element** of better performance and results and more innovation across sectors. These may include those that serve the bottom-of-the pyramid who may face additional economic challenges or risks in scaling their innovations, or stakeholders from the communities which the innovation is meant to serve. Goal 9 elaborates on the importance and challenges around equitable and inclusive participation.
- **Centring actors around addressing complex and/or controversial issues.** Addressing particularly complex issues, such as gender equality or **gender-based violence**, requires actors to reach consensus on sometimes controversial and divisive issues, even before agreeing to work together on promoting and scaling solutions. Truly innovative and pivotal solutions may also upset the status quo of vested interests and power hierarchies or require risks and long-term commitment that may be beyond the comfort of ecosystem actors who are critical to progress.

What are some of the **strategies** for strengthening ecosystems in support of this goal?

Coordinating and mobilising actors within a particular ecosystem provides a means to address common barriers and challenges and provides pathways to scale innovations or encourage innovative practices to flourish. Common entry points for connection-building include convenings, workshops and network building events.

Strategies for strengthening collective approaches around specific issues may be looked at from three levels of potential intervention:

- **Macro-level approaches** involve exploring the landscape of values, demographics and economic or political context that may support or inhibit innovation around a particular development challenge. Convenings may be organised with the various ministries or agencies in government to facilitate conversations with local actors to understand how economic policies or political realities affect innovative products or services (e.g. GIZ, Israel, and Mastercard Ghana Tripartite Agreement).
- **Meso-level approaches** involve working with specific actors or institutions and their embedded frameworks, rules and norms to adjust them to encourage innovation to flourish. For example, donors may target intermediaries like the chamber of commerce, science and technology hubs, or to establish bilateral cooperation between these hubs and innovation agencies, multinational corporations or others to encourage cross-fertilisation of ideas and new collaborations. Sida supported **Bio-innovate Africa** brings together universities, incubators, research institutions, private sector, policy and government agencies to create and market innovations to improve agriculture.

- **Micro-level approaches** where new innovations, practices or lifestyles take hold. This may involve organising a hackathon to raise awareness and address a specific complex issue or support mentoring opportunities for innovators. For example, **Dutch MoFA organizes 'Ecosystem meet-up' events** where different stakeholders of an ecosystem meet up, either publicly or privately, to discuss relevant matters around circular economies and other ecosystem-related topics.

Who are the **principal actors** with a role to play in achieving this Goal?

The coordination of multiple actors with often diverse and sometimes competing interests can be particularly challenging. In principle, 'neutral' stakeholders who have the least vested interests in the community and who can play a more balanced and impartial role in mobilising different actors around complex challenges will be most successful. Development agencies and some think tanks / academic institutions are increasingly exploring this role, while some governments may see it as part of their mandate (especially if the mission is embedded within their policy framework).

What **insights** have IDIA members and partners gleaned from strengthening Goal 9: Collective Approach in practice?

- **Every actor in the ecosystem has a role to play and convening actors enables knowledge exchange:** In its work in ecosystem strengthening, Dutch MoFA noted the value of acting as a convener of different stakeholders as it enables bridging knowledge gaps in the innovation ecosystem, adding that, *"One actor such as the Netherlands Ministry of Foreign Affairs can't change a system on its own — every actor has a part to play and every actor can explore their own added value in the innovation ecosystem framework."*

- **Don't underestimate the time and funds need towards mobilising stakeholders towards a specific innovation strengthening goal.** One donor noted, *"Probably the most challenging goal is mobilising the stakeholders towards actual decision making and the absence of significant funds to support a goal such as public sector scaling. For example, if we're talking about a health innovation, even if the government decides to prioritise, let's just say a postpartum haemorrhage innovation and it's got a stringent Regulatory Authority approval, it still needs to be reviewed by the local regulatory agencies, it might need to get on procurement lists, then even once it's on procurement list, it has to make its way through a variety of inventory controls, get through distribution, and then you'll have to train folks. So I think it's both around actual decision making, and then commitment of the human and potentially financial capital that it will take to scale innovations in the public sector."*

What are some helpful **resources** for further reading / analysis around this Goal?

- **Collective intelligence will change our world, Geoff Mulgan (2017)** | **Here**
  Geoff Mulgan, CEO of Nesta, discusses the collaborative crossroads between human skills and the power of machines. He believes collective intelligence can help us conquer economic, environmental and social challenges.

- **GIZ Guide on strengthening entrepreneurial ecosystems (2020)** | **Here or video** | **Here**
  This interactive guide is designed to provide development professionals the necessary theoretical background, concepts, approaches and practical tools to strengthen entrepreneurial ecosystems in developing countries, and to map the entrepreneurial ecosystem.

- **The design and implementation of mission oriented innovation policies, OECD (2021) | Here**
  This OECD report analyses mission-oriented policies, utilising an analytical framework to explore the challenges and opportunities that mission-oriented policies present at both initiative and country levels. It provides a better understanding of the different ways governments design, fund and coordinate mission-oriented policies.

- **Mission-oriented Innovation Toolbox, OECD (2021) | Here**
  This interactive mural highlights different approaches to mission-oriented development work and includes multiple examples and ways of working for each approach. This toolbox complements the OECD report included above.

Mapping IDIA Interventions

3.1 An initial inventory of IDIA agency Ecosystem Strengthening Initiatives

This research has surfaced a number of overarching trends that have shaped — and continue to influence — how IDIA agencies are approaching ecosystem strategy and programming:

- The last five years have seen a **marked increase in the interest and prioritisation of ecosystem-level interventions** among IDIA agencies, having previously focused their support around searching for and building a pipeline of single-point solutions through competitive challenge funds. Part of the reason for this is the understanding that those solutions will rarely reach sustainable impact at scale if they are not supported in various ways by a strong ecosystem.
- Development agencies are also now appreciating the ecosystem-level impacts of their historical approaches, particularly as regards the duplication of effort and the potential to unintentionally undermine ecosystem development by creating distorted incentives and further entrenching elitist patterns of power. This has led to a **greater interest in facilitating and advocating for more inclusive ecosystem approaches**, particularly with regard to ecosystem governance and participation (who is around the decision-making table).
- Moving toward ecosystem-level interventions has led many development agencies to reconsider their roles within ecosystems, and what the most valuable and impactful contribution they can make might be beyond funding. To this end, many agencies are **exploring ecosystem facilitation models**, in which their role is less focused on finding and supporting specific solutions and more focused on helping different ecosystem actors connect to define problems and solutions themselves. In this way, they are becoming more intentional in funding facilitation of the ecosystem (e.g. collaboration infrastructure and partnership mechanisms) rather than specific solutions within it.
- Overall, while more and more development agencies now have intentional ecosystem-strengthening initiatives within their portfolios, this is still very much an **exploratory space with an immature evidence base** on what does and what doesn't work. Providing more space for ecosystem actors to lead the design, implementation and evaluation of these interventions will help to clarify some of the critical success factors. There is opportunity for development agencies and ecosystem actors to test hypotheses and assumptions before good practices can be confidently defined.

The Secretariat mapped IDIA and other member initiatives by gathering background documentation and conducting interviews with Ecosystem Strengthening Working Group members. The summary provided in Table 5 below includes both specific ecosystem strengthening initiatives and broad strategies that contribute to strengthening. The intention is to capture initiatives that are specifically designed with the purpose of ecosystem strengthening, rather than those where ecosystem strengthening outcomes may emerge as an unintended by-product. Several of the initiatives mentioned include a corresponding table in Appendix B (in separate document) which describes the purpose/mission, goals, strategies and actors. Where possible, initiatives that focus on Ghana are included, as Ghana has been identified for a potential collaborative pilot.

TABLE 5: IDIA Ecosystem Strengthening Initiatives

AGENCY	INITIATIVE	GEOGRAPHIC FOCUS	DESCRIPTION
FCDO	African Technology & Innovation Partnership (ATIP)	Ghana, Kenya, Nigeria, Rwanda and South Africa	The Africa Technology and Innovation Partnerships (ATIP) programme will create mutually beneficial and sustainable partnerships to accelerate the growth of promising technologies in Kenya, Nigeria and South Africa and countries in their regions. Technology has long been a driver of growth. Advances in technology have the potential to translate into increased productivity in all sectors of the economy and improved access to goods and services, in addition to supporting service delivery for the poor and underserved communities.
GIZ	GIZ, Israel and Mastercard Tripartite Agreement	Ghana (among other countries)	GIZ, Israel and Mastercard Tripartite Agreement in Ghana centres on strengthening at the macro-level, using a Triple-helix approach to work with government, research and private sector actors to promote innovation-led policy, enhanced coordination among ministries/ agencies, strengthening of learning opportunities through a range of strategies.
	African European Digital Innovation Bridge (AEDIB)	Africa, Europe	AEDIB is designed to discover potential collaboration between Africa and the European Union on Innovation Ecosystems. Numerous Digital Innovation Hubs (DIHs) have been launched in the EU to provide support to companies in their digitisation pathway: they help them become more competitive, access technical expertise and experimentation and get financial advice and skills development. In Africa, there is a growing number of digital entrepreneurial intermediaries. The African Union's Digital Transformation Strategy for Africa (2020-2030) emphasises the need for further collaboration between stakeholders in order to develop a complete ecosystem. The AEDIB will establish African Digital Innovation Hubs by creating strong partnerships between stakeholders in innovation clusters of excellence along thematic, technological and entrepreneurial challenges.
	Make-IT Africa: Tech Entrepreneurship Initiative	Ghana, Kenya, (among other countries)	Make-IT Africa is a tech entrepreneurship initiative that promotes digital innovation for sustainable and inclusive development in Africa. It fosters an environment for young entrepreneurs in the digital sectors to gain better access to finance, markets and skills and also better collaboration within the entrepreneurial ecosystem through dialogue and knowledge sharing among partner institutions, agencies and intermediaries.
Dutch MoFA	Initiatives for a Circular Economy (I4CE)	Middle East, Africa (including Ghana)i	Initiatives for a Circular Economy (I4CE) promotes an economy that runs completely on reusable raw materials, moving away from agriculture/resource extraction as a main source of income toward higher value-added activities such as manufacturing and higher-tech, service-led economies. Developing countries are in a strong position to take advantage of these new economic opportunities and improve working conditions in the informal sector.
	Initiatives for Youth Employment (I4Y)	Middle East, Africa (including Ghana)	**Initiatives for Youth** Employment focuses on two types of high impact projects: projects for employability and projects for youth entrepreneurship. Employability is aimed at improving the relationship between supply and demand on the labour market. The goal of youth entrepreneurship is to facilitate the creation of new businesses and therefore jobs.

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TABLE 5: IDIA Ecosystem Strengthening Initiatives (CONTINUED)

AGENCY	INITIATIVE	GEOGRAPHIC FOCUS	DESCRIPTION
BMGF	Grand Challenges, Blended Finance, Ecosystem Review & other initiatives	**Grand Challenges:** South Africa, India, Brazil, Global Grand Challenge Explorations (range of countries) Salient's Blended Finance Research: Nigeria, Kenya, Uganda & Ghana Ecosystem Review: Nigeria **Agriculture strengthening:** Sub-Saharan Africa (including Kenya), South Asia	BMGF has a variety of initiatives contributing to ecosystem strengthening, including: a. Grand Challenges around COVID-19, nutrition, malaria control and agriculture and Grand Challenges Explorations which focuses on innovation in distribution systems b. Research examining the potential of blended finance to accelerating improvements in Health Product Distribution c. Investments in agriculture support structures (markets, infrastructure, research, policy) and innovations d. Digital innovation white paper e. Global education project in the early stages f. Ecosystem review in Nigeria
GAC	GAC promotes innovation and ecosystem strengthening through various approaches such as joint program assistance with other donors, multi-stakeholder partnerships, blended finance and new funding instruments such as challenges, micro-funding and incentive-based funding to support innovative approaches. GAC generally supports initiatives that focus on ecosystem strengthening — in part or in whole — in particular sectors. Examples include:		
	Project Example: Innovation for Women's Economic Empowerment	Ghana	Innovation for Women's Economic Empowerment which aims to create an improved enabling environment and reduced gender-specific barriers for women's participation in economic growth, enhance access to decent work for women, and increased productivity, profitability and innovation of women-owned businesses.
	Program example: Women's Voice and Leadership	32 projects in 30 countries and regions	For example, in Ghana, Women's Voice and Leadership, supports local and regional women's organisations and networks that are working to promote women's rights, and advance women's empowerment and gender equality in developing countries by supporting their activities, building their institutional capacity and promoting network and alliance-building. The program also responds to the significant, globally recognised gap in funding and support to women's rights organisations and movements.
	Ecosystem example: Equality Fund	Global	The Equality Fund is bringing together the philanthropic community, private sector, governments and civil society organisations to transform how we work to improve the lives of women and girls around the world and how we work to make more and smarter investments and to build a new model for meaningful and durable investment in feminist movements everywhere.

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TABLE 5: IDIA Ecosystem Strengthening Initiatives (CONTINUED)

AGENCY	INITIATIVE	GEOGRAPHIC FOCUS	DESCRIPTION
GCC	Enhancing Public Sector Demand for and Scaling of Health Innovation	Kenya, Uganda, Rwanda	GCC aims to **increase the demand and scaling of health innovations through the public sector**. Initial research indicated six key factors affecting public sector scaling and a new multi-stakeholder engagement model — the Mountain model — was developed to tackle these barriers and enhance government involvement in advancing health innovation. The pilot will take place with government health officials in Kenya in 2021.
	Creating Hope in Conflict: A Humanitarian Grand Challenge (CHC)	Syria, Yemen, South Sudan, DRC (among others)	**Creating Hope in Conflict** aims to improve humanitarian assistance for populations affected by conflict by investing in innovative solutions in clean water access, energy, life-saving information services, and healthcare infrastructure. It also fosters connections and collaborations among donors, NGOs, private sector, innovators and affected communities to improve humanitarian response and aims to foster systems change in the humanitarian sector that shifts towards centering power with local actors and funding more local innovators. This initiative is a partnership of USAID, Dutch MoFA, Global Affairs Canada and FCDO.
UNICEF	Giga	Reimagine Education: Various, including Kenya Giga: El Salvador, Honduras, Kazakhstan, Kenya, Kyrgyzstan, Niger, Rwanda, Sierra Leone, Uzbekistan, Zimbabwe, Eastern Caribbean States	UNICEF's Office of **Innovation** uses innovation ecosystem strengthening as a strategy to create scalable and sustainable systems that transform the delivery of education, health and social protection services to children. It has nine sectoral portfolio focus areas, which include: Humanitarian, Learning, Maternal & Newborn Health, Water and Sanitation, Climate Change, Gender Equity, Mental Health & Psychosocial Wellbeing, Youth and Immunization. Reimagine Education, one UNICEF's largest innovation ecosystem strengthening initiatives, addresses a number of systems challenges (content, connectivity, device access, teacher training, financing) in education to provide all learners access to world class digital learning. **Giga**, an initiative within Reimagine Education, aims to connect every school to the Internet and every young person to information, opportunity and choice, supporting the immediate response to COVID19, as well as looking at how connectivity can create stronger infrastructures after COVID.
USAID	Partnering to Accelerate Entrepreneurship Initiative (PACE)	Africa, South and Southeast Asia, Latin America	**PACE** catalyses private-sector investment for early-stage enterprises and identifies innovative models or approaches that help entrepreneurs scale. Partnering with 50 incubators, accelerators and seed-stage impact investors, the initiative creates public-private partnerships to foster entrepreneurship.
	Power Africa	Ethiopia, Ghana, Guinea, Kenya, Liberia, Malawi, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Uganda, Zambia (among others)	**Power Africa** brings together technical and legal experts, the private sector, governments and financial institutions to partner and increase the number of people with access to power in sub-Saharan Africa. Its transaction-centred approach focuses on facilitating more effective and efficient energy project transactions while simultaneously driving policy reform.
	Others		Other USAID innovation ecosystem strengthening initiatives include: 1. **Grand Challenges for Development** 2. **Development Innovation Ventures**

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TABLE 5: IDIA Ecosystem Strengthening Initiatives (CONTINUED)

AGENCY	INITIATIVE	GEOGRAPHIC FOCUS	DESCRIPTION
GIF	Innovative finance	India, Kenya, Uganda, Mali, Ghana, Indonesia, Nigeria, Pakistan, Bangladesh, Philippines, Tanzania (among others)	GIF invests in entrepreneurs and innovators with the potential to improve the lives of millions of the world's poorest people. It does this through grants, debt, convertible loans and equity investments, tailored to the needs of the innovator, and with a view to de-risking so as to crowd further capital. GIF can invest in any sector in any developing country, including agriculture, education, energy, health, nutrition, social protection, water and sanitation - the focus is on maximising social impact.
Skoll Foundation	Finance, Network and culture building		Skoll invests in, connects, and celebrates innovations that have the potential to drive large-scale systems change. Initiatives include: ◆ Skoll World Forum ◆ Skoll Centre for Social Entrepreneurship ◆ Skoll Awards for Social Entrepreneurship ◆ Scaling Pathways research Investment areas include health, climate action, inclusive economies, effective governance and racial justice.
Sida	Finance, Research, Network building	**Bio-innovate:** Kenya, Rwanda, Uganda, Burundi, Ethiopia, Tanzania, Uganda **Triple-helix cluster development:** East Africa, Bolivia	Sida directs funding to innovations and invests in research and networking initiatives such as: ◆ Global Network for Economics of Learning Innovation and Competence (Globelics) which raises the quality of innovation research and builds the capacity of Africa-based researchers ◆ Bio-innovate Africa program investing in innovation in agriculture ◆ Development of innovation systems and triple-helix cluster development in East Africa and Bolivia ◆ Innovation cluster initiatives Investment areas include technology, agriculture, health and more.
Rockefeller Foundation	Finance, Network building, Markets and Infrastructure development	Africa (including Kenya), Asia, US	Rockefeller's innovation ecosystem strengthening initiatives include: Smart Power Africa, which breaks down silos in the energy industry through innovative partnerships East Africa food initiative, which works across food value chains Precision Public Health approach, which aims to create better data systems for community health systems Co-Impact Initiative, a multi-donor collaborative led by Rockefeller that provides investments and support to pivotal innovations Investment areas include health, food, power and economic mobility.
DFAT	Scaling Frontier Innovation	Asia Pacific	Scaling Frontier Innovation focuses on different but interdependent parts of the entrepreneurial ecosystem — including entrepreneurs, incubators and accelerators, intermediaries, brokers and capital providers - to support social entrepreneurship. Its 3 main initiatives are: ◆ Frontier Innovators supports entrepreneurs to scale their businesses ◆ Frontier Incubators, which empower incubators and accelerators to build their ecosystems ◆ Frontier Brokers, through which SFI co-designs impact investment strategies

3.2 Preliminary Mapping of IDIA agency ecosystem interventions by goal

Table 6 below provides a map of IDIA member initiatives or agency efforts across ecosystem goals. The Secretariat gathered information from IDIA members and partners to further understand which strategies are successful, where there are challenges and where there may be opportunities for collaboration.

TABLE 6: IDIA Member Interventions against the Ecosystem Goals

	1	2	3	4	5	6	7	8	9
	Building Human Capital	Access to Finance	Supportive Markets and Infrastructure	Policies and Regulations	Innovation Culture	Networking Assets	Equitable and Inclusive Participation	Pathways to Scale	Collective Approach
BMGF	●	●	●	●		●	●	●	●
DFAT	●	●				●		●	
Dutch MoFA	●	●	●	●	●	●			●
FCDO	●	●	●	●		●	●		
GCC	●	●	●	●		●	●	●	●
GIF		●	●	●	●	●	●	●	
GAC	●	●	●	●		●	●	●	●
GIZ	●	●	●	●	●	●			●
Rockefeller	●	●	●		●	●	●	●	●
Sida		●			●	●	●		
Skoll		●		●	●	●	●	●	
UNICEF	●	●	●	●		●	●		●
USAID	●	●	●	●	●	●		●	●

3.3 Factors influencing a collective IDIA approach to strengthening ecosystems

Opportunities for knowledge exchange and improved coordination

- There is appetite and interest among members to share knowledge and learning in this space as the foundation for a larger collaborative effort. This was exemplified in the first meeting of the IDIA Ecosystem Strengthening Working Group, which attracted 43 participants from across member agencies and other innovation experts and collaborating organisations.
- From the mapping in Table 6 above, IDIA members appear to be supporting the range of ecosystem goals, with a greater emphasis on entrepreneurial and innovation-oriented, along with some mission-driven interventions. Goals that are receiving the most investment include:
  - Building informed human capital (Goal 1)
  - Accessibility of finance for innovation processes (Goal 2)
  - Establishing supportive research, markets, energy, transport and communications infrastructure (Goal 3)
  - Supporting networking assets that enable productive relationships (Goal 6)
  - Convening a collection of actors associated with: 'Nurturing a culture of innovation' (Goal 5) and 'Mobilising around a Development Challenge' (Goal 9)
- Donors or development partners in a given ecosystem should always collaborate/coordinate. The limiting factor is usually information, differing theories of change and staff time/capacity/prioritising/institutional setup. We believe that the synthesised framework and learning in this paper — in combination with other harmonising assets such as the **Whistler Principles** — has the potential to help overcome some of these challenges.

Opportunities for shared learning and experimentation

- Some IDIA members are branching out into less-explored areas of ecosystem strengthening, and these may be vehicles around which to build wider agency interest and engagement. For example, at the **entrepreneurial** end of the continuum, the Bill & Melinda Gates Foundation is looking at new ways to stimulate and use blended financing to support enhanced delivery of health products and services. Within the **innovation-oriented** space, GIZ is supporting the Government in Ghana through a Tripartite Agreement with Israel and Mastercard to strengthen Ghana's Digital Innovation Ecosystem. Finally, on the **mission-driven** end of the continuum, Grand Challenges Canada is testing a new model supporting enhanced demand for, and scaling of, health innovations by the public sector. There are a number of additional opportunities for potential collaboration, including: Dutch MoFA's Initiatives for Circular Economy, USAID's 'Power Africa', Rockefeller's 'Smart Power Africa' or Sida's 'BioInnovate Africa'.
- With many options and potential directions identified, it will be important to ensure that the rationale for IDIA members coming together is clearly articulated, supported by evidence, and - crucially - validated by country-level ecosystem actors if it is to go beyond a shared belief that 'together we can do more'. This work continues under IDIA's Ecosystem Strengthening Working Group.

In summary, there is a continuous need for innovation — for new ideas, forms of finance, ways of working and collaboration that contribute to reducing poverty and oppression. IDIA is committed to strengthen the innovation ecosystems that enable new ideas to take hold, succeed and scale. This paper begins to outline the goals, strategies and actors that contribute to a strong innovation ecosystem, but there is a need for greater collaboration and learning among development agencies and in-country partners in the process. The IDIA Ecosystem Strengthening Working Group will continue to explore how development agencies might best partner with in-country actors to optimise and accelerate innovation ecosystem strengthening. This research is a work in progress and feedback and comments are welcome

ACRONYMS AND ABBREVIATIONS

ANDE — Aspen Network of Development Entrepreneurs

BMGF — Bill and Melinda Gates Foundation

DFAT — Australian Department of Foreign Affairs and Trade

Dutch MoFA — Dutch Ministry of Foreign Affairs

COVID-19 — Coronavirus pandemic, caused by SARS-CoV-2

CSO — Civil Society Organization

ESO — Entrepreneur Support Organisations

ESWG — Ecosystem Strengthening Working Group

E&I — Equity and Inclusion

FCDO — Foreign, Commonwealth & Development Office of the UK

FinTech — Financial Technology

GAC — Global Affairs Canada

GCC — Grand Challenges Canada

GDP — Gross Domestic Product

GIF — Global Innovation Fund

GIZ — Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

IDIA — International Development Innovation Alliance

IDRC — International Development Research Centre

INSEAD — Institut Européen d'Administration des Affaires

IP — Intellectual Property

LIC — Low Income Country

LMIC's — Lower to Middle Income Countries

MIC — Middle Income Country

MIT — Massachusetts Institute of Technology

MoSTI — Uganda Ministry of Science, Tech and Innovation

NGO — Non-Governmental Organization

OECD — Organisation for Economic Co-operation and Development

R4D — Results for Development

R&D — Research and Development

SIDA — Swedish International Development Cooperation Agency

SME — Small and Medium Sized Enterprises

UNICEF — United Nations Children's Fund

USAID — United States Agency for International Development

WHO — World Health Organization

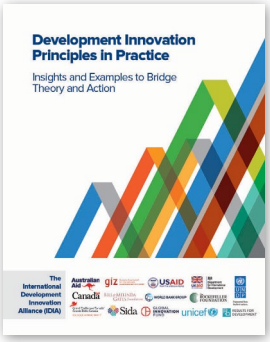
WIPO — World Intellectual Property Organization

The International Development Innovation Alliance has collectively created a number of resources tackling different aspects of development innovation. Download these reports, and access other useful resources and insights at **idiainnovation.org**.

Insights on Scaling Innovation
This paper presents a high-level architecture comprising six scaling stages, eight good practices, and a matrix of influencing factors to help guide funders through the long and complex process of scaling innovation.

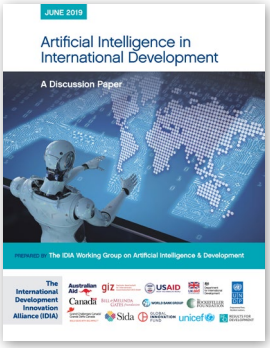
Toward Bridging Gender Equality and Innovation
This paper provides a roadmap for practitioners, donors, innovators and others interested in sustainable development to begin to address gender equality and innovation in a more holistic manner — whether or not they are specialists in gender or innovation.

Scaling Innovation: Good Practice Guides for Funders
This document explores the eight Good Practices identified in Insights on Scaling Innovation in more detail, and provides funders with further guidance on tools and knowledge products that can help them start to operationalize these good practices within the context of their own agencies.



Development Innovation Principles in Practice
This resource looks at how the eight Whistler principles adopted by the G7 Development Ministers are brought to life across a range of sectors and geographies, drawing from a shared repository of over 60 innovation stories contributed by IDIA member agencies. Questions for reflection, resources and tools for practitioners looking to integrate the principles into their own practice are also included

Insights on Measuring the Impact of Innovation
The companion to Insights on Scaling Innovation looks at challenges around measuring the impact of innovation, and presents an approach highlighting key impact domains and indicators. It also includes a case study on projecting the future impact of innovation created by Grand Challenges Canada and Results for Development.



Artificial Intelligence in International Development
This paper provides an accessible entry point for actors working in international development who are interested in how Artificial Intelligence (AI) can or will impact their work. Part One explores the history of AI, its complexity and capabilities, and examples of how it is being used within development to support the SDGs. Part Two synthesizes challenges and some of the key debates to the deployment of AI in Development, alongside tools and initiatives that are advancing practice in this space.

APPENDIX A: A More Detailed Look at Selected Frameworks for Measuring Innovation Ecosystems

The Secretariat reviewed measurement frameworks and tools that can be used to measure ecosystem strengthening programs and efforts. In alignment with their relative popularity, the majority of available tools and frameworks for measuring ecosystem strength and maturity are associated with entrepreneurial approaches. Some of these are sophisticated enough to allow overlapping analysis of innovation-oriented ecosystems, but very few exist that address mission-driven innovation approaches in general (as these tend to be specifically designed around each particular mission and are not therefore easily transferable).

Appendix A provides a summary of the frameworks outlined in Table 3 on pages 18 and 19. The frameworks and tools included are of the more practical, user-friendly and widely used frameworks available in the space. They are organised by their relative ecosystem orientation.

Appendix A can be accessed here.

Initiatives included in Appendix A:

- ANDE: Entreprenurial Ecosystem Diagnostic Toolkit
- GIZ: Guide for Mapping the Entreprenurial Ecosystem
- Kauffman Foundation: Entrepreneurial Ecosystem Vibrancy
- MIT D-Lab: 'iEcosystems'
- World Bank: Framework for Urban Tech Innovation Ecosystems
- Cornell / INSEAD / WIPO: Global Innovation Index

APPENDIX B: IDIA Member Ecosystem Strengthening Initiatives

The Secretariat collected input from members of the ecosystems strengthening working group on their ecosystem strengthening interventions and mapped their initiatives into the framework of 9 goals. Each table in Appendix B focuses on a specific agency initiative and outlines the specific innovation ecosystem strengthening goals to which it contributes, strategies undertaken to build towards these goals and the actors involved. In some cases, initiative-specific lessons are also included. The full list of included initiatives is below. The goal of this consultation process was to understand how IDIA members might best leverage their various resources and work collectively to strengthen a specific innovation ecosystem.

Appendix B can be accessed here.

Initiatives included in Appendix B:

- BMGF: Grand Challenges Africa
- Dutch MoFA: Initiatives for a Circular Economy (IC4E)
- Dutch MoFA: Initiatives for Youth Employment (I4Y)
- FCDO: Africa Technology and Innovation Partnership (ATIP)
- GCC: Enhancing Public Sector Demand for and Scaling of Health Innovation
- GCC: A Humanitarian Grand Challenge - Creating Hope in Conflict
- GIZ: Macro and Meso Approaches
- GIZ: 'Make-IT' in Africa
- USAID: Partnering to Accelerate Entrepreneurship Initiative (PACE)
- UNICEF: Reimagine Education
- UNICEF: Giga

Prepared By IDIA and the Ecosystem Strengthening Working Group

The International Development Innovation Alliance (IDIA)

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