

ideas to impact.

INNOVATING IN DEVELOPMENT LEARNING EVENT

CHALLENGE BRIEF

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CONTENTS

INTRODUCTION	5
TAKING STOCK	7
SCALING	9
INNOVATION ECOSYSTEMS	14
RISKS	20
REFERENCES	24

CHALLENGE BRIEF

HOW DO WE ENHANCE THE PACE
AND SUCCESS OF INNOVATION FOR
DEVELOPMENT IN TACKLING POVERTY
AND OTHER GLOBAL CHALLENGES?

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1. INTRODUCTION

Millions of people in the developing world are affected by urgent, complex and longstanding problems arising from poverty, climate change, food insecurity, and limited access to health services, clean water and sanitation.

Faced with mixed success in tackling these entrenched challenges, efforts in international development and humanitarian response have embraced innovation approaches from the business and social innovation worlds to re-shape development practice and accelerate transformational change. Innovation is being harnessed not only for development, but to innovate how we do development itself.

The Innovating in Development learning event in February 2017, hosted by Ideas to Impact, brings together innovators, funders and implementers of development and humanitarian innovation to take stock of innovation in development efforts and exchange operational experience to enhance its pace. The workshop themes were identified through consultation with participants, who highlighted the following challenges:

- **Scaling:** What approaches are required for scaling, replicating and diffusing innovations in developing countries?
- **Innovation ecosystems:** What is needed to move social innovations, goods and services through the innovation process into adoption and use by poor people and communities?
- **Risks:** How can we work positively with risks inherent in innovation in development, including risks of unintended consequences that reduce social benefit for the poorest?

Scaling, replication and diffusion were identified as the most pressing and complex challenges. Interviewees flagged the need to understand how

different approaches are needed for different contexts and types of intervention, recognising that we do not yet know how long it takes to 'get to scale'.

Linked to the challenges of replicating innovations in developing country contexts, participants highlighted the need to better understand how to catalyse innovation ecosystems to support locally-driven innovation and replication.

Finally, working proactively with risk was identified as an over-arching challenge, with participants emphasising the need to overcome traditional development agencies' constraints in working with innovators, and to change the sector's negative narrative around 'failure' to a positive one of learning and informed risk-taking, if innovation in development is to become more ambitious and effective.

This Challenge Brief summarises emerging insights on these topics from operational experience to inform discussions at the learning event. Section two takes stock of where innovation efforts are today, section three discusses some of the broad issues and insights around scaling, replication and diffusion, while sections four and five discuss the inter-related topics of innovation ecosystems and risk. Box 1 provides a guide to the concepts and definitions used in this brief.

BOX 1: CONCEPTS AND DEFINITIONS USED

Innovation

The application of new or improved products, processes, technologies or services that are either new to the world (novel), new to a region or business (imitative) or new to the field of endeavour, that is, repurposed (adaptive).

Impact

Positive, lasting solutions to development challenges, providing social and economic benefits that reduce poverty, improve well-being and life chances, and are environmentally sustainable.

Scaling, replicating and diffusing

Taking an idea, process, business model or enterprise, proven to have a social impact, and growing it through appropriate pathways - either market-based, institutional/state-based, civil society-based, or combined - to reach and meet the needs of significantly large numbers of people living in poverty in multiple locations.

Business ecosystem

The networks of suppliers, traders, processors, service providers, distribution networks, financial intermediaries, customers and government and regulatory agencies that are required for a business to operate and grow. Relationships in the network are dynamic, involving both cooperation and competition as each business in the system affects and is affected by the others, adapting and responding to changing circumstances.

Innovation ecosystem

The system of "people, enterprises, institutions, policies and resources that support the translation of new ideas into products, processes and services" (Ramalingam et al 2015, p. 10). Interlinked with the broader business ecosystem, it involves similar organisations, customers and market intermediaries, but with additional roles and resources brought by research, technology, intellectual property and financial entities, and showing a greater degree of cooperation towards supporting and enabling the development of innovative technologies and solutions from discovery to implementation and delivery to consumers.

Risk and uncertainty

A risk is a potential future occurrence of hazard, damage, loss or injury that is measurable and quantifiable in terms of the probability and mode of it occurring; uncertainty is where circumstances are not easily measurable in terms of probabilities, where neither the probability nor the mode of occurrence is known. Innovators face a range of risks and uncertainties, for example, affecting their operational models and delivery environments, risk of failure when testing new ideas, financial risks, as well as risks of unintended negative consequences that reduce social impact.

Social enterprise

The system of "people, enterprises, institutions, policies and resources that support the translation of new ideas into products, processes and services" (Ramalingam et al 2015, p. 10). Interlinked with the broader business ecosystem, it involves similar organisations, customers and market intermediaries, but with additional roles and resources brought by research, technology, intellectual property and financial entities, and showing a greater degree of cooperation towards supporting and enabling the development of innovative technologies and solutions from discovery to implementation and delivery to consumers.

Inclusive business

An inclusive business is a market-based approach to poverty alleviation that finds profitable ways to include lower-income communities within its value chain as producers and consumers, e.g. directly employing low-income people, targeting development of suppliers and service providers from low-income communities and providing affordable goods and services targeted at low-income communities.

2. TAKING STOCK

WHERE ARE WE?

In 2015, at the Financing for Development conference in Addis Ababa, Ethiopia, 12 of the world's leading organizations working to accelerate international development efforts launched a call for innovation in international development to support the implementation of the 2030 Agenda for Sustainable Development and achieve its Sustainable Development Goals (SDGs). The call identified six principles of innovation, including "take intelligent risks," "invest in locally-driven solutions" and "fail fast and iterate" (see Box 2). These principles were endorsed by consortium members, including the UK's Department for International Development (DFID), USAID, The Rockefeller Foundation, Gates Foundation, UNICEF, and the World Bank.

Two years on, we are at a turning point. Implementation processes around the SDGs are gaining momentum, and there has been a proliferation of innovation in development programmes trying a range of approaches from grant-making programmes to challenge funds, innovation prizes to social impact bonds. Global platforms and exchanges are using open innovation to source potentially breakthrough ideas from anywhere on the globe. The development arena is seeing an array of collaborations between traditional development agencies, civil society organisations, governments, corporates, commercial companies, social enterprises, philanthropic foundations and innovators working on issues and opportunities to re-shape development practice and accelerate transformational change.

Many innovators now come from the very developing countries where these critical challenges exist, something that has not happened before. There are many success stories to learn from, including social businesses providing poor people with a range of essential services, such as access to low-cost, off-grid clean energy; cleaner household cooking stoves; community health services, and affordable sanitation services.

However, the hoped-for acceleration in development efforts has not yet materialised and there is a strong sense of 'business as usual'. The short timeframe for achieving the SDGs by 2030, together with uncertainty about the future of international development, makes the innovation challenge all the more urgent. With aid agencies in most countries grappling with limited public funds, it will be impossible to reach the SDGs through 'business-as-usual' public sector and community-based programmes alone. Reaching the SDGs will require the combined efforts of public, philanthropic, private and social impact investment to innovate solutions, and catalyse enterprises and markets to meet global challenges facing the poorest communities (Franzel and Brooks, 2016; Shell Foundation, 2015).

BOX 2: PRINCIPLES TO FACILITATE INNOVATION IN INTERNATIONAL DEVELOPMENT

Invest in locally driven solutions

Recognise that the best ideas can come from anyone, anywhere. Support innovators in emerging countries, since proximity to the challenge is critical for designing better solutions.

Take intelligent risks

Understand that experimenting with new possibilities is the essence of progress. Navigate uncertainty in an informed manner, using rigorous data to learn and improve, while also upholding the principle of 'do no harm'.

Use evidence to drive decision-making

Evidence is critical to understanding what works and to improving impact and cost-effectiveness. Develop clear metrics early on and measure progress against milestones on an ongoing basis.

Fail fast and iterate

Embrace failure as an opportunity for learning. Revamp and retry, again and again; even good ideas can be made better. Demonstrate impact before scaling.

Facilitate collaboration and co-creation across sectors

Coordinate the application of scientific and technical, social, and business innovations with partners across all sectors—public, private, and civil society. Leverage intellectual, financial, and social resources from all to address the urgent need for life-changing and life-saving solutions. Share results widely, good and bad, to accelerate learning from, and building on, the work of others.

Identify scalable solutions

Identify solutions that demonstrate high potential to achieve disproportionate impact and to change systems impeding progress, especially for the poor. Invest in sustainable solutions that deliver significant impact, cost-effectiveness, and open the potential to reach millions of people in need.

Source: "A Call for Innovation in International Development," Results for Development, 2015

Looking at the Principles to facilitate innovation in international development, two years on, these remain aspirations rather than reality. In terms of developing scaleable solutions, people we consulted shared a view that innovation efforts may be over-focusing on early stages, creating a kind of 'pilot-itis' and generating a plethora of 'proof of concept' ideas that have no clear next steps about how to grow to deliver benefits on a wider scale (also noted by McClure and Gray 2015).

Despite promising examples, innovations that have brought benefit to people at significant scales are still the exception rather than the norm. When it comes to supporting locally-driven innovations, international public sector aid agencies find that they are severely constrained from working with national innovators and entrepreneurs due to their risk-averse procedures and stringent reporting requirements. Moreover, risk-averse donor organisation cultures tend to focus on adoption of innovations rather than learning as the over-arching success criterion, making it difficult for innovators to 'fail fast and iterate'.

Finally, the taking of intelligent risks is made more difficult by the lack of effective channels for sharing learning and evidence from the unpredictable innovation journey. The next sections summarise some of the insights into these issues and opportunities, as the basis for the forthcoming dialogue.



3. SCALING

WHAT APPROACHES ARE REQUIRED TO SCALE INNOVATIONS IN DEVELOPING COUNTRIES?

3.1 WHAT DO WE MEAN BY SCALING

Scaling is a broad term used to describe a range of processes of replication, diffusion and growth. We understand scale to mean taking an innovative idea, process, business model or enterprise, proven to have a social impact, and growing it through appropriate pathways to meet the needs of significantly large numbers of people living in poverty, in a financially viable and sustainable way. Innovations can scale through market and social enterprise-based approaches; they may be adopted into government and public sector policies, planning and service delivery; civil society organisations may integrate it as a new practice into their work, or a pathway may involve combinations of these (Ramalingam and Bound, 2016; McClure and Gray, 2015; Koh et al 2014; HIF; van den Berg et al 2012; Jenkins and Ishikawa 2010).

Depending on the type of solution and the context, the literature suggests that achieving scale can mean increasing the numbers of users and consumers within a specific population in the same context, or it can mean expansion into new geographies and/or new market segments. These differences are often bundled into a single notion of scale, but work on innovation processes in humanitarian response and agriculture respectively points out that scaling may require a two-step process. This is useful to differentiate, as each step requires different types of support and investment, and is often overlooked as innovations' 'missing middle' (McClure and Gray 2015).

3.2 TWO STEPS - SCALING UP, THEN SCALING OUT?

In this model, the first step - 'scaling up' - involves reaching more people within the same context. The second step - 'scaling out' - involves spreading the innovation to different geographical locations, target groups and market segments (McClure and Gray 2015; van den Berg et al 2012). 'Scaling up' moves the innovation forward from a technically proven idea to developing the skill-sets, business models, enterprises and value chain

relationships that are needed to implement the solution and deliver it to a large number of people within a single context. This stage demonstrates that the innovation can be delivered at scale, within a single context, in a sustainable way, often implemented through a pioneer enterprise, an enterprise that is specially formed to grow the innovation (Shell Foundation 2010; Koh et al, 2014).

'Scaling out' is where the business model and solution is replicated in different locations and environments. Scaling out is complex, requiring adaptation to a new context, even when moving to a new region within the same country. This second step is how Shell Foundation defines and measures scale - delivering cost-efficient solutions that impact large numbers of beneficiaries in multiple locations, in ways that are ultimately financially viable and self-sustaining (Shell Foundation 2010).

While the two-step model may be useful to differentiate between different types of replication, other writers emphasize that there is no single model or pathway to scaling out. Some solutions and products can replicate without the original enterprise also needing to grow, others need entirely new business models to work in a different context. The pathway depends on the solution, the business model, complexity of the problem and the social dynamics in the new context. A further challenge is that not all innovations can be straightforwardly scaled. As Walji (2016) emphasizes, it is critical to differentiate between solutions that can be easily replicated because they are less context-dependent and highly flexible (e.g. digital services), and those that work differently in different contexts because of social relationships, culture and human behaviours (e.g. sanitation) (Walji 2016).

This means that scaling pathways are usually not clear-cut in advance, nor can it be predicted how long the replication process might take. The right model needs to be discovered through an iterative process over time, often involving larger-scale 'failure' and iteration, which requires patient support from investors and partners (Shell Foundation, 2010). To be implemented in a new context, the innovation needs to be adapted to tackle new variations on the original problem, engage with different institutional configurations and understand different needs and social dynamics. Business models will need to be adapted and trialled anew (Walji, 2016; McClure and Gray 2015).

3.3 WHAT DO WE KNOW ABOUT WHAT'S NEEDED?

Lessons emerging from innovation experience in developing countries highlight that supporting social businesses to scale means moving beyond supporting individual pioneering organisations, and intervening at a broader level to stimulate and strengthen underdeveloped market systems. For example, Ideas to Impact's analysis of blockages to universal energy access revealed that, in almost every instance, the problems related not to technical innovations but to other aspects of scaling - building markets, securing financial and human resources, and recognition of solutions (Collings, 2015). Systemic challenges to scale and replication that various writers have identified include:

POOR INFRASTRUCTURE FOR TRANSPORT, ENERGY AND TECHNOLOGY:

Low-income communities can be scattered in remote rural areas or dispersed in difficult-to-access informal settlements in urban centres. These present basic challenges of poor transport infrastructure and unreliable energy access that make producing goods and delivering services to hard-to-reach customers more difficult, time-consuming and costly. Costs are increased if pioneering enterprises have also to finance building the essential parts of the infrastructure they need (ACRE/Practical Action 2015; Koh et al 2014; Jenkins and Ishikawa 2010).

BASIC, PARTIAL OR NON-EXISTENT VALUE CHAINS AND BUSINESS SUPPORT SYSTEMS:

There is often a much less developed business ecosystem serving poor and low-income communities and entrepreneurs. This depends on the sector, for example, some countries' domestic agricultural and livestock sectors have seen a couple of decades-worth of market development interventions by the international community to support low-input, small-scale producers. However, national-level development plans have often not prioritized poorer sectors and regions. So, in some places, value chains and business services may be very partial, especially in remote areas, so that inputs to grow social enterprises are not readily available. Information flows and linkages to larger markets via market agencies, intermediaries, traders and processors through value chains may be weakly integrated.

Rural enterprises especially find it hard to access technical and managerial skills, trading and distribution networks and business support services to grow. Few financial services offer credit and other products to low-income producers and consumers (Koh et al, 2014; Jenkins and Ishikawa 2010; Shell Foundation 2010).

LOW AWARENESS AMONGST LOW-INCOME CUSTOMERS AND LACK OF ENGAGEMENT WITH LOCAL SOCIAL AND CULTURAL DYNAMICS:

Social goods and services may be entering markets with low awareness for their product as a 'solution'. To be recognized and demanded, social innovations need to align with and respond to social, behavioural and cultural dynamics in different contexts, to understand how intended target groups view problems and potential solutions. If the benefits of a new approach are not clear, then people with very limited incomes will prefer to spend on familiar, trusted goods and services, even if the benefits are lower. Understanding social dynamics in a context, and engaging with users' perspectives is a critical challenge for adaptation and scaling, as this takes time and 'feet on the ground', but is vital to build the necessary trust and demand (Ramalingam and Banks, 2016; Koh et al 2014; Shell Foundation 2014).

LIMITED FINANCING INSTRUMENTS AND TECHNICAL SUPPORT FOR INNOVATION DEVELOPMENT AND SCALING, ESPECIALLY IN RURAL AREAS:

Many writers point to the lack of understanding by investors, funders and decision makers, in both private and public sectors, regarding the real costs – in both financial and technical support terms - and time involved in taking an innovation and business model to scale in developing countries (McClure and Gray 2015). Social businesses are unlikely to be profitable at early stages (due to challenges already mentioned). It may take three years before they can attract commercial investment and 10–15 years before they are able to operate at larger scales, long timeframes for investors awaiting financial and social returns (Shell Foundation 2010; Koh et al 2014; ACRE, 2015).

RISK AVERSION:

Public sector and bilateral funds flow from the global North to the global South, with low risk appetites making it difficult for innovation funding programmes to work directly with smaller in-country innovators. Grant financing is often not flexible enough to support the middle stages of developing an innovation, and may impose rigid conventional aid project performance management requirements on them (Wong, 2016; Jenkins and Ishikawa, 2010). Risk aversion may also skew investment preferences towards larger firms or clusters, as examples in agriculture suggest, potentially excluding smaller SMEs, women producers and the poorest social groups, reducing the social benefit and re-creating exclusive rather than inclusive industries (ACRE, 2015; Glinksi et al 2015). The risks of unintended consequences of this nature are explored further in the section on risks.

VARIABLE GOVERNMENT, POLICY AND REGULATORY ENVIRONMENTS:

Policy environments that shape markets and investments are affected by volatile politics, and poorly-resourced state and public sectors. Limited numbers of technical staff in government agencies to develop regulations and standards for new products and services mean that the enabling environment is not optimal, especially at province or county levels.

3.4 WHAT'S BEEN TRIED?

Given these scaling challenges, alongside the complexities of the development challenges that innovations are trying to address, there is no single path or methodology for scaling. Instead, there are many examples of different routes and models, depending on the type of innovation and their contexts.

Reading across documented lessons coming from foundations and others that have been reflecting on their experiences of tackling scaling challenges, there is an emerging consensus that scaling requires providing support not only to single enterprises, but also interventions to tackle the range of systemic and market barriers to scale. Scaling social goods and services requires introducing change at systems level to shift the relationships, practices and technologies within a region, sector or industry. Koh et al (2014) calls this 'industry facilitation' – providing stimulus to introduce systems change and enable inclusive industries to emerge and become established. Other organisations refer to this process as 'ecosystem acceleration'. Innovation ecosystems are discussed in more detail in section four.

Many foundations and funds are now adopting a systemic and structured approach to scaling, for example, Shell Foundation, Africa Enterprise Challenge Fund, Humanitarian Innovation Fund and GSMA, among others. Shell Foundation's approach, for example, involves providing parallel support in four domains:

1. Combining longer-term financial and technical support to social businesses as they develop and iterate new business models for new contexts.
2. Interventions to stimulate inclusive business ecosystems - value chains, traders, service providers, distribution networks, financial intermediaries and development platforms and institutions - and build trust and demand amongst consumers.
3. Developing institutional support in terms of regulations, standards, market information and inclusive industry development platforms
4. Developing and coordinating diverse financing mechanisms for different stages of development (Shell Foundation, 2015).

An alternative to this interventionist approach is being trialled by the Ideas to Impact programme. Research conducted by Ideas to Impact identified that, rather than supporting the development of whole business ecosystems, specific blockages to scale can potentially be tackled through carefully designed and targeted innovation prizes. Ideas to Impact rewards solvers that have addressed these challenges to successfully design a solution or scale their solutions. The resolution or management of the scaling challenge remains in the hands of the innovators and their partners who are incentivized to take on the challenge

and associated risks through a financial prize offered for success.

Currently, two separate prize processes are being tried. The first aims to stimulate scaling up of local climate adaptation solutions in Nepal (the Adaptation at Scale Protsahan Prize), while the second aims to scale out sanitation solutions in Ghana (Sanitation Challenge for Ghana). The Ghana prize process is in the early stages of collaboration between local government and external partners but is showing positive results for stimulating the development of liquid waste management strategies in Ghana. However, the efficacy of this approach remains to be determined, with successful prizes due for award in late 2018.

3.5 WHAT CHALLENGES REMAIN?

The emerging lessons on scaling challenges suggest that there is a growing understanding in the innovation community about the systems changes that are required to scale innovations. However, to catalyze the hoped-for development transformation, systems changes need to create inclusive business and markets that benefit poor and marginalized people (Jenkins and Ishikawa 2010).

Through decades of development experience in making markets work better for poor people, we know that inclusion requires transforming social relationships, and changing power dynamics between market actors to benefit the poorest and most marginalised communities – the so-called ‘base of the pyramid’. Building on poor people’s needs and skills, and involving them as producers as well as consumers in the design and delivery of social enterprise-based solutions is seen as a key underpinning of many successful innovations approaches (Banks and Ramalingam 2016; Harvey 2016; Mulgan 2016; Practical Action).

DISCUSSION

- How can lessons from scaling gained from the experience of large private sector businesses, used to running product development cycles in both developed and developing countries, be combined with ethical, political and development insights to support scaling with inclusion?
- Can small and medium-sized social enterprises scale up service delivery to the ‘base of the pyramid’ without an intermediary e.g. government procurement, or donor intervention?

Achieving real inclusion is not a technical issue; it is about enabling local users, customers and small-scale entrepreneurs to participate in building businesses and markets, and influence how they work, rather than allowing them to merely operate within them. For social enterprises to enhance their impact as agents of change, they need to understand how local social dynamics, culture and politics shape markets - often referred to as the ‘political economy’. To build inclusive businesses and markets requires integrating an ethical and political lens into scaling approaches alongside technical and market considerations, or risk widening the marginalization of those most in need.



4. INNOVATION ECOSYSTEMS

WHAT IS NEEDED TO MOVE SOCIAL GOODS AND SERVICES THROUGH THE INNOVATION PROCESS INTO ADOPTION AND USE BY POOR PEOPLE AND COMMUNITIES?

4.1 WHAT DO WE MEAN BY INNOVATION ECOSYSTEMS

There are many different ways of conceptualizing 'innovation ecosystems'. Our review of emerging lessons suggests that two different types of ecosystem are talked about in connection with 'ecosystem acceleration' and, in practice, often overlap. 'Business ecosystem' is used to refer to the networks of suppliers, traders, processors, service providers, distribution networks, financial intermediaries, customers and government and regulatory agencies that are required for businesses to operate and grow. Relationships in the network are dynamic, involving both cooperation and competition as each business in the system affects and is affected by the others, adapting and responding to changing circumstances.

'Innovation ecosystem' is used to refer to the loosely-bounded system of "people, enterprises, institutions, policies and resources that support the translation of new ideas into products, processes and services" (Ramalingam et al 2015, p. 10). The innovation ecosystem is interlinked with the broader business ecosystem, involving similar business organisations, customers and market intermediaries, but with additional roles and resources brought by research, technology, intellectual property and financial entities, and showing a greater degree of cooperation towards supporting and enabling the development of innovative technologies and solutions from discovery to implementation and delivery to consumers – sometimes referred to as the 'technology innovation system (TIS)' (Bergek et al 2008).

Innovation ecosystems need to be understood as real networks and processes that involve people, organisations, markets and institutions, linked across local, sectoral, regional, national and international levels. For example, in their study of the humanitarian innovation ecosystem, Ramalingam et al (2015) found different examples of networks and processes that could be thought of as 'innovation ecosystems', including:

- Networks of actors cooperating in innovation within an organization – such as teams working within medical charities to develop new protocols and tools for use in emergency disease responses;
- Geographical or thematically focused areas of dense innovation activities – such as the development and trialling of specific cash-based innovations by public sector actors, humanitarians and financial firms working in response to the Indian Ocean tsunami;
- Networks of loosely networked actors with differing interests but brought together into a structured innovation process – such as the small group of NGOs and agencies convened and facilitated by the HIF within a structured process to identify specific areas of need within the WASH sector;
- Multi-stakeholder processes involving all relevant innovating actors and factors making up a sector's innovation efforts – such as the role of the World Humanitarian Summit Innovation Advisory Group in convening key policymakers, thinkers and researchers in the humanitarian innovation space (adapted from Ramalingam et al 2015, p. 12).

Depending on the history of the sector, region and country, the degree of integration between different aspects of innovation ecosystems and broader business ecosystems will vary. In the international development context, innovation ecosystems have weak connections, with international (remote) aid systems operating in disconnection with national and local ecosystems, exacerbating the challenge of how to support locally-driven innovation, especially in marginal markets serving people with low-incomes. In developing country settings, both business and innovation ecosystems may need to be catalyzed and accelerated in tandem. For example, in its energy access report, Shell Foundation describes efforts to link emerging social enterprises in provinces to national-level corporates and distributors in order to grow and sustain social businesses (Shell Foundation, 2015 – Energy). Similarly, GSMA in its 'ecosystems accelerator' initiative aims to build partnerships between innovators and mobile operators, to create a pathway to scale innovative mobile products and services.

4.2 WHAT DO WE KNOW ABOUT WHAT'S NEEDED?

Ramalingam et al (2015) note that innovation ecosystems have emerged from their specific historical trajectories, but that common features can be identified amongst effective innovation ecosystems, including:

- Shared strategic vision of challenges and unmet needs around which to focus discovery, search and selection behaviour;
- Sufficient supply of key resources – especially financial and human resources – access to assets and infrastructure, and clear routes for these to flow into the system;
- High levels of openness in knowledge supply, with networks feeding in and recombining ideas from different sources and places;
- Well-articulated sense of user needs delivered by high levels of user consultation, involvement and co-creation;
- Capacity to support efforts in both incremental and radical innovation processes – entrepreneurial exploration of novel solutions, with mechanisms to ensure that the mainstream can quickly assess and assimilate emerging innovative ideas and concepts (adapted from Ramalingam et al, 2015, p. 11).

Partial innovation ecosystems may already exist within a sector or issue area, but when a new technology or social innovation emerges, few of the necessary ecosystem functions, assets and linkages are likely to be in place. The innovation ecosystem has to undergo a process of formation, either spontaneously or through more directed interventions such as 'ecosystem acceleration' that aim to convene relevant market and institutional actors to form the necessary networks and functions. Even with more directed approaches, ecosystem formation seems to be an uncertain process, as new technologies face challenges of legitimacy and social acceptance from incumbent institutional and policy agencies, businesses and customers who may be resistant to adoption (Ramalingam and Bound 2016; Bergek et al 2008).

Nevertheless, understanding the features of successful innovation systems can provide some categories to help visualise what innovation ecosystems in developing countries mean in practice, what may be already present in a given setting and what is missing in terms of enabling systems to support local innovations, as discussed below.

STRATEGIC VISION OF DEVELOPMENT CHALLENGES AND UNMET NEEDS:

A strategic overview of specific development challenges and unmet needs requires innovators and other actors to spend time in national and sub-national contexts. Consultation and interaction with affected people, communities and places is necessary to understand the social, institutional, cultural and behavioural dynamics around development issues. Ideas can be inspired globally through open innovation processes, but these need to connect locally and regionally with local entrepreneurs and institutional actors, whether through national level funds, issue-based networks of innovators or a managed innovation processes. Recent research on African enterprises, discussed in the Harvard Business review, supports this view, finding better employment and growth outcomes from locally-led enterprises that targeted the unmet needs of everyday consumers, rather than attempting to 'push' existing products into new market segments (Christensen et al 2017).

Developing thematic and geographical overviews of development challenges and unmet needs requires support at national level to make visible who is doing what in the ecosystem around challenges, and enable linkages across sectors, solutions and communities of innovators. Momentum around challenges may well be accelerated by the emerging SDG implementation processes. The SDGs bring a raft of opportunities for national innovation ecosystem formation because they provide strategic visions at the level of challenges and not sectors. National implementation plans for SDGs have strong potential to focus innovation efforts by setting priorities and channeling the resources and functions necessary for innovation ecosystems to form.

KEY RESOURCES, FINANCIAL AND HUMAN – AND CLEAR ROUTES FOR THESE TO FLOW INTO THE SYSTEM:

Global aid flows can create strong clusters of innovation activity, directing financial and human resources to prompt the rapid development of innovation ecosystems in certain areas. The downside is that development aid can skew activities into silos and may be driven by donor rather than local-level priorities. Silos mean that vertical networks are prioritised at the cost of cross-sectoral national-level connections between innovators.

Different kinds of financing need to be available in the innovation ecosystem for different stages of innovation development. International financing may be difficult for national and sub-national level social businesses to access, due to high administrative costs involved in managing an international project. Flexible and fast financing is needed, such as business plan competitions, and low value grants and challenge funds offered with lean or minimal

reporting requirements. Such types of mechanisms can be difficult to deliver through public sector aid organisations that are used to large-scale, three-year project funding and have stringent reporting requirements.

Most writers highlight that collaborations between public, philanthropic and private funds will be required to provide financing mechanisms all along the innovation process (Dunn 2016; Eccles, 2016). For example, the experience of the Global Alliance for Vaccines and Immunisation (Gavi) suggests that influencing systemic innovations requires public, private and social innovation approaches to work in tandem – governments develop new frameworks and regulations, the private-sector drives new approaches and the not-for profit sector can ensure that services reach the poorest and most in need (Franzen and Brooks 2016). Philanthropic funders can play a unique role as they are not subject to the same public or parliamentary accountabilities as development donors, enabling them to innovate with financing instruments, and approaches to generating evidence (Ramalingam and Bound 2016).

KNOWLEDGE OPENNESS AND FLOW TO SUPPORT RECOMBINING OF IDEAS FROM DIFFERENT SOURCES AND PLACES:

Global development and open innovation creates knowledge flows from global north to south, but this has to connect with in-country efforts, where there is less horizontal visibility of who is doing what and where. Support is required at a national, sectoral or county level to link innovators in the ecosystem across sectors, solutions and communities, including a role for a curator of evidence and lessons, especially to gather lessons from failed efforts (Ramalingam and Bound 2016). The curator role should include a comparative analysis of related solutions in the issue area to ensure that the strategic vision in the challenge area is being supported by a growing knowledge of problems and solutions.

USER NEEDS AND CONSULTATION:

Innovators in an ecosystem need to be able to involve users not just as data sources, but as active partners in innovation process. User-led processes require committed lengthy, periods of embedding in a context to really understand social dynamics and behaviours, to be culturally relevant, build on user needs and promote socially inclusive businesses (Banks and Ramalingam 2016; Wajil 2016).

MECHANISMS TO SUPPORT EFFORTS IN BOTH INCREMENTAL AND RADICAL INNOVATION PROCESSES:

As innovation ecosystems form and innovations gain legitimacy, pioneer enterprises that lead the radical innovation are joined by others who 'copy-cat' solutions in order to refine, update and incrementally improve the initial innovations (Bergek et al 2008). This process can be stimulated through mechanisms to support clustering and convening groups of 'solvers' to encourage crowding in, build recognition of new approaches in the mainstream, and catalyse regulatory reform to bring sector wide improvements to the ecosystem. Standards development and regulatory reform requires good measurement and evaluation practices to support assessments and adoptions by mainstream agencies (Ramalingam et al 2015).

4.3 WHAT'S BEING TRIED?

There are various approaches underway that aim to stimulate the formation of innovation ecosystems around particular challenges, even if this is not an explicit aim. For example, the Humanitarian Innovation Fund (HIF) convenes two thematic 'accelerator' processes, one in gender-based violence prevention programming and another on innovation in the WASH sector. An in-depth research process in multiple countries identifies gaps and opportunities, which are then developed and refined into a number of specific challenges that are suitable for facilitated innovation processes. This approach effectively stimulates a thematic innovation ecosystem by providing defined strategic needs, building collaboration and linkages amongst actors in the humanitarian system – aid agencies, NGOs, the private sector, and academia –, stimulating the identification of novel ideas, and providing financing and technical support through a structured research and development processes to develop and rigorously test ideas and solutions (HIF).

In another example, the Africa Enterprise Challenge Fund (AECF) aims to stimulate systemic change through a clustering strategy that finances enterprises that are innovating in the same sector or geographical region, including companies that are innovating in business services within the cluster, to promote systems change. With the clustering approach, the AECF can promote innovation ecosystems within geographical regions, whilst maintaining connections brokered through the fund to open innovation processes. The clustering approach can also help to enhance legitimisation and acceptance, especially as AECF also supports firms in the cluster to engage with government agencies to develop standards and regulations bring sector wide improvements to the innovation ecosystem.

Another example is the GSMA 'ecosystem accelerator', which works with African and Asian innovators in mobile services to build linkages between them and national corporate mobile companies. This helps to promote the closer integration of innovation ecosystems and business ecosystems, allowing corporate players to enhance the flow of resources – technical, assets, human – into the innovation ecosystem, and for innovative solutions to develop and flow more readily into the mainstream.

Ideas to Impact uses innovation prizes to encourage new entrants to come together to solve predefined challenges by enhancing, reforming and building new innovation ecosystems around the challenge. For example, the Dreampipe Prize aims to integrate broader business ecosystems to stimulate innovations that will help water utilities in developing countries mobilise funds for non-revenue water and sanitation activities.

The prize is targeted at water utility experts, financial experts and transaction advisors (who may or may not have prior experience in the water sector). The aim is to catalyse collaborations between them and water sector experts to solve key issues that are affected by the lack of financial innovation in the water sector. In the Sanitation Challenge for Ghana prize (also part of Ideas to Impact) example previously mentioned, the programme is incentivising local government bodies to identify the financing, the coordination and sequencing of technical assistance, and draw in different partners from the private sector and NGOs, to create an innovation ecosystem around liquid waste management. The prize is has completed Stage 1 at the time of writing, and Stage 2 of the prize will demonstrate the value of the prize and associated honorary incentive is sufficient to catalyse the formation of innovation ecosystems.

4.4 WHAT CHALLENGES REMAIN?

Although different kinds of financing are already being tested, the coordination and sequencing of financial and technical support from public, philanthropic and private entities to provide support across whole innovation ecosystems is a formidable task yet to be addressed. Moving beyond three-year project cycles seems vital, as does providing the right blend of 'lean' structures around early-stage innovation, while ensuring that medium and longer-term financing, technical support and evidence-generation are available to enable maturing solutions to develop. A major challenge is tackling the weak connections between internationally-convened innovation processes and in-country innovation ecosystems. There are still relatively few country-led innovation programmes so the routes for globally-inspired ideas to travel into national ecosystems to be adapted and trialled by local innovators are not yet there. The Human Development Innovation Fund (HDIF) in Tanzania and the three national innovation prizes trialled by Ideas to Impact are some of the few examples of national innovation programmes to date. Finally, integrating a focus on inclusion into ecosystem stimulation, for example through supporting inclusive value chains, remains a key challenge.

DISCUSSION

- Given the importance of ecosystems in supporting scaling and sustainability, what is the role of innovation programmes in tackling system transformation (regulatory, physical, cultural, other)?
- How can innovation programmes effectively engage country governments in innovation ecosystem transformation?





5. RISKS

HOW CAN WE WORK POSITIVELY WITH RISKS INHERENT TO INNOVATION IN DEVELOPMENT?

5.1 WHAT DO WE UNDERSTAND BY RISKS

Risk and uncertainty are often treated as interchangeable, however, it is helpful to distinguish the concepts as they require different approaches in innovation processes. Risk can be manageable and uncertainty is not. A risk is a potential future occurrence of hazard, damage, loss or injury that is measurable and quantifiable in terms of the probability and mode of it occurring; uncertainty is where circumstances are not easily measurable in terms of probabilities, where neither the probability nor the mode of occurrence is known (UK Government Chief Scientific Adviser 2014).

There is a large amount of management literature on managing risks in innovation, and many technical approaches that we cannot cover in this summary. We therefore focus on two issues that particularly affect innovation in development programmes:

1. Operational issues and integrating failure into performance management
2. Ethical risks of innovation in development

5.2 OPERATIONAL RISKS AND INTEGRATING FAILURE

It seems broadly agreed that innovation for development requires a high tolerance of risk and uncertainty. Risks are inherent in any enterprise endeavour, but innovation in development faces a specific range of risks and uncertainties, for example, arising from challenging delivery environments, risks of failure when testing new ideas in developing country contexts, as well as risks of unintended negative consequences that reduce social impact and may actively harm local communities.

In innovation programmes, 'failure' is a key mechanism for lesson-learning. Iteration is expected along a long-term innovation pathway as innovators learn about the technical, behavior and process changes needed to realise the solution, ideally supported by systematic evidence-generation about the problem and solution as learning progresses (Obrecht and Warner, 2015). However, Eccles (2015) argues that traditional development financing models do not incentivise adaptation and innovation, as they focus on delivery of a pre-defined plan and set of results, usually within a three-year project timeframe, with rigid monitoring and reporting procedures. This structure means that they are poor at dealing with the inherent failure, iteration and flexibility that is required for innovation initiatives.

Public sector and government development agencies managing public funds, often with parliamentary accountabilities, have an increased sensitivity to reputational risk. This sensitivity makes it difficult for these organisations to support in-country innovators, which can increase fiduciary risks. Concerns over reputation and results can also lead to an over-focus on adoption at scale as the measure of success for innovations, even though scaling and replication is a complex process, with timelines and processes that are not yet fully understood, as discussed. Reduced institutional tolerance of failure in international development agencies makes it difficult to 'fail fast and iterate', or to 'take intelligent risks', as the principles for innovation urge.

Alternative models are now being tried, which offer a different balance of risk and reward, for example, innovation prizes, payment by results (PBR) and challenges, which pass a lot of the risk onto the solvers. However, there is growing awareness of the need to balance input from solvers with output of finance that they will eventually win, so the risks do not become too high for individuals and enterprises coming from developing countries (Ideas to Impact blog – forthcoming).

5.3 ETHICAL RISKS AND UNINTENDED NEGATIVE CONSEQUENCES

There is a risk dimension to the theme of inclusion that runs through this briefing. Ethical issues are an emerging debate in the innovation in development community. While failures provide critical learning for social entrepreneurs, piloting that involves poor and marginalised communities can cause harm to them. The risk of unintended harm is greater in developing country contexts where life for poor communities is already difficult in physical, economic and social terms.

Over the longer term of scaling processes, risks of harm can be increased if innovation programmes bring in innovators from outside the social context who have little understanding of local social dynamics and cultural practices, and the different vulnerabilities of poor and marginalised people.

However, inclusion is not only an ethical concern. Integrating inclusion into business model and value chain development has the potential to make social enterprises more successful in their business and social impact. Long-standing work in international development on inclusive and participatory market development has established that, without specific intervention, markets will tend to exclude marginalised producers and consumers, especially women and girls who face additional discrimination and marginalization. As an illustration of this, ACUMEN's first-time study of gender inclusion in businesses in their social investment portfolio in 2015 study found surprising results. First, a quarter of enterprises in their sample were not tracking the gender of employees and customers. Second, levels of inclusion of women were in line with private sector companies in the developing world, but lower than they should be given that this is the social enterprise sector, which typically sees higher levels of inclusion of women (Glinski et al 2015).

The study found that by incorporating inclusive systems and structures, which create an enabling environment for both female and male employees, and for low-income women customers, social enterprises can expand their access to talent, enhance employee retention, build a stronger brand reputation, grow their customer base, while increasing their social impact (Glinski et al 2015).

The risk of unintended negative consequences means that social innovators and funders working in developing countries should include ethical risk frameworks into their outcome and impact evaluations, explicitly searching for signals of emerging unintended consequences, such as exacerbating exclusion rather than inclusion. The gender study has prompted ACUMEN to develop a gender framework and

diagnostic tool to enhance the integration of women within enterprises, value chains and as customers, to enhance social impact across their portfolio of investees.

5.4 WHAT DO WE KNOW ABOUT WHAT'S NEEDED?

Risk-taking for innovation in a purposeful and systematic way can be supported. Lesson-learning and evidence-generation is being strengthened through a range of rigorous data and evaluation methodologies applied at different stages of innovation, linked to alternative financing models and innovative financial vehicles that offer different approaches to risk. These include venture capital approaches, stage-gate financing, proactive portfolio management and 'agile' methodologies, such as adaptive management, 'lean start-up and data' approaches. Philanthropic funders have an important role to play in innovating financial vehicles that combine public and private funds in order to reduce the financial risks of failure to public funders (Eccles 2016; Dunn 2016).

Innovation in development as a sector has come far, but the negative narrative around failure is persistent. There is a need to change this narrative, to re-frame failure as a necessary source of learning for innovation. The measure of success also needs to be changed from 'adoption' to 'failing fast' and ensuring that evidence and lessons from 'failed' innovation processes are shared, curated and made available to the international innovation community through appropriate channels.

New financing and evidence-generation approaches should also integrate a focus on ethical risks alongside financial risk and reputational risk. Impact evaluation approaches and adaptive management should incorporate risk assessments and precautionary principles based on ethical frameworks of inclusion, vulnerability and social impact, and unintended consequences. Lesson-learning also needs to involve users and customers in the process, to scrutinise innovations and pathways from multiple perspectives (UK Govt. Chief Scientific Adviser 2014; Franzel and Brooks 2016).

5.5 WHAT'S BEING TRIED?

Our review did not find a lot of material on risks of unintended negative consequences of innovation in development, suggesting that this is an emerging area. However, the HDIF in Tanzania is developing research to look at a range of issues that present risks to social impact, for example dynamics between innovation and gender, innovation and jobs, and intergenerational connections (David McGinty, personal communication).

Humanitarian assistance has a long-standing culture of assessing impact on vulnerable populations and many tools for rapid assessment. As an emerging debate in the innovation and development community, there may be benefit in looking to adapt humanitarian tools and approaches for use in risk management in innovation initiatives.

DISCUSSION

- How do we demonstrate that the lessons from 'failed' innovation processes are being fed back into future initiatives, and what are appropriate channels?
- Can a simple, graded risk scale be constructed from existing innovation programme evidence and studies, to benchmark risk tolerances for new innovation programmers and funders?
- What ethical dimensions need to be included in risk assessments to, firstly ensure a fair balance of risk when working with developing country entrepreneurs and solvers, and secondly to minimise risks of harm and exclusion for the poorest people (and optimise inclusion and social impact)?

LOOKING AHEAD

This brief has laid out some of the critical challenges facing the innovation in development community – scaling and replicating innovations, stimulating ecosystems and working proactively with risks to enhance lesson-learning in innovation, and strengthen social impact. Some common themes about how to tackle these are emerging from the work of multiple actors and the multiple approaches being tried. Our summary, confirms that there is a growing body of lesson learning and experience that can be drawn on, but this is still small and further works needs to be done.

None of these challenges can be solved by one agency or entity working alone - there is a need to get innovators, practitioners, funders, enterprises and operational agencies together as a community if we are to reach the SDGs in 15 years. The Innovating in Development Learning Event is an attempt to take innovation programming forward in a coherent, multi-actor way, to understand and consolidate what we have learned to date, and chart out what more can be done.

We look forward to a lively debate at the event in February 2017 to help us move forward as a more coordinated sector to help achieve the social impact and transformative development we all seek.

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