



The Global Alliance for
Humanitarian Innovation

HUMANITARIAN INNOVATION:

UNTANGLING THE
MANY PATHS TO SCALE

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HUMANITARIAN INNOVATION: UNTANGLING THE MANY PATHS TO SCALE

By Dan McClure, Lesley Bourns, and Alice Obrecht

Purpose

To provide a framework that enables a more robust and structured discussion of the challenges in scaling humanitarian innovations and to highlight actions needed to better enable scaling. This paper looks at two levels:

First, at the level of specific innovations, it seeks to provide a common framework for understanding the factors that humanitarian innovators and their partners should consider when choosing a pathway to scale their specific innovations.

Second, at the ecosystem level, the paper highlights institutional gaps and barriers to scale across the humanitarian innovation ecosystem.

Audience

This paper is intended for practitioners of humanitarian innovation, as well as others working to ensure a more innovative approach to addressing humanitarian needs overall, including donors, policymakers, public and private partners, leaders of humanitarian organizations, and academics.

Background

This paper emerges from the stakeholder analysis and Global Alliance for Humanitarian Innovation's (GAHI) member interactions; a systematic engagement with the issue of scale in the humanitarian sector; and a careful look at what exists beyond our sector, in both development and the private sector.

We intend this paper to be a complement to products such as Elrha's "Too Tough to Scale?" paper, which offers a detailed analysis of the main barriers to scaling humanitarian innovation,¹ the International Development Innovation Alliance's Insights series,² and work by Results for Development and Management Systems International (MSI) on scaling innovations,³ among others.

1. Overview

The humanitarian sector has always innovated, finding creative solutions to improve results in austere and unstable settings. But such innovations are frequently sporadic, tend to be project-driven, and may not reach beyond a given setting or institution. In the face of growing demand for humanitarian assistance, the world needs innovation that produces scalable solutions.

The challenge is widely recognized: good ideas, demonstrated through pilots, often fail to reach a scale at which they can maximize value.⁴ This is partially due to the general challenge posed by a voluntary, fluid humanitarian system that struggles to consistently adopt changes in policy and practice, particularly those that disrupt the status quo and balance of power.⁵ This dynamic can undermine the collective action and the acceptance of disruption needed for scaling some of the most impactful humanitarian innovations. The sector is also characterized by a limited appetite for risk and a short-term mindset, which is due in part to the pressure on donors and humanitarian actors to demonstrate efficiency and visibility through quick, tangible results like delivery of food and tents, with funding channeled primarily through a handful of large institutions.⁶

While the sector's overall environment is certainly challenging for innovation at scale, our experience indicates this reality alone does not explain the difficulty of the scaling challenge. What really stands in the way of bringing new solutions to a broader group of users in humanitarian settings? This paper presents the issues at two broad levels. Some arise from the challenges individual innovators face when choosing a pathway to scale, while the others can be attributed to systemic barriers in the broad environment for humanitarian innovation.

At the level of **the individual innovation**, this paper argues that a poor definition of the scaling challenge, and an inadequate response to address its complexity, have kept many good ideas from going to scale. Thinking about how to scale a solution has often been left to the end of an innovation process, with relatively few strategic and supported pathways proposed for taking an idea to scale.

If an innovator finds it can't scale within these conventional processes, there is little room for reimagining the approach. However, if from the outset of the innovation process one considers a range of factors that shape the ability to scale, the innovator will have greater clarity on the scaling problem and more opportunities to successfully pursue the most appropriate strategies.

Recognizing the diversity of pathways to scale allows for a more robust framework for considering the range of approaches, skills, and steps involved in bringing innovations to scale. This paper offers a scale framework shaped by four key factors: **solution value, difficulty, contextual variation, and operational sustainability.**

The four factors defining the journey to scale



We propose that in practice, there are often very different scaling methodologies for each combination of value, difficulty, contextual variation, and sustainability (as depicted above).

Given the potential for different combinations of these factors, very different skills could be required on different pathways to scale. Instead of a single scaling capability that can be mastered once and applied uniformly across all innovations (as with the simple Silicon Valley-style product innovation journey depicted in page 7 of this document), each pathway may have a different approach for successful scaling.

The differences in strategy required to enable scaling may encompass the very start of the creative lifecycle, so that the steps necessary to move through stages of innovation such as ideation, testing, and iteration involve different stakeholders, timeframes, technical knowledge, and skill sets. For example, in the development of a web-based platform for reporting unexploded objects, Danish Demining Group planned to scale the platform through governments, and therefore had to involve key ministries from the earliest days of the platform's design and testing.

Thus far the humanitarian innovation community generally has not structured itself with this range of pathways in mind, focusing instead on bringing in the skills needed to seed fund and pilot innovation according to one or two common and relatively straightforward scaling models.

In terms of **the overall ecosystem** for scaling humanitarian innovation, this paper highlights broader barriers to scale that must be acknowledged and collectively addressed. For most humanitarian innovations, the "user" of the innovation is different from the "buyer" of the innovation. When the user is separated from purchasing power in this way, the incentives and resources needed to scale in a sustainable manner are allocated across multiple "buyers," who may have very different interests, capabilities, and needs. Others may also act as gatekeepers to scaling innovation through regulations or rule setting, which can affect the behavior of both buyers and users.

While user-centered design can help to address the lack of accountability in the design process, one also needs to consider the separation of the user from the buyer and the role of gatekeepers with regard to sustainable scaling. In a market like the humanitarian system, dominated by a small number of donors and agencies that act as "proxy buyers," the risk is that buyer interests and priorities supplant those of the user. Understood in a different way, consider this observation by a non-profit leader, who noted that social sector innovators have to "win two games simultaneously: a product game (delivering real social impact) and a revenue game. And since the product users are not always the same people as the revenue providers, that's pretty hard to do."⁷

2. What are 'Innovation' and 'Scale'?

The terms “innovation” and “scale” are defined in many different ways, with varying levels of specificity. For purposes of this paper, we propose definitions that are quite broad, embracing a wide range of creative innovation and scaling activities. This big-tent view of innovation and scaling allows us to engage with a diverse range of creative opportunities that might benefit the sector and those it serves.

What Is “Innovation”?

A commonly cited definition of humanitarian innovation is that used by the Humanitarian Innovation Fund, which describes innovation as “an iterative process that identifies, adjusts, and diffuses ideas for improving humanitarian action.”⁸ In this paper we will focus less on the underlying process of innovation and more on its outcome, understanding **an “innovation” to be an intentional creation that produces meaningful new value.** This perspective recognizes that an innovation can be a small, incremental change that improves everyday operations, while also allowing for the potential for innovation to lead to large, disruptive sector change.

What Is “Scale”?

This report builds on the definition of scale put forward by Elrha in 2018: “Building on demonstrated successes to ensure that solutions reach their maximum potential, have the greatest possible impact, and lead to widespread change.”⁹ This is a useful frame to begin considering how we understand scale. When applying it, however, many of us still face difficulties using it for specific cases, which speaks in part to the complexity of measuring the “maximum potential” of any given solution.

For example, does an innovation have to be “big”? If a local, social innovation is tailored to the unique needs of its particular context, successfully delivering value through a sustained business model, is it at scale? Conversely, is wide replication enough? If an idea is successfully piloted and replicated across many situations, but the unique needs of each context compromise the innovation’s value, has the innovation scaled? And are scaled innovations always good? Is an innovation that is replicated widely without delivering tangible results “at scale”?

In order to explore the concept of scale, this paper puts forward **five characteristics that are commonly taken to signify that an innovation is at scale.** These factors should be understood as “levers” that can be adjusted up or down to find the right balance between widespread use and maximized value.

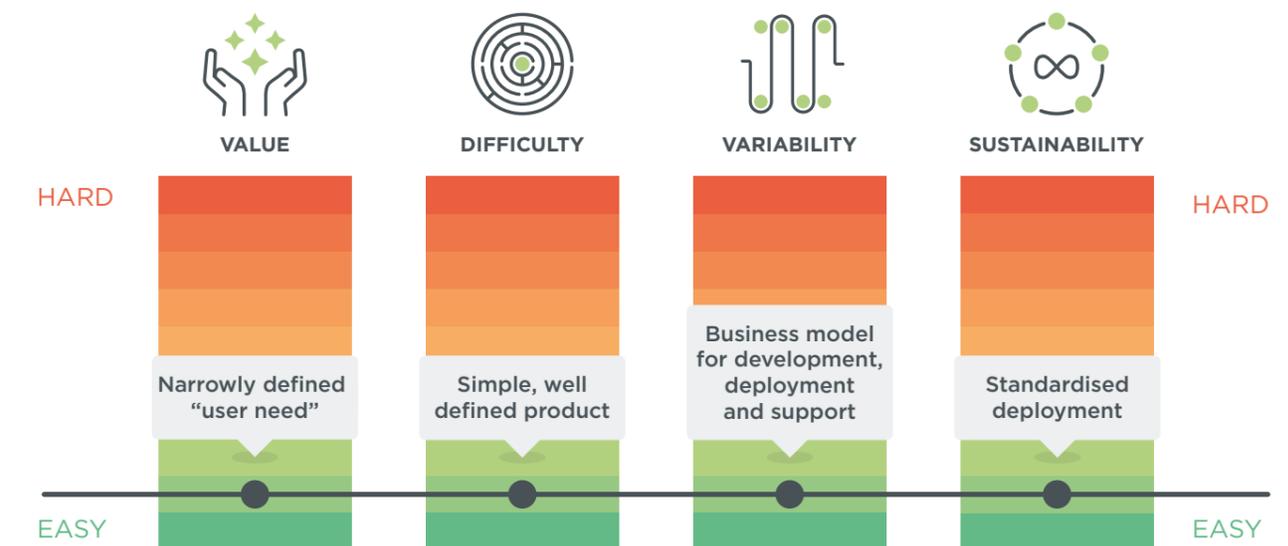
- 1. Delivers Impact:** The innovation creates meaningful results for people who could use it. Assuring impact – that the solution is the right one to solve the problem – is the primary focus of the pilot stage.
- 2. Is Used Broadly:** The innovation has been adopted or deployed in many places or by many actors. A solution has scaled when it is being used to address a problem in all areas or contexts where the problem arises.
- 3. Maximizes Fit:** Equally important to broad use, but often overlooked, is coverage of the problem to which the innovation responds. When scaling an innovation, if the local needs are different, the misfit between the imported solution and the local problem will reduce the innovation’s impact. Some customization can help to avoid this loss of value, but this improvement comes at the cost of additional time and resources. As a result, in some cases where very complex solutions are tailored to a specific context, the appropriate level of scale for an innovation may only be within one country or context.
- 4. Sustains Benefits:** The innovation needs a means of continuing its support, deployment, and use over time, through a sustainable operating model.
- 5. Is Cost Effective:** It would be possible to achieve maximum scores on all four factors if cost were no object, yet this is seldom the case. Innovations are ultimately investments, so costs must be proportional to benefits.

Scaling forces innovators to make trade-offs among these factors. Some scaling efforts may focus on broad use, while others emphasize maximizing fit with the local context. This paper does not suggest that there is a “best” version of scale. We contend that the right level and form of scale varies depending on the specific case and pathway to scale. The innovator must make choices regarding which factors should be optimized and which should be sacrificed. **The rest of the paper explores the choices that an innovator faces along the pathway to scale, balancing these factors.**

3. Expanding the Pathways to Scale

Scaling of humanitarian innovations has often been presented from a narrow perspective borrowed from commercial product innovation. This approach assumes that a well-defined product or service can be adopted across contexts with little variation, and that the users of the innovation are able to pay for the added value received. This scale pathway has received a great deal of attention due to its key role in driving growth within the tech-startup industry. Many of the dominant tools, services, and investments available to support innovation and scale reflect a reliance on this comparatively simple opportunity.

The ‘Simple’ product innovation journey to scale



While some innovations certainly fit these conditions, the assumptions rarely stand up to the realities of humanitarian settings. Simplified assumptions are out of synch with the challenges most humanitarian innovations must confront. Innovators working in this complex domain should expect to deal with other forms of the scale journey.

For example, in recent years, humanitarian organizations recognized that a key barrier to scale, given the sector’s fragmented structure, is the “not built here” problem: innovations were not being adopted by potential users because they were branded by another agency. To overcome this challenge, agencies and innovation supporters

sought to reduce the disincentives for adopting an innovation by de-branding and offering innovations on public platforms in a format that was customizable by different agencies. In some cases, this open-source access was accompanied by volunteer-based business models that further reduced dependence on a single sponsor.

Even more needs to be done to expand the toolkit of scaling strategies available to innovators working in the humanitarian sector. As a framework for this endeavor, this section unpacks **four factors that shape an individual innovation's complex journey to scale**. Each combination of factors may have its own methodology and scaling journey, offering innovators a broader, more realistic range of options for taking innovations to scale.



It might be reasonably asked why the four factors proposed in this paper are uniquely positioned to offer a useful frame for assessing scale challenges.

Each factor was chosen because it is substantially different and distinct from the others, creating separate levers for innovators to use and master. The nature of each factor's underlying challenges is such that it requires different skills and methodologies from the innovator. Distinct skills must be developed in all four areas. The way the factors contribute to scaling success is also quite different. For example, elements that contribute to an innovation's "Difficulty", such as removing legal barriers or establishing supply chains, must typically all be resolved for the innovation to work. In contrast, contextual variation can often be treated as sliding scale, adjusted up or down based on the desired level of investment in support and training.

The distinct nature of each factor can also be seen when innovators are put in the position of making strategic tradeoffs during scaling. The factors have been intentionally selected to compete with one another. For example, a strong commercial business model based on delivering a standardized product to many users will make it difficult for an innovator to also pursue substantial levels of customization. Another innovator may want to add advanced features that increase the value of the innovation, but this increased complexity will typically make it harder to resolve Difficulties, manage contextual variation, or adequately fund a Sustainable business model.

Scale factor 1: Value

At the heart of any innovation is the promise that it will deliver value for some individual or organization. Because this is such a critical aspect of the innovation, determining impact and value is the focus of pilot testing. If an innovation is unable to deliver measurable, substantive impact during a pilot, it is a poor candidate for scale. In this sense, validating the impact of an innovation is incorporated into an earlier stage in the innovation lifecycle than the scale stage. However, this doesn't mean that the potential for impact and value is fixed at the conclusion of the pilot phase.

Scaling asks innovators to focus their investments of scarce resources. If the innovation is an educational tablet for use in emergencies, for example, does the value lie in a new technology behind the solution? The durability of the tool? The accessibility of its content to a wide audience? The interoperability with different technologies? The ownership by governments and teachers of the tablet's content? Or in some meeting point among these factors? The innovator needs to refine and mature these strengths.

A good idea might be made even better, taking a promising value proposition and adding to it. For example, new features might be added to an existing innovation, or the original innovation might be extended to additional collaborators that augment the impact. Unlike the other three factors (difficulty, variability, and sustainability), which are most commonly seen as impediments to scale, improving value is an opportunity to increase the innovation's potential to scale by making it more desirable.

To assess opportunities to expand value, innovators should ask: What proven value does the solution add in relation to the problem being addressed? What is the core strength and value of this solution? Are there adjacent related problems that this innovation could also address? Could this innovation be combined with other innovations, creating synergies that multiply its impact?

** See page 17-18 in the appendix to this document for examples of how value operates in relation to specific innovations.*

Scale factor 2: Difficulty

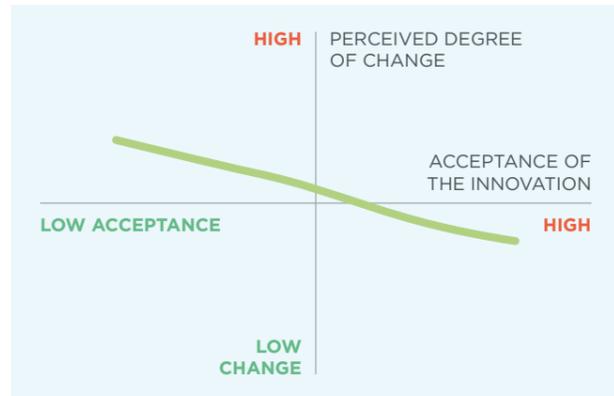
A number of requirements in very different domains must be resolved for a given innovation to work at all. While the "difficulties" are often quite different in nature from one another (e.g., establishing integrations, obtaining legal approval, driving cultural shifts), any one of them can block the innovation in even a single real-world context.¹⁰ They form a logical "and," where all of the difficulty factors must be addressed to make scale possible.

For example, one element that could contribute to difficulty is whether potential users of the innovation, as well as gatekeepers who influence its uptake, recognize the problem it addresses. In the case of Translators without Borders, innovators developed a translation service working with two types of end users: crisis-affected populations and humanitarian agencies. While crisis-affected populations embraced the services, Translators without Borders needed to educate humanitarian agencies about the implications of not communicating with people in their first language, before they could move to wider adoption.

Taken together, the elements of difficulty give a sense of the degree of change offered by an innovation – incremental or transformational. If the innovation demands change from many different stakeholders, disrupts the balance of power, and shifts the incentives in the humanitarian or related local systems – such as governance, markets, and politics – then the degree of difficulty is likely quite high. Difficult innovations require the expenditure of substantially greater effort, as well as more actors and actions, to deliver their promised value.

When assessing and planning a journey to scale, innovators can tailor their choices to the level of challenge they feel equipped to address. For example, innovations that feature substantial levels of difficulty need added depth and breadth of "ownership" or "acceptance" to enable the innovators to drive change.¹¹ As more challenging innovations introduce changes in behavior, disrupt power dynamics, or challenge cultural norms and practices, having a clear institution, network, or other anchor that offers sustained championing of the solution will be critical. In contrast, less difficult and demanding innovations can often generate wider acceptance, as the degree of change they require from actors for adoption decreases. (See diagram.)

Understanding difficulty: degree of change and degree of acceptance



To assess difficulty, innovators should ask: How difficult is the problem itself? How many different systems and behaviors need to change for the innovation to go to scale, and to what degree do they need to change? How well recognized is the problem, and do all end users and gatekeepers recognize its importance? Is there strong demand for a solution? What are the incentives for relevant players to change in ways that would enable scaling? How big is the change? What is the degree of complexity involved? How much new supporting business or communal infrastructure is needed? How common are the necessary skills required for adoption of the innovation?

Some aspects of difficulty may be systematically reduced by taking on the right partnerships, capacities, and approaches, but each element of difficulty must be solved for the innovation to work effectively in even one location.

** See pages 18-22 in the appendix to this document for examples of how difficulty operates in relation to specific innovations.*

Scale factor 3: Contextual variation

As scaling proceeds, the creator and supporters of the innovation will typically seek to deploy the new solution in more contexts without losing the value it created in the original setting. This requires the actors leading that process to make decisions about tradeoffs. The number of deployments can grow if the level of customization is limited. However, the value of each deployment grows as investments in customization increase. Additionally, customization is not a one-off process, but rather a series of adaptations as the solution is deployed to different settings.

In humanitarian settings, even when product needs are similar across diverse contexts (such as a vaccine or enhanced drinking water technology), significant variations in delivery, financing, and behavior, for example, may still be needed. To successfully scale, innovators need to recognize these differences, considering how much variation is needed to replicate across different settings, adapting to social and cultural factors as well as security, infrastructure, technology access, and other localized considerations.

Work in this area requires the innovator to determine how best to balance these priorities. In logic terms, many of these choices are “ors,” with decisions balanced against one another. Design elements that focus accountability to the user are particularly critical to understanding the degree of contextual variation.

To assess contextual variation, innovators should ask: How much customization is needed to replicate the innovation? Can a solution that works in one setting be used in a different setting and still add the same value? When does context affect the impact of the solution, and why? Alongside evidence that the innovation works, what evidence do we have that tells us how the innovation works, or what features will need to be adapted for different contexts/uses? How many “solved” problems, like legal access or community ownership, need to be repeated in a new context?

The issue of variation is often overlooked by teams that have labored to remove difficult barriers in the original context. They must often resolve the same challenge again and again in each new setting (e.g., getting local government approval or getting buy-in on standards) in addition to tackling unique challenges in new settings. Supporting this necessary repetition of difficult tasks acts as a tax on the potential benefit of the innovation and slows its spread, and thus must be considered when choosing a scale pathway.

** See pages 20-21 in the appendix to this document for examples of how contextual variation operates in relation to specific innovations.*

Scale factor 4: Sustainability

When considering the factor of sustainability, the innovation must effectively deliver value through a business operation that allows for deployment, ownership, support of existing users, and continued evolution of the innovation.

In addition to financing, the degree of sustainability can be measured by the depth and breadth of “ownership” of the solution.

To assess sustainability, innovators should ask: Who “owns” the problem that this innovation addresses? Who can provide long-term end state funding? To what extent does the solution have a champion or champions that can instill ownership? In situations where the end user has severely limited purchasing power and limited political power to translate humanitarian needs into economic demands, who has the incentive to make a business model sustainable?

The humanitarian system faces unique challenges here. As noted earlier, when the end users of an innovation have severely limited economic power or choice, they are generally not the buyers of the innovation. The growth of social enterprises has been one response to the limited resources available to support and sustain innovations. These firms have a sales-based model, but leverage volunteer efforts and low margin operations to create an organization that needs less funding to survive.

The sustainability challenge is often more complicated than just a shortage of funding. As discussed in more detail in the ecosystem section below, traditional market incentives do not govern humanitarian innovation efforts. A small number of actors (primarily the dominant United Nations agencies and a handful of large nongovernmental organizations [NGOs]) are the recipients of the vast majority of funds from a small group of donors.¹² As a result, third-party actors can serve as gatekeepers to the uptake of an innovation, blocking or creating disincentives for potential end users. In the early pilot stage, this may result in a less-viable solution design because the innovation itself may not be adequately informed by the experience of the beneficiary. Over the longer term, the lack of a working market makes traditional commercial business models unviable. Ensuring sustainability of a solution in humanitarian settings often involves political strategies and social change advocacy as much as it does business modeling.

Earlier work by Management Sciences International usefully pointed out the important role of intermediaries in linking innovators with the adopting agent responsible for sustained uptake and scale of solutions. This work notes a number of intermediary functions, including strategic planning, investment packaging, advocacy and marketing, and process management.¹³ Understanding and supporting these functions is also critical to promoting sustainability of solutions in the humanitarian innovation ecosystem.

** See pages 21-22 in the appendix to this document for examples of how sustainability operates in relation to specific innovations.*

The potential number of pathways to scale grows quickly when considering the possible combinations of the four factors: value; difficulty; contextual variation; and sustainability. When the factors interact with one another, the variety of scaling paths multiplies further.

This framework will need further validation through examination of a range of practical examples of varied paths to scale – those already undertaken, as well as those that lie ahead. That research should (1) validate and evolve this broad initial framework, (2) determine

which of the additional pathways to scale are most significant in the humanitarian context, and (3) define methodologies suited to each distinct scaling challenge. Recommended actions to support this effort are noted at the conclusion of this paper.

The Annex to this document includes more detail on each of the four factors as well as some examples of how they can produce multiple variations on scale pathways.

4. The Ecosystem: Overcoming Systemic Barriers to Scale

The sections above address some of the considerations innovators must take into account as they select and pursue a pathway to scale. However, this framework will not function without acknowledging broader barriers to scale that exist within the humanitarian ecosystem. Many of these are systemic barriers common across diverse scaling journeys. They should be tackled collectively in order to create a more hospitable environment for scaling individual solutions.

Elrha's 2018 report "Too Tough to Scale?" sets out 13 systemic barriers and aligned tangible calls to action for the sector to collectively address. The paper is organized around five challenge areas, such as insufficient embedded knowledge and skills for scale; inappropriate and inadequate funding for scaling innovation; and the inherent limitations of the humanitarian ecosystem to scale innovation, among others.¹⁴

The GAHI supports tackling these challenges not just in individual scale cases, but also through collective action where common barriers can be overcome. To that end, this paper seconds the call for tackling **the political economy that can undermine humanitarian innovation**. The existing political economy and lack of

incentives to disturb entrenched roles can undermine some of the disruptive change required to address the humanitarian system's challenges and the scale of its demands.¹⁵ This is not a problem of innovation alone, but of achieving any meaningful and widespread change in the humanitarian system more generally.¹⁶

Much innovation in the humanitarian system still comes from in-house initiatives led by the dominant humanitarian players or through external partnerships established by those same players – donors, the UN, NGOs, the International Committee of the Red Cross, etc. – which can limit scaling beyond the bounds of any given organization's own reach or interests.¹⁷ The nonprofit sector faces what has been called a "social capital chasm," which few institutions are able to bridge in order to scale their ideas through organizational growth alone, reinforcing the importance of collective action to achieving scale.¹⁸ In addition to collective funding approaches such as Grand Challenges, there is also a demand for knitting together a range of solutions from different actors and perspectives, so that they can tackle the full complexity of humanitarian challenges.

Based on findings from ALNAP/HIF's 2016 case studies on humanitarian innovation, adoption is most likely to occur under three conditions: (1) people understand the innovation to be beneficial; (2) people are able to freely adopt the innovation; and (3) only the adopter and the provider have to change their behavior in a way that allows the innovation to deliver its value.¹⁹ In humanitarian settings, the last two conditions often are not met because the user and buyer are separate and the market is predominantly supply-driven. These and other aspects of political economy offer critical barriers to innovation that merit greater exploration and collective action.

Related to this entrenched power structure is **the lack of accountability to beneficiaries of innovation**. Beneficiaries of innovation are those who stand to benefit directly from the innovation – they are the core owners of the problem an innovation aims to solve. Meaningful engagement of affected people in setting priorities and generating solutions remains largely elusive or ad hoc, a persistent challenge for the sector. In the case of innovation, the end users often have limited opportunity to define the problems and set out the solutions that most often get traction for scale, limiting value, sustainability, and other elements of successful scale.

Further, the GAHI highlights the **unease of many humanitarians with players outside of the humanitarian system**, an area that merits further exploration and dialogue. Among the primary means of scaling innovations is the adoption of the new approach by a state or public-sector entity (e.g., health systems reform). For humanitarians, this kind of engagement can be seen as wading into political territory, which is thought of by some as solely the remit of development actors.²⁰ Another common avenue to scale, through commercialization, can also be seen as undermining purely needs-based humanitarian values, on the one hand, or, worse, exploiting vulnerable populations for the purposes of experimentation.²¹ At the highest institutional levels in the humanitarian system, the last two years have seen a push to look for opportunities to align desired humanitarian outcomes in protracted crises with development goals in those same settings. The space being created around the "humanitarian-development nexus" may offer a forum in which those working to scale humanitarian innovations can explore how to responsibly engage in those external partnerships to achieve the greatest impact.

However, public and private actors can play important roles in the sustainability element of some scale pathways. In this sense, **a lack of common and implementable ethical standards for humanitarian innovation** is also a barrier to scale, as it can shut out entire categories of partners, or run the risk of exploitative or irresponsible innovation, thereby undermining the sector overall. The GAHI joins the chorus of actors calling for greater protection of end users of innovation, including areas such as ethical research principles as well as data privacy and security, among others.²² Various ethical guidelines have been proposed to ensure protection of affected people from commercial or political exploitation or otherwise unintended harm, but they have not been systemically adopted or implemented across the sector.²³

5. Recommendations for Action

The following five proposed actions are intended to support scaling of individual humanitarian innovations and to address common barriers in the innovation ecosystem. Some of these are already underway in the sector, while others are just beginning to be explored. Throughout the recommendations, specific plans on the part of the GAHI are noted.

Action 1: Map and enable diverse pathways to scale

The sector would benefit from collaborative efforts to illustrate pathways to scale that use the four-factor framing model set out in this paper (value, difficulty, contextual variation, and sustainability), to determine the most viable pathways to scale for a given innovation. In support of innovators pursuing these pathways, the sector should adapt its existing tools and innovation process management to support the most common journeys.

Below are key steps in exploring this new framework for determining paths to scale.

- 1.1 Map pathways against existing cases:** The GAHI will work with members and partners to examine successful and failed scaling case studies and map them to the overall four-factor framing model as a way to build a shared understanding and structured view of scaling pathways.
- 1.2 Extract shared methodologies:** The GAHI will collaborate with members and partners to bring to light common techniques and pitfalls associated with each pathway, to serve as a tool for innovators.
- 1.3 Evolve models and methodologies:** The proposed model is rooted in actual challenges associated with scaling an innovation, but the model itself and the proto-methodologies extracted from the case studies will evolve. As additional work is done, the GAHI will engage with members and partners to evolve the model and share lessons on its use.

- 1.4 Develop practical support for innovators:** Several organizations have set out to take general practices and prepare field-focused tools to support innovators (e.g., the Humanitarian Innovation Fund [HIF], Response Innovation Labs [RIL]). These tools should be refined to consider the complexity of pathways to scale, which would help to bridge the gap between theory and on-the-ground practitioners. Resources such as the recently developed HIF Innovation Management Guide can provide a centrally accessible repository for the continually evolving toolkit around scale.
- 1.5 Test collective action:** Solutions that merit investment in scale are those that address widely held problems. There is increasing emphasis on the need for collective action to define and address these large, complex problems. This should involve not just pooled funding for key challenges, but also new forms of collaboration on the part of implementers and policymakers: sharing ideas, forming collectives, and supporting a more networked and portfolio-based approach that connects individual innovations to address complex problems.

Action 2: Design next-generation scale support programs

Over the last several years, humanitarian innovation scale programs have developed new techniques and strategies that go beyond traditional commercial incubator models. These initiatives have worked to address the unique challenges facing humanitarian innovators on their journey to scale. There is now an opportunity to build on these insights and develop the next generation of scaling program practices. This work could advance the ability to support innovators who are undertaking difficult journeys to scale. Opportunities for next-generation work include:

- 2.1 Complex problems/solutions:** Support techniques for selecting and mentoring innovations that are associated with complex problem domains. Provide additional and ongoing guidance in the definition of problem spaces, evaluation of impact, and support for dealing with the difficulties of complex problems and solutions throughout the scale path.

- 2.2 Multiple paths to scale:** Develop techniques for supporting multiple paths to scale throughout the entire innovation lifecycle.
- 2.3 Repeatability:** Identify ways to provide highly tailored services without the cost in expertise and resources that bespoke mentoring requires. Establish reusable resources and techniques that can be broadly applied in support of scale.
- 2.4 Political economy tools:** Develop easy-to-use methods and approaches from political economy analysis that innovators can use to analyze incentives and relationships in their ecosystem and design pathways to scale that take these into account.

The GAHI plans to work with partners to explore what the next generation of scale programs will look like, and how they can be brought to life through specific program techniques and strategies.

Action 3: Adopt guidance frameworks that will enable scale

The humanitarian innovation community has recognized the need for frameworks in ethics and evidence, among other shared frameworks. These are needed to enable innovators and other stakeholders in the humanitarian system to engage in collaborative, creative work on shared terms. Together with partners, the GAHI will contribute to the adoption of guidance frameworks as follows:

- 3.1 Ethics:** Much has already been done by individual institutions and collectively that can be leveraged into more consistent practice. However, this strong foundation is spread across many reports and recommendations. There is now an opening to build an ethical framework for responsible innovation. Action is needed in the following areas:
 - **Principles for responsible innovation:** Convene the humanitarian sector to collectively develop common principles underpinning existing codes of conduct around responsible innovation and data ethics. This will include moving forward the sector's understanding of responsible innovation, such as taxonomies of harm.

- **Risk mitigation:** Choreograph sector-wide action to mitigate risks, such as the development of joint standards on responsible innovation and guidance on data ethics. Actions in this area will also include advocacy, based on evidence, to overcome barriers to ethical practice.
- **Implementation and investment strategies:** Develop strategies for organizational implementation of ethical practice that will enable the principles to come to life. This will include creating guidance to support donors on ethical investments in innovation.

3.2 Evidence: One persistent challenge for innovators in the humanitarian space is demonstrating the value added by the innovation when a baseline of existing standards or results rarely exists. Evidence will continue to be critical for determining the pathway to scaling, for sustaining investment and for demonstrating impact. Together with partners, the GAHI will develop a practical evidence framework that measures the impact and value of innovation and at various stages throughout the scaling process.

- **Evidence within the scaling process:** Through engagement in active scale processes, the GAHI will support the development of evidence frameworks and practice, including evidence that is:
 - Used to prove value (Impact/Evaluate/Prove)
 - Used to understand how the innovation works/achieves its value (Dealing with Variation)
 - Used to adapt and implement the innovation at scale (Iterate/Dealing with Variation)
 - Used to strategize or plan, e.g., market research to inform a scaling assessment map or scaling strategy (sustainability).
- **Evidence on the scaling process itself,** which would include research to explain/understand scale, including evidence that is:
 - Used to understand which scaling methodologies work best for particular innovations
 - Used to understand what forms of scaling support are most effective.

Action 4: Broaden range of investment in scale

4.1 Explore investment options: Encourage open learning about what kinds of investment work in the collective space and to what extent risk appetite increases through shared investment. This learning should explicitly consider how new forms of investment can complement or leverage existing donor instruments, or where feasible modifications to those instruments may better serve scale in the humanitarian system. This work can be explored independently but should be linked to policy and donor forums, such as the Organisation for Economic Co-operation and Development (OECD) and the OCHA Donor Support Group (ODSG), to inform best practice and policy guidance.

4.2 Test pooled investment: Create opportunities for multi-year, pooled investment to scale solutions to complex challenges, spreading risk and sharing benefits among donors. The Education Cannot Wait Acceleration Facility is just one example.²⁴

4.3 Expand investment pool: Encourage greater diversity of investment across the various scale pathways, including more “patient capital” that supports key capacities, partnerships, and approaches needed to scale.

Action 5: Seek and enable disruptive innovations

A mutually reinforcing relationship exists between commercial innovation practices that support technology products and the innovator’s natural attraction to technology-driven solutions. The conventional path to scale reinforces this push toward “silver bullet” technical solutions. However, genuinely disruptive ideas, such as the sector has seen with cash programming (in which the logistics-heavy delivery of goods and services can be replaced with direct cash provision in many cases), shift the foundation of how aid works and reimagine how those most in need can be empowered. These are decidedly less common and more difficult to drive forward than are standalone technical solutions, and they must be intentionally pursued to ensure a strong innovation ecosystem.

Actions for pushing the bounds of innovation thinking include:

5.1 Disruptive innovation inventory: Many disruptive innovations are clearly foreseeable, either because they are already evident in other sectors or because they are products of specific technology. Direct person-to-person giving, digital manufacturing, and autonomous vehicles are all examples. Such disruptions should be identified and considered in order to enable strategic discussions about forthcoming disruptive change.

5.2 Big-picture view of system change: Identify the key system changes required for the disruptions to move forward. Ideally disruptions can be enabled using a very high-level view of system change associated with the disruption. The need to change some donor regulations to allow for greater use of cash is an example of this forward-looking perspective. For example, today the need to resolve the challenge of digital identity is at the heart of many disruptions.

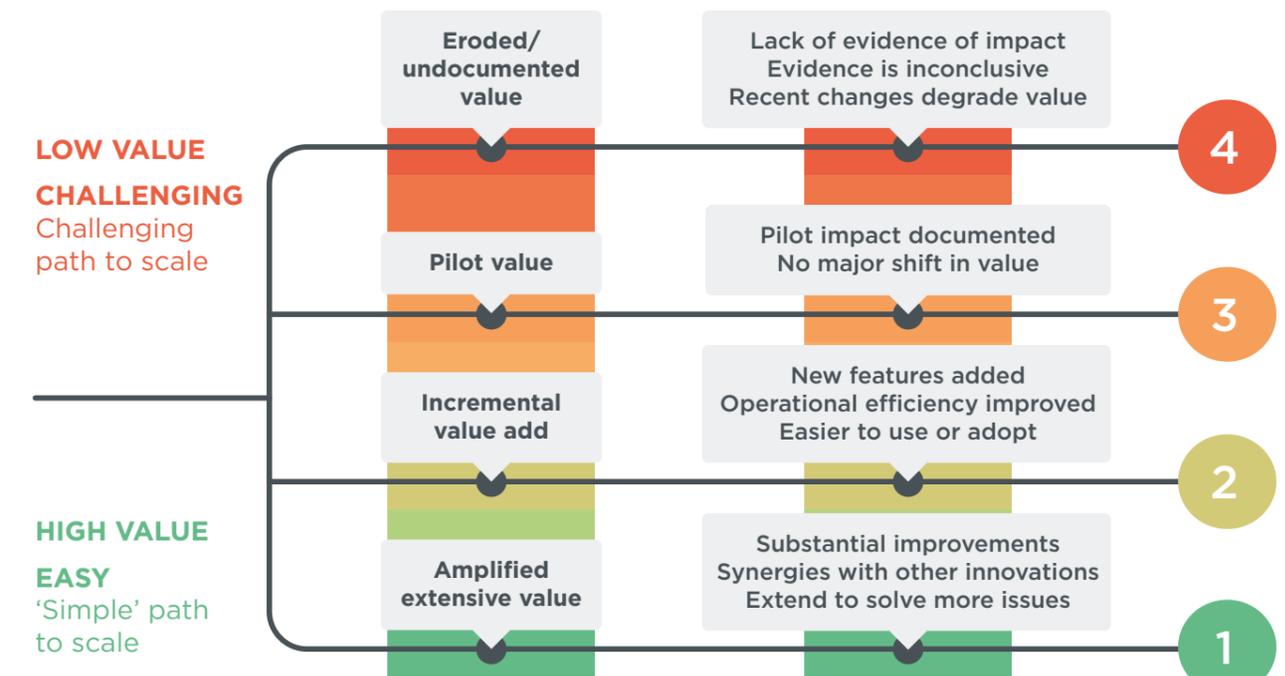
6. Appendix: More on Value, Difficulty, Variability, and Sustainability

This appendix provides additional detail regarding the definition of the four scaling factors: value, difficulty, contextual variation and sustainability.

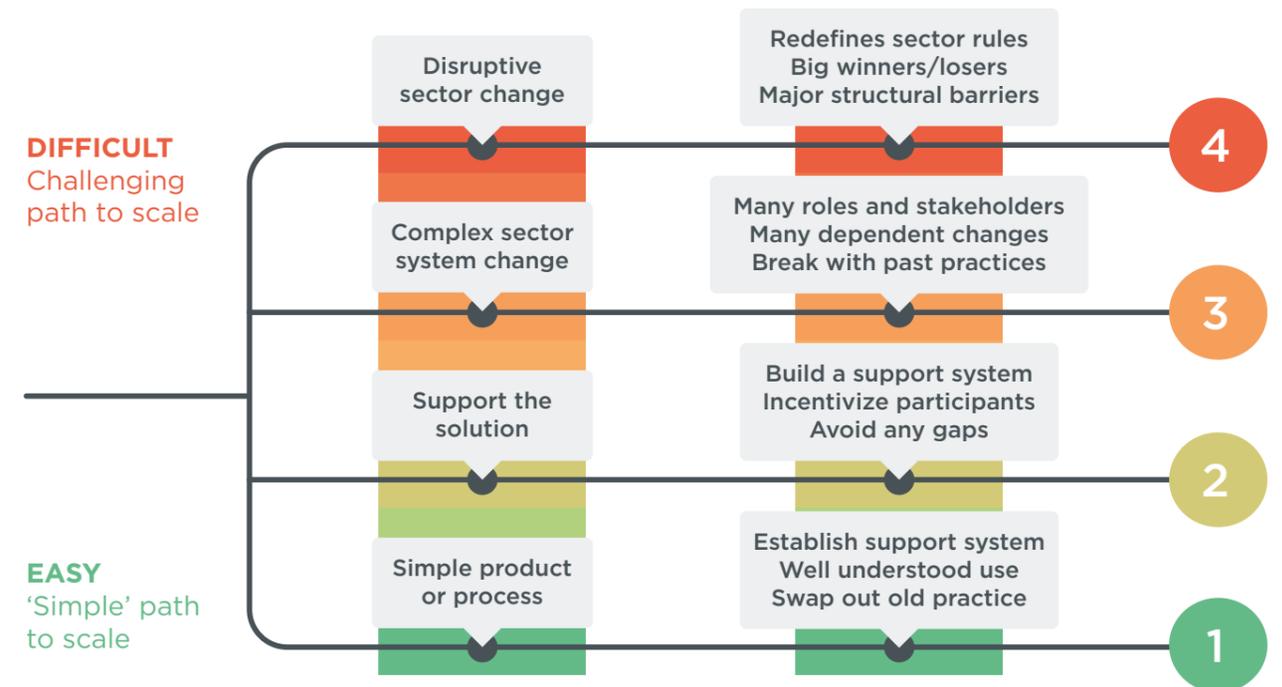
Scale factor 1: Value produced by the innovation

When determining the pathway to scale an innovation, value is the first element to consider. It is different from the others, in that most innovation practices assume that by the time an innovation is a candidate for scaling, its base level of value has already been largely established. However, during the scale process the value of the innovation may be verified or increased, or it may fail to be demonstrated at all. When an innovation is successful in increasing the value of the solution beyond what was demonstrated in the pilot phase, either through incremental improvement or more radical extension, it adds to the innovator’s ability to attract partners, financing, and new users.

The proven value of an innovation may lie along a spectrum, from Extensible (leads to synergies) to Unproven (of inconsequential value). This spectrum for assessing value is unpacked below.



- **Substantially extensible/amplified value:** Some ideas can be substantially expanded after their pilot stage. These initiatives have the potential not only to serve the original users targeted for the innovation, but also to dramatically expand their impact by creating new propositions and solving new problems. An extensible innovation has the potential to appeal to new users because of entirely new types of application. One example is mobile cell phone networks, which act as a platform for many other forms of innovation, from financial services to crop planning.
- **Incrementally improved value:** Not all innovations need to be radically transformed or re-purposed to be improved. New features, improved operation, and lower cost points can all improve the net value of an innovation. Often, these incremental improvements are made even as the innovation is taken through a scaling journey, using the opportunity to engage with users and other stakeholders to identify ways to improve an idea.
- **Basic pilot value:** Some innovations will be expected to meet the pilot stage's basic level of value as the idea moves forward to be replicated and scaled. Ideally, this value is demonstrated through evidence and does not rely on special circumstances within the pilot context for its success. Having established the level of value, the innovator doesn't have (or doesn't take advantage of) opportunities to increase the idea's base level of impact.
- **Lack of demonstrated value/eroded value:** Ideally, no innovation should advance beyond the pilot stage without having demonstrated its ability to deliver meaningful value to some group of users. Pilot programs are designed to be lightweight and fast moving, just so that they can be used to explore fundamental questions of value and feasibility. However, previously promising innovation can begin to fail under the strain of scaling. Another danger is that the lack of an evidence base for the innovation's value can be a poor foundation for going to scale. Innovations in this bottom tier of value should probably return to (or not leave) the pilot stage, pending their ability to document and support the value they deliver.



Scale factor 2: Difficulty in making the change

The second element is the overall level of difficulty in making the change happen, as outlined above.

As a first step in considering an innovation scale path, it can be useful to begin by thinking about what kind of innovation is being proposed. The most common reference for this is the four Ps model created by Dave Francis and John Bessant.²⁵ Those Ps are:

- **Product innovation:** Changes in the things (products and services) an organization delivers.
- **Process innovation:** Changes in the way products and services are created or delivered.
- **Position innovation:** Changes in the context in which the products/services are framed and communicated.
- **Paradigm innovation:** Changes in the underlying mental models that shape what the organization does.

This paper builds on the considerations of the “type” of innovation captured in the four P’s, but also considers other factors that inform difficulty, to help the innovator inform his or her decision-making about scale pathways. Paradigm and position innovation are typically thought of as more disruptive, process and product innovation less so. However, changes in products can also trigger paradigm or position changes that lead to major disruption, as with the introduction of cash-based delivery.²⁶

To illustrate these varying degrees of difficulty, several types of innovation are listed below, in order from least difficult (#1) to most difficult (#4). As we move from least to most difficult, the distinction between the user of the innovation and the owner tends to become increasingly blurred.

1. Least Difficult

Simple Product or Process Innovation: At the low end of difficulty are products that plug into an existing ecosystem (single user, single service/product). These are effectively incremental additions to existing activities or replacements of prior solutions. In these cases, it is easy to see how the solution can be spread. There are few deep barriers to adoption; it is merely a matter of users making a choice to apply the new approach or tool. These are narrowly defined problems, so creating a scalable solution simply involves finding a solution that adds value to an existing process. This level of difficulty is consistent with the commercial, lean start-up product innovation model and is the easiest and most used form of innovation in the humanitarian sector. For example: the introduction of new methods for collecting feedback from beneficiaries to improve accountability, or a new beneficiary registration technology that make distributions of food or cash more efficient using existing humanitarian actors.

2. Moderately Difficult

Supported Solutions: Moderately more difficult are cases where systems (such as procurement, production, socialization, or delivery) must be built around a product to provide sustainable operations. Often in the humanitarian sector, a pilot is tested and proven but there is no existing system through which to scale it. New systems, business operations, or supply chains have to be built in order to deliver the innovation at scale. Even if the innovation itself is simple, the supporting framework may be more cumbersome or add complexity. This element of system change has been a challenge for humanitarians but has increasingly been supported by scaling initiatives with both mentoring and funding. For example, cook stoves, which offer a product solution, generally require a local business infrastructure to support production, sales, and adoption; another example is a community health information approach that is a process innovation but requires community health workers and health infrastructure to have an impact.

3. Highly Difficult

System Innovations: For these innovations to scale, multi-actor changes are required, involving diverse participants and the development of new skills, adoption of new behaviors, and creation of new rewards or incentives. For example, to improve access to education in emergencies, one need not only innovate around the product that reaches learners, but also behaviors and practices of diverse actors (teachers, parents, administrators, students, business leaders) and systems (educational, community, economic), often engaging outside of the humanitarian system and pushing against ingrained incentive structures and politics. In other cases, the system innovation simply needs additional support to be sustained. For example, the CMAM-Report, a reporting tool for Community-based Management of Acute Malnutrition programming set up by Save

the Children, was providing technical support for organizations for the first year, but when funding ran out, reporting declined.²⁷ Without a user support service that adds to the existing system, some innovations cannot be sustained at scale.

4. Most Difficult

Disruptive System Changes: These are deep multi-actor transformations where existing systems are overturned and established organizations and practices are made obsolete. In these cases, the entire structure of a value chain is disrupted, nullifying the value of some existing actors and creating entirely new patterns of behavior for others. For example, point-to-point giving is now displacing some giving to major NGOs; widespread access to maker technology or cash distribution can replace the delivery of goods.

Though not exhaustive, the list below provides examples of different levels of contextual variation.

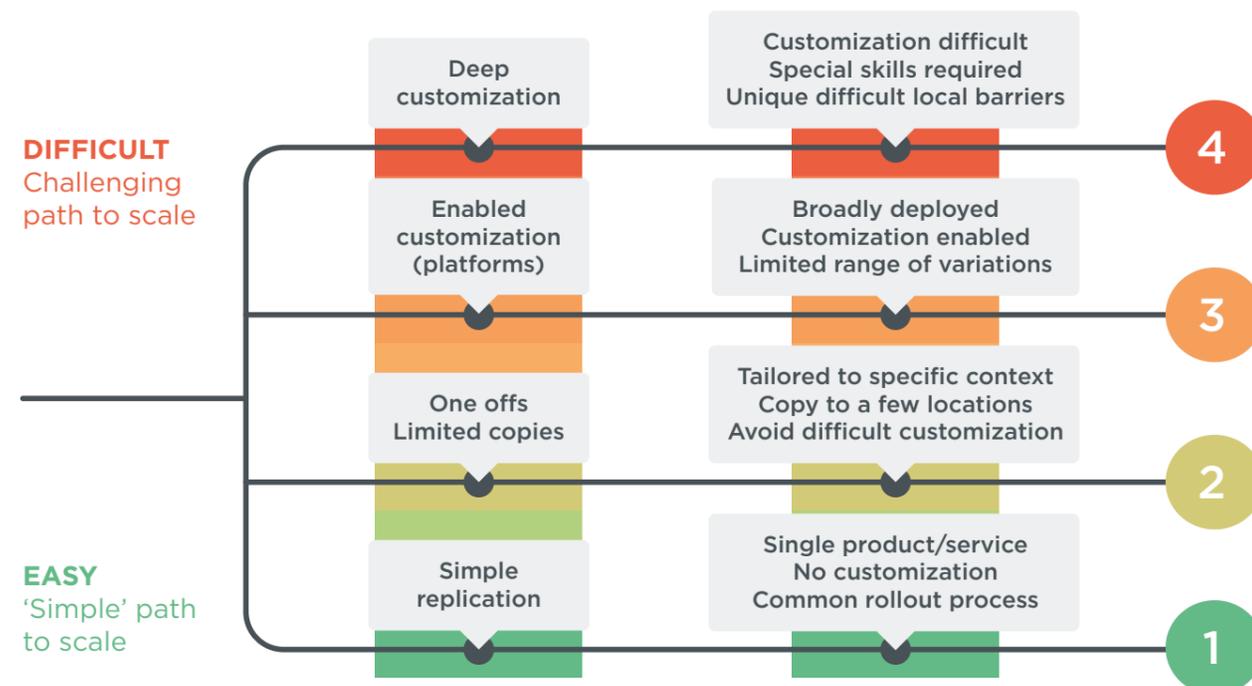
- **Simple replication:** The solution is replicated “as is” many times, with no adaptations for context or user. The issue of customization is avoided even though there is wide deployment. Many product innovations fit this model.
- **One-off/special copies:** The solution is developed for one specific context with no intention of replication. If one wanted to customize it, it would be too complicated or costly. Scaling stops where unmanageable customization would be required.
- **Enabled customization/platforms:** Tools are put in place to enable customized solutions using “toolkits” or other approaches in which the user can configure the solution to suit his or her needs. This drives the customization into the hands of users or local providers. For example, mobile phones provide access to many different applications through a common set of tools. They allow a wide range of variation to suit each user.

• **Bespoke solutions:** Each item is designed to suit a particular context or unique user needs. High skill customization is required, with specialized capabilities provided to design and enable each deployment.

The combination of difficulty and contextual variation provides a way to understand and develop the right pathway to scale. For example, the simple product that is easily replicated has a path to scale that takes advantage of those features, while a complex system change that requires bespoke solutions in each new context would require a very different approach to be scaled.

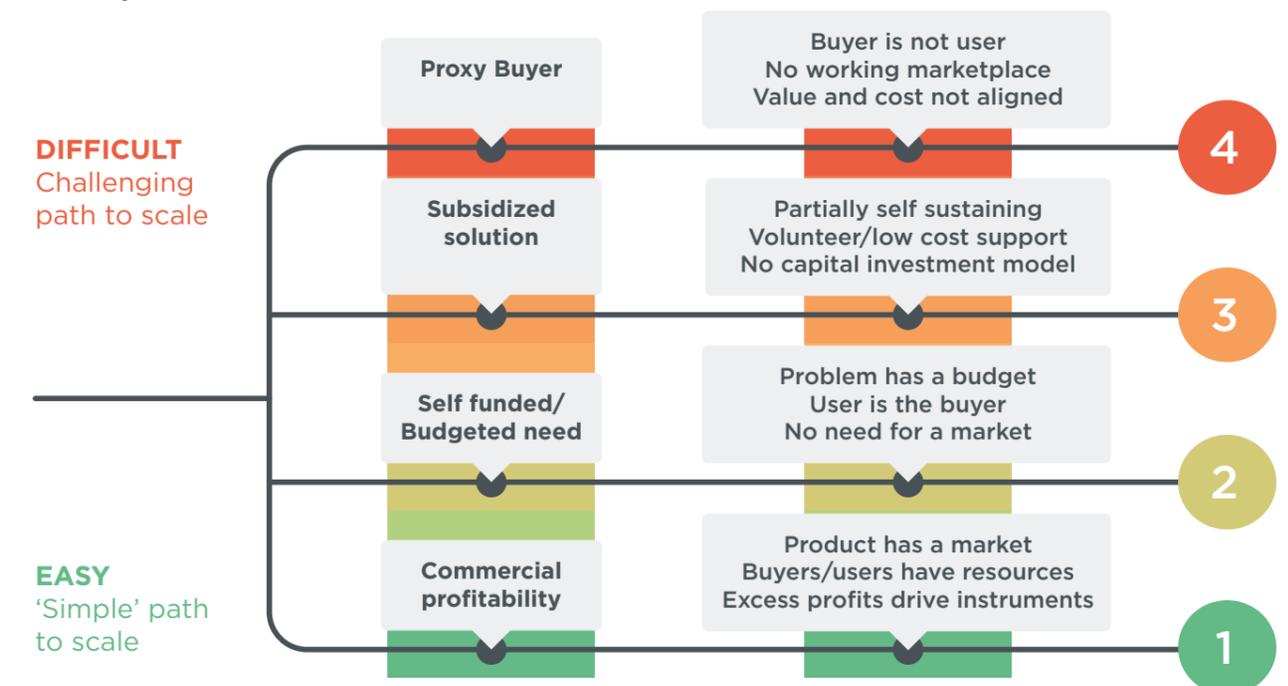
Scale factor 3: Contextual variation

The next factor to be considered is the degree of variation between different settings in which the innovation will be spread. The different pathways to scale are influenced by how a solution is shared and how different it needs to be to still add value in different settings. Is the product simply being replicated as is, or does it need to be highly customized in order to translate from one setting to another? There is a question of size as well as variation. Will it have achieved scale when it achieves local adoption, regional reach, or global scope? We know that humanitarian settings are characterized by diversity and often instability or transition, contributing to a wide range of possible contextual variation, but we also know that many basic needs – such as water, nutrition, and health services – are found across diverse settings.



Scale factor 4: Sustainability

The final dimension for the innovator to consider is the means of sustaining the solution. As noted above, the model for market-driven innovation is structured around attracting an end user with at least some purchasing power. For most humanitarian solutions, this is not the case. In a market dominated by “proxy buyers” such as humanitarian donors, the risk is that donor interests and priorities supplant those of the user and are ultimately unsustainable.



Humanitarian actors have begun to recognize these challenges to scale and are working through some alternative pathways. These include:

- **Proxy pathway:** Philanthropic or government intervention subsidizes the user's purchasing power. The change is triggered by the increased investment available to scale the new solution. It envisions an established institution, market, or system (which may include government) becoming part of its sustained business model.
- **Internal scale:** A large humanitarian actor (e.g., International Federation of Red Cross and Red Crescent Societies [IFRC], Save the Children, Oxfam) with numerous country offices takes an innovation to scale by raising revenues for use within its own organization and by requiring or encouraging its partners to use the solution.
- **De-branded/open-source:** An agency makes the innovation widely available to other agencies, coupled with some form of medium- or longer-term funding, typically from a grant, to provide ongoing services support and advocacy of uptake. Innovation is not "marketized" for income generation. Where service support is not provided, innovations tend to fail, unless they have been developed in strong partnership with a wide range of actors, thereby generating broad ownership.

- **Scale via private-sector partner:** This is a commercial pathway in which the humanitarian agency gives ownership/intellectual property rights to a private-sector partner and gets licenses to use it for themselves. The private-sector partner can then sell the solution to other agencies.
- **Systems change pathway:** This option envisions a new system or a disruption to the existing system (such as inclusive education; risk-driven planning; or access to virtual social services) that often requires new policies, market incentives, changes in mindset, or up-front investments in infrastructure. The impact of these innovations is dependent on their ability to shift or augment what already exists, which can rarely be done by a single actor or institution working alone.

Again, the nature of the humanitarian ecosystem and its economic structure play a strong role in shaping pathways to scale. Even simple questions about who gets to drive the design choices of a solution are difficult to answer when the user and the buyer of the innovation are different.

embedded knowledge and skills for supporting innovations to scale; (3) there is a lack of appropriate and adequate funding for scaling innovation in the sector; (4) there is insufficient evidence of the impact of humanitarian innovations; and (5) the humanitarian ecosystem significantly frustrates efforts to scale humanitarian innovation.

- 15 See, for example, McClure and Gray, "Scaling: Innovation's Missing Middle"; Scriven, "Humanitarian Innovation."
- 16 Knox-Clarke, *Transforming Change*.
- 17 Scriven, "Humanitarian Innovation."
- 18 Gugelev and Stern, "What's Your Endgame?"
- 19 Obrecht and Warner, *More Than Just Luck*.
- 20 Ibid.
- 21 Sandvic et al., "Do No Harm."
- 22 For example, Betts and Bloom, *Humanitarian Innovation: Humanitarian Innovation Project, Draft Principles*; Earney, "Humanitarian Innovation Ethics"; Sandvic et al., "Do No Harm."
- 23 For example, Sheather et al., "A Médecins Sans Frontières Ethics Framework."
- 24 For details, see http://www.educationcannotwait.org/wp-content/uploads/2018/05/Strategic_plan_2018_2021_web_PAGES.pdf.
- 25 Francis and Bessant, "Targeting Innovation."
- 26 Obrecht and Warner, *More Than Just Luck*.
- 27 Obrecht and Warner, 2016.

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Endnotes

- 1 International Development Innovation Alliance, *Insights on Scaling Innovation*. 2017. See, in particular, pages 13-15 on factors influencing scale and sustainability.
- 2 International Development Innovation Alliance, *Insights on Scaling Innovation*. See, in particular, pages 13-15 on factors influencing scale and sustainability.
- 3 Cooley and Linn, *Taking Innovations to Scale*.
- 4 Elrha, *Too Tough to Scale?*; Alice Obrecht and Alexandra T. Warner, *More Than Just Luck*. <https://www.alnap.org/system/files/content/resource/files/main/hif-alnap-2016-innovation-more-than-luck.pdf>.
- 5 Knox-Clarke, *Transforming Change*.
- 6 Konyndyk, *Rethinking the Humanitarian Business Model*.
- 7 Gugelev and Stern, "What's Your Endgame?"
- 8 Elrha, *Innovation Management Guide*.
- 9 Elrha, *Too Tough to Scale?*
- 10 In a logic model, Difficulties can be thought of as a series of requirements connected by "and," where each of the elements must be true to proceed.
- 11 Obrecht and Warner, *More Than Just Luck*.
- 12 Development Initiatives, *Global Humanitarian Assistance Report 2018*.
- 13 Cooley and Ved, *Scaling Up*.
- 14 Elrha. *Too Tough to Scale?* As presented in the report, the challenge areas are (1) too few humanitarian innovations are geared to scale; (2) the humanitarian sector has insufficient



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