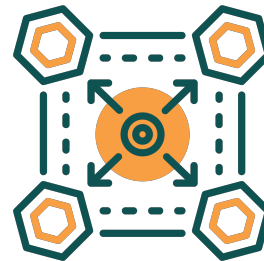


Scaling innovation for every child



Strategies, models and critical success factors that emerged from 1,600+ days of scaling innovations for children across 90 countries

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UNICEF has a long history of applying innovation. The organization has worked with partners to develop technologies to keep vaccines cold; create better solutions for identifying and treating child malnutrition; and pioneered techniques for bringing safe water to rural communities.

Since 2014, one of the mechanisms UNICEF has used to support the scale up of innovations is its Global Innovation Centre (GIC) in the Office of Innovation (OoI). The GIC vision is to inspire and support the scale-up of new technologies and approaches to UNICEF’s work and that of its partners to achieve powerful impact for all children.

Applying a demand-driven, centre-of-excellence model, the GIC has supported more than 90 countries to identify and adopt innovative solutions. To date, these new technologies and approaches have affected the lives of 150 million people across these countries. This paper reflects on this body of work and shares patterns and typologies that have emerged over the past 4+ years. It identifies some of the strategies and

critical factors for scaling, looks under the hood and shares some of the inner workings of how we scale.

What do we mean by scale?

There is no widely agreed definitionⁱ of “scale,” and as some note, scaling paradigms borrowed from the technology and corporate sectors are not appropriate for social innovationⁱⁱ ⁱⁱⁱ. However, there is clarity in what “scaling” or implementing at scale means:

- “To support the widespread replication and/or adaptation of an innovation across large geographies and populations for transformational impact.” (IDIA, 2017)^{iv}
- “Expanding, replicating, adapting and sustaining successful policies, programs or projects in geographic space and over time to reach a greater number of people.” (USAID, 2016)^v

- “Scaling up is meant a process for significantly increasing the number of sustained implementations of a successful program, thereby serving more people with comparable benefits.” (Wallace Foundation, 2017^{vi})
- “Social innovations have scaled when their impact grows to match the level of need.” (Duke University)^{vii}
- “Building on demonstrated successes to ensure that solutions reach their maximum potential, have the greatest possible impact, and lead to widespread change.” (Elhra, 2018)^{viii}
- “To make a lasting difference, solutions must be embraced by beneficiaries, address root causes, and include an engine that can accelerate growth to reach the scale of the need.” (Chang, 2018)^{ix}

Delivering an intervention at scale is about reach in proportion to need, where need is the barometer and meeting and reducing need is the aim. For an organization like UNICEF, our scale ambition matches our mandate and mission, and therefore innovating at

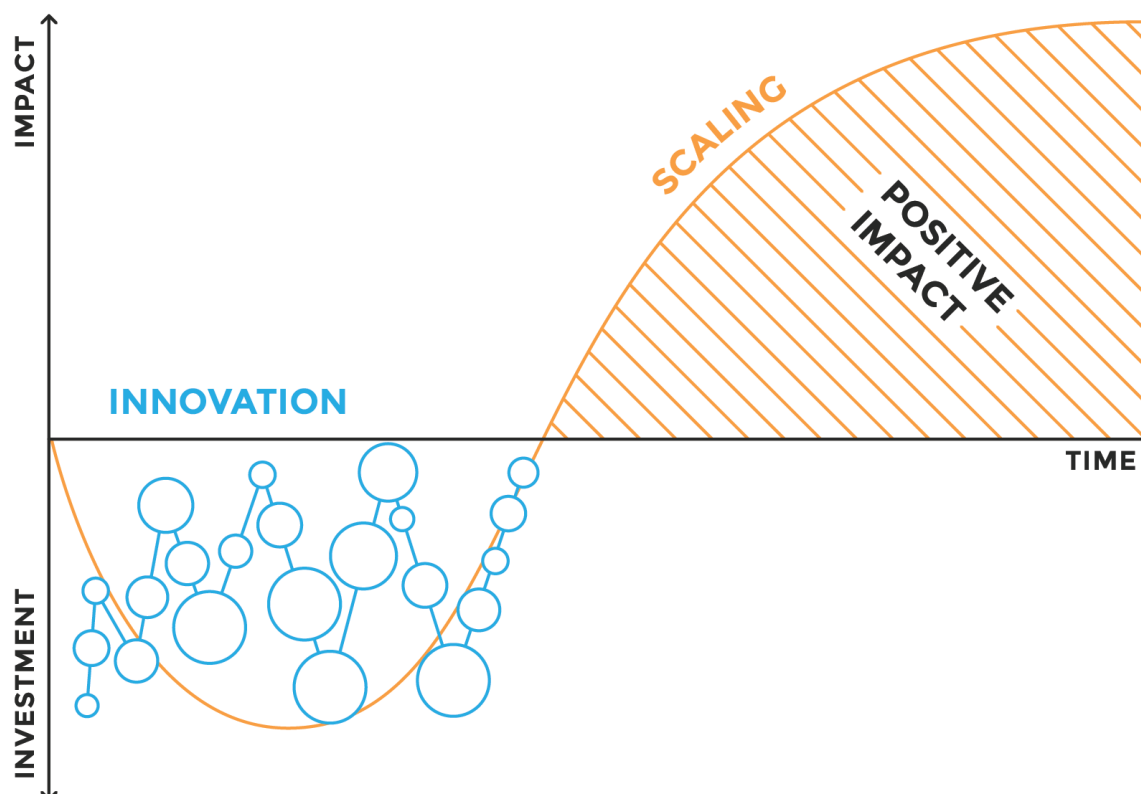
scale is about innovation that brings positive impact for children at national scale and across multiple countries. This is also the level at which significant economies of scale can be unlocked.

Why scale?

Scholars Christian Seelos and Johanna Mair^x have observed that the impact of innovation depends heavily on an organization’s ability to scale-up innovation outcomes by enhancing its organizational effectiveness. While efforts to develop novel interventions receive considerable attention and resources, organizations often struggle to turn innovation into impact -- thus failing to achieve their full potential.

Investments in innovation only yield impact if an organization is able to master the scaling part of the process. Part of mastering the scaling process is building robust mechanisms for transferring innovation-based knowledge within and across organizations. This is why most organizations struggle when trying to replicate an innovation from one context in a different context.

Figure 1: Creating social impact: Innovation plus scaling (Seelos and Mair)



According to Seelos and Mair’s research, “most organizations that succeed in achieving substantial impact, therefore, do so by investing in scaling capability. Any organization that applies enough effort and invests enough resources will likely succeed in creating an innovative product or service. But scaling up the outcome of innovation presents a much bigger challenge.”

They are not alone in this observation. Like Chang, in their study of barriers to scale, Deiglmeier and Greco^{xi} diagnose a “stagnation chasm” that prevents social innovations from scaling and achieving impact. They identify funder behavior and inadequate funding as a key barrier to scale, in addition to a fragmented ecosystem and talent gaps.

“Social innovation funders are often drawn to the early stages of the innovation continuum marked by idea generation and prototyping, and myriad incubators and accelerators have emerged to support these stages in the innovation process. But preparing to scale increases organizational costs, as investments are needed to upgrade technology, hire senior-level talent, and improve infrastructure. However, these critical activities rarely produce immediate results and can be less appealing to funders.”

Scaling strategies

Adoption is a milestone in innovation. It is the process by which a solution is selected and implemented for use by an individual or an organization^{xii} and applies at any scale. Adoption is influenced by the degree to which the innovative solution presents a relative advantage to existing solutions and is compatible with the needs and values of the adopting organization and the context where it is being implemented.

The decision to scale up an innovation implies adoption at significant magnitude. Scaling is purposeful and strategic, and the decision to do so signals evidence of broad acceptance, strong demand and programme effectiveness. The scaling strategy is the organizational equivalent of Roger’s diffusion process.^{xiii} It is the plan that moves the decision to

adopt into action and considers how to promote, expand and institutionalize the innovation. The scaling strategy is designed to deliver on a well-articulated Theory of Change and asks three strategic questions (Figure 2):

What to scale: The vision, strategic alignment with organizational priorities, and method of identifying the approach, product, programme, technology or policy to be scaled up.

How to scale: The scaling model(s) that frame approach, actions and relationships, and the pathway to scale through a standard set of phases.

Who will scale: The roles, functions and institution(s) needed to undertake the actions to scale.

In our experience, the choices, opportunities and barriers to addressing these strategic questions are shaped by four, inter-related critical success factors:

1. Partnerships
2. Resources
3. Capacity
4. Enabling environment

We will highlight their interplay across the scaling strategies, actions and lifecycle discussed below.

What to scale

Scaling innovation must be needs driven given the magnitude of ecosystem change, stakeholder commitment and resources that are often necessary to achieve results at scale. This is an even greater consideration when the ultimate aim is sustainable scale.

Assessing how a potential innovation lines up against need is where our process begins, and we were fortunate that one of our founding partners, Philips Foundation, lent their corporate innovation expertise to co-create a simple three-step framework for screening and prioritizing potential projects. This assesses i) scope, ii) expertise and iii) impact.

Our scope assessment begins by validating whether the solution proposed for scale addresses an identified need and whether it aligns with the Principles for

Digital Development^{xiv}. These nine principles are guidelines designed to help digital development practitioners integrate established best practices into technology-enabled programmes and are broad enough to be helpful when assessing non-technology solutions.

The question of alignment against need is both aided and complicated by the existence of numerous strategic and sector priorities. Over time, we developed a synthesis of the most common global ones in a short matrix that asks ‘What priority results does this innovation accelerate and/or contribute to?’ which includes SDGs, UNICEF Strategic Priorities, priorities related to youth and gender global agendas, as well as space for sector-specific goals.

In terms of organizational structure, not being situated within any specific sector or geography has been invaluable, as it has allowed us to connect siloes by paying attention to early signals and recognizing patterns of need across programmes and locations. This has translated into concrete opportunities for cost effectiveness by investing once and multiplying impact by scaling.

For example, recognizing that the Governments of South Africa and Uganda were both expressing the need for similar, real-time case management functionality, we co-created a single solution that addressed both their needs and built it for immediate adoption by other countries to meet coordination needs. Within months, it was also being used in Côte d’Ivoire, Indonesia, Nigeria and Pakistan, and is used in dozens more countries today. These types of opportunities allow us to apply innovation as a driver for South-South Cooperation (SSC) and the UN Office of SSC has highlighted our approaches to scaling, spotlighting UPSHIFT^{xv} and RapidPro^{xvi} as examples of good practice.

While our assessment is done from a global perspective, we remain conscious that national priorities determine country adoption and also that priorities vary from region to region. This reality provides particular challenges when we develop the common monitoring and learning frameworks that are part of our standard package of resources for scaling. Our approach is to share a Theory of Change, logical

framework and a nested set of indicators that can be easily adapted to suit a wide array of contexts and goals. This includes both the process and outcomes of scale up, where routinely collected data is ideally complemented by qualitative approaches that provide insight into the implementation process and its progress.

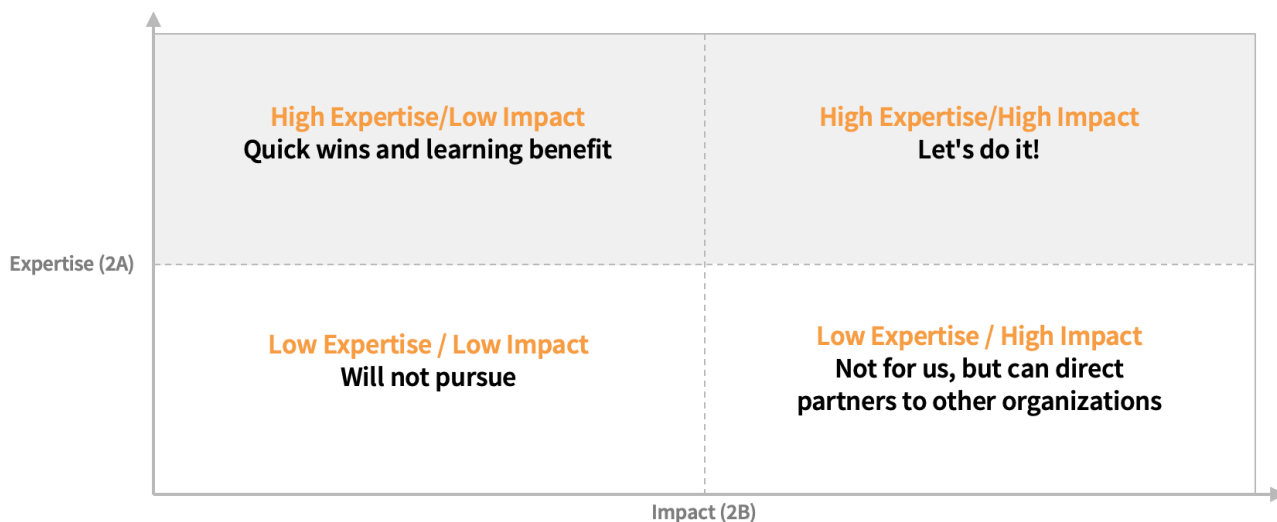
For the expertise aspect we assess factors such as thematic and geographic fit, technical expertise and resource availability. These can be radically altered by partners and resources. For example, partnerships with Facebook, Viber and WhatsApp to connect their channels to real-time information platform, RapidPro, improved the business model and sustainability and opened up scaling to millions of people through these free channels when compared to paid SMS.

Capacity and an enabling environment are equally influential, which is why the GIC focuses so much effort in designing and delivering capacity development programmes and building other’s abilities to do so on an ongoing basis. The scaling of [Human-Centred Design](#) and [UPSHIFT](#) – an initiative that empowers youth to build skills and opportunities through social innovation and entrepreneurship – have been mutually reinforcing, each building capacities that the other can apply.

In any given country where scaling is being considered, an enabling environment is a precursor for a decision to progress and is affected by political will and commitment at the necessary levels, from government counterparts, partners, the community and in our own office.

Potential impact is the final aspect we assess through looking at scalability, existing project infrastructure, sustainability and learning potential. Some of these aspects were informed by the work on effective altruism by MacAskill^{xvii}, such as considering ‘neglectedness’ of a particular challenge as a positive attribute in terms of the potential impact of addressing it. These aspects are where some of the value of the GIC is most evident, as applying its scaling expertise enhances the scalability, resources and the project infrastructure from one that is typically built from

Figure 2: Portfolio prioritization matrix



experience in one or two contexts and at limited scale, to one that is robust and ready to be adopted globally.

This three-step process results in the placement of an innovation within a particular quadrant of our Portfolio Prioritization Matrix (Figure 2 above), and the GIC typically only moves forward with those innovations that are in the top right “High Expertise/High Impact” quadrant.

Real-time digital health solutions built on top of the RapidPro platform fell into this quadrant and the GIC supported its transition to scale. In use cases where this aligns with goals and with clear evidence of efficiency and/or effectiveness, governments have been willing to apply their national systems, considerable domestic resources, and regulatory power to scale solutions, with partners such as ARM, Bill & Melinda Gates Foundation, Centers for Disease Control, Johnson & Johnson and the Government of the Republic of Korea lending their support too.

The Government of Uganda is a leading example. Its application of digital health tools demonstrated their health systems strengthening value with a five-fold improvement in the availability of key health commodities like malaria medication (from 15% to 79%); an increase in immunization coverage of DPT1 from 52% to 98% within one year; and better integrated governance and accountability through citizen feedback. The Government has integrated these solutions into every health facility, across its

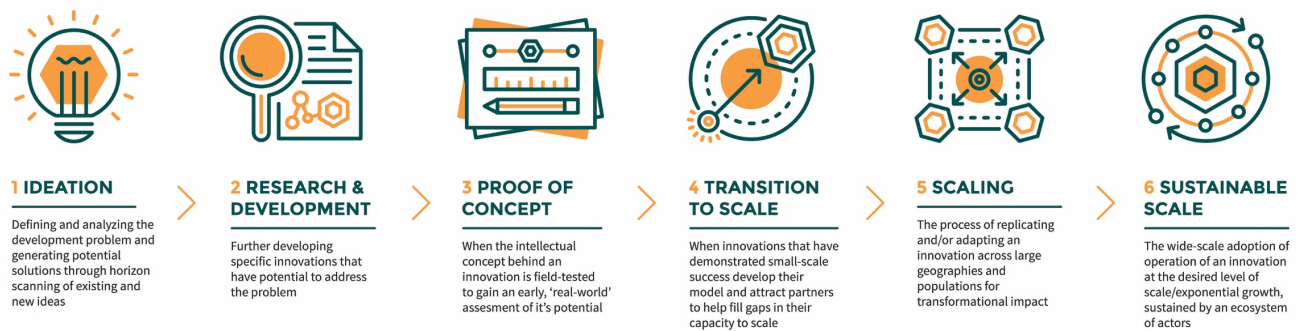
61,000 frontline health workers and within its Roadmap for Integration for Digital Health Systems. (Access information about [the solutions](#), the [Roadmap](#) and [watch a video](#) about one of the applications.)

Within UNICEF, the pathway to scale of solutions supported by the GIC always has the objective of mainstreaming the innovation by building capability embedded within existing structures, along with robust sets of resources to support something “new” to quickly become the “new normal.” For digital health, this included co-creating organization-wide guidance, [UNICEF’s Approach to Digital Health](#), paired with programming guidance, processes and public good [tools and resources](#) ranging from how to apply human-centred design to create demand for health services to customizable communication flows for community health-based interventions in primary health care. We also supported the establishment in 2018 of a new digital health team in UNICEF’s Programme Division. The internal transition of support for the RapidPro platform used in some digital health interventions had already been transitioned successfully from the GIC to the ICT function globally in 2017. [\[Read more\]](#)

Overall, opportunities to improve our approach to ‘What to scale’ include:

- The UNICEF-wide innovation strategy being developed in response to a global evaluation of the innovation function will be invaluable to improving alignment on what to scale and why.

Fig 3. Stages of scaling adopted from IDIA



- Increasing the ability to collaboratively assess many more potential solutions for scaling in a way that involves many more UNICEF staff, external sources especially young people, and that seamlessly connects the innovation pipelines within UNICEF together.
- Improving the blended governance model, which currently engages with a limited set of internal and external experts in areas relevant to the solution being considered, as well as current and potential partners who can help the ecosystem to take it to scale.
- Shared platforms and processes, such as an organization-wide innovation portfolio management process, given that ours is one of three currently used for innovation within UNICEF.

How to scale

How we scale is informed by an understanding of different models for scaling, complemented by a rich, concrete experience from having scaled one or more solutions in 90 different countries covering every region of the world. In our experience, each innovative solution’s pathway to scale is unique and usually presents a distinct combination and sequencing of multiple scaling models and actions.

To avoid getting lost among the models and terminology, it has been important to coalesce around a common framework for understanding what stage an innovation is at. This can help to identify quickly what kind of support is appropriate to be delivered by which part of the organization, with a view of the solution’s pathway to scale and to inform investment in it.

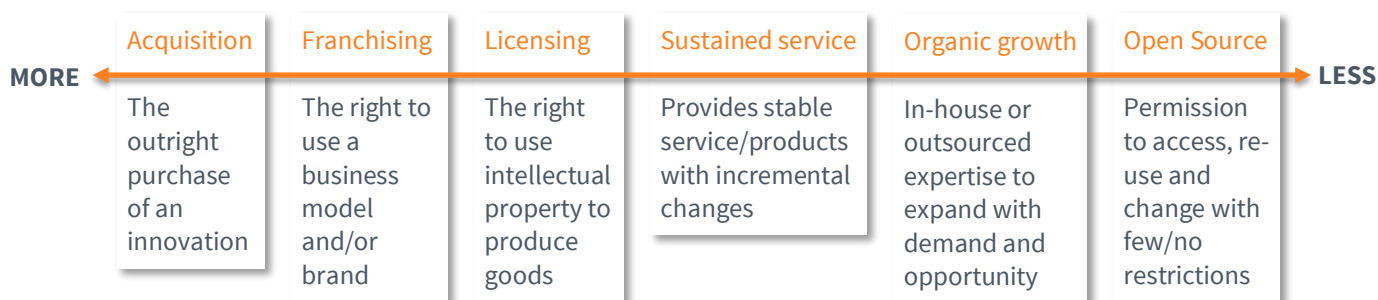
UNICEF is a member of and has adopted the IDIA Scaling Stages framework, depicted in Figure 3 above. As the mission and accountability of the GIC is “to inspire and support the scale-up of new technologies and approaches to UNICEF’s work and that of our partners to achieve powerful impact for all children” we specifically support:

- Stage 4: Transition to scale. When innovations that have demonstrated small-scale success develop their model and attract partners to help fill gaps in their capacity to scale
- Stage 5: Scaling. The process of adopting an innovation across large geographies and populations for transformational impact
- Stage 6: Sustainable scale. The wide-scale adoption of an innovation of operation of an innovation at the desired level of scale or exponential growth, sustained by an ecosystem of actors.

Stages 1 Ideation, 2 Research and development and 3 Proof of concept are supported by UNICEF’s Futures and Ventures teams.

Scaling models in the literature are derived from observing both successful and failed scale-ups and overwhelmingly draw from business experience, especially in the technology sector. Each scaling model presents its unique set of enablers and barriers that foster or block solutions from reaching their broadest impact. We have studied a broad range of the models that have most relevance for our work, including those from the Bridgespan Group^{xviii}, Brookings Institute^{xix}, IDIA, IDRC, McGuinness and Slaughter^{xx}, Mulgan^{xxi}, NESTA^{xxii}, NESTA/NPC^{xxiii}, Seelos and Mair, Stodd^{xxiv}, UNDP^{xxv}, Wallace Foundation^{xxvi} and USAID. This is not an exhaustive list of all scaling models.

Fig 4. Scale models by degree of influence



Each of the models have characteristics that make them better suited to some contexts and innovations than others, and therefore there is no one model or specific dimension that is “better” than another. The decision about how to scale is about strategic fit.

A taxonomy emerged from our analysis of these distinct models, organized around two key dimensions: degree of influence, and degree of change. We have found these two dimensions to be relevant and practical in structuring our thinking on how best to scale, while accounting for on-the-ground opportunities, constraints and experiences, and the critical success factors of partnerships, resources, capacity and an enabling environment.

Degree of influence

Degree of influence reflects the extent to which it is desirable or necessary to maintain and exert influence and close management over a solution and exactly how it scales. Figure 4 above provides a simple overview.

For example, in 2014, we [acquired](#) intellectual property rights over the Textit message flow software because we wanted to have significant influence to determine its future product roadmap, development and business model. We invested in new features and functionality to create the real-time information platform RapidPro. We then pursued a scaling approach on the opposite end of the dimension and [Open Sourced](#) it so that the platform could be accessed, used and expanded upon by anyone for development purposes. This lowered the total cost of ownership by eliminating costs such as software licenses and today, governments and civic organizations in more than 55 countries make use of a

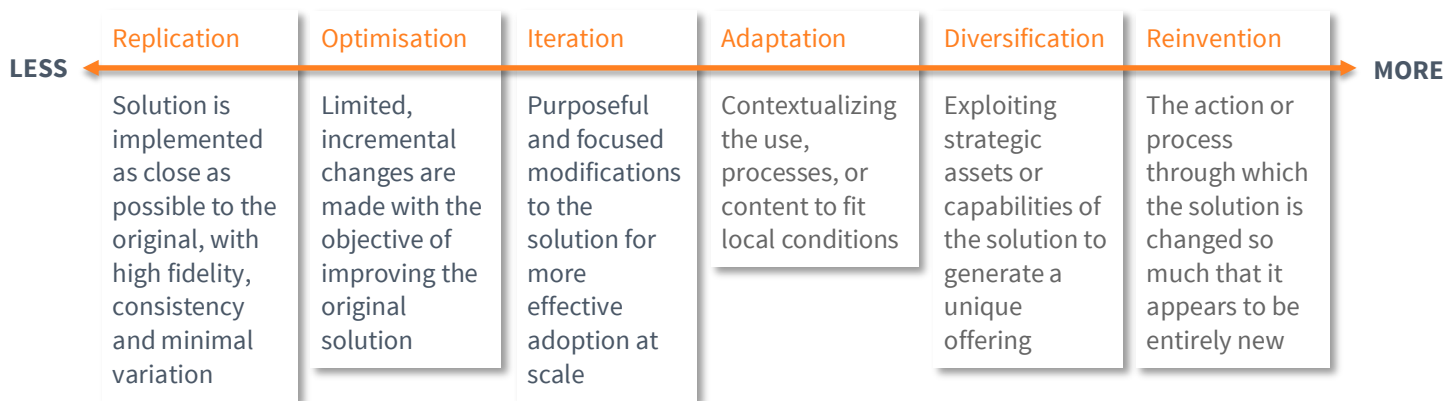
variety of solutions that have been built on the platform.

Most of the models we are using to scale innovation cluster under “less influence” and to a large degree this reflects i) our commitment to sharing the solutions and tools that we develop as Global Public Goods, ii) following the Principles of Digital Development of which Open Source is one, and iii) the decentralized accountability structure of UNICEF, which lends itself well to supporting scaling organically through demand and opportunity.

A good example of scaling through organic growth are our solutions focused on empowering youth to build skills and opportunities through social innovation and social entrepreneurship. We identified the demand for by paying attention to early signals and recognizing patterns of need across our country programmes. One solution, [UPSHIFT](#), stood out and had been organically adopted from Kosovo to Jordan, Lebanon, Montenegro and Vietnam. It had demonstrated sufficient early evidence of impact to be included in the World Bank’s [Solutions for Youth Employment](#) impact portfolio. After putting it through our ‘What to scale?’ process, we took the decision to add UPSHIFT to the scale portfolio in 2017 and undertook focused iteration to develop it into the globally scalable public good that exists today and is running across 13 countries.

UPSHIFT’s scale has capitalized on opportunistic and organic growth, scaling by responding to demand from countries and governments. Its scaling applies in-house expertise in partnership with many others in the local and global ecosystem. This has helped to realize its potential as a catalyst for systems strengthening

Fig 5. Scaling actions by degree of change to the innovation



that equips marginalized adolescents and youth for the challenges of the fourth industrial revolution. This potential is beginning to be realized a mere 18 months later, as 6 Ministries of Education including in Sudan and Tajikistan, are working to scale UPSHIFT nationally through formal or non-formal education systems.

Table 1 on page 14 maps these scale by influence models, shows how different innovations in our scale portfolio have applied them.

Degree of change

The second dimension relates to the degree to which changes are necessary to the solution in order to successfully scale it and represents different types of actions for scaling. Figure 5 above provides a simple overview.

We have experience in applying all these types of actions in the process of scaling up innovations, but there are clear patterns:

- Every incoming solution goes through iteration to develop the global solution.
- Adaptation is our most frequently applied scaling approach as it allows us to leverage the economies of a consistent core offering, as well as the local context-sensitive changes that are essential for successful adoption at scale.
- Diversification occurs less frequently and primarily as a response to strong and specific programme demand/need.
- Reinvention has not occurred that frequently. It is not surprising that digital health, which is highly problem- and context-specific, has been an area

where reinvention has been most active. [mHERO](#), for example, was created by IntraHealth International and UNICEF in 2014 to support health sector communication during the Ebola outbreak in Liberia. It is a two-way, mobile phone-based communication system that uses basic text messaging/SMS to connect ministries of health and health workers. It leverages RapidPro connected to iHRIS^{xxvii}, DHIS2^{xxviii} and OpenHIE^{xxix}.

- Replication is rarer and only chosen when consistency is critical and conditions can support minimal variation. In general, there are no “cookie cutter, one-size-fits-all” solutions as context trumps other considerations. This is especially true in humanitarian contexts^{xxx}.

In most cases, different scaling actions have been applied at different scaling stages. UPSHIFT, for example, initially went through an iteration process to develop a globally deployable core solution. It was then adopted and scaled from 5 to 13 countries through adaptation. This scaling approach allowed us to pivot quickly to support the Generation Unlimited partnership, and through diversification on the core UPSHIFT solution, we created the [Generation Unlimited Youth Challenge](#). The Challenge was scaled up to 16 countries over a matter of weeks applying replication, given that global consistency was critical.

Table 2 on page 15 maps the different scaling actions against the solutions in which we have applied them.

A closer look at iteration

The focused iteration scaling action has been applied to every solution that we have brought into the scale

portfolio. This is because the solutions we identify and adopt for scaling arrive from a proof of concept stage, meaning the innovation concept has been field tested typically limited in locations, geographic scope and with limited number of users, but does have evidence of potential.

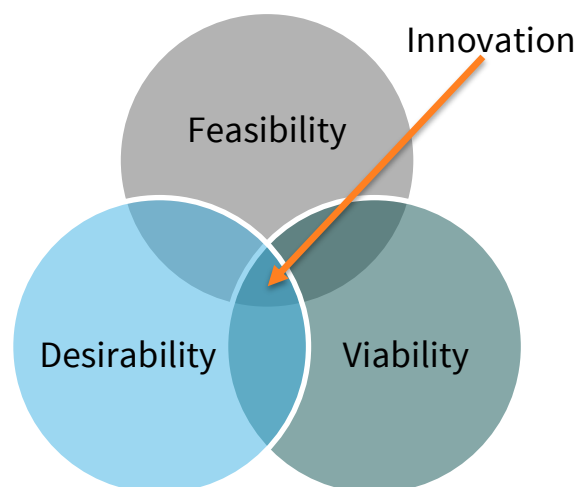
This differs greatly from the scaling ambition that the GIC is charged to support, which is to:

- Scale out to support the most extensive appropriate adoption of an innovation within a country (which would be determined by the programme and so solutions must be implementable in an array of geographic configurations), across multiple countries and multiple regions;
- Scale up, to support appropriate increased use of and deepened engagement by users of an implemented innovation, which implies extensible functionality; and
- Scale smart, to allow countries to easily take advantage of adopting the innovation to serve similar needs across multiple sectors, provided the innovation can not only do it but do it well. This is in line with the “reuse” principle in digital development.

We have found the human-centred design approach to be ideal as a systematic way to address this gap between early stage and solutions ready to scale by considering feasibility, viability and desirability. (See Figure 6.) This approach is equally suited to working with technology and non-technology solutions, which is valuable for our work as we support the scaling of both.

This gap has many practical implications that affect a solution. Feasibility and viability drive our iteration actions to identify and make the changes necessary for a solution to successfully make it through the Transition to Scale stage. Desirability, or whether the intended users of an innovation at scale across a wide and different geographic scope will use it, is addressed in our ‘What to scale’ process. A solution must be able to demonstrate sufficient desirability in the assessment of potential impact in our ‘What to scale’ prioritization process.

Figure 6: IDEO model of design thinking and Innovation^{xxxi}



In addressing feasibility, we ask how this innovation can work at scale and do so in a way that builds on UNICEF’s strengths and comparative advantages. This is where we spend significant time and resources, as early stage solutions typically aren’t built to scale at global scope. This difference affects every aspect, from the conceptual components of the solution and how these are put together, to its wider validation, and the most detailed aspects of its deployment.

Using this approach has been particularly valuable in helping us to purposefully address viability in new and creative ways. An ongoing flow of donor funding has been a popular business model in the development sector, but pathways to scale that ultimately aim at sustainability demand looking at financing, not funding. This has allowed us to focus more on building our business modeling capacity and gather data and evidence so that we can more clearly quantify, articulate and optimize the viability of solutions, including through reapplying cost savings achieved through an innovation, co-funding and blended finance options.

We can examine U-Report as an example of the transformation that occurs through iteration. This work was the subject of a Case Study within the Global Evaluation of Innovation at UNICEF. The evaluation described that:

“The GIC’s support has consisted of a diverse set of activities focused on providing seamless CO deployment support, documenting and sharing of lessons learned, evolving the product as opportunities and demand for enhancement arise, creating global partnerships that will enable U-Report to quickly scale, ensuring a consistent branding and adherence to the U-Report Key Principles, and supporting COs to be successful in achieving their goals.”

At the beginning of the transition to scale stage we started with an assortment of available materials and listened to the experiences of the handful of countries. We then consulted key stakeholders and experts in the external ecosystem, built our understanding of users through human-centred design-led processes and undertook needs finding among our own organization. We developed, tested, validated and further iterated the scaling package in country contexts that were consciously identified to be different and so provide new insights.

At the end of this stage we broadly had:

- A clear, staged adoption journey that covered key aspects such as strategic intent and concepting, governance, roles and responsibilities and resourcing.
- A comprehensive packaged and globally deployable solution set that distinguished core repeatable content and processes from components that must be localized, and entry points for customization. Mechanisms to account for local requirements ranging from translation of the front and back end of technology tools, to message sets and resources.
- A robust collection of resources that were aligned with the adoption journey and may be role-specific (e.g. end user capacity building/training package, manager’s handbook, trainer’s guide, toolkits, guides and checklists.) These resources cover preparedness, scoping and design research, and planning monitoring and evaluation.
- Tested, refined and delivered capacity development programmes including training of trainers and training of end users.
- Contractual arrangements that cover the globe, such as long-term agreements, Terms of

Reference for consultancies to fulfil defined profiles and functions, partner negotiating strategies and sample documents.

- Resourcing models, budgeting tools and proposal packages.
- Knowledge products such as use cases, case studies, lessons learned, reports, independent reviews and other pieces of evidence
- Communication assets from videos and images to presentation decks

These resources, continuously improved through optimization, provide a strong foundation for U-Report’s scale across 55 countries. U-Report delivers more than three dozen use cases, supported through adaptation. Two specific areas of need are currently driving the diversification of two new and distinct solutions that exploit its strategic capabilities. On The Move supports young migrants and refugees to express themselves on the issues that matter to them, access information about their rights and the complex bureaucratic system they find themselves in, and allow UNICEF and our partners working with unaccompanied children to receive their feedback. It also collects data with the aim of improving the refugee reception system. U-Report 24/7 leverages the platform for emergencies, including for preparedness, rapid assessment and accountability to affected populations.

The scaling models and actions in ‘How to Scale’ provide the key entry points to address the critical success factors for scaling. It is through this process that a clear view of and engagement with the ecosystem happens, where partners are identified and become part of co-creating the scalable solution as well as supporting its adoption, and where the learning and knowledge resources and approach are designed to concretely build the necessary capacity.

The value of having an informed and systematic approach on how to scale is clear, and we have formalized these within [Accelerate to Scale](#), which is designed to enhance UNICEF’s mastery of scaling. It is an innovation-enabling advisory service to support innovations to transition to scale for sustainable social impact. These services include support around i) packaged deployment strategies and resources; ii) development of business models; iii)

design of robust methods for generating evidence of results and impact; and iv) human-centred design methods to ensure relevance and engagement in co-creation with stakeholders.

We recognize that there are opportunities to further improve ‘How to scale’, including:

- Capturing this scaling practice and conceptual approach which has largely existed as applied tacit knowledge. That is the purpose of this document, and an output we identified as needed in the 2018 [GIC Annual Report](#).
- Improve our knowledge management and sharing so that we regularly capture and share not only the ‘what’, but the ‘how’ of what we are doing so that it becomes a resource for innovation practice across UNICEF.
- Just as UNICEF has agreed on a model for the stages of innovation, it may similarly be useful to have a common framework on different sets of scaling models and scaling actions that we could use across the organization. This document would be a contribution

Who will scale?

We have mobilized many parts of ecosystems to diffuse and adopt an innovation. This includes diverse teams within our own organization, development partners, public sector agencies, private sector companies, NGOs, local organizations and community members themselves, especially young people. Our experience has taught us that the people component accounts for a notional 90% of successful scale.

The question of ‘Who will scale’ is inextricably linked with that of addressing both ‘What’ and ‘How’ to scale, and in the process of working through those questions, the ‘Who to scale’ should become clear. Following a human-centred design approach is invaluable in understanding the various actors involved in scaling and their incentives, and especially to gain insights among intended end users of their motivations and desirability for change.

An assessment of the existing project infrastructure and expertise form part of our ‘What to scale’ process. This covers our own expertise and that of others,

including expertise that can be accessed through partnerships and vendors. A thorough ‘How to scale’ process captures and validates the functions that need to be undertaken by these identified individuals and organizations. This process is informed by context and data points, clarifying what capability is needed when and the content and learning delivery required to nurture that capability.

We have inventoried a range of role-based capacity options. These are not mutually exclusive and are often applied in combination to create an ecosystem of strengthened capacity. Each of these options should be complemented by a capacity development programme with a full range of resources and learning opportunities customized to the role and function.

These approaches include enhancing partner capacity as well as enhancing our own. We may create new dedicated roles, such as the new central Digital Health team established in 2019, each regional office adding one Business Analyst ICT4D role in 2018, or a country office adding a U-Report coordinator. More typically, capacity is embedded within existing systems and roles, such as adding the Internet of Good Things as one more tool in the communication for development toolkit. In some cases, we augment capacity through third-party outsourcing such as sets of consultant rosters and global LTAs as have been established for human-centred design and hosting. Table 3 on page 16 lists these role-based options and examples of how we have applied them.

How do these approaches come together in an ecosystem of strengthened capacity? When the RapidPro platform exited the GIC, support for its deployment had been functionally mainstreamed through:

- Capturing good practice and case studies of ways that the platform had been applied for real-time information in various sectors and for youth engagement across dozens of use cases and country contexts;
- Having already developed a full suite of capacity building and learning resources that had been used in multiple countries by government, implementing partners and our country offices;

- Already having established a Global LTA of vendors offering hosting and platform development services and having oriented them.
- Having established an Open Source RapidPro community of programmers and developers.
- Transitioning the RapidPro product management and roadmap to a new headquarters ICT unit.
- Helping to profile and recruit seven new Business Analyst ICT4D positions, creating an internal learning curriculum and deployment resources, and delivering a multi-month capacity-building programme to equip these roles in all seven regions with the knowledge and skills to be successful.

In UNICEF, the GIC as an organization unit has developed, refined and transitioned many of the “Who will scale?” roles and functions in the process of supporting innovation through the Transition to Scale stage. The independent Global Evaluation of Innovation described it this way in its case study on the scaling of U-Report:

“The GIC has played an important role in facilitating the growth of U-Report globally and addressing challenges facing COs throughout the innovation journey. Through providing COs with a full suite of services required to launch RapidPro, designing a strategy for U-Report and best practices and campaign support to scale the tool across the country, U-Report has been enabled to scale rather seamlessly with few significant roadblocks. In particular, the GIC’s facilitation of global partnerships has played a pivotal role in achieving scale and developing avenues for sustainability, which would not otherwise have been possible. Through facilitating the sharing of lessons learned through documentation and the coordination of global calls, roadblocks faced by COs have been effectively addressed and South-South collaboration has been facilitated.”

The evaluation, UNICEF staff surveys, and our own scaling experience all identify the knowledge, attitudes and practices of leadership and management within our organization as critical enablers across all stages of innovation. Leadership

roles, especially those of the UNICEF Representative and the Deputy Representative, are important in setting the tone, shaping the organizational culture including its risk appetite and level of psychological safety to innovate, and fostering multi-sectoral collaboration. They play outsize roles as either barriers to or enablers of innovation, their posture signaling the political will and commitment that can create and sustain an enabling environment. This is why it has been important for us to regularly engage with these leaders, through Regional Management Team meetings, meetings of the Deputy Representatives and Operations, in leadership development and orientation programmes and is why our scoping missions begin and end with briefings with the heads of offices.

Understanding overall baseline human capacity, readiness and what it will take to expand this is the starting point. Developing and nurturing capacity is a key aspect of responsible innovation, especially when the geographic focus is one of constrained resources. Innovation and especially scaling new approaches and tools should not be an added burden to an already constrained actor in the development space. At the same time, enhancing local capacity and transferring knowledge and skill to local actors is critical for the sustainability of scaling impact.

The Government of Senegal’s mInfoSante digital health solution provides a powerful example of the return on investment that meaningful capacity building can deliver. Our capacity development strategy was to not only enable frontline health workers to use this particular solution, but also to understand how it functions and to be able to develop solutions from scratch. In line with our usual practice, we worked with stakeholders to design the training programme and helped to deliver it and train others to do so too. A few months later, these frontline workers had developed a different solution on their own to tackle a life-and-death barrier they identified – the lack of an effective way to manage and coordinate a limited number of ambulances for transporting patients to hospital. This service has saved lives by efficiently being able to locate, dispatch and track the ambulances.

There are a number of ways to improve ‘Who will scale’, but our knowledge capturing and sharing presents the most significant opportunity for improvement, as we flagged in our 2018 report. This paper is an example of doing so for our scaling practice, and equally important has been organizing and publishing the capacity building resources in one, well-organized and globally accessible location. The organizational roll out of Sharepoint allowed us to do this on the intranet, and the roll out of UNICEF’s new content management system for the internet allowed us to bring together scattered public resources into one, publicly accessible location.

Conclusion

Reflecting on the practice of scaling innovation for every child is not an intellectual exercise. It is an essential learning and knowledge process that helps us share within our organization and with others why scaling innovation is valuable to UNICEF, and our strategic approach to identifying what to scale, how to scale and who will scale. This helps us recognize and examine patterns in our approaches to scaling innovation and helps us understand not only how to scale more effectively, but also how to accelerate our ability to scale.

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Table 1: Scale models and their deployment by UNICEF

An overview of major scale models that we have studied and synthesized, and our use of them to scale innovations.

	Scale models	Which innovations apply them
Less influence	Open Source <i>An Open Source license grants permission to access, re-use, make alterations or additions, share, improve, and build upon a work with few or no restrictions.</i>	<ul style="list-style-type: none"> • Digital health • Generation Unlimited Youth Challenge 2019 • Human Centred Design for Health • RapidPro platform • UPSHIFT
	Organic growth <i>Deploying in-house expertise to expand innovation to other locations as opportunities arise and with demand. Also referred to as branching.</i>	<ul style="list-style-type: none"> • Generation Unlimited Youth Challenge 2018 and 2019 • Internet of Good Things • U-Report • UPSHIFT
	Organic growth with selective outsourcing <i>Outsourcing only part of the functions required to scale and performing the rest in-house.</i>	<ul style="list-style-type: none"> • Digital Health • Human-Centred Design • Real-time information applications on RapidPro
Moderate influence	Sustained service <i>Initiative/intervention that provides service/ products as is with incremental improvements, should have a sustainable business model.</i>	Internet of Good Things
	Licensing <i>Licensing is a legal relationship where a party is granted a limited right to use its Intellectual Property or manufacture the licensor’s products or technology in exchange of a royalty fee.</i>	Biosensors
More influence	Franchising <i>The franchisee pays fees for the right to operate a business, participate in a standard operating system, and use the brand name and proprietary information of the franchise.</i>	Not yet applied
	Acquisition <i>Acquisition is the outright purchase of an innovation by another organization. Through acquisition, the purchasing organization can achieve economies of scale, increase the client base, gain efficiencies and enhanced market visibility.</i>	TextIt to become RapidPro

Table 2: Typology of actions for scaling innovations and their application by UNICEF

An overview of major actions for scaling that we have studied and synthesized, and our deployment of them.

	Actions	Description	Example
Less change	Replication	<i>Based on evidence, a solution is replicated and iterated at other locations. Solution is implemented as close as possible to the original solution, with high fidelity, consistency and minimal variation.</i>	<ul style="list-style-type: none"> • RapidPro platform • Internet of Good Things (IoGT) content management system is used by all 63 IoGT countries, while the content for each country is widely varied and context- and issue-specific. • Generation Unlimited Youth Challenge
	Optimisation	<i>A series of small, incremental improvements or upgrades focused on improving an existing solution’s efficiency, productivity and competitive differentiation.</i>	<ul style="list-style-type: none"> • Internet of Good Things (IoGT)
Moderate change	Iteration	<i>Iteration is often conceived of as a continuous part of any innovation process. Here, it refers to a purposeful and focused iteration process to modify a solution for scale up based on testing and evidence.</i>	<p>Most solutions in the scale portfolio have been through iteration:</p> <ul style="list-style-type: none"> • Digital Health • Human-Centred Design • Internet of Good Things (IoGT) • RapidPro • UPSHIFT • U-Report
	Adaptation	<i>An innovation is scaled by contextualizing the use, processes, or content to fit local conditions. The new hybrid and context-specific solution should maintain the fidelity of the original innovation.</i>	<p>Adaptation is our most frequently applied scaling model:</p> <ul style="list-style-type: none"> • Digital Health • Human-Centred Design • RapidPro solutions • UPSHIFT • U-Report
More change	Diversification	<i>Exploiting strategic assets and capabilities to generate a unique offering for a new sector, category or industry.</i>	<ul style="list-style-type: none"> • U-Report On The Move • U-Report 24/7
	Reinvention	<i>The action or process through which something is changed so much that it appears to be entirely new.</i>	<ul style="list-style-type: none"> • mHERO

Table 3: Approaches to developing capacity for scaling innovation

An overview of role-based capacity development approaches that we have studied and synthesized and how we have applied them.

Approach	Key considerations	Country office	Regional office	Headquarters	Others
New dedicated roles	The functions, new capacities and scope of work are such that they require dedicated focus, significant time and justify the investment.	Innovation Officers, U-Report Coordinators and ICT4D Specialists	Business Analyst ICT4D in each regional office	Digital Health team in Health Section	N/A
Embed capacity within existing roles, insourcing	The new functions are analogous to existing roles and the scope and volume are not anticipated to be significant and/or ongoing.	Communication Officers and C4D Officers supporting content development for Internet of Good Things	Regional Advisers / Regional Chiefs for specific functions and sectors lead initiatives using innovative solutions and provide technical advice on applying them. E.g. Regional Chief of Communication, ESARO applying Internet of Good Things as key solution in the regional C4D and Communication strategy. Regional Adviser for ECD in EAPRO doing the same for ECD. Regional Chiefs of ICT have expanded their portfolio to include technology for programme.	Innovative solutions at scale are co-created with and exit the GIC to become fully embedded in the relevant functional office	N/A
Train implementing partners	Partners require an expertise injection with training to make use of the solution. This may be enhanced so that they are able to use platforms to build solutions. This includes Training of Trainers as well as of	N/A	N/A	N/A	U-Report partner, the World Association of Girl Scouts and Girl Guides, underwent a capacity building process to use the global U-Report platform, and now have a primary role in running that platform. Building of Human-Centred Design (HCD) capacity in

	various roles such as managers vs end users. Ongoing training or support may be required.				Myanmar allowed social workers to identify challenges and design solutions independently and on an ongoing basis without further UNICEF support. With a similar approach to mobile solutions, frontline health workers in Senegal designed and deployed their own emergency medical evacuation solution.
Third party expertise for hire, outsource	The third party already has the expertise and there is limited value in investing in building inhouse capacity. This is typical for a highly specialized function that is the core business of the third party.	N/A	N/A	N/A	Global LTAs for Human-Centred Design services Global LTA for hosting and development of the RapidPro platform Global roster of Digital Health Specialists
Scaling by others e.g. franchise, delivery as part of private sector core business	The solution aligns better with others than with UNICEF and they are able to leverage existing competitive advantage, expertise and networks.	N/A	N/A	N/A	IntraHealth is well positioned to and is scaling up mHERO, a two-way, mobile messaging solution that connects ministries of health and health workers. The solution was originally co-created with UNICEF.

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