

JULY 2018

MILLIONS LEARNING REAL-TIME SCALING LABS

Designing an adaptive learning
process to support large-scale change
in education

Jenny Perlman Robinson
Molly Curtiss

Jenny Perlman Robinson is a fellow at the Center for Universal Education at Brookings
Molly Curtiss is a research analyst at the Center for Universal Education at Brookings

Acknowledgements

This report was written by Jenny Perlman Robinson and Molly Curtiss, with invaluable assistance from the team at the Brookings Institution Center for Universal Education, particularly: David Batcheck, Sara Coffey, David Eckmann, and Rebecca Winthrop, and Larry Cooley, senior advisor with Millions Learning.

We appreciate the continued guidance and support from our Millions Learning Advisory Group, chaired by the Honorable Julia Gillard, 27th Prime Minister of Australia, Chair of the Board, Global Partnership for Education, and Distinguished Fellow at the Center for Universal Education at the Brookings Institution. We are especially grateful to the more than 80 individuals who generously gave their time and valuable input into various drafts of the design of the lab (see full lists in Annex 1 and 2).

The Brookings Institution is a nonprofit organization devoted to independent research and policy solutions. Its mission is to conduct high-quality, independent research and, based on that research, to provide innovative, practical recommendations for policymakers and the public. The conclusions and recommendations of any Brookings publication are solely those of its author(s), and do not reflect the views of the Institution, its management, or its other scholars.

Brookings gratefully acknowledges the support provided by the International Development Research Centre, EAFIT University, the Jacobs Foundation, the Bernard van Leer Foundation, the UBS Optimus Foundation, and the Campaign for Female Education (CAMFED).

Brookings recognizes that the value it provides is in its absolute commitment to quality, independence, and impact. Activities supported by its donors reflect this commitment.

Table of Contents

Millions Learning Real-time Scaling Lab overview	1
Objectives of Real-time Scaling Labs.....	2
Development of overarching lab methodology	3
Background research on collective impact and adaptive implementation.....	3
Input and feedback from experts and advisors.....	6
Recommendations on design of Real-time Scaling Labs	8
Overview.....	8
Research focus of the scaling labs.....	17
Criteria for lab selection.....	18
Lab roles and participants.....	19
Communications tools.....	19
Measures of success.....	21
Endnotes.....	24
Annex 1: Experts and in-country stakeholders consulted on Real-time Scaling Lab approach and methodology.....	25
Annex 2: Millions Learning 2.0 Advisory Group members.....	28
Annex 3: Millions Learning Real-time Scaling Lab theory of change.....	30
Annex 4: Millions Learning 14 core ingredients.....	31

Boxes, Figures, and Tables

Box 1. Scaling.....	1
Box 2. Core principles of Real-time Scaling Labs.....	4
Figure 1. Three components of scaling labs.....	2
Figure 2. Real-time Scaling Lab iterative learning cycle.....	9
Figure 3. Generic timeline for the Real-time Scaling Lab.....	17
Table 1. Real-time Scaling Lab step-by-step approach.....	10

Millions Learning Real-time Scaling Lab overview

Millions Learning,¹ a project of the Center for Universal Education (CUE)² at the Brookings Institution, addresses the question of how to scale quality education for all children and youth. CUE is launching Real-time Scaling Labs in partnership with local institutions in a number of countries and U.S. cities to generate more evidence and provide practical recommendations around the process of scaling in global education, encouraging a stronger link between research and practice. These labs are not physical spaces, but rather a process established by CUE and partner institutions to learn from, support, and document existing efforts to scale interventions focused on improving children's learning as they unfold in real-time. This will include observing, gathering, and analyzing data, as well as encouraging self-reflection, recommending course corrections based on existing evidence, documenting the scaling process in real-time, and sharing ongoing learning with those involved. The ultimate goal is to support initiatives as they scale while simultaneously gaining deeper insight into how policymakers, civil society, and the private sector can most effectively work together to bring about large-scale transformation in the quality of children's learning and their development.

The impetus for the Real-time Scaling Labs—and overarching problem statement—is that

as we look at the education landscape of innovations working at a local level, it often does not translate to the systemic change needed to solve the global learning crisis. While there is growing evidence around which educational strategies improve children's learning, we know much less about how to translate this into improved policies and practices at scale. CUE believes that this requires a combination of technical and political strategies to scale evidence-based interventions, mechanisms to accelerate the adoption of new practices, and strengthening local capacity for successful adaptation and scale.

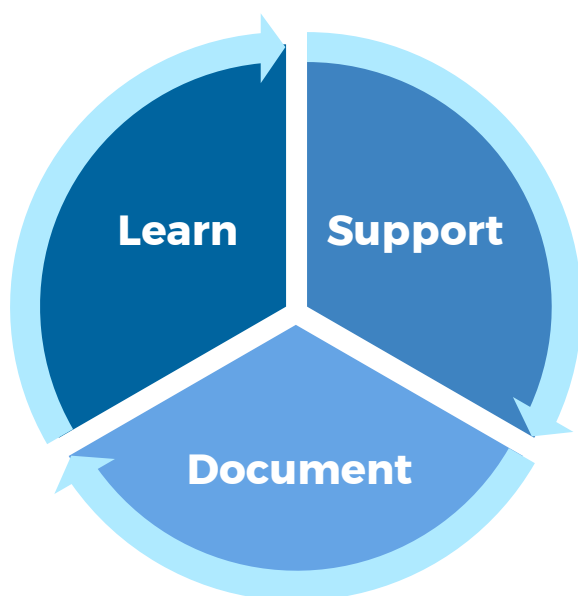
Within and across each of the labs, CUE will draw lessons to better unpack and understand the scaling process, using these lessons to feedback directly into the initiatives partic-

BOX 1. Scaling

CUE uses the term “scaling” broadly to represent a range of approaches—from deliberate replication to organic diffusion to integration into national systems—that expand and deepen impact leading to lasting improvements in people's lives.

ipating in the labs, as well as contributing to building a more robust, actionable evidence base on scaling globally. More specifically, each of the labs will explore what technical and political considerations need to be addressed, and how they have been addressed, to expand the impact of quality education initiatives. This will include developing tools targeted for policymakers, practitioners, and funders to offer practical guidance on how best to scale evidenced-based approaches in education.

FIGURE 1. Three components of scaling labs



Objectives of Real-time Scaling Labs

1. Strengthen scaling efforts through a forum for peer-to-peer learning in which lab participants discuss lessons learned and develop strategies to address challenges faced during their education interventions' scaling journey.
2. Provide ongoing evidence-based guidance to lab participants, including practitioners and policymakers, on how to identify, adapt, and expand effective approaches to scaling education interventions. Guidance will be drawn from the report *Millions Learning: Scaling up quality education in developing countries*³ and other scaling resources and tools in education and other disciplines.
3. Document participants' scaling experiences in real-time to feed back into a rapid and iterative learning cycle, as well as into the development of global public goods for scaling in education.
4. Study modes of communication and collaboration among lab participants as a potential model for reflective learning and knowledge sharing generally.
5. Identify mechanisms and approaches for connecting those innovating in education delivery with those designing and implementing policies and programs.
6. Identify gaps in the scaling evidence base and areas for further research.

Development of overarching lab methodology

Background research on collective impact and adaptive implementation

Research in the first stage of Millions Learning identified that efforts to improve learning outcomes at scale could benefit from a structured, neutral space for those involved to exchange knowledge and learn from one another about efforts to scale or affect large-systems change and to incorporate learnings into ongoing work and make necessary adjustments along the way.⁴

CUE began designing plans for the Real-time Scaling Labs by conducting an extensive literature review on collective impact and adaptive learning mechanisms, such as learning loops, innovation labs, hubs, accelerators, and delivery teams. This was followed by a global scan of almost 200 existing mechanisms, spanning non-profit, government, private sector, and social enterprise initiatives across multiple sectors, including education, social policy, energy, technology, poverty reduction, and public health. The purpose of this literature review and scan of existing initiatives was to identify relevant theory, approaches, and specific initiatives to learn from and collaborate with, as well as to identify specific gaps where CUE could add value.

CUE found that there is a global burgeoning of mechanisms and infrastructure that bring together multi-sectoral actors to generate solutions to complex, social problems of a systemic nature, within technology, governance, health, and other sectors. Despite their proliferation, however, few of these collective impact mechanisms have a deliberate focus on scaling, a clear area where the scaling labs can add value. Within the group examined, there is a large amount of diversity in terms of sector, focus, membership, funding, etc., suggesting that there is not one single blueprint or approach. However, a significant portion of the initiatives share core elements, in particular systemic thinking, applied orientation, user-centered, and rapid iterative testing cycles. Finally, very few of these mechanisms had rigorous data on their effectiveness.

Building off this work, CUE also conducted research on a wide range of methodologies and approaches, drawing not only from the principles commonly employed in existing collective impact mechanisms but also from continuous learning and adaptive programming more broadly. This included research into systems thinking, improvement science, Problem-Driven Iterative Adaptation (PDIA), change management, implementation science, and design thinking, amongst other approaches. Emerging research and

practical experience suggest that the most effective approaches to addressing complex, developmental challenges, such as delivering quality education, combine three key principles: problem-driven and politically informed; adaptive and entrepreneurial; and supporting change that reflects local realities and is locally led.⁵ A number of the methodologies focus specifically on identifying and addressing root causes of complex systemic challenges, tailoring solutions to the local context, and utilizing experiential learning to adjust and make course corrections in real-time.

Drawing from the existing mechanisms and relevant literature discussed above and informed by previous analysis undertaken for the report *Millions Learning: Scaling up*

quality education in developing countries, input from policymakers, practitioners, funders, and researchers from around the world, and consultations in more than 10 countries, CUE developed an overarching, flexible methodology for the Real-time Scaling Labs. More specifically, CUE compared and contrasted the above approaches as well as the key tenets of collective impact and applied learning mechanisms, identified core principles, and adapted them into a methodology that aligns with the aims and context of the Millions Learning project and focuses more centrally on questions of scaling. Many of these methods and approaches have previously been applied to finding a solution to a problem, while the labs will focus on scaling a solution to a problem.

BOX 2. Core principles of Real-time Scaling Labs

- **Problem-driven and user-centered:** The primary purpose of the scaling labs is to address pressing issues or bottlenecks that policymakers and practitioners face in scaling effective education interventions. To do this, it is critical that the process is focused on addressing issues identified by local stakeholders as high priority, rather than on implementing pre-determined solutions that do not address local priorities.⁶ As discussed in PDIA, too often reformers import an external “best practice” intervention, without giving adequate consideration to the particulars of the local circumstances or to the underlying causes of the problem they are trying to solve, and then fail to see the results they hoped to achieve.⁷ In response to this, the lab approach will be problem-driven and user-centered, starting by identifying concrete challenges to address that are deeply felt by the participants, led by the key local stakeholders who are close to the problem, understand it best, and are most incentivized to find a solution. Taking a problem-driven, user-centered approach can help control for what the Carnegie Foundation for the Advancement of Teaching calls “solutionitis”—the impulse to lead with a preconceived solution before fully understanding the problem to be solved.⁸
- **Systems approach:** The scaling labs will be grounded in systems thinking, or analyzing systems as a whole as well as the interplay of relationships within them rather than examining the individual components independently. Drawing from the improvement science mantra that “every system is perfectly designed to achieve exactly the results it gets,”⁹ one must understand the larger system if seeking to

achieve different outcomes or results. Similarly, the scaling labs will begin by convening a diverse group of stakeholders to discuss and assess the nature of the problem the intervention(s) seeks to address and the system that produces it. By taking a systems approach, participants will better understand and address the processes and mechanisms within the system that are hindering the type of improvement sought and to tackle the underlying causes behind the problems they are trying to solve. As Roy Steiner argues, “Simple solutions that don’t take a systems view into account often result in unintended negative consequences instead of durable change.”¹⁰

- **Multi-stakeholder participation:** Addressing complex challenges of a systemic nature requires the participation of actors across sectors and disciplines. The scaling labs recognize the importance of bringing together stakeholders with a diversity of perspectives and experiences in order to identify and address what are often structural barriers hindering scaling. As no one person can see the whole system, engaging a variety of different stakeholders with multiple perspectives helps to address the underlying causes within the larger system.
- **Adaptive orientation:** Today’s rapidly changing and uncertain world requires adaptive learners, institutions, and systems that readily learn, adjust, and evolve. The scaling labs recognize that just because an intervention has worked in one education system, does not mean it will have the same positive impact in every education system. Therefore, education reformers need to employ adaptive and innovative approaches to tailor solutions to fit in their own context and adapt global best practices to local needs. Research and practical experience find that many interventions ultimately fail because they do not include mechanisms to address problems as they arise.¹¹ And given the complexity of most development challenges, there needs to be room for trial and error as well as flexible adaptation and course-correction.¹² Yet, rigid log frames and evaluation methodologies can prescribe solutions that leave little to no room for making adjustments when things start to go wrong. Instead, the Real-time Scaling Labs will experiment with an adaptive learning approach, employing an iterative process of testing, refining, and re-testing change ideas to leverage opportunities and address challenges to scaling.
- **Quick feedback loops:** Another critical component of this adaptive learning approach are quick feedback loops, so that lab participants in the process of scaling interventions can test out ideas, fail quickly, reflect on the learning in real-time (rather than waiting for the end of a project), and use that information to inform decisions and adapt plans. The labs will employ cycles of testing, reflecting, and adapting with quick feedback loops built in, in order to test hypotheses and make changes throughout the process based on data and the group’s evolving understanding. This includes purposeful opportunities for reflection, which research in cognitive psychology and neuroscience has shown can lead to greater learning than simply acquiring more experience.¹³ The lab methodology purposefully builds in routine moments for reflection on the scaling process, with the opportunity for

lab participants to pause from the task of scaling in order to review data, reflect on what has already taken place and why, learn from what has happened thus far, and use that learning to adapt their work moving forward.¹⁴ This learning is a critical element of an adaptive approach.¹⁵

- **Political and technical considerations:** Research and practical experience suggest that only tackling the technical challenges of expanding education access and quality is not enough; in order to provide millions of children with improved opportunities to learn, it is also essential to understand and address the various factors outside of the classroom that determine whether an effective education innovation actually scales.¹⁶ As discussed in *Millions Learning: Scaling up quality education in developing countries*, it takes a combination of both technical and political strategies to implement effective initiatives at a large-scale.¹⁷ Similarly, another core principle of the Real-time Scaling Labs is the focus on identifying and adapting education initiatives and pathways to scale that are politically, economically, financially, and socially feasible within the particular local context. In the initial stage of the lab process, participants will develop or revise scaling plans that take the local political economy and context into account, and address both technical and political challenges to the scaling process.

Input and feedback from experts and advisors

Once the draft design of the scaling lab process was created, CUE solicited feedback from a wide variety of experts across disciplines including education, health, agriculture, systems change, continuous learning, and adaptive programming (see Annex 1 for a list of individuals consulted), to further refine and develop the lab methodology. Additionally, CUE held four in-person meetings with the Millions Learning high-level international advisory group, chaired by former prime minister of Australia, chair of the Global Partnership for Education, and distinguished fellow with the Center for Universal Education at Brookings, Hon. Julia Gillard, between March 2017 and May 2018. In these meetings, advisors discussed and provided feedback on plans for the scaling labs, including overall design, research approach, and internal and external communications strategies (see Annex 2 for a list of advisors).

CUE incorporated key feedback received into various iterations of the lab approach and methodology, some of which included:

- the importance of starting the process with clarity and consensus among lab participants on the nature of the problem, as well as underscoring the reality that scaling does not automatically happen but is challenging and must be planned for from the start;
- the need to give ample consideration to organizational capacity for scale and, therefore, the importance of institutional learning in the lab process;
- the value of exploring opportunities to leverage in the scaling lab process in addition to examining problems or challenges confronted;
- the importance of strong information management systems that allow for

continuous learning balanced with the need for quick, simple data collection methods;

- the need to build in enough time for iterations and reflections in terms of the overall timeline of lab process as well as the necessity to employ tight enough feedback loops in between lab convenings that allow for real-time learning;
- the critical importance of identifying resources required to scale from the beginning, which will include considering budgets available and costs of the intervention as scale; and
- and the necessity of ensuring the incentives to participate in the lab are clear by closely linking the learning and support provided through the process.

CUE also presented the draft framework for input at international conferences, including at EAFIT University in Colombia in November 2017, The Education University of Hong Kong in January 2018, Harvard University in February 2018, and the Carnegie Foundation for the Advancement of Teaching's Summit on Improvement in Education in San Francisco in April 2018. This input was then incorporated into a final version of the design.

The resulting lab approach was designed to provide a common framework for all of the Real-time Scaling Labs, while also being flexible enough to be adapted to the local context. As such, for each of the Real-time Scaling Labs, the next step in the lab design process includes in-depth research into the local context as well as input and feedback from local stakeholders and partners to tailor the overarching lab approach to the particulars of each individual lab.

Recommendations on design of Real-time Scaling Labs

Based on the background research and consultations held with key stakeholders as outlined previously, CUE proposes the following general design for the Real-time Scaling Labs to be tailored to each specific lab in partnership with local stakeholders.

Overview

Over the course of three years, the lab process will involve a series of in-person and virtual convenings and workshops that bring together policymakers, practitioners, and a diversity of other stakeholders around a particular education initiative or set of initiatives that is in the process of scaling.

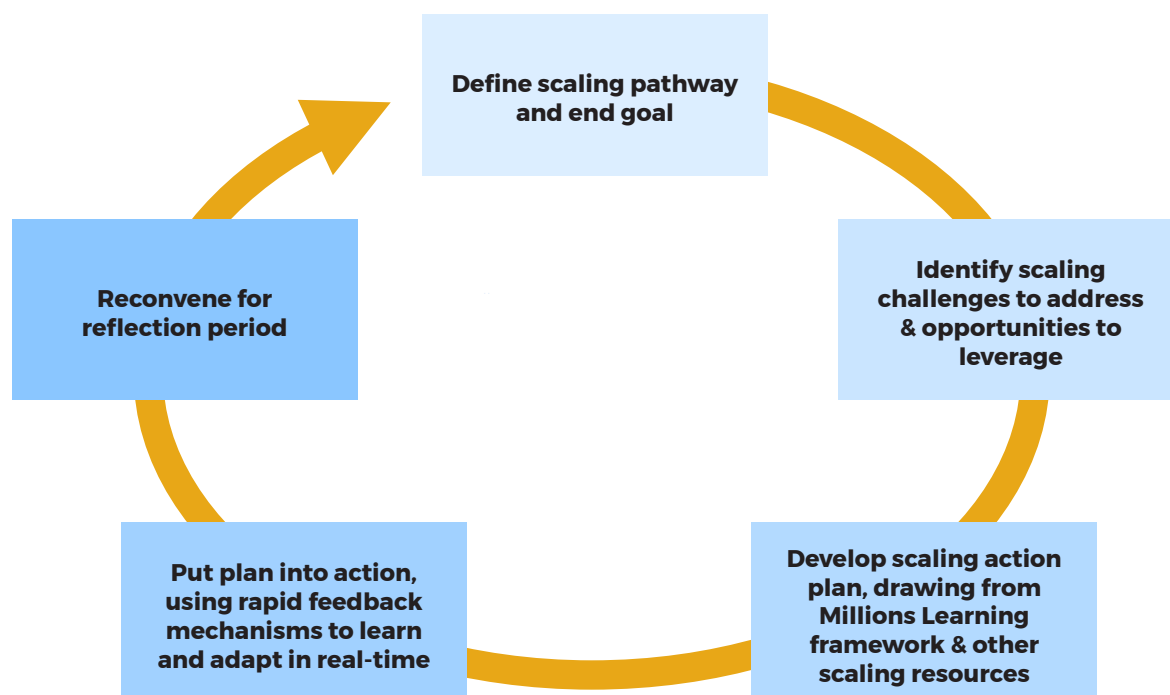
- Initial convenings will focus on **articulating a shared scaling goal** for the intervention and determining the initiative's current place along a scaling pathway, along with **identifying opportunities and obstacles** currently confronted in achieving those scaling goals and progress towards scale.
- The lab will then support a process for **developing and/or refining a scaling action plan** that addresses root causes of the scaling challenges identified and leverages opportunities to accelerate scaling, drawing from the Millions Learning framework and the scaling literature.

- Participants will **put scaling plans into practice and reconvene periodically for reflection periods**, to assess data collected on short-term targets, determine what elements should be adjusted, analyze what lessons have been learned thus far, and evaluate progress along the scaling pathway towards the end goal.
- Throughout the three years, the lab will employ an **iterative process of testing and refining change ideas to strengthen scaling efforts**, which will allow participants to learn from what works and what does not work, make adjustments to scaling plans, and ultimately progress along the scaling pathways identified while also improving capacity to scale.

As such, the lab will provide a reflective, neutral space for stakeholders to discuss shared challenges and opportunities faced in scaling an education intervention, discover the underlying causes of those challenges, and identify and adapt approaches based on data collected to address these issues, ultimately contributing to improving learning outcomes for children and youth.

Within this lab process, each individual scaling lab will focus primarily on its own education initiative(s) and the challenges

FIGURE 2. Real-time Scaling Lab iterative learning cycle



and opportunities it faces in bringing that initiative to scale. However, CUE will also foster opportunities for cross communication, knowledge sharing, and peer-to-peer learning between the labs, through virtual meetings, webinars, and occasional in-person convenings. Additionally, CUE is interested in going deeper into questions that emerged through research conducted for the Millions Learning study and subsequent consultations around the world. Beyond testing the Millions Learning framework and exploring the various scaling pathways and approaches within each lab, CUE has also identified two key scaling challenges that each of the labs will explore in depth. The first focuses on education alliances, drawing lessons around mobilizing diverse actors from public, private, and social sectors to align around shared incentives and objectives of improving learning outcomes. The second is around flexible

adaptation, looking at the critical question of adapting and scaling an effective approach across contexts.

Throughout the project, CUE will observe the process of implementing, adapting, and scaling the selected interventions via quantitative and qualitative methods, analyze data on an ongoing basis to identify lessons learned and challenges confronted during the scale up, leverage existing tools and expertise to help address challenges as they arise, and recommend course corrections identified through the iterative learning process as well as existing evidence and experience from other labs. CUE will document the entire process undertaken by the various actors—from conception to design to implementation to monitoring to outcome—so that others can continue to build upon what is learned through each scaling lab. Ongo-

ing lessons learned will be shared between the Real-time Scaling Labs in each location through in-person and virtual exchanges, including two global convenings that will bring together representatives from all of the scaling labs twice during the three-year period.

At the end of the project, CUE will produce a policy report that tells the story of the design, implementation, adaptation, and scaling of the intervention(s) and broader efforts to collectively strengthen education ecosystems. It will also serve as a model of collaborative learning and collective action, including what strategies can be used to develop a coherent approach engaging multiple ac-

tors to achieve large-scale systems change. Additionally, the publication will provide recommendations about how best to foster the transformational change urgently needed in education—identifying mechanisms and approaches that connect those innovating in education delivery with those designing and implementing policies, in conjunction with evidence about scaling, and affecting broad systems change. CUE will also develop tools targeted for policymakers, practitioners, and funders to offer practical guidance on how best to scale evidenced-based approaches.

TABLE 1. Real-time Scaling Lab step-by-step approach

Step	Details	Tools (not exhaustive)
Pre-Lab Activities		
Tailor general lab methodology and approach to local context in collaboration with local partners	CUE will work with partners to adapt the general lab approach to the local context. This will include a series of calls and meetings with lab stakeholders and partners to get ongoing feedback on design of lab process, tailor materials to meet participants' expectations and needs, and build consensus and buy-in prior to official launch of the lab.	<ul style="list-style-type: none"> · Generic step-by-step lab approach
Hire in-country facilitator and documenter	CUE and the local partner institution will hire two local, part-time consultants to work on the ground throughout the lab process. The documenter will be responsible for capturing the details and data of how the initiatives scaled and how the lab approach functioned and supported the scaling process, while the facilitator will be responsible for guiding the in-person and virtual convenings.	
Conduct background research in support of the lab process	CUE will conduct background research to inform each scaling lab, which may include landscape analysis, stakeholder mapping, scoping pieces on particular issues, etc.	<ul style="list-style-type: none"> · Stakeholder mapping · Landscape analysis · Political economy analysis

Step	Details	Tools (not exhaustive)
Select lab participants	CUE and local partner institution will identify and invite approximately 20-25 key stakeholders involved in scaling the selected initiative, representing a diversity of sectors and perspectives (including representatives from government, civil society, private sector, etc.), to participate in the lab process. This will include a mix of high-level representatives along with those directly responsible for implementation of policies and programs. Ideally the same individuals will participate in the entire three year process.	<ul style="list-style-type: none"> Stakeholder mapping
Clarify the education problem and intervention that will be the focus of the lab	While the overall lab process will be problem-driven, focused on identifying and addressing challenges faced in the process of scaling, the starting point for each lab will be to identify an evidenced-based education initiative (or set of initiatives) in the process of scaling that the lab will focus on and to ensure that all key stakeholders engaged in the lab have a common understanding of the nature and scope of the problem that the intervention(s) seeks to address.	
Global facilitator & documenter training	CUE will organize a multi-day, in-person training of facilitators and documenters involved with each of the Real-time Scaling Labs. Training will provide the opportunity to become familiar with lab design, research protocol, methodology, communications and data platform, and data collection tools, ensuring consistent and systemic data collection, analysis, and facilitation of lab convenings.	<ul style="list-style-type: none"> Microsoft Teams Millions Learning framework, scaling lab survey, scaling rubric, and other data collection instruments Lab step-by-step approach
Initial Lab Convening - 2-3 day workshop, hosted by local partner institution and co-designed and co-led by CUE, local partner, and in-country facilitator		
Administer questionnaire to lab participants on scaling knowledge and survey on expectations for participating in lab	Lab facilitator will administer questionnaire on scaling knowledge to all lab participants to gather baseline data in order to assess any increase in scaling knowledge over the course of the lab process. A similar questionnaire will also be administered to a sample of non-participants at the baseline, midline, and endline to serve as comparison with the lab group as well as capture any eventual spillover of knowledge to broader community. An additional survey will include questions on participants' expectations, what they hope to learn from the lab process, and how would they define success at the end of the three years.	<ul style="list-style-type: none"> Millions Learning scaling lab and questionnaire survey

Step	Details	Tools (not exhaustive)
Overview of scaling definitions, frameworks, and best practices	<p>Brief presentation and discussion of key scaling definitions, frameworks, pathways, best practices, and challenges.</p> <ul style="list-style-type: none"> • <i>Why is scaling so difficult?</i> • <i>Defining scale: What are the various definitions of “scaling impact”?</i> • <i>Pathways to scale: What are the various pathways and approaches to scale?</i> <p>Presentation of Millions Learning 14 core ingredients and scaling framework</p> <ul style="list-style-type: none"> • <i>How does this resonant with current work?</i> 	<ul style="list-style-type: none"> • Millions Learning framework • Management Systems International (MSI) Scaling Up Management Framework • Hartmann and Linn spaces and drivers framework • ExpandNet 9 Step Guide for developing a scaling-up strategy
Define scaling goals and assess intervention’s place along scaling pathway	<p>Quick review of the education intervention(s) being scaled and the nature and scope of the problem it addresses.</p> <p>Define scaling goal.</p> <ul style="list-style-type: none"> • <i>What exactly are we scaling? What is the end goal? What does success look like in 1-2 years? 5-7 years?</i> <p>Identify current scaling approach being pursued.</p> <ul style="list-style-type: none"> • <i>Is intervention scaling vertically, horizontally, functionally, and/or organizationally?</i> <p>Assess intervention’s progress along scaling pathway.</p> <ul style="list-style-type: none"> • <i>What stage of scaling is the intervention at?</i> 	<ul style="list-style-type: none"> • Millions Learning scaling rubric • International Development Innovation Alliance (IDIA) Architecture for Scaling Innovation
Identify scaling challenges to address and opportunities to leverage	<p>Conduct scalability assessment.</p> <p>Discuss scaling drivers, such as Millions Learning 14 core ingredients, and spaces, such as fiscal, political, and cultural spaces, and importance of applying systems thinking.</p> <p>Examine existing bottlenecks inhibiting scaling and potential opportunities to accelerate progress.</p> <ul style="list-style-type: none"> • <i>What is causing this challenge or bottleneck?</i> • <i>What is leading to this opportunity?</i> • <i>What strengths and weaknesses does the scalability assessment reveal?</i> <p>Identify concrete, actionable constraints or opportunities to address through the Real-time Scaling Lab.</p>	<ul style="list-style-type: none"> • Millions Learning framework • MSI Scalability Assessment Tool (SAT) Checklist • Landscape analysis • Fishbone diagram • Driver diagram • Process mapping • System mapping

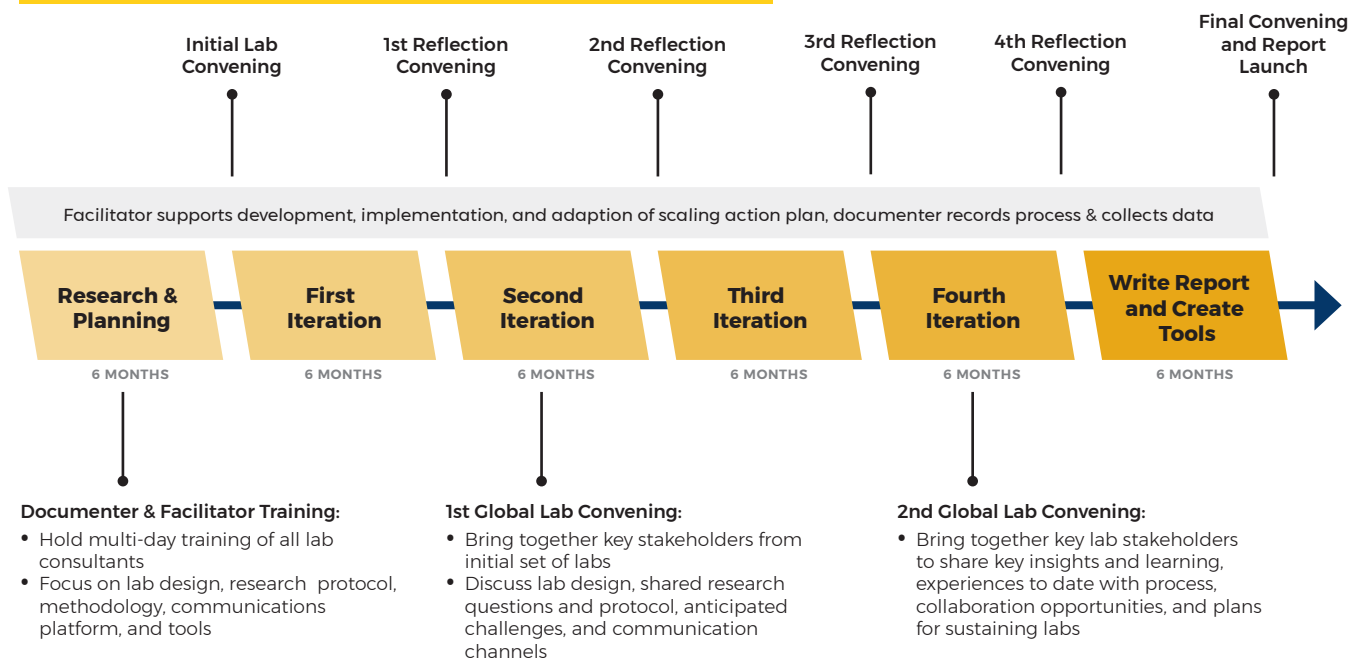
Step	Details	Tools (not exhaustive)
Conduct organizational/institutional assessment	<p>Identify key stakeholders to be engaged in scaling action plan, including roles, influence, and interest.</p> <p>Conduct an organizational/institutional assessment in regard to the scaling strategy to identify gaps in human resources, infrastructure, incentives, or systems required to implement the scaling strategy and operate at scale.</p>	<ul style="list-style-type: none"> • MSI Scalability Assessment Tool (SAT) Checklist
Develop a scaling action plan	<p>Lab participants, led by facilitator, draft scaling action plan, using a shared format and guided by examples. This will include the following:</p> <p>Decide which key drivers to tackle first, based on stakeholder priorities, scalability assessment, ability to enact change, cost analysis, etc.</p> <p>Identify change ideas¹⁸ to be tested that participants hypothesize will address the identified underlying causes of the scaling challenge and advance progress along scaling pathway.</p> <ul style="list-style-type: none"> • <i>What changes might we introduce to address the root causes identified?</i> • <i>What does relevant theory and research suggest? What seems plausible to practitioners? To policymakers? What addresses the systemic problems we face?</i> • <i>What is financially, politically, and socially feasible in the local context?</i> <p>Discuss plans for implementing change ideas, to be refined throughout the first iteration.</p> <ul style="list-style-type: none"> • <i>What specific change ideas will be tested?</i> • <i>What specific actions will be taken to enact these change ideas?</i> • <i>What is the timeframe for this iteration?</i> • <i>What outcomes are expected?</i> 	<ul style="list-style-type: none"> • Millions Learning scaling action plan framework • MSI Scalability Assessment Tool (SAT) Checklist • ExpandNet 9 Step Guide for developing a scaling-up strategy • Hartmann and Linn spaces and drivers framework • NESTA Strategies for Scaling Social Innovation • J-PAL Generalizability Framework
Iteration One - Approximately 3 months		
Draft scaling action plan for iteration and validation	<p>Lab facilitator drafts scaling action plan based on discussions during initial lab convening. Draft is shared with lab participants for feedback and iteration.</p> <p>CUE conducts background research as needed to inform the scaling plan, such as costing exercise, organizational assessment, etc.</p>	<ul style="list-style-type: none"> • Millions Learning scaling action plan framework

Step	Details	Tools (not exhaustive)
Reflection Convening One - One day workshop hosted by local partner institution and co-led by CUE and in-country facilitator		
Review and validate scaling action plan	<p>Bring stakeholders together to discuss drafted scaling action plan, recognizing the development of the plan is only a first step and it will remain a living document used to track progress and make ongoing adjustments.</p> <ul style="list-style-type: none"> • <i>Reevaluate and adjust if necessary scaling pathway</i> • <i>Conduct scalability assessment of new plan</i> • <i>Validate plan among key stakeholders</i> <p>Lab participants simplify and refine intervention as needed, based on scalability assessment, scaling action plan, and best practices.</p>	<ul style="list-style-type: none"> • Millions Learning scaling action plan framework • MSI Scalability Assessment Tool (SAT) Checklist
Develop data collection and rapid learning strategy	<p>Design simple, feasible measures to assess progress on the plan that can be implemented and used quickly by non-experts. Measures depend on the problem identified and solutions being tested.</p> <ul style="list-style-type: none"> • <i>How will we know if the changes introduced are leading to improvement?²⁹</i> • <i>How will we measure progress towards the end goal? Towards addressing the underlying causes?</i> • <i>How will we measure if change ideas are being implemented as planned?</i> • <i>How will we be sure that the change ideas are not creating unintended consequences?</i> <p>Agree on data collection approaches/requirements for documenter during next iteration period.</p> <p>Agree on cross-pilot learning and communications strategies during the next iteration period and clarify role facilitator will play.</p>	

Step	Details	Tools (not exhaustive)
Iteration Two - Approximately 6 months		
Implement scaling action plan	<p>Lab participants will implement scaling action plan, supported by the facilitator, including researching unanswered questions, negotiating unresolved issues, and testing change ideas.</p> <p>Lab facilitator and documenter, with support from CUE and local partner institution, will:</p> <ul style="list-style-type: none"> • <i>Collect data against simple targets identified in previous convening</i> • <i>Provide regular updates analyzing data captured, presenting key achievements or milestones attained and critical bottlenecks faced</i> • <i>Conduct individualized follow up with key stakeholders</i> • <i>Hold targeted discussions around specific issues</i> • <i>Conduct targeted research to fill information gaps</i> <p>Documenter will capture and share key progress and obstacles confronted.</p>	<ul style="list-style-type: none"> • Millions Learning scaling action plan framework • Millions Learning scaling rubric • Microsoft Teams
1st Millions Learning Real-time Scaling Lab Global Convening	<p>CUE will organize the first of two global convenings that will bring together key stakeholders from the initial set of the Millions Learning Real-time Scaling Labs (approximately 5-7 labs) to discuss the overarching lab design and approach, shared research questions and protocol, anticipated challenges to consider, and communication channels for sharing learning and data, among other issues. Additionally, it will be an opportunity for stakeholders to become familiar with the larger universe of scaling labs, make connections, and identify opportunities for potential collaboration in the years ahead.</p>	
Reflection Convening Two - One day workshop hosted by local partner and co-led by CUE, local partner, and facilitator		
Reflection workshop	<p>Bring stakeholders together to analyze results of second iteration.</p> <ul style="list-style-type: none"> • <i>What worked and did not work?</i> • <i>What assumptions did we make?</i> • <i>What lessons did we learn?</i> • <i>What changes need to be made to the scaling plan?</i> • <i>What adjustments should be made to the interventions?</i> • <i>Do we need to reevaluate the scaling pathway?</i> • <i>How did the process of collecting, analyzing, and communicating learning in real-time work?</i> • <i>How did communications between stakeholders work?</i> <p>Check in with government on its current priorities and needs.</p> <p>Adapt scaling action plan for iteration three. Conduct scalability assessment of new plan.</p>	<ul style="list-style-type: none"> • Millions Learning scaling action plan framework • Millions Learning scaling rubric • Data gathered during iteration period • Expandnet Implementation Mapping Tool • MSI Scalability Assessment Tool (SAT) Checklist

Step	Details	Tools (not exhaustive)
<p>Over the course of three years, the Real-time Scaling Lab continues to follow cycles of six-month iteration periods to implement scaling action plan and collect data against short-term targets identified, followed by in-person reflection convenings with lab participants to analyze results and make necessary adjustments to scaling action plans and change ideas to test, on the way to achieving the short and long-term goals and progressing along the scaling pathway. At the midline and endline convenings, CUE will administer a follow up survey to lab participants on their scaling knowledge, to assess whether it has increased through the lab process, as well as on their perceptions of the lab's effectiveness and whether it met their expectations.</p>		
<p>2nd Millions Learning Real-time Scaling Lab Global Convening</p>	<p>CUE will organize the second global convening that will bring together key stakeholders from each of the Millions Learning Real-time Scaling Labs to share key insights and learning, discuss experiences to date with the lab process, identify opportunities to collaborate, and plans for sustaining the labs beyond the initial phase.</p>	
<p>Final documentation and dissemination</p>		
<p>Development of policy brief, targeted tools, and other multimedia products</p>	<p>CUE will produce a seminal report that tells the story of the design, implementation, adaptation, and scaling of intervention(s). CUE will also develop tools targeted for policymakers, practitioners, and funders to offer practical guidance and recommendations on how best to scale evidenced-based approaches that improve learning. These tools will be designed for use by a wide audience.</p> <p>To accompany the report and tools, CUE will also produce other knowledge sharing and dissemination products including blogs, videos, briefs, and podcasts throughout the lab process.</p>	
<p>National and international report and tool launch and global dissemination of findings</p>	<p>CUE and local partner institution will hold national event(s) to launch final report(s) and tools, bringing together lab participants and other key stakeholders. In addition to the national launch event, CUE may host other global sharing and dissemination events with key stakeholders including policymakers, practitioners, funders, and academics, in Washington D.C., New York City, and other locations.</p>	

FIGURE 3. Generic timeline for the Real-time Scaling Lab



Research focus of the scaling labs

Each of the labs will provide an opportunity to test and refine the Millions Learning scaling framework and 14 core ingredients identified (see Annex 4). This will include looking at the issue of costs in each of the labs, including how costs of interventions are considered from the start, how unit costs change when delivered at scale, and where cost efficiencies or economies of scale can be achieved. Beyond testing the Millions Learning framework and exploring various scaling pathways and approaches, in each lab CUE is interested in examining more deeply two issues that have emerged through research conducted for the Millions Learning study and subsequent consultations as key challenges facing policymakers, funders, and practitioners in their efforts to scale quality education interventions. Both issues go deeper into some of the “core ingredients” identified in the Millions Learning study as key drivers contributing to the scaling process.

1. Education alliances (partnerships): The labs will draw lessons around mobilizing diverse actors from public, private, and social sectors to align around shared incentives and objectives of improving learning outcomes. The need to engage various partners to deliver quality-learning interventions at scale presents both opportunities and challenges. While partnerships are not always effective, they have been essential in a variety of contexts to bring together the diverse skills, resources, and assets required to scale sustainably and equitably.

Within the labs, this may include looking at the following issues:

- Role of intermediaries in bringing together various systems actors, including questions of sustainability and eventual handover of intermediary’s role (examining the “black box” between small-scale learning innovations and achieving large-scale implementation);

- Role of financing in resourcing the scaling of learning approaches, in particular, innovative financing arrangements such as Public-Private Partnerships, taxes levied, flexible, long-term financing, etc.;
- Strategies to engage the government and maintain impact, particularly where the innovation has been initiated by non-state actors; and
- Role of accountability among the various actors.

2. Flexible adaptation: The labs will also look at the critical question of adapting effective learning interventions across contexts, which requires striking the right balance between contextualization and maintaining fidelity to the original model.

Within the labs, this may include looking at the following issues:

- Identifying the core elements of the interventions responsible for driving gains in learning that should be replicated across contexts, while contextualizing the rest to local circumstances;
- Developing a deeper understanding of the process of contextualizing learning approaches, particularly in resource-poor environments;
- Understanding and addressing the political economy factors that arise when scaling effective learning approaches (particularly as scaling from an NGO-led initiative to government-led);
- Reconciling conflicts between donors' and host governments' accountability-driven needs for ex-ante targets and work plans with the expectation that successful scaling requires course-corrections and a degree of flexibility;

- Role of data and the systems required to collect, analyze, learn, and share information as initiatives are adapted and scaled in new contexts; and
- Issues of capacity, human resources, and skills needed to innovate and implement quality education initiatives at small-scale versus operational complexities of implementing at large-scale.

Criteria for lab selection

CUE developed criteria for selecting lab partners and initiatives, balancing an interest in comparability and the development of a strong research base with the realities of where there exists demand for a lab, partners with aligned interests, evidence of effectiveness, and government engagement. Criteria for scaling lab selection include:

- Demand-driven, where there is strong interest from a local partner;
- Strategic timing, where there is a reform process underway or other catalyst to leverage;
- Evidence of the effectiveness of the intervention being scaled;
- Committed local partner with aligned interests and capacity to engage;
- Political will and buy-in from government partners; and
- Addresses a critical issue in education facing many countries.

When selecting the labs, CUE deliberately sought diversity across the cohort, in terms of geographic location, intervention of focus, scaling pathway (i.e., horizontal, vertical, etc.) and approach (i.e., replication, adaptation, etc.), as well as the role of state and non-state

actors in designing, delivering, and financing the intervention. At the same time, the development of a common framework and shared research questions for all the labs will allow for cross-comparability.

Lab roles and participants

In each location, CUE will co-design and jointly implement the Real-time Scaling Labs with a local partner institution, who will also play a role in documentation, analysis, and dissemination of findings. Local partners include academic institutions, non-governmental organizations, government agencies, and philanthropic institutions. While the exact structure of each lab may vary, the local partners will all co-design and serve as the point of contact between CUE and other key stakeholders; convene the meetings and workshops; co-manage local consultants along with CUE; contribute to the analysis and documentation process; and contribute to dissemination, especially at the national and local levels.

Each scaling lab will also contract or work with two part-time individuals to work on-the-ground throughout the lab process. These individuals may be current government employees or local researchers in order to help build local capacity and institutionalize scaling knowledge. The facilitator will be responsible for co-designing and co-facilitating the initial lab workshop and subsequent in-person and virtual lab convenings over the three years, as well as supporting lab participants during the iteration cycles to draft, implement, test, and adapt scaling action plans. The facilitator will also play a role in sharing real-time learning rapidly with lab participants. The documenter will serve as researcher and documenter for each scaling lab and will be responsible for capturing the details of how the scaling lab approach functioned and how it supported the scaling process; “telling the story” of how the educa-

tion intervention scaled; and sharing lessons learned within and across the scaling labs. The documenter will gather data during lab convenings and throughout each iteration period, tracking progress towards short- and long-term targets identified during the lab convenings, and report findings periodically to CUE and the local partner.

The Real-time Scaling Lab process itself will bring together key stakeholders involved in the implementation and scaling of the selected education intervention or set of interventions, representing a diversity of sectors and perspectives (including government, implementers, civil society, the private sector, etc.), to participate in a series of convenings and workshops over the three-year period. This will include a mix of high-level representatives along with those directly responsible for the implementation of policies and programs. Participant diversity is an essential component of the scaling lab, as it ensures perspectives from a wide variety of viewpoints, resulting in stronger problem analysis and helping the group to avoid relying on their own assumptions and preconceptions. Lab participants will be selected by CUE and the local partner, based on the local context and specifics of the education intervention for each lab. Key to the lab success will be participant buy-in in the process and active participation in the convenings. Ideally, the same individuals would participate in the entire three-year lab process.

Communications tools

An essential aspect of the labs is that information is gathered and analyzed in real-time and key insights are shared on a regular basis in order to facilitate learning and inform necessary adaptations. In each lab, the plan is for an on-the-ground documenter to collect this information during in-person convenings and throughout the six-month iteration periods, while CUE, in collaboration with local

partners, will analyze, synthesize, and share emerging findings with lab stakeholders on an on-going basis.

CUE researched a wide variety of platforms and tools for communication, data collection, document sharing, and peer-to-peer exchange within and between the Real-time Scaling Labs that would be appropriate for low-resource environments. In this research, CUE sought functionality in three categories: communications, data collection and storage, and knowledge management. First, in terms of communications, CUE wanted a tool that would allow and encourage lab participants (in particular the on-the-ground documenter and facilitator in each lab) to communicate easily and frequently with CUE and with each other within and across labs, through real-time chatting as well as voice and video calls. Specifically, CUE was interested in a platform that would encourage discussion and peer-to-peer sharing, replicating the informality and real-time conversation of a WhatsApp group. For data collection and storage, CUE wanted a platform that would allow the on-the-ground documenter and facilitator for each lab to regularly upload their data and reporting, store it in a shared location, and have the research easily available to CUE and local lab partners. For the knowledge management component, CUE sought a platform that would store and archive relevant documents and conversations between lab participants in order to support the documentation of the lab process and record how it happened in real-time.

Other requirements for the platform included: availability of the platform on both a desktop and phone; at least some of the services available with a slower internet connection; worldwide availability; affordability; and ease of use. Finally, rather than having lab participants use multiple tools and programs for these varied services, CUE ideally wanted a single platform that brought all of

these functions together, in order to streamline communications, ensure no data or information gets lost, and make participation as straightforward as possible.

After extensive research, CUE has selected Microsoft Teams as the best platform for communications and data sharing within the Real-time Scaling Labs. Microsoft Teams is a chat-based workspace within Office 365 that is deeply integrated with the other Microsoft Office products. Given that Brookings already uses the Office 365 suite, Teams fits in seamlessly with the Millions Learning workflow and is already directly synced with the software, programs, and file management systems Millions Learning uses (such as SharePoint, OneDrive, etc.).

Using Teams, lab participants (in particular the on-the-ground documenters and facilitators) can chat, call, or video conference in groups or one-on-one, enabling real-time and ongoing collaboration and communication on specific projects and tasks. Conversations within Teams are divided into dedicated channels to enable focused conversation and exchange, such as the “Philippines” channel and the “Monitoring & Evaluation” channel. All conversations in Teams are archived and searchable, automatically documenting all of the communication taking place and allowing CUE to go back and revisit important conversations later in the research and writing process.

Within Teams, participants can also upload and share files, co-edit documents, share screens during presentations and video calls, host large webinars, schedule and facilitate team meetings, take notes, and hold phone conversations (with phone numbers available for 400+ cities around the world and voicemail and translation functions). Teams seamlessly integrates into the other Office 365 products (such as Word, PowerPoint, Excel, Skype, and OneDrive) as well as most third-party services (such as Twitter),

essentially allowing all of the work for the Real-time Scaling Labs to happen in one place. The creation of a “Millions Learning Team” also creates a larger “Group,” which effectively serves as a hub for all of the Team’s work. This includes a share point site, where all Team documents are stored in the cloud, and a shared Team email address, calendar, and to-do list. Lab documenters and facilitators will be able to upload their research and documentation directly to this site, so that all of the information is stored on the cloud in a single place accessible from anywhere. CUE will be able to control permissions to the various folders, and so can decide who has access to what information within and across labs.

In summary, through Teams lab consultants and partners can actively participate in real-time learning, sharing, communication, and collaboration. Individuals can have focused conversations on a particular topic within one channel, while another general channel keeps all lab participants informed of critical news and updates. Documentation and data from the labs can be uploaded to the group files, so that data is all stored in a single place and backed up by Office 365. As the owner of the group, CUE will have access to all communications and folders and can assign permissions and control access. Teams is available as both a desktop and mobile app and lab consultants and participants can have free access to the service through Brookings’ guest access. CUE will create and manage the Team and will train all lab consultants on how to use the program during the global consultant training to ensure understanding and correct usage.

Measures of success

CUE is in the process of designing a common data collection and monitoring and evaluation system across all of the Real-time Scaling Labs. This remains a work-in-progress but to date CUE is considering collecting data at two levels:

At the lab process level, CUE will explore two fundamental questions.

1. How did the lab process function?
2. Are individual labs making progress towards their internal targets within each iteration?

To answer the first, CUE will measure how the lab functioned through data collected by an on-the-ground documenter in each country. This consultant will be documenting the entire lab process, including measures on how the lab functioned, such as participation in twice-yearly convenings, attrition, responsiveness of participants, etc. Additionally, the documenter will gather survey data at the baseline, midline, and endline of the lab process on participants’ expectations of the lab, satisfaction toward meeting these expectations, and impressions of the impact of the lab process. These measures and surveys will be the same across all of the scaling labs.

CUE will also be collecting data around scaling plans developed during the lab convenings and measuring progress towards meeting those targets. At the initial convening for each scaling lab and in the first iteration that follows, lab participants will jointly develop a scaling action plan that they will continue to iterate on during the lab process, including ideas they want to test to accelerate progress towards their scaling goals and short-term targets they aim to achieve. At each lab convening, participants will identify which of these ideas and targets they wish to focus on in the subsequent six-month

iteration period as well as quick measures to assess progress towards these targets. The on-the-ground documenter will then gather data based on these measures throughout each iteration period, which will be used to inform real-time learning and adaptation. Lab participants will review and discuss the data gathered at each reflection convening, and adjust the scaling action plan, including the short-term targets, based on insights gathered.

At the lab outcome level, CUE is interested in understanding if, how, and to what extent the labs have contributed to the expected outcomes of Real-time Scaling Lab, which are:

1. Increased knowledge of how to scale quality education initiatives, specifically among the policymakers, practitioners, and funders participating in the lab process, as well as spillover effects in the broader community.
2. Demonstrated progress towards scale for the initiatives within the individual labs.
3. Development and uptake of an adaptable, replicable model to support peer-to-peer learning and knowledge exchange for scaling in education.

To measure the first outcome—an increase in knowledge—CUE will administer a questionnaire on scaling knowledge to lab participants at the baseline, midline, and endline of the lab process in order to gather quantitative data on any increase in scaling knowledge over the course of the lab process. CUE will also administer the same questionnaire at the same points to a similar group of non-participants to serve as a comparison. This will include a question on where non-participants have learned about scaling, in an attempt to capture whether their colleagues who are participating in the labs are sharing their learning. CUE is consid-

ering other methods by which to measure how knowledge gained through the lab process might be spilling over to the broader community as well.²⁰

To measure the second outcome, CUE will track progress towards achieving the ultimate scaling goals collectively identified in each lab. As described above, targets will be identified in initial lab convenings and tracked by the in-country documenter, along with local partners, and discussed during reflection convenings.

To test the hypothesis that the Millions Learning 14 core ingredients contribute to the process of scaling, CUE is considering the development of a rubric, or scoring guide, to measure the strength of each of the interventions vis-à-vis each of the core ingredients at baseline, midline, and endline of the labs. This rubric will be standardized across all of the scaling labs, with the recognition that some core ingredients may not be applicable in every situation. Data to inform the rubric will be gathered both through observation as well as interviews with key stakeholders.

To measure the third outcome—development and uptake of an iterative learning model to support scaling—CUE will develop a checklist of steps in the development of the lab model and assess progress towards meeting them, such as iteration on a dynamic theory of change. CUE will also incorporate data gathered on how the lab functioned into the assessment of this outcome. Additionally, CUE will look at the uptake of this model, through metrics such as citations and requests for guidance and speaking engagements.

For each of these metrics, the on-the-ground documenters connected with each lab will collect data during the lab convenings and throughout each iteration cycle. Each lab documenter will use a set of questions and measurement tools developed by CUE and

local partners that are common across all labs to help ensure data standardization, quality, and comparability. The documenters will upload and share data collected routinely with CUE and local partner institutions, who will analyze the data within and across the labs on an ongoing basis in order to draw out and synthesize key learning and identify issues to investigate and discuss with lab participants. The in-country facilitator will also play a role in sharing this learning with lab participants (in addition to the bi-yearly convenings) to inform adjustments to implementation and scaling plans.

Endnotes

- 1 See www.brookings.edu/series/millions-learning.
- 2 See www.brookings.edu/center/center-for-universal-education.
- 3 Robinson, J., Winthrop, R. and E. McGivney. (2016). "Millions Learning: Scaling Up Quality Education in Developing Countries." *The Center for Universal Education at the Brookings Institution*.
- 4 Robinson et al. (2016).
- 5 Wild, L., Booth, D., Cummings, C., Foresti, M., and J. Wales. (2015). "Adapting Development: Improving Services to the poor." *Overseas Development Institute*. See also: Andrews, M., Pritchett, L. and M. Woolcock. (2017). *Building State Capacity*. Oxford University Press.; Andrews, M., Pritchett, L., and M. Woolcock. (2015). "Doing problem driven work." *Harvard University Working Papers*.; Booth, D. and S. Unsworth. (2014). "Politically smart, locally led development." *ODI Discussion paper*. ; Fritz, V., Levy, B., and R. Ort. (2014). "Problem Driven Political Economy Analysis: The World Bank's Experience." *World Bank Group*.; Valters, C., Cummings, C. and H. Nixon. (2016). "Putting learning at the centre: Adaptive development programming in practice." *Overseas Development Institute*.
- 6 Wild et al. (2015).
- 7 Andrews et al. (2015).
- 8 Anthony S Bryk, Louis Gomez, Alicia Grunow, and Paul LeMahieu. (2015). *Learning to Improve: How America's Schools Can Get Better at Getting Better*. Harvard Education Publishing.
- 9 Conway, E. and P. Batalden. (2015). "Like Magic? ("Every system is perfectly designed...")." *Institute for Healthcare Improvement*.
- 10 Steiner, R. (2017). "Why Good Intentions aren't enough." *Medium*.
- 11 Wild et al. (2015).
- 12 Andrews et al. (2015).
- 13 Giada Di Stefano, G., Gino, F., Pisano, G. and B. Staats. (2015). "Learning by Thinking: Overcoming the Bias for Action through Reflection." *Harvard Business School Working Paper 14-093*.
- 14 USAID. (2017). "What difference does CLA make to development? Key findings from a recent literature review."
- 15 Valters et al. (2016).
- 16 World Bank. (2018). *World Development Report 2018: Learning to Realize Education's Promise*. Washington, DC: World Bank. doi:10.1596/978-1-4648-1096-1. License: Creative Commons Attribution CC BY 3.0 IGO
- 17 Robinson et al. (2016).
- 18 Bryk et al. (2015).
- 19 Bryk et al. (2015).
- 20 Note: CUE is unable to directly measure increased capacity to scale among lab participants given the many confounding factors that remain outside of our control. However, the assumption is that an increase in knowledge of how to scale combined with demonstrated progress towards scale will likely result in greater capacity among those involved with the labs.

Annex 1: Experts and in-country stakeholders consulted on Real-time Scaling Lab approach and methodology

1. Julie Battilana, Joseph C. Wilson Professor of Business Administration, Harvard Business School
2. Brandon Bennett, Principal Advisor, Improvement Science Consulting
3. Dan Berelowitz, CEO, International Center for Social Franchising
4. Mamadou Binate, Coordinator, TaskForce, Government of Côte d'Ivoire
5. Brittany Butler, Executive Director Social Innovation + Change, Harvard Kennedy School
6. Laurent Cortese, Agence Française de Développement
7. Florence N'Dede Dagnan, Gender and Social Inclusion Expert, National Committee for the Implementation of the MCC Compact in Côte d'Ivoire
8. Diego Leal Fonseca, EAFIT University*
9. Natalia Gavrilita, Managing Director, Global Innovation Fund
10. Henriette Hanicotte, Research Manager and Country Representative, Innovations for Poverty Action - Côte d'Ivoire
11. James Honan, Senior Lecturer on Education, Harvard University Graduate School of Education
12. Irina Hotz, Project Manager International Programs, Jacobs Foundation*
13. David Istance, Nonresident Senior Fellow, Center for Universal Education, Brookings Institution
14. Hisham Jabi, Technical Director, Management Systems International
15. Muhannad Jarrah, Executive Director, Partnership & Communication Unit, INJAZ
16. Sharath Jeevan, CEO, STIR
17. Shelly Kessler, Principal, SKConsultants
18. Raoul Kone, Deputy Chief of Staff, Ministry of National Education, Technical Education, and Vocational Training

19. Yao Kouassi, Employability and Productivity Expert, National Committee for the Implementation of the Millennium Challenge Corporation (MCC) Compact in Côte d'Ivoire
20. Kay Lankreijer, Programme Coordinator Refugee Response Region, Bernard van Leer Foundation
21. Herman B. Leonard, Eliot I. Snider and Family Professor of Business Administration, Co-Chair Social Enterprise Initiative, Harvard Business School
22. Paul Macek, World Cocoa Foundation
23. Rachel Machefsky, ECD Specialist, Bernard van Leer Foundation
24. Nora Marketos, Program Manager International Programs, Jacobs Foundation*
25. Chris Marquis, Visiting Professor of Social Innovation and Public Policy, Harvard Kennedy School
26. M. Rashad Massoud, Director, USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, Senior Vice President, Quality & Performance Institute at University Research Co.
27. Joe McCannon, Co-Founder and Senior Advisor, Billions Institute
28. Julia Monaghan, Syntegral
29. Jeff Morgan, Director of Global Programs, Mars
30. Kyle Murphy, Policy Manager, The Abdul Latif Jameel Poverty Action Lab (J-PAL)
31. Aïda Alassane N'Diaye-Riddick, National Coordinator of the MCC, MCC Compact Côte d'Ivoire
32. Youssouf N'Djore, World Cocoa Foundation
33. Juan Pablo Giraldo Ospino, Education Specialist/Innovations in Education, UNICEF
34. Sandra Park, Senior Fellow, Networked Improvement Science, the Carnegie Foundation for the Advancement of Teaching
35. Katiénéffooua Adama Ouattara, Technical Advisor, The Cabinet, Ministry of National Education, Technical Education, and Vocational Training, Côte d'Ivoire
36. Joseph Petraglia, Director, Syntegral
37. Carrie Previtara, Associate Partner, Pathways Fund & Early Learning Fund, New Profit
38. Lant Pritchett, Professor of the Practice of International Development; Faculty Chair, MPA/ID Program, Harvard Kennedy School of Government
39. Patrick Philippe Ramanantoanina, World Bank
40. Teca Pontual, Center for Innovation and Excellence in Education Policies (CEIPE), Getulio Vargas Foundation, Brazil
41. Salimah Samji, Director, Building State Capability Program, Harvard Kennedy School of Government
42. Brahim Sangafowa Coulibaly, Director, Africa Growth Initiative & Senior Fellow, Global Economy and Development, Brookings Institution
43. Moussa Sankara, M&E Coordinator for GMM2, Innovations for Poverty Action – Côte d'Ivoire
44. Nanzouan Patrice Silue, Director, Department of Pedagogy and Continuing Education, Ministry of National Education, Technical Education, and Vocational Training, Côte d'Ivoire

45. Ruth Simmons, Professor Emerita, Health Behavior & Health Education, University of Michigan School of Public Health
46. Fabio Segura, Head of International Programs, Jacobs Foundation*
47. Lisa Slifer-Mbacke, Chief of Party, USAID/Senegal Monitoring and Evaluation Project, Management Systems International Senegal
48. Matthew Smith, Senior Program Officer, International Development Research Centre*
49. Kim Syman, Managing Partner, Field Leadership and Early Learning Fund, New Profit
50. Ben Tan, M&E Engagement Manager, Innovations for Poverty Action
51. Shinichiro Tanaka, Senior Education Advisor, Japan International Cooperation Agency
52. Obin Tchetché, Private Sector Expert, National Committee for the Implementation of the MCC Compact in Côte d'Ivoire
53. Reinier Terwindt, Head of Business Case, STIR
54. Victoria Tinio, Executive Director, Foundation for Information Technology Education and Development (Fit-ED)
55. Caitlin Tulloch, Technical Advisor, Best Use of Resources Initiative, International Rescue Committee
56. Cecilia Vaca Jones, Programme Director, Bernard van Leer Foundation
57. Sabina Vigani, Country Director Côte d'Ivoire, Jacobs Foundation*
58. Alvin Vista, Fellow, Center for Universal Education, Brookings Institution
59. Loïc Watine, Director, Right-Fit M&E / Regional Director, Innovations for Poverty Action
60. Tricia Wind, Senior Programme Specialist, International Development Research Centre*

*Referenced experts are affiliated with organizations that provide financial support to the Brookings Institution. Brookings scholars, in conformity with the Institution's mission of developing independent, non-partisan analysis and recommendations that reflect objective and rigorous scholarship, make final determinations regarding all scholarly activities. Brookings scholars do not, at any time, lobby or otherwise promote the interest of any donor or any other third party.

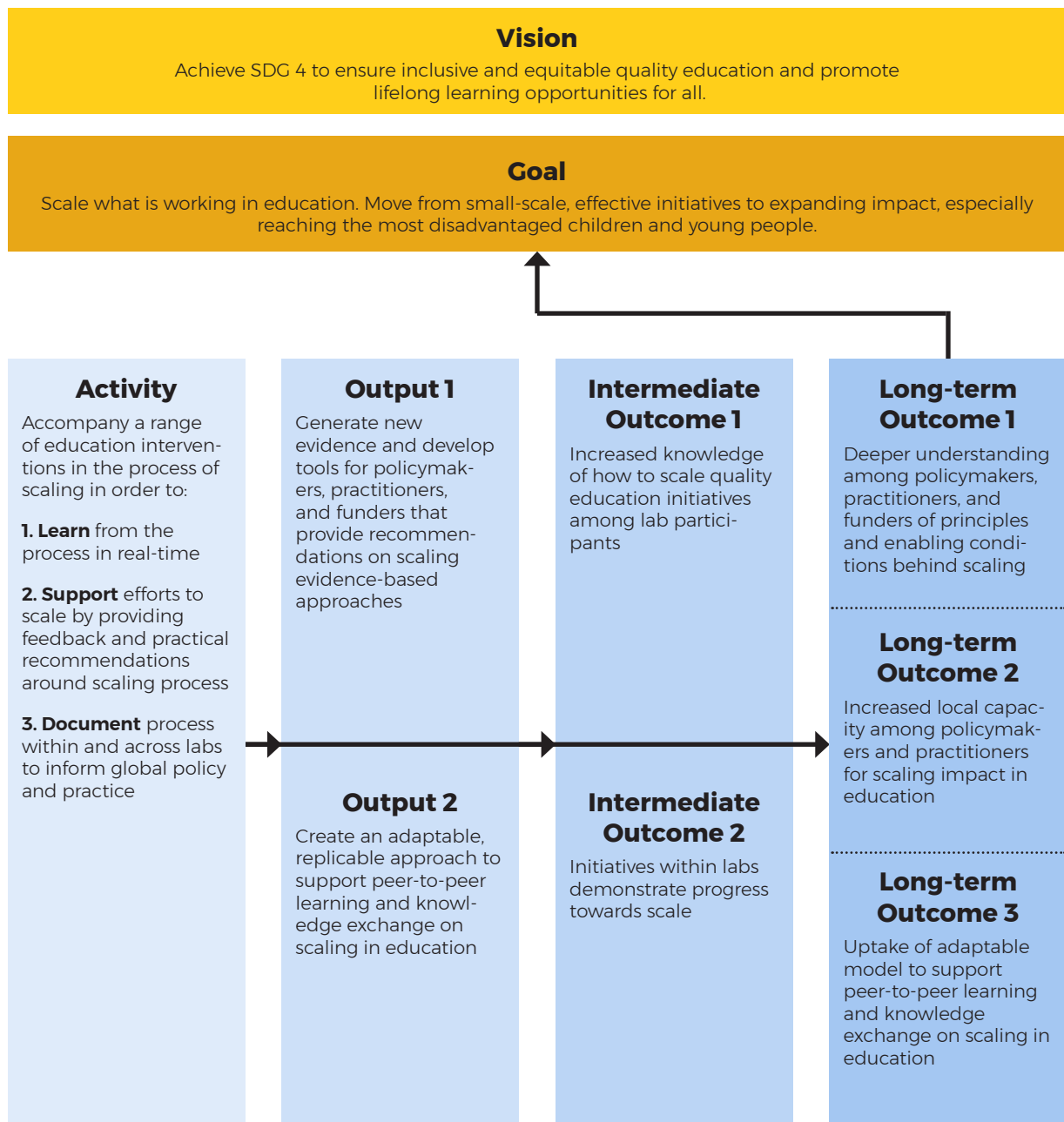
Annex 2: Millions Learning 2.0

Advisory Group members

1. Mo Adefeso-Olateju, Managing Director, The Education Partnership Centre (TEP Centre), Nigeria
2. Manos Antoninis, Director, Global Education Monitoring Report
3. Tamar Manuelyan Atinc, Visiting Fellow, Center for Universal Education, Brookings Institution
4. Luis Benveniste, Practice Manager, Global Engagement and Knowledge, The World Bank
5. Larry Cooley, President Emeritus, Management Systems International
6. Claudia Costin, Director, Center for Innovation and Excellence in Education Policies (CEIPE), Getulio Vargas Foundation, Brazil
7. John Floretta, Associate Director of Policy, The Abdul Latif Jameel Poverty Action Lab (J-PAL)
8. Laura Ghiron, Vice President, Partners in Expanding Health Quality and Access
9. Hon. Julia Gillard, 27th Prime Minister of Australia, Chair of the Board, Global Partnership for Education, & Distinguished Fellow, Center for Universal Education, Brookings Institution
10. Rachel Hinton, Senior Education Adviser, Research and Evidence Division, United Kingdom Department for International Development (DFID)
11. Cassandra Kelly, Global Chair and Co-Founder, Pottinger Global Advisors
12. Homi Kharas, Interim Vice President and Director, Global Economy and Development, Brookings Institution
13. Lord Jim Knight, Chief Education Adviser, TES Global
14. Wendy Kopp, Chief Executive Officer & Co-Founder, Teach For All
15. Lucy Lake, Chief Executive Officer, Camfed International
16. Johannes Linn, Nonresident Senior Fellow, Global Economy and Development, Brookings Institution
17. Nadim Matta, President and Founding Board Member, Rapid Results Institute
18. Tamela Noboa, Managing Director, Discovery Learning Alliance
19. Darius Ogutu, Director of Education, State Department of Basic Education, Ministry of Education, Kenya
20. Philipp Schmidt, Director of Learning Innovation, MIT Media Lab

21. Nathan Richardson, Chief Executive Officer, Trade It
22. Kedrace Turyagyenda, Director, Directorate of Education Standards, Ministry of Education and Sports, Uganda
23. Liesbet Steer, Director, International Commission on Financing Global Education Opportunity
24. Emiliana Vegas, Chief of the Education Division, Inter-American Development Bank
25. Rebecca Winthrop, Senior Fellow and Director, Center for Universal Education, Brookings Institution
26. Eliya Zulu, Executive Director, African Institute for Development Policy (AFIDEP), Kenya
27. Alix Zwane, Chief Executive Officer, Global Innovation Fund

Annex 3: Millions Learning Real-time Scaling Lab theory of change



Annex 4: Millions Learning 14 core ingredients

